

Vedic Chronology vs. the Aryan Immigration Theory

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Abstract

The chronology of the Vedas is an important matter in itself, but also happens to be a decisive consideration in the Āryan Immigration debate. Its presently most touted argument, geneticist David Reich's discovery of an influx into India between -2000 and -1500, hinges on Max Müller's low chronology of the Ṛg-Veda. But recent archaeological findings come to confirm the established astronomical pointers to a high chronology, well before -2000. Reich's immigrants came too late for bringing Sanskrit into India: it was already there.

Full Paper

Every textbook chapter or introductory article about the Vedas starts with a matter-of-fact statement about their chronology, that they started to be composed shortly after the Aryan immigration (violent or otherwise), dated around 1500 BCE. Scholars working on other aspects of Vedic literature, especially its philosophical contents, derive their dating from it, e.g. Bṛhadāranyaka Upaniṣad (800 BC) is a plausible dating on condition that post-1500 BC for the start of the Ṛgveda and ca. 500 BC for the Buddha are assumed.

Edwin Bryant devotes a chapter to the problem of the date of the Ṛgveda, which remains non-committal, but he states its importance well. The Vedic Indo-Aryan contains (surprisingly few) loans from Dravidian and Munda, which are always cited as proof that these must have been picked up after an immigration into India. However:

“The various attempts made to date Sanskrit texts (the Veda) are examined in the context that if the Ṛgveda (the earliest of the texts) is at least a millennium older than its commonly accepted date, then the possibility of Dravidian and/or Munda and/or unknown linguistic influences on Vedic Sanskrit being the result of the speakers of these languages intruding on an Indo-Aryan-speaking area after the other languages had already left, as opposed to vice versa, becomes a much more serious consideration. Moreover, the relationship between Vedic and Proto-Indo-European would need to be reconsidered, and any proposal associating the overland trajectory of the Indo-Aryans with the Andronovo culture, a southern Iranian route, or any Post-Harappan culture in the subcontinent, loses value. For these and other reasons, a much older date for the Veda is foundational to the Indigenous Aryanist position; if by contrast, the oldest strata of the Ṛgveda cannot be far removed from the conventionally accepted date of 1200 or 1500 BCE, then the Indigenous Aryanist case loses cogency.” (Bryant: 2001:238)

The recent commotion about an alleged genetic proof of the Aryan Invasion Theory (or as some nowadays squeamishly insist, Aryan Immigration Theory, abbreviated either way as AIT) is also based on this common chronology. David Reich (2018) from Harvard has argued, and Indian Invasionist journalists like Tony Joseph (2017, 2018) have vulgarized his position, that a genetically identifiable influx into India from Central Asia and Eastern Europe took place between -2000 and -1500. Though Indian geneticists like AL Chavda (2017), Premendra Priyadarshi (2017) and Niraj Rai (2022) have argued against this, we think opponents of the AIT shouldn't mind it because the deduction of the AIT from Reich's findings totally depends on the vulnerable conventional chronology. If the Ṛgveda and therefore the presence of the Sanskrit branch of Indo-European in India predates -2000, Reich's influx can be something like the later Scythian, Huna or Turkic invasions that left no linguistic traces, but not the fabled 'Aryan' invasion that brought Sanskrit into India.

Determining the Date, Conventionally

According to the on-line *Encyclopedia Britannica*, entry ‘Rigveda’ (consulted 15 January 2023),

“No definite date can be ascribed to the composition of the Vedas, but the period of about 1500–1200 BCE is acceptable to most scholars.” An implied date for the Brahmanas at ca. -900 is also deduced. So, note that this date is deemed “acceptable”, but an evidential basis for it is lacking.”

So where does this conventional chronology come from? How do they know that the Vedas were composed from ca. 1500 onwards? The estimate was made by Friedrich Max Müller in the late 19th century, but it was not based on some corresponding C-14- dated archaeological discovery (this technology did not exist yet), nor on a synchronism with an already-dated other text (where are those equally old texts?). Therefore, in his own day, Max Müller was challenged by fellow Orientalists to show the factual basis of this estimate. His own pupil Moriz Winternitz objected that the entire evolution from the *early R̥gveda* to the Buddha was too variegated and rich to be compressed in a few centuries.

The end of it was that Max Müller threw his hands up in the air and conceded that he really didn’t know. In a bout of unnecessary pessimism, he even said that we would never know. But that was in the context of a quarrel between a handful of specialists. For the larger informed public, his estimate had already become Gospel because of his eminence. He was the Oxford-based dean of Orientalism and the editor of the Sacred Books of the East, a series of translations of philosophical and spiritual classics from the Orient. This constituted a cultural revolution, a second Renaissance, because it gave numerous philosophers and artists, as well as their audience, access to the fabled wisdom of the East. This gave his estimate an authority that would prove difficult to challenge.

Indian Estimates

In India, more ambitious chronologies are extant. Attempts to date the Vedas are few, probably because of the common though unhistorical belief that they are timeless and uncreated. But an important implied chronology of the Vedas follows from the dating of the Mahābhārata, which started shortly after the Vedas reached completion. The connection between the two is the person of Kṛṣṇa Dvaipayana, better known as Veda-Vyāsa. The tradition that he edited the Vedas (or at least the *Veda-trayī*, i.e. minus the Atharva-Veda) and that he was the biological grandfather of the epic’s main protagonists, clearly has a historical core: the last person mentioned in the R̥gveda is his stepfather Śāntanu, the last in the Yajurveda his son Dhṛtarāṣṭra, both older participants in the epic drama. So, the completion of the Vedas narrowly predates the start of the epic. (The Atharvaveda still manages to name Arjuna’s grandson Parīkṣit, sired during the battle.)

The Mahābhārata’s core, the Kurukṣetra battle between two branches of the Bhārata dynasty, is usually taken to have happened 37 years before protagonist Kṛṣṇa’s death, with the latter dated to 3102 BC and equated to the beginning of the *Kali Yuga*; so in 3139. The first to come up with this chronology, at least implicitly, is the scientist Āryabhata ca. 500 AD, and shortly thereafter it makes its first public appearance in the Aihole inscription. It has no basis in any prior work, not even in the Mahābhārata itself. (It is thus a case of an ‘invented tradition’, a term coined by the British Marxist historian Eric Hobsbawm ca. 1980 and meaning a tradition of relatively recent vintage that falsely passes as ancient.) We will therefore not be surprised when it transpires to be untenable.

A wilder but now popular variation is Nilesh Oak’s thesis (2015) that the battle took place in 5561 BC. For the reasons that follow, we cannot accept such an early dating. Also, many cite Narahari Achar (2012)’s dating of astronomical events, mostly eclipses, mentioned in the Vedas and the Mahābhārata, taken to yield -3067 for the Kurukṣetra battle and therefore even earlier for the Vedas. However, as Talageri (2017:5) shows, these data can at best yield a relative chronology, but refer to too ordinary a phenomenon, too frequently occurring, to be of much use in absolute chronology. Only

an extremely precise description of location, time and astronomical characteristics would allow us to determine an absolute date, but the epic and certainly the Vedic hymns don't provide that.

But Talageri is too swift in rejecting this type of evidence altogether. There is one central astro-fact in the epic that does provide an imprecise but decisive date, and will do likewise for the Vedas. It does this thanks to its use of the largest hand on the Sun-Earth system's clock, the precession cycle that has the constellations move vis-à-vis the seasons at the rate of some 71 years per degree of arc, or 25772 years, to come full circle (probably discovered by Hipparchus of Nicea, working in Alexandria, ca. -127). These indications are unambiguous and easy to handle, ancient astronomical knowledge not being very sophisticated yet, even philologists without scientific training could decipher them. If a star is described as lying on the solstitial or equinoctial axis, this means a datable moment in the cycle which won't come back for thousands of years.

Bhīṣma on his deathbed manages to postpone his death until the asterism *Māgha* (meaning the asterism marked by the *Maghā* or Regulus), which he specifies falls after the *Uttarāyaṇa* or Winter Solstice. Now, the star *Maghā*/Regulus falls practically at the beginning of this asterism and must have passed the solstice, but Bhīṣma waits till the eighth day after the month's beginning to breathe his last (*Bhīṣmāṣṭamī*). The principal star Regulus itself passed the solstitial axis precessionally in the -23rd century. Seven days corresponds to a precessional 500 years, so this yields the 18th century, or up to a few centuries later depending on whether Regulus had already passed the solstice by a few degrees.

We know therefore that the Kurukṣetra battle fell at least later than the -23rd century, and normally not earlier than the -18th century, such as the 1783 date argued for by Bhatnagar (2017) and Ravi (2023), or -1504 preferred by some other. For the present purpose we won't follow the attempts at a higher precision but remain satisfied that it must be in the earlier -2nd millennium. This implies that the Vedic period ended very early in the -2nd millennium, which happens to coincide with the general social disintegration following the archaeologically attested desiccation of the Sarasvatī river. And the Vedic data will confirm this.

Vedic Astrodata

The really useful astronomical data in the Vedas are only a few, but they are rather precise and entirely consistent, i.e. they never conflict with the internal chronology of the texts. The later Vedas and the *Brāhmaṇas*, decidedly a younger corpus than the Ṛgveda, contain several references to the Pleiades/*Kṛtika* on the Equinoctial axis: Atharvaveda 19:7, Taittirīya Saṁhitā 4:4:10, Maitrāyaṇi Saṁhitā 2:13:20, Kathaka Saṁhitā 39:13, Śatapatha Brāhmaṇa 2:1:2:3. This position is sharp in ca. -2250, but the then status of this asterism as the Zodiac's number one must have lasted until its full replacement in the equinoctial zone by the next one, though. It may thus be taken to remain valid till roughly -1700, lower than -2250 but still centuries too high for the Max-Müllerian or AIT-based chronology.

The Kauṣītaki Brāhmaṇa (19:37, discussed in Dash 2009:47-48) has the star *Maghā*/Regulus on the solstitial axis; this happened last in ca. -2250. This is mentioned in Keith and Macdonnell's *Vedic Index* (entry *Nakṣatra*), a book that every Indologist has gone through as a student. And yet, like those writers, they all overlook this explicit dating in the source text, preferring the book's shockingly cavalier interpretation: -800 to -600, or no less than 1500 years later. This text is late-Vedic, so if this stellar event falls in -800, it leaves enough time for the Aryans to enter India as per the AIT and first compose the Vedic hymns. Only, that is not what the text says: rather, it points this late-Vedic text to -2300, with the central Vedic Family Books implicitly dated even centuries earlier. Hock (1999:166-167) points out that the ritual described there can still be performed a month later; if the star were to move an equivalent space of some 30°, it would make a difference of more than two thousand years – even later than the AIT would imply. But again, that is not what the text says: while the time of the ritual can fluctuate, the stellar position is very definite.

Even the post-Vedic astronomical manual *Vedāṅga Jyotiṣa* dates itself clearly, and moreover in two different ways: the asterism *Dhaniṣṭha* occupies the solstice (same position, and hence similar date, in the Maitrāyaṇīya Brāhmaṇa Upaniṣad 6:14), the asterism *Bharaṇī* the equinox. This points to the -14th century, when the AIT hardly has the *Ṛg-Veda* being composed. The same dating is given by another astronomical work, only recently reconstructed and translated: the *Parāśara Tantra* (Iyengar 2013).

These data all point to a higher Vedic chronology, with the *Ṛgveda* minus its later 10th book predating the 23rd century BC, and the 10th book plus the *Yajurveda* and some of the *Brāhmaṇas* around 2000 BC. This roughly agrees with an earlier astronomy-based estimate by Sen 1974 to between -3500 and -2000. This is compatible with a Vedic Harappa scenario but incompatible with the AIT.

The higher chronology is confirmed by a number of archaeological data, e.g. the discovery of the *Sinaulti* spoked-wheeled horse-drawn chariots ca. -2000 matches the mention of these chariots in specifically the *Ṛgveda*'s tenth book, whereas the older books only mention slow ox-drawn carts (Talageri 2019). That it pushes much of the *Ṛgveda* beyond the urbanization of Harappa ca. 2600 BC also matches the estimate by KD Sethna (1982), with cotton being widely attested in the Harappan cities but not in the *Ṛgveda* yet. This also answers the invasionist objection that the *Ṛgveda* can't be Harappan because it's more primitive: is mostly predates the Harappan cities.

Conclusion

In contrast with this sober and consistent astronomical case for a higher chronology, there simply isn't any astronomical information at all that specifically supports the standard Max-Müllerian AIT-friendly chronology. We don't expect ancient civilizations to be 100 % right on any scientific subject, but 100 % wrong must also be rare; yet the AIT implies the discovery of one such case. Reconciling the astronomical data with the AIT chronology would require lots of special pleading (which has hardly even been tried because most invasionists don't realize the problem). It is far more logical and parsimonious to posit a higher chronology, with the *Ṛgveda* in the 3rd and even 4th millennium.

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