

Time, Space and Structure in Ancient India

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Introduction

This essay uses Vedic and classical sources to present a synoptic vision of the universe in ancient India and shows its continuity across different periods. This vision was based on an assumed equivalence of the outer and the inner cosmoses and it is embodied in architecture, music, and art. It provides an archaeoastronomical window on Indian monumental architecture.

The ancient world did not have a split between the sacred and the temporal. The temple served as the place where time-bound ritual was conducted and keeping time was one of its functions. The English word *temple* is derived from the Latin *templum*, which is sacred space, facing west, that was marked out by the augurs. In the east-west orientation of the axis of the temple that is strictly true only on the two equinoxes is the acknowledgement of concern with time and the seasons.

In India, the temple is likewise associated with the east-west axis and we can trace its origins to priests who maintained different day counts with respect to the solstices and the equinoxes. Specific days were marked with ritual observances [1] that were done at different times of the day. Some ritual included construction of altars that coded knowledge related to the motions of the sun and the moon and supposed correspondences with the inner cosmos.

The Agnicayana altar, the centre of the great ritual of the Vedic times that forms a major portion of the narrative of the Yajurveda, is seen as the prototype of the temple and of the Indian tradition of architecture (Vāstu). The altar is first built of 1,000 bricks in five layers (that symbolically represent the five divisions of the year, the five physical elements, as well as five senses) to specific designs [2]. The Agnicayana ritual is based upon the Vedic division of the universe into three parts of earth, atmosphere, and sky, which are assigned numbers 21, 78, and 261, respectively; these numbers add up to 360, which is symbolic representation of the year. These triples are seen in all reality, and they enlarge to five elements and five senses in further emanation.

In the ritual at home, the householder employed three altars that are circular (earth), half-moon (atmosphere), and square (sky) at his home (Figure 1), which are like the head, the heart, and the body of the Cosmic Man (Purusha). In the Agnicayana ritual, the atmosphere and the sky altars are built afresh in a great ceremony to the east. The numerical mapping is maintained by placement of 21 pebbles around the earth altar, sets of 13 pebbles around each of 6 intermediate ($13 \times 6 = 78$) altars, and 261 pebbles around the great new sky altar called the Uttara-vedi.

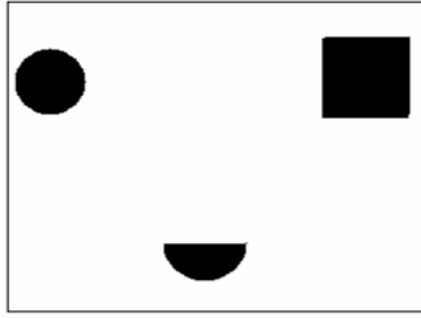


Figure 1. The three altars of the Vedic house: circular (earth, body), half-moon (atmosphere, prāna), square (sky, consciousness)

The Uttara-vedi is the precursor to the temple structure [3]. It also symbolizes the patron in whose name the ritual is being performed [4].

The underlying bases of the Vedic representation and ceremony are the notions of *bandhu*- (equivalence or binding between the outer and the inner), *yajña* (transformation), and *paroksha* (paradox). As mentioned before, the five layers of the altar represent the physical world, and the number of consecrated bricks in the five layers is related to numbers derived from the year count of 360. To represent two more layers of reality beyond the purely objective, a sixth layer of bricks that includes a hollow brick with an image of the golden Purusha inside is made, some gold chips scattered and the fire placed, which constitutes the seventh layer (ŚB 10.1.3.7). The two layers beyond denote completion, for seven was taken as a measure of the whole. The symbolic meaning of this is that the ceremonies of the great altar subsume all ritual [5].

Recursion

The central idea of this scheme is that of *recursion*, or repetition in scale and time. The universe is taken to be mapped into the individual; it is also symbolically represented in the creative arts, as in music, dance, sculpture, and sacred architecture [4],[6],[7]. In literature, we see recursion in the *story within story* genre that is to be found in the Vedic hymns, the Epics, the Yoga Vasishtha, and the Puranic texts.

Not only is the temple a symbolic representation of the cosmos, the Rigveda itself was planned as a five-layered altar by stacking up the 10 books in pairs, two books to a layer [2], as shown in Figure 2. These hymn numbers have several symmetries, such as pairs of hymn numbers differing by 12, 17 and 29, and the numbers have an astronomical basis that is described at length in *The Astronomical Code of the Rgveda* [2].