

# Cultural Astronomy and Cosmic Order: Sacred Cities of India

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Decades ago, Mircea Eliade observed that "...men are not free to choose the sacred site, ...they only seek for it" and that "if the choice of sacred places were left entirely to intentional human design, there could be no explanation for their permanence and continuity" (pp. 19, 18). Rana P. B. Singh recalls these observations in his updated book *Cultural Astronomy and Cosmic Order: Sacred Cities of India* (2023: New Delhi, Akshaya Prakashan and Ahmedabad, Indus University. pp. x+lxxii+250).

As his guiding stars, and sets out to study "the inherent power of [some] sacred places" located in northern India. He combines analytic methods of Geography and Astronomy, and investigates the power of sacred sites by searching for "the astronomical dimensions of holy places", for the "cosmic geometries embedded in ritual landscapes".

The long introduction, co-written with John McKim Malville, sets out the larger analytic model that the book espouses. The explorations are built around two interrelated methodological queries. First, "whether using highly precise GPS field measurements to map shrines within a pilgrimage landscape can offer any new insights into the pilgrimage process". Second, more importantly, whether "the newly emerging multi-disciplinary paradigm of Self-Organizing systems...can provide valuable insights into pilgrimage" (p. 17). An explanation of the Self-Organizing systems is in order. Such systems have two core features—"self-similarity" and "power law distribution". The first suggests that "[s]imilar geometric patterns are repeated at different sizes". This similar repetition is "expressive of a fundamental unity of the system" (p. 23). The second suggests that a mathematical model of power law can be employed to "search for the spontaneous patterns of nature, mature ecosystems, and other fractal landscapes". When we study pilgrimage landscapes as self-organized systems,

we look for the presence of these core features, repetition of self-similar geometric patterns of pilgrims' movement of different sizes as well as the presence of power law distribution in the patterns of spatial structures such as shrines.

In this book the author seeks to explain the origin of richly complex self-organizing pilgrimage systems. He argues that "[these] systems are not ordained by kings or hierarchical power but emerge as the collective behaviour of free individuals, each searching for a spiritual ideal". These systems retain an "essential quality" of "openness" which allows for "self-transformations". Such self transformation occurs when "the system has become metastable due to departures from equilibrium" (p. 24). The core argument of the author concerns the "dynamic parallelism" between the "three realms of the cosmos." These three realms are "the macrocosm of the north celestial pole, stars, planets, moon, and sun," and "the mesocosm of the atmosphere, mountains, lakes, oceans, and rivers," and "the microcosm of city, temple, home and body" (p. 31). This parallelism is most visible in cosmograms or "magical-spatial" geometrical designs—*yantras* for instance. This dynamic parallelism is precisely what is experienced in pilgrimages to holy places. "The essential point is," the author argues, "the natural world often self-organizes itself into fractal patterns that follow a power law...When pilgrimage systems involve free and unconstrained people walking across the land searching for the sacred, we propose that they become elements of the natural world" (p. 41). The author employs the term "faithscape" to describe this experience of union. Faithscape is "a cosmic field of divine manifestation where man and natural mystery meet", and it encompasses "sacred place, sacred time, sacred meanings, and sacred rituals" (p. 36).

The author takes the reader through an enlightening tour of some of the holy places of northern India—Khajuraho, Gaya, Vindhyanchal, Kashi and Chitrakut. The model mapped out in the introduction shapes the

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analyses in the subsequent chapters. Two chapters, for instance, are devoted to Kashi. The first of the two delineates the Shivascape. The chapter begins with an analysis of the four “symbolic forms” of the city—trident, disc, chariot and conch-shell (p. 155), and moves on to the study of the major pilgrim routes—*chaurashikroshi yatra*, *panchakroshi*, *nagara pradakshina*, *avimukta yatra* and *antargrha yatra* (pp. 161-169). The author then offers insightful commentary on the Vishveshvara temple and goes on to conclude with an exploration of the Sun shrines of the city. The second chapter on Kashi delineates the Shaktiscape. The analysis begins by taking note of the two shrines of the ‘City as Goddess’ devoted to Kashi Devi at Lalita Ghat and Varanasi Devi in the Trilochan

temple (p. 189), and goes on to discuss the cognitive and geographical location of 96 *shaktis* on the *chaurashikroshi yatra* pilgrim route. The chapter then delineates the location of the Kshetra Rakshika Devis, Yoginis, Nava Durgas, Gauris, Matrikas, Chandis, Kshetra Devis, and Dasha Mahavidyas (pp. 189-203). The chapter plots all the goddess temples and shrines of Varanasi on a map, and concludes with a discussion that shows the formation of a self-organizing pilgrimage system.

First published in 2009, the book has come out in an updated version in 2023. It is a culmination of several decades of research in cultural astronomy, and comes well recommended to scholars and lay readers who are new to the field.