



THE MAHABHARATA DATE, ARCHAEOLOGY AND THE SINDHU-SARASVATI TRADITION

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Abstract

The Mahabharata as an encyclopaedia of early Indian culture and history may be expected to shed light on the Sindhu-Sarasvati (SS), or Indus, Tradition. For example, the Mahabharata and the Puranas call Visnu and Siva by the name Ekasrnga, the “onehorned one,” or the unicorn, which is one of the most striking images from the mature phase of the SS Tradition.

The Santi-Parva (chapter 343) of the Mahabharata speaks of the one-tusked boar (Varaha) who saves the earth as Visnu’s incarnation. Here Varaha is described as being triple-humped, a figure that we see in the Harappan iconography. There is other continuity of motif and style between the SS Tradition and the classical Indian culture. Geologists tell us that the river Sutudri braided into several channels after its course changed from being a tributary of the Sarasvati to that of the Sindhu. The Epic remembers this in the legend that sage Vasistha wanted to kill himself by jumping into the Haimavati, but the river saved him by breaking up into a hundred shallow channels, hence its ancient name Satadru (CaitrarathaParva, chapter 179). This is example of an event in the Epic that occurred in the 4th or the 3rd millennium BC.

The change in the focus of the civilization from the Sarasvati river to the Ganga is not only implicit in the Puranic story of the descent of Ganga but also in the statement in the Mahabharata (VanaParva, chapter 85) that in the TretaPuskara was the holiest tirtha, in Dvapara it was Kurukshetra, and in the Kaliyuga it is Prayaga.

In this paper I explore several issues related to the date of the Mahabharata events and the text and their relationship to the SS Tradition and the Indic people in West Asia.

Keywords : Mahabharata, Indian culture, Sindhu, Saraswati, Ganga.



1. Introduction

The Mahabharata telescopes early genealogical history. The Puranic king-lists provide useful clues to the sequence of events. Some of the main events are: Generation 45, Bhagiratha, Ganga changes course; Generation 65, Rama Dasarathi, Dvapara begins; Generation 94, Mahabharata War. Given that the Mahabharata War took place several centuries before the Buddha, it is clear that even if we allocate only 20 years to each generation, the Puranic king-lists reach back into the early phases of the SS Tradition. The astronomical references in the Vedic texts reach back to the 4th and 5th millennia BC.¹

The Mahabharata, in turn, describes events that belong to the earliest layers of the Vedic lore. For example, there is much material in the AdiParva on Yayati, one of the first kings in the Puranic lists. There is also description of the westward emigration of Aryan tribes through the device of Yayati expelling his sons. Such emigration stories are part of the Rgvedic narrative.²

The Greek historians inform us that the Indians during the time of the Mauryas remembered more than 150 generations of kings spanning over 6,000 years. (We assume that these lists remember the prominent kings only.) The earliest calendar in India was centennial, with a cycle of 2,700 years. Called the Saptarsi calendar, it is still in use in several parts of India. Its current beginning is taken to be 3076 BC. Notices by the Greek historians Pliny and Arrian suggest that, during the Mauryan times, the calendar used in India began in 6676 BC. It is very likely that this was the Saptarsi calendar with a beginning of 6676 BC.

The SS Tradition has been traced to about 7000 or 8000 BC in Mehrgarh in northwest India. It is seen to have evolved in four distinct stages as follows:³

¹Kak, S. 2000. The Astronomical Code of the Rgveda. MunshiramManoharlal, New Delhi.

²Talageri, S.G. 2000. The Rigveda: A Historical Analysis. Aditya Prakashan, New Delhi. Frawley, D. 2001. The Rig Veda and the History of India. Aditya Prakashan, New Delhi.

³ Gupta, S.P. 1996. The Indus-Sarasvati Civilization. PratibhaPrakashan, Delhi. Lal, B.B. 1997. The Earliest Civilization of South Asia. Aryan Books International, New Delhi. Kenoyer, J. M. 1998. Ancient Cities of the Indus Valley Civilization. Oxford University Press, Karachi.



1. Early Agriculture Economy Era 8000 BC – 5500 BC	Mehrgarh, Period I Aceramic, Neolithic, 8000 – 5500 BC
2. Regional Growth Era 5500 BC – 2600 BC	Mehrgarh, Period II, 5500 – 4800 BC Mehrgarh, Period III, 4800 – 3500 BC Harappa, Period I, 3500 – 2800 BC Harappa, Period II, 2800 – 2600 BC
3. Integration Era 2600 BC – 1900 BC	Harappan Phase Harappan Period, 3C, Final, 2200 – 1900 BC
4. Localization Era 1900 BC – 1300 BC	Late Harappan Phase, 1900 – 1300 BC Harappa, Periods 4 and 5, 1900 – 1700 BC Beginnings of the Ganga Phase

Table 1. Phases of the SS Tradition

The Early Agriculture Economy Era (ca. 8000-5500 BC) witnessed the beginnings and maturation of the early agriculture economy. In the Regional Growth Era, (5500-2600 BC) we see regional styles and different phases of evolution. Although uniformity begins to emerge in 2800 BC (or a couple of centuries earlier), the Harappan state with numerous cities and towns emerges in the Integration Era (2600-1900 BC). The uniformity is seen in the writing, system of weights and styles of pottery. The uniformity across a very wide area emphasizes social classes and considerable trade.

In the Localization Era (1900-1300 BC) we witness unbroken continuity in several cultural expressions but we don't see writing and the use of standardized weights. Evidently, this was a consequence of a breakdown of long distance trade. By the end of this Era, a new integration is seen in a geographical area across the entire north Indian plains.

If one juxtaposes these phases with the events of the Mahabharata Epic, it appears that at the end of the War the region changed from a period of several isolated, independent kingdoms to that of a larger state. The unification created at the end might have provided the climate in which epic poetry was patronized by the king. This idea supports the view that the growth of the Epic from its original form took place during the transition to the Integration Era or perhaps at the end of the Localization Era.



2. The Date of the Mahabharata

Let's consider the epoch for the Mahabharata War. By popular tradition, the Kali Age started with the death of Krishna, 35 years after the War. The Kali calendar has a beginning of 3102 BC, therefore it is thought that the Mahabharata War took place in 3137 BC. The Kali age is supposed to have begun with a grand planetary conjunction.

The first mention of the Kali calendar is by the astronomer Aryabhata in his treatise on astronomy with an internal date of 500 AD. The earliest epigraphical reference is in the 5th century inscription of King Devasena where it is alluded to indirectly, and in the Aihole inscription of 3735 Kali (634 AD). Because of these late references, some scholars have suggested that the Kali calendar was started at a late period with an assumed conjunction at the beginning of the era for convenience of calculations, and, therefore, the Aihole inscription cannot be taken as proof of the date of the War.

Modern studies using powerful software that can reconstruct the ancient skies indicates that there was actually an approximate conjunction of the planets on Feb 17, 3102 BC as taken by Aryabhata. This may only be a coincidence. Even if the Kali calendar is as old as its starting date, its connections with the Mahabharata War do not appear to be equally ancient. There are also other traditions related to the War. Some of them are old, some new. The most prominent competing theories may be gathered into the following four classes:

1. The date of around 1000 BC. This is the date popularized by Western Indologists as being most "reasonable" based on archaeological data. Repeated in numerous school texts, it has achieved a certain kind of canonicity. This date was first proposed within the framework of the Aryan invasion theory. Although that theory has been discredited, this date has taken independent life of its own.
2. The date of 1924 BC. Based on Puranic genealogies that see a gap of 1000 years or so between the War and the rule of the Nandas (424 BC) we get the date of 1424 BC. But



Pargiter, while editing these accounts from the various Puranas,⁴ suggested that the original number was 1,500 which was wrongly copied in various texts as 1000, 1015, or 1050. I accept the arguments of Pargiter and, therefore, consider the Puranic tradition to support the date of 1924 BC.

Furthermore, the date of 1424 BC sits in the middle of an obscure period, and it is hard to see how the events of that age would not have left markers in the archaeological record.

3. The date of 2449 BC. This is based on a statement by Varahamihira in 505 AD in chapter 13 of the BrihatSamhita, where it is claimed that the commencement of the Saka era took place 2,526 years after the rule of the king Yudhisthira. If the Saka era meant here is the Salivahana era (78 AD), then the date follows. Some scholars have suggested that this Saka era refers to the one started by an earlier Saka king in Central Asia and that this date is not at variance with the Kali date of Aryabhata.
4. The date of 3137 BC. The traditional value, mentioned by Aryabhata and in the Aihole inscription of 634 AD. I shall examine these three different dates while considering the evidence from theMahabharata, the Puranas, archaeology and astronomy.

3. The Mahabharata Epic and Archaeology

Is the Mahabharata epic - the text of 100,000 verses - which is a source for the events of the War to be taken as history? The epic itself claims to have been originally just 8,800 verses composed by KrsnaDvaipayanaVyasa and called the Jaya. Later, it became 24,000 verses, called the Bharata, when it was recited by Vaisampayana. Finally, it was recited as the 100,000 versed epic (the Mahabharata) by Ugrasravas, the son of Lomaharsana.

Thus the tradition acknowledges that the Mahabharata grew in stages. The core of the story is very ancient and there is astronomical evidence in it related to the Asvamedha rite that indicates a period before the 3rd millennium BC.⁵

⁴Pargiter, F.E. 1975 (reprint). The Purana Text of the Dynasties of the Kali Age. Deep Publications, New Delhi.

⁵Kak, S. 2002. The Asvamedha: The Rite and its Logic. MotilalBanarsidass, Delhi.



The details of the final version may very well include episodes that are poetic exaggerations or imagined material. We see such poetic imagination at work by comparing the Ramayanas of Valmiki and Tulasidas. We may also compare the story of Radha, who does not appear in the Mahabharata or the BhagavataPurana, who has become a part of the Krsna legend due to later texts.

Many of the characters of the Mahabharata are mentioned in the Vedic texts that, on account of being considered sacred, have not suffered interpolations and should thus represent historical persons. Krsna, for example, is mentioned in the ChandogyaUpanisad. Other names occurring elsewhere include Vicitravirya, Santanu, Dhrtarastra, Janamejaya, and Pariksit.⁶

Due to its expansion over several centuries, the Epic includes late material. This means that dating the events of the Epic based on archaeological finds could be misleading. Some scholars have correlated the painted grey ware (PGW) pottery of the period of 1100-900 BC found in Hastinapur (modern Hathipur) to the Kauravas. But there is no basis for such correlation. The Kurukshetra site itself has structures that go back to about 3000 BC.

Panini's grammar (c. 400 BC) knows the Mahabharata. In the sutra 6.2.38, it mentions both the Bharata and the Mahabharata. Also, the Epic, in its long descriptions of the religions of the day, describes the Vedic, Sankhya, Yoga, Pasupata, and the Bhagavata traditions. There is no mention of Buddhism, so we can be certain that it was substantially complete prior to 400 or 500 BC. The language of the Epic does not always follow Paninian constructions which also indicates that it is prior to 500 BC. Even the political life described in the Mahabharata does not correspond to the imperial ages of 400 BC – 400 AD that has sometimes been assigned to it in the West. Cattle raids occur prominently in it, not imperial conquest. There is no reference to the Sisunaga kings, the Nandas, the Mauryas, or the Sungas. On the other hand, the Buddhist Jatakas, that were written during the times of these dynasties, are aware of the characters of the Epic. One Jataka, for example, speaks disparagingly of Draupadi for having four husbands.

⁶Agarwala, G.C. (ed.) 1979. Age of Bharata War. MotilalBanarsidass, Delhi.



Dion Chrysostom, Greek Sophist (40-105 AD) mentions that the Indians possess an Iliad of 100,000 verses. Together with its appendix, the Harivamsa, the Epic does add up to this total.

Recent archaeological discoveries indicate that the Sarasvatiriver dried up around 1900 BC, leading to the collapse of the Harappan civilization that was principally located in the Sarasvati region (accounting for about 70 percent of all the Harappan sites). The Rigveda celebrates the Sarasvati as the greatest river of its day, going from the mountains to the sea (giribhyaasamudrat in RV 7.95.2).

There are two schools of thought related to the drying up of the Sarasvatiriver. According to the first one, the Sarasvati ceased to be a seagoing river about 3000 BC, explaining why the 3rd millennium settlements on the banks of the Sarasvati river end in the Bahawalpur region of the Punjab and do not reach the sea; there was a further shrinking of the river in about 1900 BC due to an earthquake that made its two principal tributaries to be captured by the Sindhu and the Ganga river systems. According to the second view, the Sarasvati flowed to the sea until 1900 BC when it dried up. The first view explains the geographical situation related to the Harappan sites more convincingly.⁷

Given the understanding of the drying up of Sarasvati, with its preeminent status during the Rigvedic times, it follows that the Rigvedic hymns are generally anterior to 1900 BC. If one accepts the theory that the Sarasvati stopped reaching the sea in 3000 BC, then the Rigvedic hymns are prior to 3000 BC. If the tradition that Vyasa was the arranger of the Vedas is correct, the latter explanation would mean that the Mahabharata War could indeed have occurred in 3137 BC.

4. The Puranic Tradition

The Puranic lists come down to the 4th or the 5th century AD and they are quite accurate in their details for the post-Mauryan period for which independent inscriptional evidence is available. One would expect that they would be accurate for the period prior to the Mauryas also. The

⁷ See Note 1. See also, Kak, S. 2001. The Wishing Tree: The Presence and Promise of India. MunshiramManoharlal, New Delhi.



regnal years are given in the Puranas only for the post-War kings. The king-list for Magadha has the following dynasties in the post-Bharata War period:⁸

1. Brhadrathas (32 kings) 967 yeats
2. Pradyotas of Avanti (5 kings) 173 years
3. Sisunagas (10 kings) 360 years
4. Nandas (Mahapadma + sons) 100 years
5. Mauryas (9 kings) 137 years
6. Sungas (10 kings) 112 years
7. Kanvas (4 kings) 45 years
8. Andhras (30 kings) 460 years

One may question the reliability of the earlier parts of this list since the average span of reign for the pre-Nanda kings is more than twice as much for the post-Nanda ones. The explanation appears to be that it was during the imperial Maurya age that comprehensive king-lists were made and, consequently, only the better-known names of the earlier period were included. The centennial counting system, named after the nakshatras, made certain that the count of the dynastic totals was accurate. The length of the Brhadratha dynasty may also be questioned. But, it may represent the cumulative sum of several early dynasties.

During the pre-Nanda period, the lists also provide for 24 Aikshvakus, 27 Pancalas, 24 kings of Kasi, 28 Haihayas, 32 Kalingas, 25 Asmakas, 36 Kurus, 28 Maithilas, and 23 Surasenas.

We know that Chandragupta Maurya started his reign in 324 BC. Therefore, if we were to accept these periods, the dynastic eras for the post-Bharata age will be:

1. Brhadrathas 1924-957 BC

⁸ See Pargiter, op cit



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2. Pradyotas 957-784 BC
 3. Shishunagas 784-424 BC
 4. Nandas 424-324 BC
 5. Mauryas 324-187 BC

and so on.

It is most significant that the Puranic king-lists imply 1924 BC as the epoch of the Mahabharata War. Since this epoch is virtually identical to the rough date of 1900 BC for the catastrophic drying up of the Sarasvatiriver, it suggests that the two might be linked if they are not the same. The disruption due to the earthquake may have been a contributing factor to the Mahabharata War, or the War could have served as a metaphor for the geological catastrophe.

Around 500 CE, a major review of the Indian calendar was attempted. The astronomers Aryabhata, Varahamihira and others used the nakshatra references that the Saptarsi were in Magha at the time of the Mahabharata war to determine its epoch. Aryabhata declared the war to have occurred in 3137 BC, and Varahamihira assigned it 2449 BC. This discrepancy arose perhaps from the different assumptions regarding the nakshatras (27 or 28) in the calculations of the two astronomers.

It is likely that the fame of the Kaliyuga era with its beginning assigned to 3102 BCE prompted a change in the beginning of the Saptarshi era to about the same time, that is to 3076 BC.

The Puranic memory of the Mahabharata war having occurred in 1924 BC may represent the transference of a much earlier event to the cataclysmic event at the end of the Harappan period. The memory of the War in popular imagination may represent the conflation of two different actual events.

The date of 1000 BC or so is just not possible because it is at variance with the astronomical facts related to the period. Furthermore, it is at variance with the Puranic genealogies which, we know, are quite accurate in the post-Mauryan period and are likely to have been accurate earlier



as well. Then there are various remembered lines of teachers that show up in various texts. Specifically, the Brhadaranyaka Upanishad remembers a line of 60 teachers. We don't know how many years should be assigned to each teacher but this line could span substantially more than a thousand years. Given that this Upanishad is about 800-600 BC in the most conservative reckoning, this long list makes it impossible for the Rigvedic period to end in 1000 BC, as required by the War in that epoch.

Recently, astronomical evidence related to the mention of eclipses and the placement of planets in the narrative of the Mahabharata has been examined by several scholars.⁹

The date of 3067 BC (35 years after 3102 BC rather than 35 years before it) has provided a nice fit for a large number of data points. But such analysis depends on subjective interpretation of the stray astronomical references. Neither can we be sure if the passages used are from the core text or from the much later accretions. Therefore, such an approach will remain highly controversial.

This leaves us with the dates of 1924 BC and 3137 BC. I don't think we have evidence at this time to pick one of these two as the more likely one. If one gives credence to the Puranic genealogies, then 1924 BC would be the time for the War; if, on the other hand, we go by the astronomical evidence related to the Vedas and the subsequent literature, then 3137 BC remains a plausible date. If the pre-Nanda Puranic lists are not accurate for the regnal periods, then the War will have occurred a few centuries later than 1924 BC. The Indic Kings of the West

We mentioned in the Introduction that the Mahabharata mentions that of the five descendents of Yayati, two became Yavanas and the Mlecchas. This seems to remember a westward emigration. This particular migration may have occurred in a very early period in the Vedic world that spanned Jambudvipa and the trans-Himalayan region of UttaraKuru. We have a later evidence for another westward movement to the lands ranging from Babylonia to Turkey.

⁹ See Agarwala, op cit. for summary of early attempts. Recently, the historian of astronomy Narahari Achar has in unpublished work argued for the date of 3067 BC with an error of a few decades. Achar's work does not depend on the classical siddhantic ideas which increases its persuasiveness.



The Mitanni, who worshiped Vedic gods, were an Indic kingdom that had bonds of marriage across several generations with the Egyptian 18th dynasty to which Akhenaten belonged. The Mitanni were known to the Egyptians as the Naharin, connected to the river (nahar), very probably referring to the Euphrates. At its peak, the Mitanni empire stretched from Kirkuk (ancient Arrapkha) and the Zagros mountains in western Iran in the east, through Assyria to the Mediterranean sea in the west. Its center was in the region of the Khabur River, where its capital, Wassukkani (Vasukhani, “a mine of wealth”) was probably located.¹⁰

The first Mitanni king was Sutarna I (good sun). He was followed by Baratarna I (Paratarna, great sun), Parasuksatra (ruler with axe), Saustatar (Sauksatra, son of Suksatra, the good ruler), Paratarna II, Artadama (Rtadhaman, abiding in cosmic law), Sutarna II, Tushratta (Dasaratha), and finally Matiwazza (Mativaja, whose wealth is thought) during whose lifetime the Mitanni state appears to have become a vassal to Assyria.

The early years of the Mitanni empire were occupied in the struggle with Egypt for control of Syria. The greatest Mitanni king was Sauksatra who reigned during the time of Tuthmose III. He was said to have looted the Assyrian palace at Ashur. Under the reign of Tuthmose IV, more friendly relations were established between the Egyptians and the Mitanni.

The daughter of King Artadama was married to Tuthmose IV, Akhenaten's grandfather, and the daughter of Sutarna II (Gilukhipa) was married to his father, Amenhotep III, the great builder of temples who ruled during 1390-1352 BC (“khupa” of these names is the Sanskrit ksipa, night). In his old age, Amenhotep wrote to Tushratta many times wishing to marry his daughter, Tadukhipa. It appears that by the time she arrived Amenhotep III was dead. Tadukhipa was now married to the new king Akhenaten, becoming famous as the queen Kiya (short for Khipa).

The Egyptian kings had other wives as well. Akhenaten's mother, Tiye, was the daughter of Yuya, who was a Mitanni married to a Nubian. It appears that Nefertiti was the daughter of Tiye's brother Ay, who was to become king himself. The 18th dynasty had a liberal dose of Indic blood.

¹⁰Kak, S. 2003. Akhenaten, Surya, and the Rgveda. Louisiana State University, Baton Rouge



But how could an Indic kingdom be so far from India, near Egypt? A plausible scenario is that after catastrophic earthquakes dried up the Sarasvatiriver around 1900 BC, many groups of Indic people started moving West. We see Kassites, a somewhat shadowy aristocracy with Indic names and worshiping Surya and the Maruts, in Western Iran about 1800 BC. They captured power in Babylon in 1600 BC, which they were to rule for over 500 years. The Mitanni ruled northern Mesopotamia (including Syria) for about 300 years, starting 1600 BC, out of their capital of Vasukhani. Their warriors were called marya, which is the proper Sanskrit term for it.

In a treaty between the Hittites and the Mitanni, Indic deities Mitra, Varuna, Indra, and Nasatya (Asvins) are invoked. A text by a Mitannian named Kikkuli uses words such as aika (eka, one), tera(tri, three), panza (panca, five), satta (sapta, seven), na (nava, nine), vartana (vartana}, round). Another text has babru (bahru, brown), parita (palita, grey), and pinkara (pingala, red). Their chief festival was the celebration of visuva} (solstice) very much like in India. It is not only the kings who had Sanskrit names; a large number of other Sanskrit names have been unearthed in the records from the area.

Documents and contract agreements in Syria mention a warrior caste that constituted the elite in the cities. The ownership of land appears to have been inalienable. Consequently, no documents on the selling of landed property are to be found in the great archives of Akkadian documents and letters discovered in Nuzi. The prohibition against selling landed property was dodged with the stratagem of "adopting" a willing buyer against an appropriate sum of money.

Information of the mythology of the Hurrians of the Mitanni is known from related Hittite and Ugaritic myths. The king of the gods was the weather god Teshub who had violently deposed Kumarbi paralleling the killing of Vrtra by Indra. Major sanctuaries of Teshub were located at Arrapkha (modern Kirkuk) and at Halab (modern Aleppo) in Syria. Like Indra, Teshub also had a solar aspect. In the east his consort was the goddess of love and war Shaushka (Venus), and in the west the goddess Hebat (Hepat). In addition, a considerable importance was attributed to impersonal gods such as heaven and earth as well as to deities of mountains and rivers. Temple monuments of modest dimensions have been unearthed.



The general Indic influence in the area may also be seen in the comprehensiveness of the god lists. The most "official" god list, in two Ugaritic copies and one Akkadian translation, consists of 33 items, exactly as is true of the count of Vedic gods. These gods are categorized into three classes, somewhat like the three classes of the Vedic gods, although there are difference in details.

The main Semitic gods are Yahvah and El or (Il or al-Il, as Allah) The Rgveda mentions Yahvah in 21 different hymns. Ila is the deity for the RgvedicApri hymns and it represents Agni in Yajurveda (VS) 2.3, whereas Ilaa represents Earth, speech, and flow. The Vedic Yahvah is, as an epithet, associated with movement, activity, heaven and earth; it means the sacrificer and Agni, the chief terrestrial god. It is associated with energy like the Yahvah of the Semites. It may be compared to Shivah, an epithet for auspiciousness in the Rigveda, that later is applied regularly to Rudra. It is plausible that the Vedic Ila and Yahvah were adopted by the Semites through the mediating agency of the Mitanni.

Greek accounts tell us that the Ugaritic believed in a cosmic egg out of which the earth emerged which is reminiscent of brahmamda of the Vedic view. How do we know that the Mitanni were Indic and not Iranian? There are several reasons, but to be brief, I shall only give three: 1. the deities Indra, Mitra, Varuna, and Nasatya are Indian deities and not Iranian ones, because in Iran Varuna is unknown and Indra and Nasatya appear as demons; 2. the name Vasukhani makes sense in Sanskrit as a "mine of wealth" whereas in Iranian it means "good mine" which is much less likely; 3. satta, or sapta, for seven, rather than the Iranian word hapta, where the initial 's' has been changed to 'h'.

Why could not the Mitanni be the descendents of a pre-Vedic people as in the Gimbutas model of the spread of the Indo-Iranian people from the Kurgan culture of the steppes of Central Asia? They would then have had no particular affinity for Indic deities. If the preVedic people in Central Asia already had Indian deities, how would these small bands of people impose their culture and language over what was perhaps the most densely populated region of the ancient world. Furthermore, that view does not square with our knowledge of the astronomical tradition within India. The Vedic Samhitas have very early astronomical and its geography is squarely



within India. The VedangaJyotisa, a late Vedic text, already belongs to the middle of the second millennium BC. The earlier texts remember events within the Indic geographical area going back to the third and the fourth millennia BC. The theory of a proto-Indoaryan people in Iran from whom the Aryans of India descended in the second millennium BC does not work for the same reasons.

The idea of invasion or large-scale immigration of outsiders into India displacing the original population in the middle of the second millennium BC has been rejected since it is not in accord with archaeological facts, skeletal records, and the continuity of the cultural tradition.

The Indian textual tradition also does not permit us to accept the Gimbutas model because of the length of time required for the rise of the voluminous Indian literature. Over fifty years ago, Roger T. O'Callaghan and W.F. Albright published in *AnalectaOrientalia* of Rome a list of 81 names (13 from the Mitanni, 23 from the Nuzi, and 45 from the Syrian documents) with Indic etymologies. Out of this list, Dumont has provided the etymology of 45 names.¹¹ Analyzing the names, Dumont concludes that the names are clearly Indic and not Iranian. The initial s is maintained and the group s'v is represented by the similar sounding sw and not the Avestanaspō. Also, most of the names are bahuvrihi or tatpūrusa compounds.

Considering the language, it is clearly an Indic dialect because the initial v is replaced by b, while medial v becomes the semivowel w. Like Middle Indic (Prakrit) dialects, the medial pt transforms into tt, as in *sapta* becoming *satta*.

Dumont stresses its relationship to Sanskrit in the characteristic patronymic names with the vrddhi-strengthening of the first syllable, like in *Saumati* (the son of *Sumati*) or *Sausapti* (the son of *Susapti*). The worship of the Vedic gods like *Indra*, *Vayu*, *Svar*, *Soma*, *Rta*, *Vasus* has already been noted. The fact that the Mitanni names suggest a Middle Indic dialect is supportive of the thesis that the emigration of the various groups from India took place after the early Vedic period had come to an end.

¹¹ Dumont, P.-E. 1947. "Indo-Aryan names from Mitanni, Nuzi, and Syrian documents." *Journal of the American Oriental Society*, 67: 251-253.



Our argument actually goes beyond the presence of people in West Asia whose languages were Indic, as was the case with the Mitanni. There is evidence that Indic religion and culture had adherents even outside of groups with Indic speech.

The Avesta speaks of the struggle between the worshipers of Ahura Mazda and the daevas. Zarathustra nowhere names the daevas and it is only in the later texts that Indra and the Nasatyas are so labeled. Many of the Vedic devas (such as Mitra, Bhaga, Agni, Vayu, and Indra as Vrtraghna) continue to be counted amongst the good ahuras. It appears that the triple division of deva/asura/raksasa corresponding to sattva/rajas/tamas was divided into the dichotomy deva versus asura/raksasa in India and that of deva/asura versus daeva (raksasa) in Iran. The term daeva as synonym with raksasa and distinct from deva survives in Kashmir.

The ahura-daeva opposition in the Zoroastrian texts is expressed as one between the Mazdayasnas and the Daevayasnas. It is a conflict in which Zoroaster wished to defeat and convert the worshipers of the daeva religion. The Yasts speak of legendary heroes and kings who participated in this struggle. The wars against the Daevayasnas by Vistaspa (Yt. 5.109, 113; 9.30-31), Jamaspa (Yt. 5.68-70), and Vistaru of the Naotara family (Yt. 5.76-77) represent this ongoing conflict in the historical period. In Vendidad, the Zoroastrians are encouraged to take possession of the lands, waters, and harvests of the daeva worshipers (Vd. 19.26). Elsewhere (Vd. 7.36-40), it is recommended that the art of medicine should be first tried on the daeva-worshipers and if they survive then it should be attempted on the Mazdayasnians.

Although the Zoroastrian heresy triumphed in Iran and the great Persian kings of the middle of first millennium BC followed the religion of Ahura Mazda, the daeva worshipers survived, especially in the West, in the Mesopotamian religion. The devas as well as daevas survived for a pretty long time in corners of Iran. The evidence of the survival of the devas comes from the daiva- inscription of Xerxes (ruled 486-465 BC). The revolt by the daeva worshipers in West Iran is directly referred to: Proclaims Xerxes the King: When I became king, there is among these countries one which was in rebellion. Afterwards Ahuramazda bore me aid. By the favor of Ahuramazda I smote that country and put it down in its place.



And among these countries there was a place where previously daiva were worshiped. Afterwards, by the favor of Ahuramazda I destroyed that sanctuary of daiva, and I made proclamation: 'The daiva shall not be worshiped!' Where previously the daiva were worshiped, there I worshiped Ahuramazda at the proper time and in the proper manner. And there was other business that had been done ill. That I made good. That which I did, all did by the favor of Ahuramazda. Ahuramazda bore me aid until I completed the work.

The analysis of early Persian history has shown that the Mazandaran, the region south of the Caspian sea and the Alburz mountain range, remained for long a centre of daeva worship. There were also the successors to the deva worshipers of the Mitanni kingdom. It has been suggested that the Xerxes inscription refers to the suppression of these people. Burrow takes the daeva worshipping people to be proto-Indoaryans and sees them as the remnants of a population that stretched from West Asia to India. The Iranians coming down from the northeast drove a wedge between this belt, leading to the eventual assimilation of the western daeva worshipers in the course of centuries. Irrespective of what the original movement of the Indoaryans was before the fourth or fifth millennium BC, it is clear that since their Indian branch recognizes the geography of only their region, it is either necessary to push back the proto-Indoaryan phase to the fourth or the fifth millennium BC or to postulate their movement out of India as is suggested in the Puranas.

5. Conclusion

The material from the Mahabharata and the Puranas provides us many tangled hints. Given the extensive nature of the king-lists and the teacher-lists it is impossible that the origin of the Mahabharata-Purana tradition could be brought down to the beginning of the second millennium BC as espoused by the proponents of the theories of Aryan invasion and migration. The Mahabharata War occurs at the 94th generation in these lists, and even if one were to assign just 20 years for each generation and assume that the lists were exhaustive, one would have to account for nearly 2,000 years before the War which, even in the most conservative dating for the War, takes us square into the beginnings of the Integration Era of the SS Tradition.



The Epic and Puranic evidence on the geographical situation supports the notion of the shifting of the centre of the Vedic world from the Sarasvati to the Ganga region in early second millennium BC. O.P. Bharadwaj's excellent study of the Vedic Sarasvati using textual evidence¹² supports the theory that the Rgveda is to be dated about 3000 BC and the Mahabharata War must have occurred about that time.

The Mahabharata clearly belongs to a heroic age, prior to the rise of the complexity of urban life. The weapons used are mythical or clubs. The narrative of chariots could be a later gloss added in the first millennium BC. The pre-urban core events of the Epic would fit the 3137 BC date much better than the 1924 BC. But this would suggest that the Puranic tradition at a later time conflated earlier events with the destructive earthquakes of 1924 BC and remembered the later event accurately using the centennial Saptarsi calendar. The Indic kings of West Asia are descendents of Vedic people who moved West after the catastrophe of 1924 BC.

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10. See Note 1. See also, Kak, S. 2001. The Wishing Tree: The Presence and Promise of India. MunshiramManoharlal, New Delhi.
11. See Pargiter, op cit

¹²Bharadwaj, O.P. 1984. "Identification of Vinasana and some consequential observations." In Svasti Sri (ed. K.V. Ramesh). Agam Kala Prakashan, Delhi. Bharadwaj, O.P. 1987. "The Vedic Sarasvati." Haryana SahityaAkademi Journal of Indological Studies, II, Numbers 1-2: 38-58.



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9. See Agarwala, op cit. for summary of early attempts. Recently, the historian of astronomy NarahariAchar has in unpublished work argued for the date of 3067 BC with an error of a few decades. Achar's work does not depend on the classical siddhantic ideas which increases its persuasiveness.
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