# Indic Ideas in the Graeco-Roman World

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It is common to speak of "civilizational ideas", but do they exist? For example, are the *dośas* of Āyurveda peculiarly Indian since they are a tripartite classification that is basic to the Vedic system of knowledge? Plato introduced a similar system based on three humours into Greek medicine, with a central role to the idea of breath (*pneuma* in Greek). But this centrality of breath (*prāṇa* in Sanskrit) is already a feature of the much older Vedic thought. So do we agree with Jean Filliozat (1970) that Plato borrowed the elements of the wind, the gall, and the phlegm, from the earlier *tridośa* theory, and that the transmission occurred via the Persian empire? Others claim that any similarities between the Indian and the Greek medical systems must be a result of the shared Indo-European heritage and what may appear to be Indian is actually Indo-European. Dumézil's demonstration that tripartite categories operated elsewhere in the Indo-European world supports this latter view.

Dumézil argued that all Indo-European religions have three hierarchical functions: sacred sovereignty, force, and fecundity, represented by the categories of brāhmaṇ, rājan (or kṣatra), and viś. Religious and political sovereignty is conceived as a dual category: the magician-king and the jurist-priest. In India, this duality is in the roles of the rājan and brāhmaṇ; in Rome, of rex and flamen. Even the names are similar!

In his *Mitra-Varuna* Dumézil (1948) shows that the magician-king (Varuṇa in India or Romulus in Rome) initiates in violence the social order that the jurist-priest (Mitra in India or Numa in Rome) develops in peace. Magical sovereignty operates by means of bonds and debts, whereas juridical

sovereignty employs pacts and faith. This pattern is repeated in time: in the cult of Christ as the "son" he is the "intercessor and savior juxtaposed to the avenging, punishing father."

There is similarity between the Indian and the Greek religions as also in the society sketched in the Mahābhārata and Homeric poems. Metempsychosis is known in both places. The imagery of the "world-egg", so central to Vedic thought, is described in the later Orphic legends. According to Rawlinson (1975), "the resemblance between the two legends is too close to be accidental."

These parallels are the result either of shared origins, migration, or cultural diffusion, or a combination of the three. In themselves, they cannot help us in determining the history of the system, but the articulation of the basic scheme has distinct characteristics in different regions. It is this articulation— this style— that represents a civilizational idea. Perhaps the clearest representation of this is in the styles of art, painting, music, and literature.

As an illustration of a civilizational idea consider the notion of self in the Upaniṣadic dialogues, which the texts assert is the essence of the Veda, its secret knowledge. A similar emphasis on self-knowledge is introduced into Greek thought by the Pythagoreans and the Orphics. Corresponding to the three guṇas of *sattva, rajas, tamas*, Plato spoke of three categories *logistikon, thumos, epithumia* and he used a three-part classification for society. According to Lomperis (1984), "Plato, through the Pythagoreans and also the Orphics, was subjected to the influence of Hindu thought, but that he may not have been aware of it as coming from India." Irrespective of the source of these ideas, it is clear that, civilizationally, by the time of the Greek philosophers, there existed very important parallels between India and Greece. But there were also significant differences which made each civilization unique. The amplification of the ideas of self and society occurred in different ways in the two civilizations. The commonality of purpose between Vedantic ideas and the philosophy of Plato is not as crucial as the manner of the exposition, that has distinct flavours which may be called Indian and Greek. But one may ask if it is possible to go back before the time of the Greek philosophers and see the evidence of intrusive ideas before they were assimilated. Innovations in art and scientific knowledge, when supported by archaeological and textual records, can help delineate the process at the basis of pivotal cultural transformations.

The intrusion of Indic people—and presumably their ideas—in the Near East is well known. An Indic element was a part of the Mitanni who, by the 15th century BCE, had expanded their power from the shores of the Mediterranean to the Zagros mountains. In a treaty with the Hittites, the Mitanni king swears by the Indic gods Mitra, Varuna, Indra, and Nāsatya. Other Mitanni documents, uncovered in the archives at Bogazköy (Hittite) and El Amarna (Egypt) clearly point to Indic influences. A Hittite text on horse-training and chariotry uses Sanskrit numerals; a Hurrian text uses Sanskrit words to describe the colour of horses. The Kassites, who ruled Mesopotamia for several centuries in the second millennium BCE, had an Indic element, representing, here as elsewhere in the region, a ruling aristocracy.

This Indic element is likely to have played a role in the development of the cultural and religious complexes of Egypt and the Near East in the second millennium BCE. The beginnings of this particular intrusion is seen around 1800 BCE. Around 1650, an Indic people occupied the Nile delta for about 100 years; these people are described as the Hyksos, "the Foreign Princes". Egypt's new eschatological visions and innovations in myth are taken as the evidence for this presence, which flows in logical sequence to their presence in West Asia. A still earlier intrusion of "Eastern" ideas into Egypt has also been assumed based on the readings of "Pyramid Texts" of about 2600 BCE. The military activity of the Hittite king Hattusilis is taken as the vehicle for this process. But that early period does not concern us here.

A memory of the supremacy of the Indic (or Indo-Iranian) region in religious and, concomitantly, artistic ideas is preserved in an ancient Pahlavi text. The world is divided into three regions: "the west (Rome) with riches; the north and east (Turkestan and the deserts) with martial turbulence; the south (Iran and India) with religion, law, and the supreme royalty besides" (Dumézil 1973).

Could the Near East have served as a conduit for Indic ideas to Europe? In this paper we trace the passage of certain Indic ideas in art and astronomy to the Graeco-Roman world. We will show how this helps us understand the ancient interaction between India and the Graeco-Roman world in a manner that is consistent with the recent discoveries made by archaeologists.

## The language of myth

The language of myth often represents astronomical and spiritual knowledge. Santillana and von Dechend in their *Hamlet's Mill* (1969) show structural similarities in many myths of the ancient world and they read these myths as a narrative on the shifting frame of time due to precession. Myths are also a description of the ongoing transformations in the mind's sky. This dual meaning can provide us specific imagery making it possible to trace its history.

Consider Venus, the planet and the Roman goddess of natural productivity and also of love and beauty. The Greeks called this planet Aphrodite and also *Eosphoros* or the 'bringer of light' when it appeared as a morning star, and *Hesperos* when it appeared as the evening star. It is believed that the Greeks first did not know that the two stars were the same but by the time of the Pythagoreans this identity was known. The Roman Venus derived her characteristics from the Greek Aphrodite which in turn appears to have been based on the Babylonian Ishtar. In Greek legend Aphrodite was taken to have been born in *Kupris* or Cyprus; Kupris, a feminine deity, was derived from the masculine *Kupros*. In India, there is the Ṛgvedic attestation (10.123) of Vena as the name for this planet (Kak 1996b). Later texts use Śukra as another name. So we have have linguistic affinity in these names: Venus and Vena, Kupros and Śukra.

The Ṛgveda describes two aspects of Venus: one, as Gandharva who is the patron of singing and the arts; and the other, who is the son of the sun and an asura. These conceptions, together with the meaning of Vena as "longing" and "love", lead to both the later mythologies to be found in India as well as in west Asia.

It has been suggested that the representation of the goddess in Mesopotamia and later on in Greece was under the influence of Indian ideas (Alvarez 1978). Perhaps the evidence of the first conceptualizations of the goddess can help us with the chronology of the ideas in India. Aphrodite, like Lakṣmī, is born out of the sea. But the Indian story is technically more sound because here the birth is out of churning, like that of butter out of milk, whereas the circumstances of Aphrodite's birth are more fanciful. According to Hesiod in his *Theogony 185-200* she is nurtured in the foam produced when Kronos hacks off and tosses the genitals of his father, Ouranos, into the sea (Athanassakis 1983). Also, Ishtar couldn't have been prior to Vena because it has only one

of the many elements to be found in the Ṛgvedic hymn 10.123.

Vena knows the secret of immortality; this presumably has reference to the fact that Venus emerges again after being obscured by the sun. In the Purāṇic glosses of this story Śukra is swallowed up by Śiva and later on expelled as semen; this is a play on the etymology of Śukra as "bright". The birth of Aphrodite out of the genitalia of Ouranos is a similar story, where instead of semen the nurturing is in foam. The Purāṇas tell us how the gods learnt the secret of immortality from Śukra by subterfuge. There is another remembrance of the immortality of Venus in the myth of Phoenix, a word cognate with Vena. Phoenix rises again after death, warmed by the rays of the sun.

The Indian sources, namely the Ṛgveda and the Purāṇas, explain the whole basis of the Vena-Śukra myth at several levels. In Mesopotamia and in Greece and Rome, only scattered meanings are encountered which lead us to the conclusion that these ideas travelled from India to Europe by way of Mesopotamia.

Scholars of comparative mythology have pointed out other parallels. Dumézil (1970, 1983) has compared episodes from the epics and the Purāṇas with the myths of various European people and found crucial similarity in detail. Although, Dumézil invokes the tripartite underpinnings of the Indo-European thought to explain this similarity, it is more likely that there was some transmission of stories like the ones that occurred in the later transmission of Indian fables and Jātakas. The Indian stories are according to a self-conscious logic so the encyclopaedic authors of the Purāṇas had no trouble churning them out in large numbers. There is a deep and comprehensive exposition of the myths in the Indian texts. The European stories, in contrast, are disconnected. Nicholas Kazanas (1998) shows that the Ṛgveda "contains a decisively greater portion of the common Indo-European mythological heritage. In fact there is hardly a major motif common in two or more of the other branches that is not found in the Ṛgveda." This is even more true if the Purāṇic literature is considered.

# Astronomy

For many years the mainstream view was to take Indian astronomy as being essentially derivative, based on Mesopotamian and Greek sources. This view

arose from the belief that the Indians did not possess a tradition of sound observation. This view was proven wrong for the Siddhāntic period by Roger Billard (1971) who, by using computer analysis, showed that the parameters used in the Siddhāntas were accurate for the date of the texts, establishing that they couldn't have been borrowed from some old source outside of the country.

Meanwhile, our understanding of Vedic astronomy has changed completely. An astronomical code has been discovered in the organization of the Vedic books. The astronomy of the Vedic fire altars is also better understood (Kak 1994, 1995, 1996a,b). These discoveries indicate that there was a long tradition of astronomical observation in India. The origins of Indian mathematics are also much remoter than previously thought.

One can go even further since the beginnings of Indian culture have been traced to about 40000 BCE in the rock art that has been found at many sites in India (Wakankar 1992). It is almost certain that the heavens have been studied for a long, long time. An examination of the motifs of the rock art supports this view.

An amulet seal from Rehman Dheri (2400 BCE) indicates that the nakṣatra system is an old one. The seal shows a pair of scorpions on one side and two antelopes on the other. It has been argued (Ashfaque 1989) that this seal represents the opposition of the Orion (Mṛgaśiras, or antelope head) and the Scorpio (Rohiṇī) nakṣatras. There exists another relationship between Orion and Rohiṇī, this time the name of $\alpha$ Tauri, Aldebaran. The famous Vedic myth of Prajāpati as Orion, as personification of the year, desiring his daughter (Rohiṇī) (for example Aitareya Br. 3.33) represents the age when the beginning of the year shifted from Orion to Rohiṇī. For this "transgression" Rudra (Sirius, Mṛgavyādha) cuts off Prajāpati's head. It has been suggested that the arrow near the head of one of the antelopes represents the decapitation of Orion, and this seems a very reasonable interpretation of the iconography of the seal.

It is likely then that many constellations were named in the third millennium BCE or earlier. This would explain why the named constellations in the Ṛgveda and the Brāhmaṇas, such as the Ṛkṣas (the Great Bear and the Little Bear), the two divine dogs (Canis Major and Canis Minor), the twin Asses (in Cancer), the Goat (Capricornus) and the Heavenly Boat (Argo Navis), are the same as in Europe. Other constellations described similar mythical events: Prajāpati as Orion upon his beheading; Osiris as Orion when he is

killed by Seth.

The Vedāṅga Jyotiṣa (VJ) of Lagadha (1300 BCE) is one of the subsidiary Vedic texts, so its contents must be considered to be roughly coeval with the Brāhmaṇas and other post-Vedic texts although the VJ text that has come down to us is definitely of a later period. The Purāṇas also contain a lot of very old material and their astronomy appears, on all counts, to be earlier than Āryabhaṭa so they provide us with clues regarding the evolution of astronomical thought.

It was long popular to consider the Siddhāntic astronomy of Āryabhaṭa to be based mainly on mathematical ideas that originated in Babylon and Greece. This view was inspired, in part, by the fact that two of the five pre-Āryabhaṭa Siddhāntas in Varāhamihira's Pañcasiddhāntikā (PS), namely Romaka and Pauliśa, appear to be connected to the West through the names Rome and Paul. But the planetary model of these early Siddhāntas is basically an extension of the theory of the orbits of the sun and the moon in the VJ. Furthermore, the compilation of the PS occurred after Āryabhaṭa and so the question of the gradual development of ideas can hardly be answered by examining it. It was also believed that the Indians had no tradition of observational astronomy, a view that continues to be repeated by careless writers. But it has been shown by Billard (1971) that the parameters in the various Siddhāntas were actually correct for their times.

Could there be borrowing in one direction or the other by the Indians and the Greeks in taking the sun to be about 500 earth diameters from the earth? I have recently shown (Kak 1998) that this distance is present in the Pañcaviṃśa Brāhmaṇa which, by all accounts, predates Greek astronomy.

I have presented the technical details of these discoveries elsewhere (e.g. Kak 1998c). The main conclusion of these findings is that the earliest Indian astronomy is prior to the Mesopotamian one. We have traced certain Indian ideas in Mesopotamia in the second and the first millennium BCE. There they were further developed and subsequently transmitted to Greece.

# Art

Given the above evidence, it is not surprising that the themes and motifs of the rock art and the later Harappan seals are repeated in the Near East and in Greece. One of these is the image of the "hero"—the "Gilgamesh"

figure— that is found both in the rock art and in the Harappan seals (Kak 1998a). This appears to validate the idea of interaction between India and its western regions in early centuries of the third millennium BCE.

We now look at a few specific forms and symbols from Western art for their Indian parallels.

## Heroes, sacrifice

Although the Kīrttimukha, a guardian of the threshold, is dated somewhat late in Indian art, its basis is squarely within the Indian mythological tradition. Zimmer (1946) argued that the image of the Gorgon must be viewed as an intrusive Indic idea or a Greek interpretation of the Kīrttimukha assimilated atop a different legend. Napier (1986, 1982) provides powerful new support for this idea. He suggest that the forehead markings of the Gorgon and the single-eye of the cyclops are Indian elements. He suggests that this may have been a byproduct of the interaction with the Indian foot soldiers who fought for the Persian armies. But there were also Indian traders in Greece. This is supported by the fact that the name of the Mycenaean Greek city Tiryns — the place where the most ancient monuments of Greece are to be found— is the same as that of the most powerful Indian sea-faring people called the Tirayans (Krishna 1980).

Napier shows that the Perseus-Gorgon story is replete with Indian elements, especially the connection of the myth with Lycia. "This ancient kindgom figures predominantly in Greek mythology as the location of the exotic: a place of ivory, peacocks, and 'many-eyed' cows; a place to which Greeks went to marry and assimilate that which to the pre-classical mind represented everything exotic... [In the British Museum] we find a Lycian building, the roof of which is clearly the descendant of an ancient South Asian style. Proof of this hypothesis comes not only in what may appear to be a superficial similarity, nor in the many 'Asian' references with which Lycia is associated, but in the very name of the structure which dates to the mid-fourth century B.C.. For this is the so-called 'Tomb of the Payava' a Graeco-Indian Pallava if there was one. And who were the Tirayans,but the ancestors of two of the most famous of ancient Indian clans, the Pallavas and Cholas?" (Napier 1998)

## Funerary art

Indian mythology has rich descriptions of Indra's city, the paradise, with its water nymphs and gardens. Octavio Alvarez (1978) suggests that these Vedic themes of afterlife are sketched on Etruscan tombs. He traces the transmission of these themes via Egypt, where the souls were no longer received by the tragic death-god Osiris, but by the enchanting Hathor, the goddess of joy and love. Likewise, in the earlier Graeco-Roman conception of the afterworld the souls were supposed to exist "without midriff", i.e., deprived of food and sex. But ultimately the ideas of the Vedic heaven, where in the city of Indra are all pleasures and eternal youth, displaced these older views, and Alvarez is able to explain the new symbols of resurrection used in the Etruscan and later funerary art. He establishes a connection between the water-nymphs in the Graeco-Roman mythology and the apsarases of the Vedic mythology.

We note that this western interpretation of Vedic afterlife was a literal rendering of a metaphor. The Vedic paradise transcends space and time and it represents an absorption into Brahman. It is fascinating that the notion of paradise as a pleasure garden was later adopted by Islam.

Alvarez is able to explain the iconography of the Etruscan sea-sarcophagi very convincingly using Indian parallels. He describes 8 basic elements:

1. The scene is the celestial ocean, abode of the departed souls, quite like Indra's paradise.

2. The females are the apsarases, water-nymphs. On early sarcophagi and sepulchral imagery they wear the Indian hairdo and earrings, but are otherwise nude, conforming to the Indian models. They are shown with prominent bellies and heavy backsides intentionally framed by drapes in the Indian manner.

3. The babies are the souls of the departed who reappear in paradise. This reappearance is connected to the idea of rebirth.

4. The flowers are the immediate vehicles of rebirth according to the idea of the birth out of Lotus.

5. The breast-feeding of the soul-babies shows the reception and nourishment by the heavenly hosts.

6. The sea-centauri are gandharvas. As the male counterparts and lovers of the apsarases, they show fins and fish-tails to set them apart from the Graeco-Roman centauri.

7. The amorini who fill the atmosphere are the Mediterranean symbols to denote the celestial ocean, which is so glowingly described in India's eschatology.

8. The portrait of the deceased was shown within a sea-shell, no doubt to indicate the rebirth in the "Celestial Ocean."

There are other Indian elements in the iconography, such as garlands and the betel nut.

## The Gundestrup cauldron

Consider the case of the Gundestrup cauldron, found in Denmark a hundred years ago. This silver bowl has been dated to around the middle of the 2nd century BCE. The sides are decorated with various scenes of war and sacrifice: deities wrestling beasts, a goddess flanked by elephants, a meditating figure wearing stag's antlers. That the iconography must be Indic is suggested by the elephant (totally out of context in Europe) with the goddess and the yogic figure. According to the art historian Timothy Taylor (1992), "A shared pictorial and technical tradition stretched from India to Thrace, where the cauldron was made, and thence to Denmark. Yogic rituals, for example, can be inferred from the poses of an antler-bearing man on the cauldron and of an ox-headed figure on a seal impress from the Indian city of Mohenjo-Daro...Three other Indian links: ritual baths of goddesses with elephants (the Indian goddess is Lakshmi); wheel gods (the Indian is Vishnu); the goddesses with braided hair and paired birds (the Indian is Hariti)." Taylor speculates that members of an Indian itinerant artisan class, not unlike the later Gypsies in Europe who also originate in India, must have been the creators of the cauldron.

## Egyptian terracottas

Harle (1992) has examined terracottas excavated by Petrie at Memphis in Egypt and believed by him to be Indian. These figures date from the Graeco-

Roman period and it is accepted that an Indian colony existed in Memphis from about the 5th century BCE onwards. Reviewing the evidence, Harle concludes that the figures were made by these Indian colonists. Harle points to the pose, which in two cases is *lalitāsana* and *rājalīlāsana*. He adds, "The plastic feeling, however hard to define, is also Indian. There are other features as well which recall certain Indian figures: the corpulence, a *dhoti*-like lower garment and, in one case, an armlet on the right arm and a scarf over the left shoulder. All these features point to an India Pancika (Kubera) from Gandhara of the early . Pāñcika and Hārītī sculpture in the Peshawar Museum." The figures include the one that has traditionally been taken to be Harpocrates, the son of Isis and Osiris. But it is possible that for the Indian colonists the figure represented Kṛṣṇa-Vāsudeva as the child-god. Two bronzes of this child-god have been found in Begram and Taxila.

## The archaeological context

In studying the interaction between India and Europe, one must note that the latest archaeological findings place the Indo-Aryans, the founders of the Indian literary tradition, within India (Feuerstein et al 1995). The antecedents of the Harappan civilization have been traced back within India to about 8000 BCE. Whether this tradition was derived from the earlier rock art tradition, we don't know. But there is no evidence of a discontinuity in the archaeological record, the only breaks are due to ecological factors. In a review of the archaeological evidence Shaffer and Lichtenstein (1998) conclude, "The South Asian archaeological record does not support ... any version of the migration/invasion hypothesis. Rather, the physical distribution of sites and artifacts, stratigraphic data, radiometric dates, and geological data can account for the Vedic oral tradition describing an internal cultural discontinuity of indigenous population movements." They add, "As data accumulate to support cultural continuity in South Asian prehistoric and historic periods, a considerable restructuring of existing interpretive paradigms must take place. We reject most strongly the simplistic historical interpretations, which date back to the eighteenth century, that continue to be imposed on South Asian culture history. These still prevailing interpretations are significantly diminished by European ethnocentrism, colonialism, racism."

The Indian literature remembers astronomical events that go back to the

fourth or fifth millennium BCE. The presence of the Indic element in the Near East in the second millennium BCE should then be seen as an intrusion from India or an intrusion by a group that had been culturally Indianized.

The drying up of Sarasvatī around 1900 BCE, which led to a major relocation of the population centered around in the Sindhu and the Sarasvatī valleys, could have been the event that caused a migration westward from India. It is soon after this time that the Indic element begins to appear all over West Asia, Egypt, and Greece.

In this paper we have reviewed some elements of Indian astronomy in Greece; also, a study of art has provided evidence of the Indic element in the Graeco-Roman world as in the case of the Gorgon, the sea-sarcophagi in Rome, the yogic figure and other deities on the Gundestrup cauldron, and the terracotta figures in Memphis. We believe that ancient Eurasia had considerable trade and interaction within its regions. This interaction was a complex process and, doubtless, migration was an element of it. The diffusion and intrusion of ideas was animportant element of the trade. Here we have seen some examples of ideas in art and astronomy that travelled West from India. Doubtless, other ideas travelled in the opposite direction.

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