

Vedic & Mesopotamian Interactions.

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Introductory

1. Here I examine systematically affinities first between the Vedic and Mesopotamian cultures and possible cross-influences. There are many similar elements, themes and motifs in the religious texts of both. Some are found in other cultures the world over: e.g. the worship of Sun, Moon, Wind, Fire, etc; search for immortality; god/hero kills dragon/monster/serpent; tree of life; and so on. Such universal motifs will be ignored. But if the Sungod travels in a boat, as happens here, rather than on a horse-drawn carriage, as we find in Greece and elsewhere, then the motif deserves comment. Other common themes are the separation of heaven and earth by a god of wind (and light); the cosmic cow of plenty; the virile bull; the divine bird which is a messenger of, or symbolizes, a deity; the horse-sacrifice; creation through the dismemberment of a divine being; the Flood; the turtle/tortoise; etc.

2. Until now it has been generally assumed (e.g. Dalley 1998; Bottéro et al 2000; McEvelley 2002) that the Vedic Tradition is the borrower in all cases (brick-building, certain rituals, astronomy and mathematics, writing, mythological motifs, etc). The assumption has been based on the widespread belief that the Fertile Crescent in the Near East is the cradle of all civilization and, with regard to India, on the AIT (=Aryan Invasion/Immigration Theory), which should have been dismissed as soon as the ISC (=Indus-Sarasvati Civilization) came into the light of day in the 1920s. I shall show that, apart from the anteriority of the Vedic texts (the bulk of the *Rgveda* being dated at c 3200 BC and before), which may be doubted, the internal evidence in the documents and other types of evidence indicate that India is not the borrower; if anything, Mesopotamia and Egypt probably borrow from Saptasindhu. I do not hide the fact that I am in a way prejudiced. I am now convinced, as I have argued elsewhere (Kazanas 1999, 2002a, 2003b, etc) that the Indoaryans are by 1500 BC fully indigenous having come to Saptasindhu at the very

latest in the early 5th millennium and that much of the *RV* was composed before 3100¹.

Th. McEvilley claims to be undogmatic but, in fact, is no less prejudiced in favour of Egypt and Mesopotamia.² Many of his parallels and correlations are highly dubious and many of the things he presents as facts are downright wrong. He devotes many pages to prove that some Mesopotamian iconographic material was related to *kuṇḍalīnī* yoga and therefore influenced the development of this tradition in India (and Greece). He gives many reproductions (pp 216-9, 246-273) some of which have similarities. On p 246, a seal impression shows a "Gilgamesh

- 1 Throughout this study the dates are BCE except where stated as CE. The date after the name of an author in brackets denotes a modern date, of course. E.g. (McIntosh 2002: 24, 28) – where 2002 is the year of the publication and the other numbers denote pages in that publication.

I take it for granted that the ancient Indoaryans are indigenous from at least the early 5th millennium BC and that the (bulk of the) *RV* was, as the native tradition has it, compiled just before 3102, which marked the onset of the Kali-yuga (Kazanas 2002 and 2003b) although there may have been (Witzel 1995) later redactions, insertions and other modifications of the original text.

Here only a brief summary can be given of the evidence discussed at length elsewhere.

All archaeologists stress the uninterrupted continuity of culture from Mergarh (c 7000) to late Harappan and down to the Persian encroaches after 600 BC. There is only a break in the skeletal record between c 6000-4500 BC (references in Kazanas 2002: 287). There is no mention of any invasion/migration in the early Vedic texts (unlike texts in other Indo-European branches like Iranian, Greek, Celtic, Scandinavian). The *rigvedic* people may have practised some nomad pastoralism but they also lived in settled communities: they had agriculture (*RV* IV, 57; VIII, 91, 5; etc) and animal-husbandry of cattle, sheep, and goat and horse (*RV* *passim*); they had weaving (I, 134, 4; II, 3, 6; VI, 9, 2-3; etc); also metallurgy and smithies (IV, 2, 17; V, 9, 5; IX, 112, 2; etc); they also seemed to engage in maritime trade (I, 25, 7; 56, 2; etc).

The *RV* is pre-Harappan. It knows no urban structures or ruins thereof; no rice *vṛīhi*, no cotton *karpāsa*, no brick *istakā*, no fixed fire-hearths/altars – all elements present in the late Indus-Sarasvatī culture and post-Rigvedic texts. The river Sarasvatī dried definitely c 1900 BC, according to geological and palaeoenvironmental studies (Rao 1991: 77-9; Ailichins 1997: 117). However, G. Possehl concludes that it could have reached the ocean only before 3200 and more probably c 3800 (1998; so also Francfort 1992). So those hymns that praise the Sarasvatī as "best river *naditamā*" (II, 41, 16), having the Ārya tribes settled along its bank (VI, 61, 8-10, 12) or flowing to the ocean (VII, 95, 2) must belong to a period before 3200 and perhaps 3800! By the *AV* the great river seems to have diminished; for in this text the name tends to denote the goddess rather than the terrestrial river (Ludvik 2000). Then, there are the archaeoastronomical papers of B.N. Achar who find that some references place the *Satapatha Brāhmaṇa* c 3000-2900 BC, the *Jyotiṣa Vedāṅga* c 1800 and the early core of the *Mahābhārata* 3067 (Kazanas 2002: 293-7); the epic received the form in which we now have it at c 100 BC -200 CE after many accretions and some revisions and rearrangements over the intervening centuries. Since the *RV* is linguistically many centuries older than the epic it must be assigned to a date much earlier than 3067.

2. He writes: "Indian religion and thought were in a state of meltdown... The Aryan establishment admitted tribal influences from Munda and Dravidian peoples along with renewed Near Eastern influences" (p 112). This is dogmatic and entirely hypothetical. "The transition from Jain missionaries to proto-Orphics [in Greece], such as, perhaps, Pherecydes, is still largely invisible (except for glimpses such as Democedes returning to Croton [in South Italy, from the Persian Court]), though it must have occurred" (p 204; but see *GPA* §29). This too is dogmatic. A final example is on "the revisionist Indian view" which seeks to reconstruct ancient Indian history: "This whole pan-Indian or Indocentric construction may be viewed as a postcolonial reversal... if those hands seem willful in their handling of the evidence, the reversal will only tend to reinforce the colonists' self-righteous sense that there was real need for them to take charge in the first place" (p 660). No further comment – except that McEvilley himself rather displays repeatedly willfulness in (mis-)representing and (mis-)handling of the evidence, as will be seen hereafter.

figure holding two lions" (and p 274: "the Nude Hero... like the Gilgamesh icon grasping lions in a conquered position")³ but while he gives the well-known Mohenjodaro seal of the Nude figure holding off two tigers (p 249), this being similar to the Mesopotamian "Gilgamesh figure", he does not give the rock painting of the Nude hero from India c4000 or before (Kak 2001b), which shows that the Mohenjodaro seal belongs to the Indic native tradition. On p 247, a Sumerian seal shows three pairs of caparisoned goat-like animals with enormous horns; the two pairs are leaping from above down to a tree on a mound while the central and larger pair flank the mound with the tree and step on the lower part with their front hooves. This is supposed to be similar to (and perhaps the inspiration for) a Mohenjo-Daro seal showing three human figures with different objects and on the left, under a big tree, two goats with upraised forelegs against what could be another goat-like figure or something else, but certainly not a tree. Other seals from the two cultures are decidedly dissimilar or irrelevant. On p 255 a photo shows three Mesopotamian human bearded figurines: all three have their hands crossed and resting on their chest; one of them wears a headpiece with two horns and has hooves but no tail. This "bull-man", again, is supposed to be similar (and perhaps the inspiration for) the figure of a "bull-man" in two different ISC plaques where the figure in each has two horns, also a long tail, possible hooves in one, feet in the other, and one arm hanging down and the other upraised: except for the horns, the figures are utterly dissimilar. In any case, all these comparisons do not really mean very much since they are unaccompanied by a text that would explain their true significance. We can assume that the Harappans borrowed these designs. People borrow designs, even ugly ones, all the time. But there is no bull-man myth (like the Greek minotaur) nor goat myth in Mesopotamia, nor Gilgamesh-like hero subduing two lions in the Vedic texts: thus these icons, dissimilar as they are in many cases, do not mean much. Unless we know the function of, and the import of the writing on, the ISC seals there is very little that can be usefully said (though much can be and is being conjectured to no useful purpose). McEvelley goes further and makes much out of the Ishtar-rosette and the ISC eight-petalled rosette linking them with the lotus-flower (pp 253-4); but, in this case too, unlike Egypt and Saptasindhu, Mesopotamia has no myth for a lotus-born one. Besides, since India had several eight-petalled flowers and the lotus, why should the natives copy such a design from Sumer and not make it themselves?... Thus all this iconography is almost valueless.

3. One yardstick in the comparisons that follow is the IE (=IndoEuropean) nature of some of the motifs examined. If a motif in the Veda is also Indo-European, i.e. it is found in the ancient culture of Greek, Slavonic, Baltic, Germanic or Celtic peoples, then we must take it that it is inherited in (or native to) India and not borrowed from the Near East. In the absence of the definite IE character of a motif, a second criterion will be the inner constitution of the motif: if this comprises native traditional elements and has no exclusively NE (=Near Eastern) elements, then it must be native to India and not borrowed. The IE criterion is fairly sound and secure. It is certain that there were no contacts between India and Greece, Gaul and Germania before the 6th century. McEvelley (following others) claims that there were channels of transmission from India to Greece through the Persian court in the 6th cent (see his ch 1). This is highly improbable because the philosophical or mythological ideas that are supposed to have travelled via this route (monism, reincarnation, the 5 elements, the Orpheus figure, etc) are not found in Persian or other NE texts. This issue is examined in detail in Kazanas 2003c. Therefore if a legend or a mythological motif is found in the Veda and in any of the IE traditions in the West (Greek, Celtic, Germanic, etc) then this item is PIE (=Proto-Indo-European) and belongs to the early 5th millennium at the very latest; and I take this period as the lower limit because it is the latest date by which the Aryans might have entered Saptasindhu, if that (see n 2 above). All such themes

3. There are other figures also on this: a scorpion, a bearded man holding a staff, a boat with three human figures and fish beneath it – illustrating perhaps the Flood motif.

and motifs in the Veda are inherited, not created and developed under foreign influences. In all such cases, if we insist on postulating influences, the influence would run from Saptasindhu westward to the NE.

However, although a ritual like the horse-sacrifice is, I shall demonstrate, most probably a loan by Mesopotamia from Saptasindhu, I do not disregard the very real possibility that there was, c 6000 or much earlier, a culture with many common features among the peoples of the eastern European plains, the Balkans, the Pontic steppes, Anatolia, the Near East, Iran and Saptasindhu. I have elsewhere (Kazanas 2003b) accepted the possibility that the IE homeland was a continuum spreading from Saptasindhu to the Pontic steppes. Even if we assume that in the beginning of the 6th millennium or earlier, the IE and NE cultures were substantially different in language, religion and social customs, it is not impossible that they shared some motifs and themes, inherited from an earlier culture we can no longer reconstruct fully but can detect in elements found here and there in different later cultures.

Comparisons

4. The horse-sacrifice is our first test-case. In Mesopotamia a horse-sacrifice is documented in a liturgical text repeatedly mentioning god Marduk and belonging to the Babylonian ritual related to gods Shamash and Adad (Albright & Dupont 1934). One interesting detail of this ritual is that the priest whispers an incantation "into the left ear of the horse" before its immolation. Another one is the presence of seven spots like the Pleiades, on the forefront of the sacrificial animal (ibid 119-120). The lowest terminus for this text is c800 and the upper c2000 (ibid 117-8). Indeed, the horse came to Mesopotamia from Iran a little before 2000 but was put to common use c1600 (Saggs 1989: 213-4). Before this, the Mesopotamians used asses for their carts and the text mentions the ass as well.⁴

The corresponding Vedic ritual *asvamedha* is abundantly documented and much commented upon by ancient scholiasts and modern scholars. C. Watkins wrote "We may legitimately look upon the Asvamedha as the principal Indo-European kingship ritual" (2001: 265). One of the minor features in the Vedic horse-sacrifice is the whispering by the priest to the horse's right ear. Here too, the horse must have the seven spots/stars on its foreneck (*Satapatha Br* XIII, 4, 2, 1-4). Full if varied descriptions of this lengthy and complex rite are found in the *SB* Book XIII, in the *VS* Bks XXII-XXV, in the *TS* spread through Bks IV to VII, and in other texts.⁵ Evidence for a simpler, perhaps, ritual is found in *RV* I 162 and 163, two hymns praising the horse, and in III 53, 11 in which king Sudās's horses are to be let loose to wander and thus win wealth for him. (Part of this ritual was to let a royal stallion wander freely for a year in neighbouring countries; the king and a band of 400 warriors followed it, claimed the regions through which the horse passed, and if challenged gave battle.)

Unlike the NE cultures, a rich horse mythology is attested in almost all the IE traditions (except the Hittites) and some form of horse-sacrifice was performed among the Greek, Roman, Celtic and Nordic peoples (Anderson 1999). One frequent myth, among others, is that of a god taking on the form of a horse for various reasons. For example, in Vedic mythology Saranyū, the daughter of god Tvaṣṭr, marries Vivasvant, the Sungod, then disappears and takes the form of a mare; her husband becomes a stallion, mates with her and as a result the *Asvins* are born (*RV* X, 17, 1-2; *Bṛhaddevatā* VI, 162 ff). We find a similar tale in Greece when goddess Demeter

4. Albright and Dupont (116-7). They cite also Sir Flinders Petrie who found horses buried with humans in Giza, Egypt, from the 16th cent (pp 113-4). The horse came to Egypt in the 17th cent; the Egyptians had no horse mythology of any kind. Thus, obviously, such finds can hardly count as horse-sacrifices in the sense discussed here.

5. Abbreviations. *AB* = *Aitareya Brāhmaṇa*; *AV* = *Atharvaveda*; *MB* = *Mahābhārata*; *PIE* Proto-Indo-European; *SB* = *Satapatha Brāhmaṇa*; *TS* = *Taittiriya Saṃhitā*; *V* = Vedic; *VS* = *Vājasaneyi Saṃhitā*;

became a mare to avoid the harassment of Poseidon, god of the sea, but he became a stallion and mated with her on the plains of Arcadia; as a result were born Areion, a noble horse with black mane, and a girl, and Demeter came to be worshipped in Arcadia as Demeter *Ἐπιπύς* *Erinus* (= *saranyū*)! The story is in Pausanias VIII 25, 5). A slightly different myth appears among the Scandinavians when Loki, the god of tricks and transformations, becomes a mare to attract from work the giant-mason's stallion Svadilfari; as a result is born Sleipnir, a horse with eight legs, the swiftest animal in the world, which is given to Odin, king of the gods (*Edda* p 35-6; Crossley-Holland 1993: 11-14). Surely, it would be absurd to claim that the horse-sacrifice spread from Mesopotamia to all these IE-speaking regions and that, then, each one of them developed almost identical horse-mythologems.

In India, the wild horse is present from c 17000 and there is evidence for its domestication in the Ganges basin c 5000 and in the ISC c 2400 (Kazanas 2003b; Chakrabarti 1999; Sharma 1980). Consequently there is no question of the Veda being indebted to Babylon. Nor can it be claimed that this rite descended from a remote common cultural background since the horse did not come to Mesopotamia much before 2000. All that can be said is that it was instituted in Babylon c 2000-1600 after the importation of the horse and Marduk's rise to preeminence c 1800-1600; the Babylonians decided to add this noble creature to the animals they had been using for sacrifice and so enhance the nobility of their own (new) chief god(s). Albright and Dupont mention several Indo-Mesopotamian affinities but, above all, the whispering to the horse's ear and the seven spots/stars on its front are details strongly suggestive of borrowing by the Mesopotamians.

Now let us turn to mythological test-cases.

5. ~~The eagle flies to heaven~~ is our second test-case.

In Mesopotamia we find two legends with main theme the removal from heaven of some valuable material. The first is about a shepherd-king, Etana, who saves an eagle from death, then with the bird's aid ascends to heaven to take 'the plant of birth' so as to obtain a son. The second is about a lion-headed eagle, Anzu, a demonic being that steals the Tablet of Destinies from god Enlil. Both are translated from their Old Babylonian (and later) versions in Dalley's *MM* 189-202 and 203-227. There is no Sumerian version. Only some Akkadian seals show the ascent of a man on an eagle's back from c 2390-2249 (*MM* 189; McCall 1992: 63); whether these depict Etana's adventure is not known. If so, the legend makes its first demonstrable appearance c 2400. We shall be dealing only with the Etana legend. The Anzu myth has some relevance since it has been thought that the Tablet of Destinies may originally have been plants, as surmised by H. Cornford (cited by Knipe 1967: 344 & n 77); otherwise, the tale is more of a panegyric for god Ninurta (who overcame Anzu) and belongs rather to the short-epic genre "god-vanquishes-monster".

The Etana legend is more complex in that it begins with the friendship of the eagle living on the branches of a tree and a serpent having its nest at the roots. Although the two have a compact to help each other sharing their catch, one day the eagle eats up the serpent's young ones. The grief-stricken serpent invokes Shamash for retribution and he gives good advice on how the serpent might take revenge. Indeed, the serpent captures the eagle, cuts off its wings and casts it into a pit. The eagle now prays to Shamash for help; he relents and sends Etana (who wants "the plant of birth" so that his wife can have a child) to aid the moribund bird. Etana nurses the eagle back to health and then the bird carries him up to the gates of heaven in three stages. There are variants including a fall and a second ascent but the text breaks off. It is assumed that, since in the King list Etana is succeeded by a son, he and the eagle obtained the fertility plant.

Of some significance are the three stages of the ascent. Scholars find much symbolism in this legend: the Tree of Life, the serpent/earth/darkness and the eagle/sky/light and so on, all related to IE motifs and all noted by D M Knipe (1967 *passim*). However, as all this is imported by modern scholars I shall ignore it. To me it seems that the legend is made up of two discrete tales fused together⁶. I see no organic connection between the serpent and the Etana ascent: the eagle eats the serpent's young ones out of wickedness, so it is no angelic creature. But the third stage of the ascent has close affinity with the third heaven or the third summit where the soma-plant is in the corresponding Vedic myth.

6. In the Indian epic *Rāmāyaṇa* Bk III ch 35, the chief of birds, Garuḍa, destroys the *niṣādas*, taken by Knipe to be serpents (p 348) then flies up to heaven for *amṛta*, the elixir of life. If the *niṣādas* are serpents (something by no means certain) then Knipe is right in seeing here a parallel with the Etana legend even though Garuḍa carries no man to heaven. This brief episode is not strictly related to the main plot, so it may be an old legend that has been grafted onto the epic like so many others.

An older version appears in the Saṃhitās and Brāhmaṇas (*SB* III 2, 4 and 6, 2; *AB* III 25-6) with Kadrū and Suparṇī (a female eagle). *TS* VI 1, 6 says that Kadrū and Suparṇī had a dispute about each other's form, Kadrū won and obliged Suparṇī to go to heaven and fetch Soma saying "For this parents rear children: in the third heaven from here is the Soma; fetch it, and by it buy your release". The Jagatī metre first, then the Trīṣṭubh (here presented as offspring of Suparṇī) fly up but fail to obtain the Soma; finally the Gāyatrī succeeds.⁷ *AB* III 26 contains additional information. Here, as in the *SB* passages, the gods desire the Soma and send successively the three metres to fetch it, but unlike the *SB* text, there is no mention of Kadrū and Suparṇī, who begets the metres. In any case, the Gāyatrī metre succeeds and having terrified the guardians takes the Soma; but on her return flight, Kṛṣānu, one of the guardians, hits her with an arrow and cuts off the nail of her left foot. This incident links up clearly with the yet older but fragmentary version in the *RV*.

RV IX 86, 27 says that Soma is 'on the third ridge in the bright realm of the sky'. It is there presumably that the falcon/eagle flies to fetch the Soma in *RV* hymns IV 26 and 27. I shall not indulge here in needless speculation about who speaks what lines in these hymns (see Knipe 329-337 for various opinions) because this would not help significantly our discussion. Some scholars translate hymn 27 as though stanzas 3 and 4 say that the bird bore aloft Indra as well (Knipe 331; O' Flaherty 1981: 12-130). There might have been a legend in which Indra was a human and was taken up to heaven and so on, since he became immortal through *tapas* 'ascetic penance' (*RV* X 167, 1); but here neither R. Griffith (1889) nor K. Geldner (1951-7) translate in this manner, and rightly so, since the text does not warrant it. The bird *syena* 'falcon/eagle' or *suparṇa* 'of fine feathers' or 'of strong-wings' returns with the soma but Kṛṣānu shoots an arrow and the bird loses a feather. And this is all we have in the *RV*. The subsequent tales (Kadrū and Suparṇī, etc) may not be the original legend but elaborations attempting to reconstruct it or fill

6. McCall is of the same opinion and cites the short Sumerian story of Gilgamesh and the Halub tree on which live an eagle and a snake (p 63).

7. Having surveyed all the secondary literature about this tale and its variants in the IE traditions, Knipe saw here "a quite transparent form of the seasonal light-darkness-conflict with Kadrū, the earth, the serpent of darkness ... and ... the falcon of light, the heaven, Suparṇī" (345). He may be right, but the text says only *iyam* 'this one' for Kadrū and *asau* 'that one' for Suparṇī. In *SB* III 6, 2, 2 Kadrū is again said to be *iyam* but Suparṇī is identified with *Vāc* 'Speech'. It is moreover difficult to see how Suparṇī would fetch the soma from heaven if she herself is heaven. However, there is mention of Arbuda Kādraveya, a serpent-seer and mantra-maker (*AB* VI 1; *KB* XXIX 1; *SB* XIII 4, 3, 9) so Kadrū may have been connected with serpents.

gaps; but they may be original and the *RV* version either omitted these details or did not know of them.

7. The affinities with the Etana legend are obvious. But the Vedic legend has parallels or affinities in the other IE branches. Knipe gives many references for Avestan, Greek, Scandinavian and Celtic myths. In Iran the *saēna* bird (=V *syena*) descends from heaven bringing the *haoma* (=V *soma*). In Greece Zeus is connected with the eagle, who bears nectar, and he himself, in the guise of an eagle, abducts young Ganymedes and takes him to Olympus to become the gods' cupbearer. In Scandinavia Odin, again in the guise of an eagle, steals giant Suttung's mead (= V *madhu* 'sweet, intoxicating drink'), here not from heaven but from within a rocky mountain; be it noted that in Scandinavia the Guardian Tree (the *axis mundi* or Tree of Life) is a wholly separate motif having a dragon gnawing at its root and an eagle at its top (Crossley-Holland 1993: xxiii-xxiv). In Ireland, Llew is killed by a javelin, ascends in the sky as an eagle and is eventually restored to life; he is the "bright hero", probably derived from the older Britannic god of light, Lugh (Green 1996: 34-5).⁸

Now, apart from the antiquity of the Vedic literature, we have the presence of the same motif in all these IE traditions in all these different areas from Asia to northwestern Europe. We must assume therefore that this legend belongs to the PIE period. The oldest version in the *RV* is a simple one: it does not involve (or even hint at) any tree nor enmity between the *syena* and a serpent; unlike the Mesopotamian eagle, the *syena* is not a wicked but a most noble creature; a tree with two birds on its branches appears quite separately (as in the Scandinavian tradition) in *RV* I, 164, 20-22. Consequently the Vedic tradition did not borrow this myth from Mesopotamia. It may be that the Mesopotamians borrowed the myth from India and combined it with their own legend(s).

8. The 7 Sages is a third case.⁹

Stephanie Dalley, the well-known assyriologist, states (1998) that the Mesopotamian tradition of the 7 Sages which is linked to the Flood has "no foreign elements" and "there is no reason to doubt that it is indigenous" (p 16). She examines similar traditions in Egypt (where the 7 sages appear in the very late period and could have come from anywhere) and other NE cultures and concludes that this "essential concept", that is "civilization brought by sages, was diffused from Mesopotamia" (ibid). She says nothing about the tradition in India so we don't know if she considers this also to be similarly diffused. She mentions the trade and contacts generally between the ISC (or Indus Valley, as she calls it) and Mesopotamia, then makes this statement: "These were the means, whether by land or sea, by which Mesopotamian culture, notably the idea of writing, sealing and monumental brick architecture, became known to the populous regions of western Pakistan, and seem to have influenced the rise of urban civilization in the Indus Valley, where writing appears in archaeological remains around 2000 BC" (1998: 14). Here we find two errors. First, the ISC was, even in 1996 when Dalley was probably writing her study, known to be not confined to "western Pakistan" but to cover much of Punjab and Gujarat in India. Second, even in 1996 it was known that writing in the ISC had begun by the mature phase c 2600! A third error comes a little later when she states that the study of grammar and syntax in Mesopotamia had started some 1500 years before Pāṇini himself who "was once thought to be the earliest grammarian in the world" (p 18). Now many people may have thought this but only through ignorance of the fact that Pāṇini himself mentions at least 10 grammarians

8. Knipe cites also the theft of the sacred apples in Scandinavian and Irish legends; in both is involved the flight of an eagle/hawk (338-9). In Greece Hercules steals the apples of the Hesperides, but here no bird is involved. These legends also may be variants of the same theme.

9. A full examination of this subject of 7 Sages in Indic texts will be found in Mitchener (1982) who follows the AIT. Here I shall be selective.

(Gārgya, Śākalya et al) who preceded him. Thus he could not be the “earliest grammarian”. Besides, Pāṇini may have belonged to an era much earlier than the one given by the AIT chronologies.

Apart from such factual slips, it is obvious that Dalley, whose work in her field I respect and consult constantly, accepts fully the AIT and the chronologies linked with it in the hitherto mainstream view of academic Indology. As indicated in n 1 above, this view should no longer be tenable. With regard to Mesopotamian–Vedic relations we should take into account at least two simple but very instructive facts. First, when in the 24th century king Sargon of Agade refers to the ships in his harbour (Saggs 1995: 40, 68) the ships are those from other countries, that is Dilmun, Magan and Meluhha (ie, the ISC: Dalley 1998: 14). *If Sargon had a mighty ocean-going fleet to trade with other countries he would have been boasting of Mesopotamian ships reaching, or returning from, foreign harbours.* Second, in the Mesopotamian text *Enmerkar and the Lord of Aratta* (Kramer 1952) it is king Enmerkar of Uruk who sends a messenger and merchants (by land) to distant Aratta (a country north-west of Punjab: see §99, below) to obtain goods (not the other way round). So I would think that strength and influence lay as much at least (if not more) with the ISC as with Mesopotamia.

9. The 7 Seers (ṛṣis, priests, fathers), are amply attested in the *RV* (I, 164, 34; III, 31, 5; IV, 2, 15 and 42, 8; VI, 22, 2; X, 63, 7; etc). No hymn says who they are or why they are singled out from among the many other ṛṣis. In IV, 42, 8 they are *asmākam pitāras* ‘our fathers’; in X, 81, 4 and 82, 2-4 the *saptarṣi-* assist Viśvakarman ‘the All-creator’ to fashion the worlds through sacrifice. In X, 109, 4 they again act in concert with the gods and practise *tapas* and in X, 130, 5-7 they rise to the divine condition *daivya* through knowledge of measure and ritual.

Their names we find in *SB* XIV 5, 2, 6 and in *Bṛhadāraṇyaka Up* II 2, 6: Gotama, Bharadvāja, Viśvāmitra, Jamadagni, Vasiṣṭha, Kaśyapa and Atri. In the same *SB* (II 1, 2, 4) they are said to be the 7 stars in the nakṣatra of the Great Bear – and with them will (later) be their, or Vasiṣṭha’s, wife Arundhatī. Since the later Vedic texts find it necessary to name them (unlike the *RV*), we must suppose that the legend of the 7 ṛṣis was no longer widely known and this implies a lapse of a very long period. So the legend must be very very old. (Lists with different names are given in Mitchener 1982.)

Apart from the concerted group-action of the Seven, each ṛṣi performs miraculous deeds on his own, too. Thus Viśvāmitra stops the flow of two rivers in *RV* III 33 and 53. Vasiṣṭha calls upon Indra to aid king Sudās defeat his numerous foes (VII 18) and travels with Varuṇa in the god’s boat (VII 88). Atri with his “fourth sacred-utterance *brāhman*” discovered the sun, placed it in the sky and abolished demon Svarbhānu’s black arts (V 40). Kaśyapa engenders all creatures in *SB* (VII 5, 1, 1). Agastya, again, who is also one of the Seven (or eight) in other accounts, makes the Vindhya mountains lower themselves (Mitchener 1982: 127) and inspires the Vedic culture in South India (Frawley 1991: 134, 285; Mitchener, 183-4) being one of the Sages, or Agatīyanar (=sage Agastya) of the First Sangam =Academy or Assembly for promoting knowledge (Hancock 2002: 248-9).

The 7 Sages are found also in some other IE traditions. The Greeks had their 7 *sophoi* or *sophistai* ‘wise men’ (Herodotos I, 29; Isocrates 15, 235). These became actual historical figures like Thales, the philosopher of Miletus, Chilon of Sparta, Solon of Athens and so on.¹⁰ The Slavic tradition has 7 judges attending the Sungod as he traverses the sky: they are thought by modern scholars to represent the 7 planets, but as judges they watch and assess men’s deeds (Simonov 1997: 14).¹¹

10. Plato’s *Protagoras* 343A has a list, but other writers give different lists including Pythagoras or Cretan Epimenides and excluding others. The total comes to 17 of them, as Diogenes Laertius records, (I, 40-2.)

11. I ignore the Roman tradition with its *septem-viri epulones* (Dio Cassius 48, 32; et al): they were a college of 7 priests conducting sacrificial banquets. But at an early period these were 3 in number and at later periods they were as many as 10. So this sounds like an independent development.

The Greeks had also the tradition of the 7 Argive Kings who perhaps in pre-Iliad times attacked Thebes and that of the 7 Sleeping men of Ephesos (Cox 1882: 98, 225). This persistence on 7 wise men or warriors indicates that the tradition is rooted back in the PIE culture. The legend's presence in the PIE period confirms thus its great antiquity, in the Vedic Tradition.

10. In the Mesopotamian mythology the Seven Seers appear as the 7 Craftsmen *ummiānu* or Counsellors *muntalkū* or the divine sages *apkallu*. According to the myth in *Erra and Ishum* (MM 286) they were born of King Skygod Anu and Earth. The god of freshwaters and wisdom, Ea (Sumerian Enki), sent them among the people (in the form of *purādu* 'fish, carp?') to teach them the arts and crafts. Each one was sent separately during the reign of an antediluvian king. However, they angered Ea and he dispatched them back to the underworld of freshwaters Apsu for ever. We must note here that some texts mention the 7 *Sebitti* and "their sister Narundi", like the 7 *ṛṣis* and Arundhati (De Santillana 1977: 301, n 37). Note that just as Vedic lore has 7 demons (RV VIII 96, 16), so the Mesopotamian texts have the 7 demonic forces, sometimes described as gods (eg *Erra and Ishum*); these latter are connected with the 7 Pleiades (MM 327 "Sebitti", offspring of Anu and Earth).

The first one to embark on his civilising mission was Adapa, known also as Uan. This last name appears later as "Oannes" in the *Babylonian History* written in Greek by the Chaldean scholar Berossos c 300 BC (Bottéro 1992: 246ff). According to Berossos, Oannes was "an extraordinary monster": its whole body was "that of a fish and under the head was a second one and also feet similar to those of a man"; he taught them writing, science, law, geometry and the building of temples and cities. (For more details see Verbrugghe & Wickersham 1999.) Quite a different tale is told about 1000 years earlier c 1400 in the poem *Adapa* (MM 182-8). Adapa/Uan was a priest of Ea in Eridu, traditionally the earliest Mesopotamian city and the first one to receive kingship from the gods. He was created "extra-wise" *atrahasis* (also the name of the survivor of the flood) by Ea "as a protecting spirit (?) among mankind" but not immortal (MM 185). He was a fisherman as well and one day, when out at sea, he broke the wing of the South Wind and had to go to heaven to Anu, King of the gods. Ea advised him not to eat or drink anything there because it would mean death. Adapa indeed refused the bread and water that Anu offered but as they were the bread and water of eternal life, Adapa lost the opportunity to become immortal and was sent back to earth (and later presumably back to the underground freshwaters Apsu). The fish-like men are quite evident in Assyrian iconography (Black & Green, 35; Hancock, 1995: 86).

Unlike the Vedic seers who rose to divinity and immortality and functioned in harmony with gods, Adapa seems to be at odds with the gods; even the god he serves, Ea, apparently tricks him and makes him lose immortality. The extant text has nothing to show how Adapa was a "protecting spirit" or how he civilized mankind. Perhaps there were other stories, now lost to us, and one of them reached Berossos. Here, in Berossos's narrative, it is interesting that Oannes (=Uan-Adapa) comes out of the sea in a combined fish-man form and brings writing and the other arts of civilisation. This for me has two significant aspects: (a) The Mesopotamians obviously believed, in one of their traditions at least, that writing, geometry and so on came from abroad by a sea-route: this is one significance of the fish-monster Oannes rising out of the sea. (b) The fish-side of Oannes is probably connected with the fish that pulled and saved Manu's boat/ark in the flood (see next §11). That Adapa-Uan is a fisherman is quite natural in the conditions of south Mesopotamia. But there is nothing in the extant poem to show how he was "a protecting spirit" among men.

It is possible that the 7 Sages formed a native Mesopotamian theme. But the plain fact is that apart from Adapa/Uan, we don't hear much about any of the others anywhere in the texts – unless Atrahasis himself, appearing also as Utnapishtim, is one of them as well. Either there was legendry that was lost or the Mesopotamians borrowed the theme from elsewhere but did not develop it further. In any event, the rich lore of the Vedic 7 Seers owes nothing to Mesopotamia.

11. **The legend of the Flood** is closely linked with the 7 Sages and forms a fourth test-case.

The Vedic legend of the deluge is first related in *SB* I 8, 1, 1-10 (or *Kāṇva*-text II 7, 3, 1-8). This version is very simple, saying how a small fish sought Manu's protection, then warned him of the impending flood *augha* and later actually pulled his boat to safety; afterwards Manu made a sacrificial oblation from which arose *Īā* and through her he engendered the new generation of men. The spot on the mountain where Manu got off is called "Manu's descent" *manor-avasarpānam*. The legend itself is not found in the *RV* but some related elements can be traced there. One *Atharvaveda* hymn mentions "the spot where the boat glided down, on the peak of the Himalayas" (*AVXX* 39, 8). In the *RV* several hymns call Manu "our father" (I 80, 16; II 33, 13; etc) and regard him as the prototype of sacrificers: eg "like Manu we shall establish the sacrificial fire" I 44, 11; "as with priestly Manu's oblations" I 76, 5; also V 21, 1; etc. In X 63, 7 Manu with 7 priests is said to offer the very first oblation. All these elements, except *Īā*, are drawn together (even the horn of the fish) in the *MB* Bk III 185, 1-54: this is still a simple, brief narrative with the additional information that the fish-saviour was god *Brahmā*, that it pulled the boat through the flood for many years, that Manu was saved together with the Seven Seers and that he carried on the boat "the seeds of all creatures" so that he could create the worlds anew. (The legend is found of course in the *Purāṇas* also, the fish being *Viṣṇu*'s first *avatāra* 'incarnation in this world'.)

All this suggests a simple and very old legend which at some stage divided into two and appeared with small variations: one version with *Īā* in the *SB*, the other with the 7 Seers and the seeds in the *MB*. There may well have been floods of varied magnitude in India and other places with the melting of the ice after c 16000 which produced heavy rainfall, swollen rivers and rise of the sea-level. But it is most improbable that these floods, however severe, caused the total annihilation of mankind and other creatures as is said in the legend. Consequently we must take it that the legend comes from a much earlier era or at least refers to a much earlier cataclysm that indeed destroyed mankind completely and a new start had to be made. While not denying the fact that real floods may have occurred in the past, some writers stress a different aspect, namely that the legend is symbolic of the collapse of ancient cultures or civilizations and of their regeneration (eg Ouspensky 1953: 56-7). Several others discuss different facets of Flood myths in

A Dundes (ed) 1988.¹²

12. When we turn to the Near East we find two very similar yet very different legends. One is the story of Noah in the Judaic *Old Testament* (*Genesis* 6-8). The other is that of *Atrahasis* in the Old Babylonian version of c1700 (*MM* 3ff) and that of Utnapishtim (or Uta-naish-tim = Atrahasis) in the epic *Gilgamesh* of about the same period (*MM* 109-114: Tablet XI, i-iv): the two Mesopotamian stories are but for some minor variants quite similar. The Vedic and the NE legends differ in several respects. One important difference is that in the Vedic tale the deluge comes in the natural order of things as one big cycle of world-history ends and another begins, while in the NE ones the cataclysm is a means deliberately chosen by God(s) to punish bothersome/iniquitous mankind.

13. Of the two Mesopotamian accounts the one in *Gilgamesh* is much the shorter. The flood-story is related by Utnapishtim himself to Gilgamesh ostensibly to explain how he had been

12. G Hancock discusses (2002) in detail the probability of floods inundating and submerging large coastal areas in the Mediterranean, the Persian Gulf, the Gulf of Cambay (southwest Gujarat, northwest of Mumbai) and the eastern part of Tamil Nadu, Japan and elsewhere, at c 13000, c 9000 and c 6000. Inundations occurred earlier too, after the end of the Last Glacial Maximum c 15000, but these were mild, as were also those that arose with the Flandrian transgression c 3500. During the devastating deluges of c 13000, 9000 and 6000, cities and regions with an older civilization of megalithic structures, knowledge of agriculture, astronomy and even oceanic navigation, sunk under the abruptly rising sea-level. But wise men managed to save (some of) the arts and sciences and started afresh at other safe locations with their preserved store of knowledge. Hancock thinks the culture that started at Mehrgarh c 7000 with a ready knowledge of agriculture, animal-domestication and building (but not ceramics) is such a case – from an earlier Vedic civilization now sunk in the gulf of Cambay (2002: 169-197). D Frawley sketched a similar idea in his own study 2001: 30-1. Hancock provides an enormous amount of scientific detail in support of his thesis utilizing the studies of many experts in oceanography, palaeoclimatology, geology etc: eg Emiliani (2000), Oppenheimer (1998), Straus (et al 1996), Vitaliano (1977), Wilson (et al 2000) and many others, and the good services of Dr Glenn Milne and his team at Durham University's Dept of Geology where with a computer-programme they can calculate sea-level changes at different periods (2002: 22, 150, 263 etc). Indeed, in recent years ruins and artefacts have been found on the seafloor in the Gulf of Cambay.

I agree with the general idea both in Frawley and Hancock: it is likely that many Flood legends in different parts of the world arose from the inundations mentioned above and chiefly, of course, the last one c 6000. But I suspect that the meagre material on Manu, the 7 ṛṣis and the Flood in Vedic texts is very much older than these two (and other) authors think. The *SB* and *MB* texts agree in that all creatures are destroyed except Manu (and the 7 Seers in *MB*). Such a universal destruction occurs not at the end of one yuga but of a mahāyuga (or a manvantara or a kalpa). Now tradition says that the Kaliyuga begins at 3102. If we take the number of years given in *Manusmṛti* I, 68ff (not the Puranic hundreds of thousands) we have for Kṛtayuga 4800, for Tretā 3600 and Dvāpara 2400, ie a total of 10800. This plus 3100 make 13900 for the end of the previous cycle and the beginning of the new. This corresponds approximately to the first date computed by Hancock, ie c 13000. But the other two floods were just as big and destructive at 9000 and 6000. All this does not seem very sensible. I suspect that the years in Manu are *divya* 'divine' and therefore correspond with the Puranic yugas (Kali 432000, etc), and that we are at present very much in the dawn of this Kaliyuga. Seeing the atrocities committed by the Nazis and other vicious regimes in the 20th century and the prevalent corruption which increases year by year, we can't possibly think that the Kaliyuga ended c1900 (3100-1200) and that we are now in a new Kṛtayuga that will end c 2900 CE (4800-1900)! Obviously this issue needs more detailed examination. Whatever be the case, my discussion of the Vedic-Mesopotamian relations c 3000 and after is not really affected.

made immortal by the gods after his survival and how difficult it would be now to gain immortality. The gods decide to send the deluge to destroy criminals and sinners (this is revealed at the end of the tale in Ea's words in Tablet iv) but Ea manages to pass a message to his servant Utnapishtim advising him to build a large ark and deceive his fellow citizens through double-talk about impending gifts/calamities; in this ark, which should have harmonious proportions, he should put "the seed of all living things". The construction of the boat and its dimensions are given at length, then Utnapishtim loads silver and gold, all the seed of living things, his kith and kin, cattle and wild beasts and "all kinds of craftsmen".

Here we must pause and note that the narrator is actually expanding and elaborating. The initial "seed of all things" (in i) now becomes in addition (in ii) silver and gold, kindred, domestic and wild animals and all kinds of craftsmen. Similarly the initial proportionate and harmonious dimensions become (in ii) actual measurements, 110 poles all round, 6 decks, various quantities of pitch, etc. *The narration seems to be trying to become a "realistic", entertaining and convincing story (and perhaps history) – not aware that it would be impossible in those days to construct a ship (with 6 decks!) that could contain all those people and all those domesticated and wild animals. If they had the seeds of all things, animals would have been unnecessary.*

Then came the deluge: neither version (in Dalley's translation) mentions explicitly "rain" but as we read of darkness descending, winds howling, storms and torrents we must assume there was heavy rain as well as swollen rivers and seas, the cataclysm lasting 7 days and nights. We are not told how the ark was navigated but it arrived at a mountain top and three birds were released in succession to ascertain whether the waters receded. Then Utnapishtim came out and made a sacrifice with "(essence of?) reeds, pine and myrtle" (MM 114). The gods smelt the fragrance and gathered there; they conferred immortality on him and his wife and sent them to dwell far off at the mouth of the rivers. Here ends the actual tale of the flood and we must suppose that the kith and kin and the various craftsmen continued to live as before with the transported silver and gold and animals. It is worth noting also that Enlil alone wants the flood, the other gods consent (though some don't like it) and Ea goes actually if indirectly against it.

Most of these details are found in *Atrahasis* too which is a much longer narrative with many more elements and events. It begins at a time before man's appearance when the gods did all the work and the lesser ones rebelled against the higher ones and mainly against Enlil. So the gods decided to create mankind to "bear the load of the gods" (MM 14-5). Men increased in number and clamour and the troubled gods sent disease and drought to contain them. This was repeated in 3 or 4 cycles of several centuries and every time Atrahasis, unaffected by all these centuries and diseases and death, interceded to his god Enki on behalf of humanity. Eventually (Tablet III in the Old Babylonian Version: MM 29-35), we have the tale of the deluge which does not seem to differ substantially from the one in *Gilgamesh*. There may have been differences but as many lines are damaged and unreadable while large gaps of 30 or 50 lines appear here and there, it is difficult to know precisely. Berossos writes that Xisuthros (=Atrahasis), his wife, daughter and pilot disappeared (went to heaven) but the others heard a voice from the sky telling them to go to Babylon, then rescue the writings with the arts and sciences hidden in Sippar (=the Eternal City) and disseminate them to the world.

Internal correlations and chronology.

14. The Judaic legend has many similarities with that of Mesopotamia, the most striking one being the fact that they are stories of a unique event, never to recur. The Judaic story differs from the Mesopotamian mainly in being narrated in a monotheistic tradition (*Gen* 6-8). God sees that man is very wicked and the earth filled with violence and corruption, so He wishes to destroy it through a deluge. But Noah is just and "walk[s] with God", so he is advised to make an ark 300x50x30 cubits and 3 decks. Before the heavy rains come, Noah places into the ark his own wife, his three sons and their wives and one pair of every living creature – animals, birds and serpents, clean and not clean. Here it is interesting to note that there is mention of the "seed" as well in the phrase "to keep seed alive upon the face of all the earth" (*ch* 7, 3). Another difference

is the emphasis given on the duration of the rains (40 days and nights) while the flood receded after 150 days. Noah too sacrifices (clean beast and fowl in contrast with the herbs of Atrahasis) and God smells the sweet fragrance and decides not to destroy the earth and the living creatures on it again. It is most interesting that in the next chapter God prohibits the eating of all flesh telling Noah he may eat only "green herbs" (Gen 9, 3-5).¹³

The Judaic story in *Genesis* may well derive from one or other version of the Mesopotamian legend. The Judaic tradition tells us in definite terms that Abraham and his tribe/clan left Ur of the Chaldees and came into the land of Canaan (*Genesis* 11, 31 and 12, 5-6). So the Hebrews could have brought with them (some of) the lore from Ur which was in South Mesopotamia, including the legend of the deluge, current perhaps before 1700 or even 2000. Egyptian sources refer to the Israelites c 1200 dwelling in Palestine (Dunstan 1998: 193). Chapters 3 to 6 of *Genesis* and 9 and following, have no repetitions, at least no more than the succession of generations requires in chapters 5, 10 and 11. But chapters 7 and 8 contain several repetitions, even from ch 6, as regards the pairs of animals and the flood of waters: this repetition is characteristic of the Mesopotamian texts. Dalley thinks it possible, moreover, that an abbreviation of (Utnapishtim=) (*Uta*-)*naish(tim)* might have been pronounced 'Noah' in Palestine (*MM* 2). Thus we can assume that the Judaic legend is a derivative. But it could also derive directly from a Vedic version. It has not the fish and the 7 Seers and does have the elaborate ark, the wives and kinsmen and the animals, which are all Mesopotamian elements; it also has the waters above the firmament and those under it (*Gen* 1, 6-10), like the Mesopotamian two kinds of waters. But it has monotheism too which is definitely not Mesopotamian, or NE at all. The Jews in Ur may have had direct contact with visiting Indoaryans: their monotheism may derive (with adjustments) from the One supreme Power, which is the creative Cause of All, recognised in the Veda and expressed superbly in the Creation Hymn, *RV* X 129. It may be, as some scholars believe (eg Frawley 1991: 268), that NE and Hebrew *El* and *Elohim* (plural) 'God(s)' derive from or are cognates with Vedic *id/i* and *Ilā* 'sacred food/speech' and 'offering' or 'creation' (see § 34). The Veda also knows of two kinds of waters, the celestial and the terrestrial. So the evidence is mixed and ambivalent. Then, creation proceeding from the divine Word is common both to the Veda and *Genesis* but unknown in Mesopotamian texts. Perhaps the Judaic tradition is an amalgam of elements from both cultures.

What of the Mesopotamian one? Scholars have now shown that Ziusidra (=Sumerian for Atrahasis) was a ruler of Shuruppak, as was his father Ubara-Tutu or Shuruppak (=the ancestor of the citizens in that city-kindgom), in the early 3rd millennium. Gilgamesh himself and his

13. E A Wallis Budge thinks that the Judaic legend of the Flood is derived from an Egyptian original (1988: 40) and indeed gives a summary of the Theban recension of the *Book of the Dead* which contains the legend. Thoth, or Djehuti, here being "the tongue of the Great God", says: "I am going to blot out everything which I have made. This earth shall enter into (ie be absorbed in) the watery abyss of NU (or NUNU) by means of a raging flood, and will become even as it was in primeval times I myself shall remain with OSIRIS, but I shall transform myself into a small serpent which can neither be apprehended nor seen" (ibid, 198). A "flood" is mentioned briefly in Spell 176 of the *Book of the Dead*.

It is possible that the Jews borrowed their legend from the Egyptians as Budge says, but the similarities are scanty. The Judaic account is much closer to the Mesopotamian legend. But when Budge was writing, c 1930 CE, the Mesopotamian literature was not fully known.

Another story dealing with a kind of flood is in no way similar. It is in the *Book of the Divine Cow* (c 1330) and describes how Re wants to kill off all mankind because they plot against him. The goddess Hathor begins, in the form of destructive Sakhmet, a ferocious lion-deity, to hunt people and slaughter them. Re changes his mind, colours lots of beer red and floods with it the whole region. The goddess sees all this "blood", drinks it avidly, gets intoxicated and forgets the extermination of men (Hart 1995: 46-9; Rundle Clark 1993: 181-5). Obviously, there is nothing in all this remotely resembling the legend we have examined so far.

father, Kings of Uruk, are assigned to the period 2800-2500. This does not mean that a cataclysm actually took place c 2900-2800 or that its legend was first established at that period. Both the event and the legend may in fact be of a much earlier era. On the other hand, *the legend as we have it in Atrahasis and Gilgamesh may be not much earlier than the texts, ie c 1700.*

15. What of the Indic legend? The Flood itself is not mentioned in the *RV* and it is not absolutely clear that the reference to the boat on the Himavant-peak in *AVXX* 39, 8 is to Manu's boat. Our earliest explicit reference is that of the *SB*. In our new chronologies (Kazanas 1999, 2002; Frawley 2001: 308) the composition of the *RV* must be placed at 3500 and before, though its present arrangement is traditionally said to be c 3100. The early Brāhmaṇas, ie *Satapatha* and *Aitareya* should be placed c 3200-2900. So the legend of the Flood in *SB* is attested c 3000. The start or the core of the *MB* belongs to at least 3067 according to many astronomical references contained therein (Kazanas 2002). Are we entitled to assume that the Flood-tale in *MB* III 185 is as early as that? Most probably not as it stands but quite possibly yes in a less ornate version.

Here we must open a parenthesis and examine an aspect of Indic literature that seems most paradoxical. Peoples with an early literature have, apart from religious texts, also tales of battles, heroic deeds, animal adventures and the like. The Greek epics for example contain all these types of tales. Some of the earlier Mesopotamian texts from the 3rd millennium are popular songs of courtship (Jacobsen 27ff). India should be no exception. The fact that the earliest extant texts are religious does not mean that there were no tales about heroic kings and battles, fairy tales or animal fables in circulation at the time. On the contrary, (grand-)parents must have told stories to their (grand-) children from the very earliest times. I suspect that even heroic tales about Indra or the Asvins and other gods circulated in a secular and perhaps irreverent garb at the time. We must assume then that some of these popular tales found their way into the epic texts that grew larger and larger, though in the absence of evidence (and due to the chronologies established under the distorting influence of the AIT), we are at present unable to trace this process even approximately. Since the Flood legend is attested in the *SB*, a more popular and slightly different version may have been in circulation finding its way eventually into the epic *MB*.

The flood-legend seems to have been known in Saptasindhu at c3000 in two versions. In *SB* we find the simpler, shorter version with the bare essentials of the tale; here the Seven Seers and the seeds of creatures are missing and the new beginning is made through Iḷā, the divine embodiment of the essence of sacrifice. The version in the epic (as we have it) is more elaborate, more literary (eg "he threw the fish *candrām susadṛsaprabham* which shone like moonbeams": 185, 11; etc) and therefore later; but it has the 7 Seers, who are obviously the 7 hotṛs of Manu in *RVX* 63, 7, and this detail makes the essential tale early. Two more substantial differences are the inclusion of all seeds of creatures *bījāni sarvāṇi* and the identity of the fish as Brahmā in the epic version (both absent from the other). The appearance of Brahmā is undoubtedly late but the seeds are probably original just like the 7 Seers (see §17, end).

16. Now comes the critical question: was there interaction between the Vedic legend and the Mesopotamian one, or borrowing, and which way did the influence run?... It is quite possible that the legend appeared independently in Saptasindhu and Mesopotamia. However, if there was interaction or borrowing, then the influence ran from Saptasindhu to Mesopotamia. This latter conclusion is based on two considerations.

To begin with, the Flood, like the Seven Sages, is a PIE theme. It is well known in Greece where the survivors are Deucalion and his wife Pyrrha, whose son Hellēn subsequently became the progenitor of all Hellenes (=Greeks): some traces are found in Hesiod (White 1935: 154-7), more in Plato (*Timaios* 22A; *Laws* 677A) and more in other authors (Kerényi 1982: 226; *GM* p38; Vitaliano 1977: 156-60). The Greeks may have borrowed it from the NE but the legend appears also in Avestan, in the Scandinavian and Russian lore and in the Celtic tradition of Ireland. So it is an inherited mythological motif. The *Edda* has a flood early on: only the giant

Bergelmir and his wife survived in their *luðr* 'box-mill' (1996: 11). All these traditions are later than the Vedic and Mesopotamian attestations and add nothing further to our understanding but do stress the IE pedigree of this mythologem. Since this legend is PIE it must go back to at least c 5000 and therefore could not have been borrowed by the Indoaryans from the Mesopotamians.

It may be argued that the AIT is true, and that the Indoaryans lost this legend and borrowed it from the NE c 1300-1200. This is utterly unlikely but, in any case, there is another aspect for consideration. The Vedic tradition is not encaged in gross material forms and its deities are not such anthropomorphic (or zoomorphic) figures as in other mythologies, like those of Mesopotamia, Egypt or Greece. In the hymns and in later texts we find abstractions, qualities and essences to a greater degree than concrete characteristics and actions. Thus there is creation with gross materials as in the *RV* hymn to Visvakarman X 81 or the dismemberment of Puruṣa in X 90 but also, and more often, with subtle forces like *māyā* or *asuratva* through will, inner vision and meditation as in the *nāsadiya* X 129, or in X 190, and in the upanishadic formulas *sa aikṣata* 'he envisioned', *so'kāmayata* 'he desired', *sa tapo'tapyata* 'he meditated/brooded or practised austerity' in *Bṛhādaranyaka Up* I, 2, 5-6. Thus the Vedic mind, even if only in few and select individuals, could conceive and accept that Manu and the Seven Seers took with them on the boat the seeds of creatures and that through *tapas* Manu would be able to create anew all the creatures including *devas* and *asuras* (*MB* III 185, 49-52).

The Mesopotamians, on the other hand, do not display a similar capacity for abstraction: there is nothing like *mahād devānām asuratvām ékam* 'single is the great god-power of the gods' (*RV* III 55 refrain) or the One that breathed without air, of itself, prior to existence and non-existence (X 129). The creation of men in *Atrahasis* requires gross materials like clay and blood, specialist gods like Nintu (Jacobsen 108), who is the great goddess Ninhursag now in her aspect of womb-goddess or divine midwife, and concrete actions as when "She pinched off fourteen pieces (of clay)/... seven pieces on the right/ seven on the left" and "She covered her head/ ... / Put on her belt..." etc (*MM* 16-7). In the *Enūma Elish* Marduk creates the universe from parts of Tiamat, deification of Mother-chaos, again in very concrete terms (*MM* 255-7), like the dismemberment in the *Puruṣa Sūkta*. Consider also the Mesopotamian need for temples and statues of gods, whereas the *rigvedic* people had none and were content to know their deities by their attributes (and as expressions of the One) and made their offerings on any patch of ground strewn with grass. The Tablet of Destinies (symbolic but solid) is another example of the Mesopotamian concrete concepts. Thus the Mesopotamian mind apparently could not deal in abstract entities like *Īlā* (in the *SB* version) or the Seven Seers (in the epic) or a sacrifice that creates a new generation of humans or the mere 'seeds' of creatures.

17. Quite important, if not crucial, is the element of the "seeds of creatures". It is found in all the Indic relevant versions except that of the *SB*. The question naturally arises: is this a native motif or has it been borrowed from the NE legends? Before dealing with it, let us see how the Mesopotamians treat and develop this theme. In the extant legend Ea instructs his chosen one: "Leave possessions, search out living things/ Reject chattels and save Lives/ Put aboard the seed of all living things into the boat" (*Gilgamesh* IX, i: *MM* 110)¹⁴. The essential instruction here seems to be "Put aboard the seeds of all living things". But the poet seems to have a difficulty with this: how would *Atrahasis*/ *Utnapishtim* gather all the seeds of creatures and subsequently create anew the creatures and then promote civilized life with just "seeds"?... So in the boat are brought silver and gold, domesticated and wild animals, relatives and all kinds of craftsmen (*MM*

14 A slightly different translation of these two lines reads: "Abandon possessions and look for life/ Despise worldly goods and save your soul." *Epic of Gilgamesh* 1988, Penguin Classics, cited by Hancock 1995: 202. Yet another translation says: "Reject the corpse-like stench of wealth. / Choose to live and choose to love;/.../ Be moderate as you flee for survival/ in a boat that has no place for riches./ Take the seed of all you need..." Yet here too the survivor puts aboard silver, gold and the rest, contrary to the divine instruction (Jackson & Bigs 1993). There are other variant translations.

111-2). For the same reasons the boat is made quite big so as to be able to contain all these creatures.¹⁵ The Mesopotamians have even less faith than the Hebrews. Noah is content to gather into his ark pairs of all living things and to start afresh with divine help. Atrahasis needs in addition precious metals and various craftsmen. Another telling detail is that while the two Vedic texts speak of a flood or of ocean and billows, the Mesopotamian legend enlarges with darkness, winds, storms and torrents. So the tale becomes more realistic, again in a concrete fashion.

The motif “seeds of creatures” in the *MB* version seems to be native. For instance, in *RVV* 53, 13 seer Ātreya prays to the Maruts for *bījam-ākṣitam* ‘seed imperishable’ for progeny and wealth and long life. No doubt the Mesopotamians too knew of seeds but the point is that the Vedic poets did not need to borrow this; they had ‘indestructible seed’ in their native tradition and obviously could adapt this to the needs of Manu’s survival through the flood. If they had borrowed this motif (assuming the Mesopotamians had ‘imperishable seed’), they would not have ignored all the other interesting details in the Mesopotamian material. On the contrary, they would have elaborated even further the description of the decks and the various animals’ accommodation as well as the arts and skills of the craftsmen or Seven Seers. In the Indian epic generally the tendency for accretions and expansion is all too obvious. The extant epic version of the Flood has some obvious accretions which are, however, natural developments or elaborations of native elements. One such type is the description of Manu’s asceticism: he is standing on one foot with arms raised, with head bent and eyes unblinking for ten thousand years (*MB* III 185, 4-5). This is a recognizably late development of an earlier yogic element in the Vedas and certainly not Mesopotamian. Other later elaborations – but always within the native tradition – are various poetic touches, one of which was noted earlier, the fish shining like moonbeams; another one is “the boat buffeted by hurricanes – like an excited, unsteady woman”¹⁶. Yet another addition is the revelation that the fish is god Brahmā (the divine embodiment of the ‘holy power’ *brāhman*). That the fish pulled the boat for many years need not be a hyperbole since the deluge could have lasted many years, but this too sounds like an accretion. What were these “seeds of creatures” and how did Manu manage to preserve them in his small boat? One can only speculate that they were forms of knowledge held in mind/consciousness that would be uttered into material existence by the power of the Word. This too is a common theme in the Vedic texts.

All these elaborations are decidedly *not* borrowings from the Mesopotamian story. The Indian bards developed and added elements of their own native tradition. They kept the plot of the tale simple, except for the elaborations noted above. They accepted the efficacy of the great spiritual powers of Manu and the 7 Seers who could by the potency of the Word in prayer stop rivers, defeat enemy-armies, make the sun and fire to burn and create worlds anew. So they were essentially concerned to bring Manu’s boat safely through the cataclysm and, later, to introduce god Brahmā as the saviour in the form of the fish while Manu’s miraculous spirituality would generate the new worlds.

15. In a private communication to me (4/11/02), A George, Prof of Assyriology in University College, London, wrote: “‘Seed of all living creatures’ in *Gilg* XI means a living representative of each type of animal, in my view. It was clearly not imperishable, for special arrangements had to be made to preserve it from destruction by the flood. I do not know of other evidence for animals. The “seed of kingship” was, according to a common expression, eternal: this reflects a political ideology in which kingship was established by the gods in the remote past as the proper method of human governance and thus expected to be a fact of human life for ever.”

16. J van Buitenen translates, perhaps more correctly(?) “like a drunken whore” but this is not a very apt simile for the vehicle carrying the progenitor and the 7 Seers.

First conclusion

18. These four test-cases show that the Vedic people did not borrow from the Mesopotamians. Borrowers were the latter, if there was borrowing. We can envisage, for example, some Indoaryans transmitting to the Sumerians a (confused?) version of the Flood-legend c 2800-2600. Or perhaps the Sumerians understood it imperfectly and disseminated it among themselves in a confused manner. The Vedic legend was diversified into two. One was that of the Seven Sages who, combining the fish's role of protector and saviour and the Seers' supernatural powers to re-create and re-civilize, became the Mesopotamian Seven Craftsmen/Counsellors in the strange garb of the fish. The other was that of the flood and the survivor with his (seeds of) living things. It is quite possible that the Mesopotamians had indigenous forms of these myths and grafted onto them the Vedic material elaborating them further, because, as I indicated above, they could not comprehend fully how a Sage could revitalize and regenerate all the creatures of the world only with "seeds". Let us now proceed with more parallels.

Other mythological affinities.

19. Interesting is the number 432000. This of course is the number of years in the Kaliyuga in the Puranic reckoning. De Santillana and von Dechend pointed out long ago that "Berossos made the Babylonian Great Year to last 432000 years" while "it is also the number of syllables in the *Rigveda*" (p 162; see also Kak 2000, ch 5 and McEvilley, ch 3). Here again the Mesopotamian culture would seem to be indebted to the earlier Vedic tradition. But here it could be argued that the Indic material is of c 500 CE while Berossos is of the 3rd cent BC. However, while the Purāṇas as we have them are late, they may (and in several cases do) contain very old material.

20. We need note also the theme of humans springing out of the soil. In the text *Creation of the Hoe* god Enlil fashions the first hoe and with that breaks the hard crust of the earth out of which emerge the first humans like plants (Jacobsen, p 103). This is reminiscent of AV hymn III 17, 3 where the plough *lāṅglā* digs up a cow, a sheep, a chariot-frame (or a horse) and a lusty, fat girl; it reminds faintly also of Sitā both in RV IV 57, 6 and in the *Rāmāyaṇa* Bāla-Kāṇḍa where she emerges from the furrow.

21. **The Sungod's boat.** In Mesopotamia Samas/Utu traverses the sky in a boat and is depicted doing so in extant seals (Black & Green 44-5), like the Egyptian sungod Re where the mythologem is much more complex. Many other gods have boats and at their festivals their statue (or image) is placed on a boat and paraded thus. In a country with two large rivers (as also in Egypt with the Nile) this seems very natural. Even Ninurta the Sumerian wargod par excellence (and god of fertility) travels in a boat.

Travelling by boat is not at all common on the part of gods in Vedic texts. But we cannot ignore RV VII 88, 3-4 where sage Vasiṣṭha sails with Varuṇa in the god's boat into the middle of the (sky-?) ocean. Varuṇa is no sungod but he is closely associated with him: in RV I 50, 6 sungod Sūrya is identified with Varuṇa; in VII 87, 5 Varuṇa has fashioned and placed the sun in the sky (also V 85, 2); he holds the sun there or draws it along (V 62, 2 and 66, 7; VII 87, 1 and 88, 1). It is only one small step away to have the god of ocean-and-waters Varuṇa (who actually has a boat and who guides the Sun in heaven) carry the latter across the sky on a boat. Something like this (but without Varuṇa) happens in the AV hymn XVII 1, where the sun (*āditya* in st 25 and *sūrya* in st 26) is said to be on a boat of a hundred oars. However, already in RV VI, 58, 3, Pūṣan, the glowing aspect of the Sungod (*āghṛī*), the guardian of paths, who often travels on a goat-drawn car, moves in the aerial ocean with his fleet of golden ships. The motif of the Sungod travelling in a boat is thus well-established in the Veda.

The motif appears in Greece also. Usually the Greek sungod Apollo (or Phoibos = V *bhaga*) travels in the sky on a horse-drawn carriage and so does Helios (=V *sūrya*) as in the hymns to

these two gods (White 1935: 340-1, 458-9) – and as Vedic Sūrya and Savitr̥ do. However in a fragment of early Mimnēmus (also in late Stesichorus), Helios passes along the ocean (in the night, and before sunrise) from west to east in a golden winged vessel fashioned by Hephaistos (Onians 1988: 251, n 11). This motif may have come to Greece from the NE (Egypt rather than Mesopotamia). But it could just as feasibly be IE, retained in some parts of Greece but forgotten in the regions of Homer (eastern Aegean) and Hesiod (Boeotia). If it had come from the NE, we would expect to meet it in Homer since his epics contain much NE material (Kazanas 2001b; Burkert 1992). That it is not known in other IE branches (e.g. Celtic and Germanic) is not surprising since they did not retain a definite Sungod as found in the Greek and Vedic traditions, which, especially the latter, preserve many more IE elements. So this motif of a sun-boat, quite accordant with that of celestial waters, may well have been PIE.

22. In the *RV* the sun is often described as a bull (eg III 61, 7; VII 88, 1; etc); so is Agni (I 140, 2; II 35, 13; etc); so is of course Indra, the mighty god of thunder-and-lightning (I 32, 7; VII 20, 5; etc). In Mesopotamia the bull is associated with and is the emblem of Adad (Sumerian Iškur), the storm-god who also has the lightning (Black & Green, 46-7; *MM* 316); the clouds are described as “bull-calves”. Sometimes the animal is associated with the moon-god Nanna/Suen (Black & Green 47). In the *RV* also the moon-god Soma is often mentioned as a bull (IX 2, 6; etc, etc). In *RV* IX (5, 1-2; 27, 3-4; 70, 5-7; etc) Soma is repeatedly described as a mighty and unconquered bull in heaven reminding us of the Bull-of-Heaven whom goddess Ishtar brought down to punish Gilgamesh for offending her but whom Gilgamesh and Enkidu killed (*MM* 80-2: tablet VI, iii-iv). In *SB* I 1, 4, 14 Manu has a miraculous bull whose snorting kills demons and foes and this gets sacrificed. It is worth noting here that the Bull “appears as one of the incarnations of Verethraghna”, the Avestan equivalent of Indra (Macdonell 1898: 150). In Greek mythology Zeus, in the form of a bull, carries off Europa while Dionysos also is described as a “bull-god” (Kerényi 109); Talos, the Sun, is also called *Tauros* ‘the bull’ (*GM*, 92, 7.) (However, the Greek bull may not be IE, or not wholly so, since the cult of the bull was common in Crete before the advent of the Mycenaeans.) With the Celts of Gaul too in pre-Roman times the bull has great importance (Larousse 240) represented as a divine animal in monumental iconography; A and B Rees, in speaking of the “great bull” in Ulster (Ireland), cite G Dumézil to the effect that the animal “symbolizes the warrior function both in Rome and in India” (1995: 124). So the bull-figure as a god is PIE and certainly does not derive from Mesopotamia. Harappan seals often depict a vigorous bull (and sometimes bull-man).

23. If there is a mighty bull there is bound to be a **Cow-of-plenty** also. In the Vedic texts Aditi herself, mother of the Ādityas, is spoken of as a cow (*RV* I 153, 3; etc; *VS* XIII 43). In another form, Pṛśni, the spotted cow, is the mother of the Maruts. But we meet also the cosmic cow in *RV* I 80, 3, III 55, 1 etc; also as cow Audhumla nourishing universal man Ymir in the Scandinavian *Edda* (1996: 10) – and thus having a PIE identity. The cow as Cow-of-Plenty appears in Iranian, Irish and Norse legends (Koppers 1936: 320-7) as well as Vedic. The *dhenuh kāmāduḡhā* ‘Cow-of-Plenty’ is found in *AV* IV 34, 8, granting all desires in heaven.

In the Mesopotamian pantheon Ninhursag(a), the supreme lady and mistress of the gods (*Belet-ili*) has the cow as her symbol (*MM* 326), as does Inanna/Ishtar (Black & Green 53); the latter is goddess of love and war, daughter of the moon-god (and appearing as the morning- and evening-star: see also Kak 1996). In a different tradition Ishtar is said to be daughter of An, the Skygod (*MM* 326). Jacobsen writes: “... a tradition ... saw the power in the sky as both male and female and distinguished the god An (Akkadian *Anum*) from the goddess An (Akkadian *Antum*) to whom he was married. According to that view the rains flowed from the sky goddess’ breasts, or (since she was usually envisaged in cow shape) her udder – that is, from the clouds” (p 95).

In Jacobsen’s passage there are interesting and revealing details. Skygod An/Anu is like the Vedic *Dyaus* (*div/dyu/dyo*) both masculine and feminine. Just as Anu has progeny with Antu (but also others, including his daughter Ishtar, who bore Shara ‘hero of Anu’), *Dyaus* is invariably

coupled with Mother-earth Pṛthivī. Then the rains flowing from the skygoddess's breasts or udders ("envisaged in cow shape") is an image of very common incidence in the Vedic texts: in *RV* I 92, a hymn to the Dawn, we find the cow and breast and udder in stanza 4; in I, 164, 26 and after we find cow, calf, milk, heavenly stream, rain-cloud etc; cf also I, 64, 5-6 and X, 100, 11, etc, and *VS* II, 16.

24. Just as significant is the theme of creating the worlds out of the **dismemberment of a divine being**. The *Puruṣa sūkta* (*RV* X 90) deals at length with this theme. It seems to divide into two parts: the first part (stanzas 1-5) resembles the *Nāśadiya* hymn X 129 in that an unknown Being is said to manifest with its one fourth as the cosmos and be immanent in it, yet, at the same time with its other three parts, the Being remains beyond or transcends the cosmos. Then, part two (stanzas 6-16) describes the sacrificial dismemberment of manifest (anthropomorphic) *Puruṣa* (born of *Virāṇ*) who was born of the first *Puruṣa* (st 5) and the creation of different worlds and creatures from his members.

In the *Enūma Elish* Marduk fights, defeats and kills Tiamat, the mother of the older generation of gods, a kind of Vedic Aditi. Here she has a gigantic, monstrous form with four eyes, a horn and a tail but she is not necessarily a dragon-serpent, as some have claimed (for details see Heidel 1969: 83-8). She has spawned serpents and during the fight as well as during the final deadly blows of Marduk and her dismemberment, she reminds one of a repulsive demoness: Marduk sliced her in two making the sky and earth; with her liver he made the zenith and from her eyes the rivers Tigris and Euphrates and so on (*MM* 255-7). This epic is a glorification of Marduk who slays a demonic monster then creates the world and its hub, the country between and along the two rivers, and thus becomes the new King of the gods. However, beneath this version lurks a different story where Tiamat was a primal Mothergoddess, consort of Apsu: she gave birth to the good gods (those that now fought against her), cared for her offspring and probably willingly offered herself originally to the cosmic sacrifice that generated the worlds (Heidel, *ibid*; Jacobsen, 187). So I think here too the Mesopotamians may have borrowed from the Vedic tradition.

The Indoaryans would not have borrowed because the divine dismemberment must go back to the PIE era, since the Scandinavians preserved the similar myth of the dismemberment of the first giant-being Ymir (=V *Yama*) by which the gods made the world (*Edda* 10ff; Kazanas 2001a: 280). In Greek mythology Hesiod gives the castration of Ouranos from whose blood and organs spring up different divine beings (*Theogony* 176ff; White 1935): this seems to be an amalgam of the IE myth (Vedic *Puruṣa*, like Scandinavian Ymir, and perhaps Indra hacking up *Vṛtra* to release the waters and bring out the sun in *RV* I 32) and of various NE versions like Kumarbi castrating Anu. The IE theme is very old. So in this case, again, the Mesopotamian presentation is very crude but, as was said, contains hints of an earlier finer version, which has subtler affinities with the Vedic culture.

25. Significant is also the motif of the **tortoise** or turtle. Jacobsen summarizes (p 132) the extant portion of a Sumerian myth in which Ninurta, wargod son of Ellil but also god of fertility, desired to gain control over the much larger area of the Apsu and after an adventure with the thunderbird Imdugud generated an enormous flood-wave against Enki, the god of fresh-waters and wisdom, and his temple. Enki created a turtle and placed it at the entrance of the Apsu. When Ninurta appeared the turtle quickly dug a pit and pushed the wargod into it! This is, of course, quite an extraordinary tale. Turtles undoubtedly existed in South Mesopotamia and it is not surprising that this animal should play some role in a cosmic myth where ambition and violence (Ninurta) turns against wisdom (Enki). What is extraordinary is that this proverbially slow-moving animal should dig a pit "quickly" and push a god in. I can only suppose that the myth was originally different and the turtle functioned more as a guardian stemming perhaps the flood and thus saving the temple (and the world?).

The tortoise is not a very a common motif in world mythology (apart from a Siberian tale, S Thompson, 1989, has very few entries under 'tortoise'), but, as one would expect, it has its place in the Vedic tradition. Long before the *Kūrma Purāṇa* with Viṣṇu's second avatāra in tortoise-form, the name of one of the 7 Seers 'Kāśyapa' means also 'tortoise' (= *kūrma*, *kacchapa*). In the *AV* Kāśyapa is often identified with Prajāpati (eg XIX 53, 10) while in *SB* VII 4, 3, 5 Prajāpati becomes a tortoise and then in VII 5, 1, 1 produces all creatures. In the (*White*) *Yajurveda* the tortoise is said to enter into the altar and be elevated as "master of waters" (*VS* XIII 31). S Kak mentions the *kūrma*-shaped altar showing its structure (2000: 13, 15-7).¹⁷ In the *Jaiminiya Brāhmaṇa* again the *akūpāra* 'limitless' tortoise finds the earth, a firm resting-place, in the ocean (*JB* III 203, 273) and so foreshadows Viṣṇu's incarnation. Thus, while I would not at all preclude an indigenous Mesopotamian legend involving a turtle, I would at the same time maintain a strong suspicion that some influence came from Saptasindhu. Note too that the turtle was the emblem of Enki/Ea (Black & Green 1995: 179), who was god of wisdom and creativity like Prajāpati.

26. The seductive female. 'Kāśyapa' is the name for tortoise and that of one of the 7 Seers. This particular Seer had a son named Ṛśyaśṛṅga, "he who was born of a doe", and the latter's tale of seduction by a whore (*MB* III 110-3) is thought by some (Panaino 2002: 309 and Bibliography) to derive from the story of Enkidu who is also seduced by a whore in *Gilgamesh* (*MM* 52-61: Tablets I-II). Personally, I find no affinities between the two other than the seduction itself which, however, is a common motif the world over.

The Mesopotamian and the Indic legends may be connected but I find no affinities other than the seductive whore. They seem to me to be quite independent and indigenous. After all, in the *RV* we may not have a seductive whore, but we do find the attempt of Yamī to seduce her brother Yama (X 10) and the successful seduction of Agastya by his wife, Lopāmudrā (I, 179). Then, the two protagonists are quite different in age and character and so are the motives and objectives. Finally, Enkidu's life ended tragically after he had lost his innocence yet gained nothing substantial, while Ṛśyaśṛṅga's adventure resulted in maturity and happiness with the intervention of higher wisdom in the form of Kāśyapa himself. The name itself occurs in a list of teachers in *Jaiminiya Upaniṣad Brāhmaṇa* III 40, 1 and in *Vaṃsa Brāhmaṇa* (VII 118) where he has the patronymic Kāśyapa.

27. We should not neglect the theme of **hell or underworld**, although I do not find here sufficient similarity. H Oldenberg, A Keith and E Arberman pointed out the similarity between the Greek Hades and the Vedic underworld (Bodewitz 1999: 107-8). Greek Hades is a concept very similar to the Mesopotamian hell or underworld (*Kurnugi* = land of no return) where all mortals go. Here also mortals never go to heaven, not even to an Elysian region for heroes, but only to the underground region of no return: eg Enkidu's death in *Gilgamesh* (*MM* 89 and 123). The *RV* mentions a pit/abyss of no return for sinners and sorcerers (VII 104, 3 and 17). This is more common in the *AV* hymns. It is curious that in Mesopotamian texts a paradise for humans is not mentioned nor the possibility of attaining godhood (as in the *RV*), while heaven is reserved only for gods.

28. Connected with the world "Beyond" (underworld or heaven) is **the motif of eating (or abstaining from) certain food-stuffs there** which will bind the eater to the Underworld or make

17. Kak's cognation of *kāśyapa* with Greek *kassiopeia* (a queen and mother of Andromeda in Greek mythology who after boasting of her beauty was made into the well-known constellation), is implausible both for semantic and phonological reasons. *Kāśyapa* does not have this astronomical connection and the *Kassiopeia* constellation does not remotely look like a tortoise. Vedic *ś* usually appears as Greek *k* or *p* as in *V asman* Gk *akmōn* 'stone', *asva ikko/hippo* 'horse', *dasa deka* 'ten' etc.

him immortal in Heaven. We noted this motif earlier in the Mesopotamian legend of Adapa, one of the 7 Sages, when he went before Anu in heaven but, on the earlier advice of his patron-god Ea, refused to take the bread and water (of immortality) offered to him (§10). In the Greek myth of the abduction of Persephone by Hades, god of the Underworld, she eats pomegranate seeds and when her mother Demeter finally reclaims her, Persephone can remain with her only for six months and then must return to Hades (Kerényi, p 239-40). A similar motif is found in the Japanese myth of Izanagi, a kind of creative-god and father of creatures, who seeks his beloved Izanami (his sister/wife and mother of gods and islands) in the Underworld but she cannot leave that realm because she has eaten its food (Larousse, p 407).

This theme is also found in the Vedic tradition, in the Naciketas legend. I shall omit here the later versions in the *Brahmāṇḍa* and *Varaha Purāṇa*s and in the 'Anuśāsana' Bk XIII of the epic *MB*: all these are highly elaborated upākhyānas, 'tales'. A simple if elliptic version is in the *KU* (I, 1-9) which becomes a philosophical treatise explaining the fire-ritual of Naciketas as a means of practical knowledge and discipline leading to union with the Supreme Self and immortality. The kernel of the story is found in *Taittirīya Br* III 11, 8 and in *RV* X 135 (where, however the child in Yama's abode is not named). In the Upaniṣad, Naciketas himself chooses to go to Yama's abode and remains without food and water for 3 nights. In the *Brāhmaṇa*, however, he must go to Yama at the express instruction of a divine voice – and *not eat anything there for three nights*. This may be a coincidence with the Mesopotamian story where Ea instructs Adapa (*MM* 186) or, as I think, the latter is an adaptation of the Vedic motif. In both the mortal figure returns to man's world, but while the Vedic legend stresses positive values (self-abnegation, faith, acquisition of true knowledge) the Mesopotamian one suggests trickery on the part of Ea (or Anu?), and the powerlessness and ultimate failure of even a supposed sage like Adapa.

Magical and ritual practices.

By this are meant simply omens, divination and various apotropaic and cathartic practices involving incantation and other forms of ritual.

29. Divination. Dalley suggested that the art of bird-augury, as attested in a Greek inscription of the 6th century, derived from Mesopotamia (1998:100). I pointed out that the Greek and Mesopotamian texts she compared are in fact quite different and that she is probably wrong since this kind of divination was practised quite early on in the Vedic culture and west of Greece among the Celts (Kazanas 2001b: sect I and IV). Indeed bird-augury is attested in *RV* hymns II 42 and 43 taking the *Kapinjala*, a kind of heather-cock, as birds of good or bad omen, depending on the direction from which they call: if the call is from the right or south of the house, then it is auspicious. Dalley cites the omen: "If many eagles keep flying over a city, the city will be besieged." (The Greek omen is: "If [a particular bird] flying from right to left disappears from view, [the omen] is favourable...").

In the Vedic texts many phenomena serve as omens, particularly in the *Brāhmaṇa*s: the movement of cows; the clarity or otherwise of the sacrificial fire; a dream of making a neckband or garland; meteors and lightning, and so on (Kazanas, *ibid*). However, hepatoscopy, that is the inspection of liver and entrails, is not evidenced even in late texts, whereas it was common practice in Mesopotamia (Jacobsen, 84; Oppenheim 207 ff; Burkert 46-51).

30. Demons, ghosts etc. In Mesopotamia there are evil spirits and ghosts that cannot find rest in the Netherworld (Jacobsen 12-3; Oppenheim 109-203; Burkert 65-6), take possession of men and cause bodily or mental illness. There are also monsters, dragons and serpents like Humbaba, the guardian of the forest in *Gilgamesh* (*MM* 21: Tablet V, i) or the monstrous offspring of Tiamat in the *Enūma Elish* (*MM* 237: Tablet I). The *AV* hymns are full of demonic creatures like Takman "god of yellow hue... son of Varuṇa" (I 25, 2-3) or *raṁśasas* and *pisacas* that assume animal, insect or deformed human shapes (VI 37, II; VII 6, 13; etc; cf also *RV* I 133, 5, VII 104, 10, etc); for such creatures pestering houses or causing mental disorders see *AV* IV 36, 8; IV 37 II; V 29,

5-9; etc. We must not forget also Vṛtra, the dreadful dragon/demon whom Indra kills and releases the waters.

In Mesopotamia these demonic figures are often said to effect their torments by enveloping humans with a net or by binding them with fetters and there are texts praying for release (Onians 1988: 364, 372, with references). Similar concepts are found in India too. Very common is Varuna's *pāśa* 'noose, fetter' which binds threefold and even sevenfold the sinner in the *RV* (I, 24, 15; VI, 74, 4; VII, 75, 3; etc). Varuṇa and other gods are frequently implored to forgive the transgression and remove the noose(s), as in I, 24, IV, 12, 4, etc. Indra too has a net with which he vanquishes foes (*AV* VIII 8, 5-8). (In later texts we find also Yama carrying a noose like a hunter, as in the story of Sāvitrī, *MB* III 281, 8). In these texts we find also that the noose is woven by the gods (*AV* VIII, 8, 4) or by Fate (*Rāmāyaṇa* VII, 37, 9). In the *SB* XIII 6, 2, 20 a rope-maker is consecrated to Fate; here we should note also the term *guṇa* as 'thread, rope, quality, attribute, type', suggesting that "attributes" are "threads" woven into a pattern of "type" or of life.

These concepts – noose, Fate and release – are well attested in other IE traditions. In the earliest Greek texts we find the gods binding individuals or embattled groups with a rope or noose (*Iliad* 13, 347-60; *Odyssey* 22, 268ff; etc) while the lot of a man's life is "woven" by Fate, as in Plato's famous myth of the three Fates, Clotho, Lachesis and Atropos (*Republic* 616Cff); people pray, of course, to gods for release (*Iliad* 23, 262ff; *Odyssey* 5, 394ff). Similar ideas are found among the Iranians, Germans and Celts (Onians 1988: 353-7, 363, 381). Since the broader idea of Fates or gods "weaving" a man's life-pattern is absent in the Near East, it would hardly be possible that these beliefs and cultic practices were borrowed by all these different IE peoples.

31. Protection. Many and various means for protection against these demonic forces (and for purification) were used by the Mesopotamians: spells, votive offerings, amulets of all kinds, even effigies, today's "voodoo doll" (Burkert, 60-1, 65-7, 82, 87, 110). It should not come as a surprise that all such means, with some variants here and there, are amply presented in the Veda. The *Atharvaveda* (and much of the *Sūtra* literature) abounds in various protective, expulsive, offensive and retaliatory means: spells (V, 31, 1; etc; also, the verses from *RV* I 23, 22 and X, 97 – "O Waters, carry off whatever sin is in me..." etc – are another such incantation); amulets of all kinds (I, 16, 3; etc, etc); use of plants (IV, 7; VIII, 7, 3; etc) and ointments of all kinds which are sometimes genuine medicinal remedies (IV, 9, 8; etc); carrying round of fire (VIII, 64, 1); and of course water for all occasions. Another feature in these practices is the making of effigies (out of wax and other substances) which are melted, buried or pierced through. These are made by women also and one description is in *AV* X, 1, 1-3, which also has incantations for protection; most of them can be and are placed in wells or cemeteries (V, 31, 8). More details are found in the *Sūtra* texts (Keith, p 389).

Oppenheim mentions foundation deposits (p 26) while J Black and A Green refer to them together with building rites (p 46) and Burkert distinguishes (pp 53-5) between two types of these during the construction or consecration of a house, temple or other building, both in the Near East and Greece: one type consists of precious metals and/or stones, guardian figures and tablets with inscriptions; the other consists of animal sacrifice and libations. The first type, essentially an extension of the second, is unknown in the Vedic tradition, which, as was said earlier (§16), did not at that early period show much concern with material objects. However, a beautiful Hymn (*AV* III, 12) describes the consecration of a house invoking gods Savitrī, Vāyu, Indra, Bṛhaspati, the Maruts, and Bhaga 'Bestower of fortune'. Offerings are made of milk, corn, jars of purified butter and curdled milk, honey and water. In later texts, the *Sūtra*-literature, a black cow or a white goat may be offered and in this Keith finds a similarity to "the black cock killed at the foundation of a new house in Greece" (p 363). So here we have another affinity.

32. Purification. Burkert mentions that branches of special trees are used in purification as evidenced in an Akkadian poem: "a remarkable young [man] holding in his hand a tamarisk rod of purification... the water he was carrying he threw over me, pronounced the life-giving incantation and rubbed [my body]" (p 60-1, square brackets original). Of course in the Veda we find the use of the plant *Apāmārga* 'which-drives-away' (AV IV, 7; etc) as well as of other plants (AV VIII 7, 3 ff; etc); they are used against diseases, evil dreams and any other form of real or supposed pollution.

"Anything left over from the purification must be carefully disposed of" writes Burkert (p 62). We find the same practice in the Vedic tradition: all remnants of the rite must be burnt completely and whatever is left must be buried secretly (*SB* III 8, 5, 9ff); then all get washed and the last traces of uncleanness flow away with the running water.

More details and examples are found in Kazanas 2001b. Indeed many more could be cited, but enough has been given here to show that there are many Vedic parallels in this sphere also.

We turn now to another area of possible influence.

33. The Origin of Kingship has its own common mythology in the two traditions.

Jacobsen delineates the emergence of the king as an important "savior-figure... exalted above men" (p 79). In many tales the human ruler challenges even the authority of the gods – as when Gilgamesh disregards Enlil and kills the god's giant forester Humbaba (*MM* 63, 73-4), or rejects Inanna/Ishtar's advances insulting her (*MM* 77-9). Then comes a development whereby An/Anu is supreme (p 95), but holds his distance and does not intervene much. The other gods hold appointments under his authority: eg Enki has the duty to keep the river-mouths clear, enrich the sap in plants, make dense the clouds and so on, while Ellil has charge of all the winds (p 85). Then ultimate power is seen to rest in "the Assembly of the Gods" and this becomes the "highest authority in the Mesopotamian universe" (p 86). Jacobsen stopped at this point, but it is obvious that there is a further development in *The Epic of Creation* where Marduk becomes king of the gods, supreme ruler, after he defeats Tiamat and her army of gods and monsters. Heidel points out that the epic is "not only a religious treatise but also a political one" (1969: 11) because in exalting Marduk as creator and ordainer of the universe and so on, the poem praises Babylon (and her king) stressing her supremacy over other cities (ibid). So here, as in earlier times, the King on earth is a reflection of the King in heaven. Oppenheim stresses "the divinity of kings" whose name was often written with the determinative DINGIR 'god' (1977: 98).

In *RV* X 173 the king is elected (or re-elected, in other cases) by the people *viśas* but is established steadfast in sovereignty *rāṣṭra* by steadfast Indra (then by Soma and other gods, including king Varuṇa). Two hymns in the *AV*, III 4 and 5, are even more explicit in that the people, the 5 tribes including princes, chariot-makers and metal-workers, elect the king, who has the blessing of the gods, Agni, Aśvins and so on. The origin of kinship is in *AB* I, 14: the gods were losing the war against the demons so they elected Soma as their king and thus conquered all quarters. In *TB* I, 5 the tale is repeated but here the assembly of the gods make a sacrifice to Prajāpati, the supreme creator-god (like Anu), and he sends his son Indra, endowed with brilliance and royalty to lead and rule them.

I find no evidence that the democratic principle of electing the king was ever practised in Mesopotamia as it was in Saptasindhu. Here we must bear in mind that in those ancient times the chariot- and metal-workers were not necessarily uneducated and unintelligent people: even late Lawbooks allow the *vaśya* class of producers, artisans and traders to study the Vedas (but not teach), so they may have been of high quality and with good, broad knowledge. Otherwise all elements are very similar in the two cultures. Here, we may have independent development but the (overplayed) Assembly of the Gods in Mesopotamian texts may well be an elaboration of the (underplayed) occasional gods' assemblies in the Vedic texts.

Also, the *Epic of Creation* may derive from the *TB* tale. For just as Prajāpati sends his son Indra to lead the gods against the demons so Anshar (another creator skygod) sends his grandson Marduk against Tiamat and confers on him all power (*MM* 242-4). This epic may be late (1st

millennium) or from c 2000 (MM 228-9) or from the 16th century from the reign of the Kassite king Agum-Kakrine (MM 229) when, much literary activity took place (see §43, below). Be that as it may, the Vedic material is much older.

Here I stop. No doubt further researches will produce more parallels in this field but now we must turn to a different area.

Language, Writing, Mathematics, Astronomy and Peacocks.

34. Starting with lexical similarities we should note the possible connection of Sanskrit (=S hereafter) *mleccha* and the Mesopotamian (=Mp hereafter) *meluhha/melukha*. To this we could add another cognation given by Sethna – S *karpāsa* (>Prākṛit *kapāsa*) and Mp *kapazum* ‘cotton’. These sound quite valid. As cotton was cultivated in the ISC but not in Mesopotamia until much later (see n 22), we must take it that the Mp *Kapazum* is a loan from S *karpāsa*. For this loan there is the indubitable archaeological evidence.

There may be more, as yet unknown or unverified. Frawley for instance thought (1991) that *līā* is cognate with *Ela-m*, the name of the region east of Sumer and that *id/i* ‘libation, (sacred) speech’ and goddess *līā* are linked with “the most important Mesopotamian name for the Divine... ‘lī’ ” and also Hebrew *El* or *Elohim* ‘God the Father’ (pointing out that *Elohim* is a plural neuter, which indicates that originally it was a plurality of gods); he also connected god *Ashur* of the Assyrians and Egyptian *Asar* (=Osiris) with S *asura* (=Avestan *Ahura*) and both *vas* ‘be, live’ and *vās* ‘sit, exist, abide’ (pp 268-84). Some of these ideas he repeats in his 2001 study (pp 27-9). One could add some more hypothetical cognations (See also Frayne 1993; Whittaker 1998)¹⁸: S *muh-yati* ‘be unconscious, deluded’ and Egyptian *mhy* ‘be negligent’; S *ap* ‘water’ (loc pl *apsū* ‘in waters’) and Mp *ab/absū* ‘fresh-waters’; S *dhāman* ‘abode’ (cf Greek *ana-thēma* ‘offering’) and Mp *temen* ‘foundation’ (?Greek *temenos* ‘(sanctified) site’); S *cakra* (cf Greek *kuklos*) ‘wheel’ and Mp *gigir* ‘wagon’; S *sapta* Mp *sebit-ti/tu* ‘seven’; one might also suggest tentatively S *māyā* and Mp *me* ‘creative power/knowledge’; and so on.

However, all such cognations seem fortuitous and arbitrary. Only if one knew Sumerian/Akkadian (or whatever relevant NE language) as well as Sanskrit, would one be able to make such comparisons convincingly. Assyrian god’s name *Ashur* may be cognate with S *asura* but experts on Mesopotamian culture say that this deity’s name probably grew out of the name of, and in parallel with, the city Aššur (Black & Green 1995: 37). So all such comparisons and

18. G. Whittaker argues, not very convincingly, that the Sumerians were not indigenous but were preceded by an IE people in the area. This is not, of course, impossible but that an IE people should have moved into this region so early seems improbable. Others thought Dravidians moved from India to Elam and Mesopotamia (references in McEvilley pp 238ff). However if more evidence were to be accumulated, one or other proposition would be acceptable.

etymologies must be laid aside until much more is known about the subject.¹⁹

35. While lexical elements (except for very few cases) are rather uncertain, there are **poetic elements** or devices which are common. That there should be stock epithets in both literatures can be ascribed to independent development. The examples in the *RV* hymns are numerous: *ugra* 'fierce' of Rudra (II 33, 9), *somapā* 'soma-drinker' of Indra (II 12, 13), *urukrama* of Viṣṇu, *jātavedas* of Agni etc. etc. In Mesopotamian poems these are much fewer: eg in *Atrahasis* "warrior" Enlil, "far-sighted" Enki, "wise" Mami (*MM9-35*). As in the *RV*, Mesopotamian similes are varied and some are very lyrical or expressive: "splendour like the stars of heaven" and "His

19. Burkert mentions the Greek/Vedic cognates *pelekus/parasu* 'axe' and connects them with Akkadian *pilaqu* which, however, means 'spindle, dagger' (1992: 37). Mayrhofer (under *parasu*) rejects this connection and proposes Altaic **paluqa* 'hammer' and Burushaski *baluqá/bulqá* 'big/small hammer'. This may be correct but we must not ignore Sumerian *balag* 'axe'; so the connection with Mesopotamian seems to me quite valid. Burkert mentions also (p 37) the cognates Greek *smaragdōs*, Mycenaean *pa-ra-ku* and Sanskrit *marakata* 'emerald' and connects them with Akkadian *baraktu* and Aramaic *bar'qa*.

Very peculiar is an article by L. Srinivasan (1999-2000) in which he claims that many Bengali words are similar to Sumerian ones. He cites support from Cyrus Gordon, an expert in Neareastern scholarship but without Sanskrit, and Malati Shendge. It is all utterly wrong. Srinivasan, who obviously knows no Sanskrit unfortunately consults none of the etymological dictionaries. For convenience I cite some of the more obvious examples, giving first the Bengali, then the Sumerian and finally the Vedic form (from which the Bengali probably evolved): *udo* 'sheep', *udu*, *eḍa* (or Sk *huḍa* 'ram'); *ūru* 'thigh', *ur*, *ūru* (!); *ghāro*; 'wall, enclosure', *ga-ar*, *ā-gāra* (Skt *ghara/grha* 'house'); *thūm* 'pillar', *dim*, *sthāman* 'station' (< *sthā*); *sūrū* 'all, whole', *sar*, *sarva*; etc etc. M. Witzel deals with all these (wrong) connections showing that all can be explained through changes from Vedic/Sanskrit and Middle Indo-Aryan (1999-2000). Unfortunately, entrenched as Witzel is in the AIT and wanting the Indoaryans to come to ancient Saptasindhu from the Urals c 1700-1500, he suggests that many of these perfectly Vedic forms are loans from Sumerian (!libid, passim). It does not of course occur to him to mention the possibility that the influence may run from East westward. For instance, *eḍa* 'sheep' may well be cognate with Gk *aix*-, Armenian *aic*, Avestan *iz*-, all 'goat', thus being an IE stem; similarly *āgāra* and Gk *agora* 'court-yard' and *grha* 'house' with Iranian *garē-da*-, Gk *korthis*, Lithuanian *gardas*; more obviously, *sthā* 'stand-ing' is IE with cognates Avestan *stā*-, Gk *sta-* *histē*-, Latin *sto*-, Gmc *stā-n*-, etc; so also *sarva* 'all, whole' and Avestan *har'va*- Gk *houlo*-, Latin *salvus*-, etc. So all these IE stems could not possibly be borrowings in Vedic from Mesopotamian. To explain such linguistic similarities we could hypothesize only that at a very early period, say c 5000 or before, there was interaction between the Mesopotamian and the PIE languages, or that Mesopotamia borrowed from Saptasindhu c 3300-2800.

Shendge has made similar claims for some 400 words that had allegedly come into Sanskrit from Akkadian (1994, 2001). They are no better than McEvelley's or Srinivasan's. Among Vedic loans, she cites the Vedic *ṁmā* > *mimāti/mimite* as if from Sumerian *MAA* 'creative water' (!) ignoring that this Vedic root has cognates in Avestan *-mīma-ḥa* etc, Tocharian A and B *me-/mai*, Hittite *māi*, Greek *mē-tis*, etc, etc. If she were a competent linguist and indo-europeanist, she would not have written that the absence of Vedic words in other IE languages indicates that they are borrowings (2001: 152), for she would know that Vedic contains many more PIE elements of language and mythology than the other IE branches; that it is more readily analysable into dhātus or stems and terminations and is therefore closer to PIE; that many lacunae in the other IE branches are filled by Vedic material (Kazanas 2001a, 2002a, 2003b). Consequently the absence of Vedic words in IE branches may be due to loss while their presence in Akkadian may be due to borrowing by Akkadian, as illustrated clearly by the S *karpāsa* (not in other IE branches) and the Mp *kapazum* (§ 34). (I would go even further and suggest that the *murdhanya* retroflex or cerebral family of phonemes, *ṛ*, *ṛ*, *ṛa*, etc, might have been PIE but were lost in the other branches and were retained in Vedic and Sanskrit.)

face was like that of a long-distance traveller" (*MM* 290, 53). But there is one curious device common to both poetries which reveals close contact: this is when a character (a hero or god) speaks to himself. The common formula here is "speaking to one's heart/spirit" as in *MM* 96, 105 and in *RV* VII 86, 2 or X 129, 4.

36. When we turn to the material means of transmitting language, ie **writing**, we find that there is considerable uncertainty about its origins in Mesopotamia. Writing appears simultaneously – or so it seems – at c 3000 in Egypt, South Mesopotamia and the ISC. The Egyptian hieroglyphic style can be separated from the other two because it is quite different from them; the material upon which the hieroglyphs are inscribed is also different – stone, not clay tablets. Harappan and Mesopotamian scripts and materials have similarities. In his extensive survey of the different stages of writing (1992: 55-102, esp 70) J Bottéro writes: "We do not have apodeictic proof of the priority of this discovery, only a solid mass of indications" (p 87). Saggs is even more explicit in rejecting Denise Schmandt-Besserat's theory that writing in Sumer developed from prehistoric *tokens* (=small marbles or stones in different shapes, some having holes or incisions) via *bullas* (=clay balls containing tokens), numerical tablets and then protocuneiform tablets (1989: 63-5); he states: "Either the invention of writing took place not in southern Mesopotamia but in some other place not yet excavated; or else, the earliest writing material was not clay but something perishable" (p 63). Michalowski again argued that protocuneiform was an invented technology that appeared on the scene quite suddenly, though not unrelated to earlier recording technologies (tokens etc) which were all practised concurrently (1990: 54-8). Susan Pollock states that there has been no resolution to the divergent views on the subject (1998: 166).

That writing made a sudden appearance is indicated in the native legend or historical text of *Enmerkar and the Lord of Aratta*, mentioned in § 72 above. In this text (transl and ed by Kramer 1952), the king of Erech/Kullab (=Uruk) Enmerkar communicates through a messenger with the lord of Aratta and engages in trade with that city – sending wheat in exchange for carnelian and lapis-lazuli. After the third journey of the messenger, we find a strange passage suggesting that Enmerkar was the first man to use writing on clay tablets. He did so because the herald for some reason (length of message?) was "heavy of mouth" and unable to repeat the message (ll 498-507). That so momentous an event should be introduced so cursorily is quite baffling. Following a French secondary authority, Frawley proceeds to suggest that "the origin of Sumerian writing had some connection with Aratta [in the north-west Punjab] and might have been borrowed from there" (2001: 227).

Although Kramer's translation of the text contains no overt suggestion of any borrowing or influence from Aratta, nonetheless Frawley's idea is not without merit. It is possible that writing started in the ISC before Sumer. Back in 1998 J M Kenoyer, expert on the ISC, in an interview said that inscriptions have been found there which may be as early as 3300 (1998: 29). More recently there have been reports (Internet, Press) of inscriptions from 3500 (see Dr R Medow's view, *BBC News* on the Internet; McEvilley, p 242). All this, of course, requires further study and confirmation. Additional investigations may well prove that writing emerged independently in Sumer and in the ISC, but at present there is nothing to preclude writing coming to South Mesopotamia from Saptasindhu together with other goods, material and cultural.

37. The Mesopotamian debt to Vedic **Mathematics** seems to be more certain - at least according to the view of A Seidenberg, a distinguished American mathematician and historian of science. I have no training in Mathematics and can only accept his word and mathematical proofs. He argued (1962 and 1978) that there is "a single source" for the two distinct traditions in ancient Mathematics, that of the algebraic or computational and that of the geometric or constructive (1978: 301). He examined the mathematical data and concluded that this 'original source' was either 'Vedic Mathematics' as formulated in the *Sulbasūtras* or an older system very much like it – rejecting the idea of Babylonian originality or the derivation of Vedic Mathematics from Babylon c 1700 BC (1978: 304, 307, 310, 318-9) or from Egypt (1962: 515). He states of this original source: –

"its mathematics was very much like what we see in the *Sulvasūtras* [*sulbasūtras*]. In the first place, it was associated with ritual. Second, there was no dichotomy between number and magnitude ... In geometry it knew the Theorem of Pythagoras and how to convert a rectangle into a square. It knew the isosceles trapezoid and how to compute its area ... [and] some number theory centered on the existence of Pythagorean triplets ... [and how] to compute a square root. ...

The arithmetical tendencies here encountered [ie in the *Sulbasūtras*] were expanded and in connection with observations on the rectangle led to Babylonian mathematics. A contrary tendency, namely, a concern for exactness of thought ... together with a recognition that arithmetic methods are not exact, led to Pythagorean mathematics. (1978: 329)

Sanskrit scholars, Seidenberg writes, did not give him a date for the *Sulbasūtras* as far back as 1700 BC. The earliest they would have given is 600, if that. He felt therefore obliged to "postulate a pre-Old-Babylonian source for the kind of geometric rituals we see preserved in the *Sulvasūtras*, or at least for the mathematics involved in these rituals" (1978:329). However, there is no general acceptance of Seidenberg's views and more research will be needed.

38. I am now fairly certain that many sūtra texts belong to the first quarter of the 3rd millennium, if not earlier in a more primitive form. Obviously cities like Harappa, Kalibangan, Mohenjorad, Dholavira etc, with their straight streets, square blocks, large buildings, domestic and urban water-supply, "way ahead of those of any other civilization of their time", and "main drainage system" (McIntosh 2001: 100-1), etc, indicate town-planning, and town-planning requires knowledge of geometry, precisely the sort of "constructive" mathematics contained in the *Sulbasūtras*. Although Seidenberg may have been wrong, I find nothing remarkable about the *Sulbasūtras* being early or the Mesopotamians borrowing (from) them. An additional consideration will help here. One of Bṛhaspati's sūtras states: "A privy, a fireplace, a pit or a receptacle for leavings of food and other [rubbish], must never be made very close to the house of another man (XIX 26)." This sounds like a regulation to control excesses from pressure due to increasing population and the beginning of urbanization. This situation arose probably c 3000-2600 when the ISC was in its early urban phase, before town-planning was established generally.

39. David Pingree, and many another before him, thinks that Indian **astronomy** or astrology, or at any rate the study of celestial phenomena that were regarded as ominous and somehow influencing human life, derived from Mesopotamia (1998). He finds A. Parpola's "interpretation of the inscriptions in Harappan seals as recording, in a Dravidian language, an astral religion related to an alleged counterpart in Mesopotamia... too hypothetical and unsubstantiated for us

to consider it further" (p 127).²⁰ He then takes as his basis the text MUL.APIN which is assigned to c 700, possibly back to 1000 (p 125, 127) and indicates correspondences with Vedic texts. He finds similarities in the lists of 18 constellations in the path of the Moon in MUL.APIN and the 27 or 28 nakṣatras in Vedic AV XIX 7, 2-5, *Taittirīyasaṃhitā* IV 4, 10 and *Taittirīyabrāhmaṇa* I, 5 and III, 1 and thinks that the association of deities with the nakṣatras in India "seems totally arbitrary and unexpected" but the Mesopotamian belief that the constellations are manifestations of gods and goddesses is not so (p 127). Why the Indian nakṣatra/deity relations are arbitrary but not the Mesopotamian ones is not at all clear to me, but Pingree gives no further explanations. He then refers to "the ideal year of 360 days divided into twelve equal months" being the same in both MUL.APIN and RV I 164, 11 and AV IV 35, 4; the same holds for the intercalary months in the real lunar calendar: here Pingree finds that such divisions serve specific purposes in the Babylonian tradition but not in the Vedic one – which seems a most astounding statement since any and every calendar serves the very obvious purpose of signalling days and months not only for religious festivals and rituals (in the Vedic culture too) but also for simple routine chronology. Pingree mentions also that in a "later liturgical calendar recorded in a Vedic text" (ie *kaustakibrāhmaṇa* 19, 2) the practice of reckoning the months from the new moon and of adding an extra month before the New Year is one followed in the Babylonian calendar (p 128); this however can hardly indicate borrowing from Babylon since, as Pingree notes only one paragraph earlier, different Vedic texts reckon months sometimes from the full moon and sometimes from the new moon, exactly as in the MUL.APIN!

40. There is absolutely nothing in Pingree's evidence and arguments to demonstrate a west-eastward movement of influence.²¹ His conviction that the Vedic culture is the borrower stems obviously from the AIT and the old mainstream chronologies assigning the RV to c 1200, the other Vedas to c 1000 and so on (see n 1, above). Although the MUL.APIN is at the very earliest c 1000, nonetheless Pingree cites evidence of translations into Hittite and Elamite which give us a date in the mid-second millennium. But since we have evidence now that the Aryans are indigenous to Saptasindhu and the RV is from before 3100 (and some hymns much earlier), then any similarities must be taken to indicate a westward movement as we saw with other cases. Apart from the aspects discussed in the previous section on Mathematics, an additional consideration is the astronomical references in the MB which, as N Achar demonstrated in 2001, belong to the year 3067 (see Kazanas 2002a). If the Aryans were in a position to make such accurate observations at 3067 then they were well ahead of the Mesopotamians in this science and all correspondences that hitherto indicated Vedic borrowing, thanks to the warped old chronologies, must now be reversed. Thus, in this sphere again the debtor is Mesopotamia – and §41 gives additional confirmation. For a scientist's treatment of the Vedic evidence, confirming my view, see S. Kak 2003.

41. Oppenheim writes: "both the **peacock** and the chicken passed through [Mesopotamia] on their way westward[;] the Sumerians called the chicken 'the bird from Meluhha' and the Syrians called it the 'Akkadian bird' " (p 317: my square brackets). As we saw earlier (also §42, below), the Mesopotamians called Meluhha the Saptasindhu; so chicken and peacocks came to the Near East from the ISC.

In relation to this, of great interest is the view of B Brentzes which I have been unable to see in its original publication but whose significant part is given by S S Misra (1992). Now Brentzes is

20. He cites Parpola's *The Sky-Garment* Helsinki 1985, and *Deciphering the Indus Script*, Cambridge 1994. We too shall ignore Parpola's conjectures.

21. It may be that in later times, whether with Buddhist texts of the last centuries BC or with Hindu texts well into the Common Era, India borrowed through Iran (Pingree pp 130 ff) but this does not concern us in this paper.

an invasionist who found (independently of Oppenheim's statements) some archaeological evidence that links the NE with Saptasindhu: this is the representation of the peacock in Iran and countries of the NE as early as "the late 3rd millennium" in Elam ("two figured poles from Susa with peacock symbols"). It is pointed out that "the earliest examples are known... from Mohenjodaro and Harappa: two birds sitting on either side of the first tree of life are painted on ceramics" (pp 11-2). The transmission to Syria and Palestine (and Sassanian art in Iran) was ascribed to the Aryans in the NE, Kassites and Mitannis c 1600. And Brentzes concluded: "So we are forced to accept the Indo-Aryans in what is now Iran, especially Eastern Iran before 1600 BC were under the Indian influence for such a long period that they could have taken over the peacock veneration. In that case they could not be part of the Andronovo culture, but should have come to Iran centuries before, at the time when the Hittites came to Anatolia."

Misra comments: "Thus, Brentzes has supplied us with a very important archaeological evidence and he has shown with cogent arguments that Indo-Aryans were in India much before the second half of the 3rd millennium BC and that they moved to Iran and Iraq [= Mesopotamia] from India and influenced them culturally" (1992:13; my square bracket). Albright and Dumont too state that peacocks were exported from India to Mesopotamia at the latest c750 (1934: 106, n 6).²² Here now, we have another undoubted case of influence from India to Mesopotamia.

External inter-relations.

42. I have shown that as regards the internal evidence of the Indic and Mesopotamian legends the latter is the more likely one to have borrowed from the former. The external inter-relations between the two cultures seems to confirm disturbs this likelihood.

C.A.Hromnik discussed (1981) the Indian influence on sub-Saharan, eastern and southern Africa from early to modern times suggesting that Indians introduced, among other things, the fat-tailed sheep into the region before the 5th cent BC (p 40) and started gold-mining "on and around the south Zambezi plateau" as early as 1000 BC (p 45). R. Austen examines maritime trade through the Indian Ocean by means of the *dhow* boat, but only in the period after 150 CE; he refers briefly to some studies dealing with earlier periods (p 12 and 25, n 14) but mentions Hromnik nowhere. Clearly more research is needed in this area. However, early trade-contacts between India and Mesopotamia are well established.

B.B. Lal presents (1997) ample evidence for products from the ISC found in various sites of Mesopotamia (Ur, Kish, Nippur etc) suggesting that there were trade exchanges from 2600 onwards (182-5). This is significant since Mesopotamian literary activity is thought to begin only a little before c 2800, though of course oral tradition would be older. Lal presents ample evidence of Harappan products at Bahrain and Oman in the Persian Gulf and in Tepe Yahya near the South coast of Iran (185-7). All this indicates that there was a sea-route connecting the ISC and southern Mesopotamian. "That there did exist land-routes through which the Harappan objects were disseminated is rather self-evident from the occurrence of etched carnelian beads at Shah Tepe and Hissar [in central and north Iran], in levels ascribable broadly to c 2300-1800 BC" (188). Now on the basis of the Mesopotamian text *Enmerkar and the Lord of Aratta*, H. Saggs thinks that "perhaps by 2750 BC direct trading between states, by organised caravans, was taking place" (1989:130). Aratta was "a notable source not only of gold and silver, but also of lapis-lazuli and carnelian" (ibid). Saggs thinks that Aratta contained perhaps Sahr-i-Sokhta (in Afghanistan:ibid). However, D. Frawley rightly points out that such identifications are hypothetical and unnecessary since the epic *MB* (VIII 44-5) actually refers to the region Aratta in northwest Punjab (2001: 224, 226). So the Mesopotamian text describes trading with a region

22. The same two writers state that "wool-bearing trees", i.e. cotton, from India were planted in Assyria c700 (1934: 108, n5; also Oppenheim 1977: 94). McEvilley writes, "In Mesopotamia the obelisk of Shalmaneser III (around 860BC) shows imported Indian elephants" (p 5). These are late attestations, of course.

(kingdom, major city?) in the ISC - definitely at c 1700 and perhaps 2700 (see Saggs, *ibid*). Lal thinks - tentatively - that the countries Dilmun, Magan and Meluhha, whose ships berthed in Agade (= Akkad) as stated in a document of King Sargon c 2350, correspond to Bahrain, Oman and Saptasindhu (195-7). G. Roux on the other hand has little hesitation in accepting these identifications, shown explicitly on the first Map in his book (1992: Maps). Equally certain of this is Harriet Crawford (1994: 148). Frawley reminds us that "K D Sethna has shown with much evidence that Meluhha, pronounced 'Melukha', derives from 'Malekha', which is Prakrit for Mleccha" (2001: 227). Lal suggests also that a small community of Harappan merchants might have been established in one or more of the large Mesopotamian cities (1997: 192); Crawford also accepts the possibility of such "colonies" (1994: 148).²³

It is not beyond the bounds of possibility, surely, that at this early period, c2700, and perhaps before, not only material goods but also cultural ideas travelled from Saptasindhu to Mesopotamia.

43. The Hittites were certainly established in central and south-east Anatolia in "the land of Hatti" by 1900 (Gurney 1990: 13-5; Dunstan 1998: 160-1). It is not clear what and how much of the IE heritage the Hittites brought with them initially because the early centuries of their history are unknown to us. They were conquerors setting up a kingdom (c 1650) that developed into a powerful empire lasting down to c 1180. Yet their mythology (which surfaced in written texts from c 1600) preserved few IE elements. The Hattis, as they were known by their neighbours, retained the names of only 3 gods (Agnis, D-Siu and Inar = V Agni, Dyaus and Indra respectively) and the slaying of the serpent-dragon by Inar and the Weathergod (Kazanas 2001a: § 4c); the castration of Anu by Kumarbi may be related to or even derived from Indra's slaying Vṛtra and other relevant castration-material (Kazanas 2001b, §VII, 6). Their language may have retained some archaic features but it alone among all the other IE branches lost the feminine gender and all 4 commonest of relation words - 'father' (V *pitṛ*, Gk *pater*, Gmc *fadar* etc), 'mother' (V *mātṛ*, Gk *mātēr*, Gmc *mōdor* etc), 'daughter' (V *duhitṛ*, Gk *thugater*, Gmc *tohter*, etc) and 'son' (V *sūnu*, Gk *huio-*, Gmc *sun-*); even Tocharian has cognates of all four. Nonetheless, it is possible that the Hittites brought with them much more IE lore which they gradually forgot or altered beyond recognition²⁴, but some of which found its way into the legendry of neighbouring

23. On the strength of other modern writings of the 1960's and 1970's McEvilley accepts the establishment of such a colony and even points out that a reciprocal Mesopotamian settlement in India seems to be absent or less prominent (p 240). However, not being content with this situation and, wishing to show that the Mesopotamians were the dominant power commercially and culturally, cites D.C. Snell (1997: 28), who wrote "The...Mesopotamians had contact with the periphery mainly to trade for or to seize raw materials, and in that contact they may have influenced the people they confronted." True, but Snell does not mention India, and Mesopotamia's "periphery" is (according to the maps McEvilley helpfully provides) the Caucasus in the north, Syria in the west, Arabian desert in the south and Elam and Iran in the east. True, the Mesopotamians showed aggressiveness and seized both raw materials and regions, but their trade with far-distant ISC could only have been peaceful and costly since the latter, rich in natural resources, needed very little or nothing from Mesopotamia (McIntosh 2002: 169-172).

24. The myth of the missing god Telepinu may be a fusion of the Vedic myth of Saranyu's disappearance and the Mesopotamian myth of fertility-god Dumuzi's death. Unlike Saranyu who is daughter of Tvaṣṭṛ and marries the Sungod Vivasvant, Telepinu is masculine and the son of the great Sungod; in the Hittite legend the Sungod gives a feast and invites all the gods and then Telepinu disappears while in RVX 17, 1-2 Tvaṣṭṛ gives the feast and Saranyu jolts away. Saranyu arranges to leave behind her substitute thus seeming to return. Unlike Dumuzi, Telepinu does not die but returns after a period and restores the fertility cycle. These myths are obviously connected with that of Demeter and her daughter Persephone in Greece, but this would take us far from our immediate concern. (For a discussion of the Telepinu-myth see Gurney 152-5; for the text, Pritchard 1958: 87-91 and Hoffner 1998: 15-20).

people. To use T. Burrow's judgment of Tocharian, we can say of the Hittite culture that it underwent "profound and far reaching ... changes strongly suggestive of alien influence" since it had "travelled [long and] far from its original home" (1973: 10, my square brackets).

Something similar may be said of the Kassites also who came from the east and set up their own kingdom (shortly before or after) c 1600 ruling Mesopotamia for about 400 years. They too brought little IE material as far as can be ascertained from the extant texts but with a significant difference: their language had elements that proved to be of pure Indoaryan provenance and some of their gods and kings had, again, Indoaryan names – like Indaš/Indra, Bugaš/Bhaga, Maruttaš/Marut-as etc (Oppenheim 1977: 338). A little later another people of a similar Indoaryan descent, the Mitannis, established their own kingdom in North Mesopotamia (and part of today's Syria); they too had some clear Indoaryan linguistic elements and kings' and gods' names (Sutarna/Sutarāna, Tušratha/Tvešaratha, Šurriaš/Sūrya, Maruttaš/Marut-as etc: Burrow 1973: 27-9). A highly significant feature here is that under the Kassites' rule in Babylonia, especially under Agum II in early 16th century, there was "a surge of literary invention, collection and recording" (MM 47, 229; Heidel 1965: 13-4; Roux 1992: 251). This might have been a period when new ideas of Vedic descent entered into the Mesopotamian culture and other NE ones.

Conclusion

44. The material discussed in the preceding sections shows that the Vedic Mythological ideas and motifs **have** correspondences in other IE branches and are therefore of PIE provenance. Consequently they cannot be said to be loans from the NE. Different types of evidence suggest that the borrowing was done by the Mesopotamians. I suspect the opposite view prevailed until now because of the wretched AIT and its very recent dates for the Indoaryan culture. Once the AIT is removed and the ISC is seen as a material expression of the anterior Vedic Tradition this problem is also solved. The commercial travels and colonies established by the Indians in Mesopotamia in the 3rd millennium as well as the presence of Kassites and Mitannis (who are linguistically of Indoaryan descent) in the NE show how the east-west influences may have been transmitted. It is also possible that the Indoaryans may have sent civilizing missions much earlier. But, as I said in §3, we must not rule out the possibility that we have shared elements of a much earlier culture, common to Indians, Mesopotamians and other peoples.

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