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Sacred Geometry of India's Holy City, Varanasi: Kashi as Cosmogram

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Abstract. In the Oriental world sacred schemata (*cosmogram*) and related myths are basic concern in the evolution of holy centres. The city of Varanasi represents a complex mix of the cosmocised structure and local sacrality, and has grown without the support of sacred kingship. There exist fifty-six pilgrimage circuits, of which five are the most popular 'and make the web of the cosmogram. All the pilgrimage circuits and related shrines and sacred spots symbolically represent some aspects of the man-cosmos relationship. The ultimate synthesis of cityscape represents integration of macro-, meso- and micro- cosmos at different levels. At micro level temple itself represents the cosmos. However, due to drastic demolition of temples during Muslim rule the basic structure has been lost. In a course of time these structures have been re-built and mythologies set to revive the ancient glories and mystic power. That is how the structure and network of sacred geometries became so complex that it is not easy to investigate. After all the tradition of pilgrimage and religious activities always continued and maintained. This helps to explain the complicated web of Kashi as Cosmogram.

Key words. Cosmogram, cosmogony, holy city, framing, order and pattern, sacrality, sacred geometry.

1. Introduction and Outlook

In the Oriental world the idea of ancient city had grown in the psychic purview of physico-cultural and economic processes in the dimension of space and time leading to form an ordered territorial organisation. The study of growth and organisation of this sense of territoriality involves at least three basic issues: man and activities shaping the cityscape, man and space relation and interaction, and the mechanism linking human mind and the environment through cognitive processes – ultimately they emerge to develop a cosmogram.

Cosmogram is the magico-spatial design, which combines macro-, meso-, and micro-cosmos at an order and level of unity. This way it serves to explain and experience the integral relationship between Man and Cosmos, and the central point represents the life-breath of the earth (see Fig. 1). The number 108, in itself a numerical cosmogram, has a cosmogonic scope related to the constellations (lunar asterism, 27) and the rhythm of human condition or cardinality (8). It thus defines cardinality, centrality and circulation (see Singh, 1993a: 245). The basic frame of cosmogram consists of three parts: a circle (*light*), a square (*water*), and a triangle (*wind*). In numerical context the square denominates 9 points (planets), the circle 4

points (directions) and triangle 3 axes (mythic realms). Their integration (9 x 4 x 3) comes to 108; this structural plan in totality symbolises a cosmogram (Fig. 1).

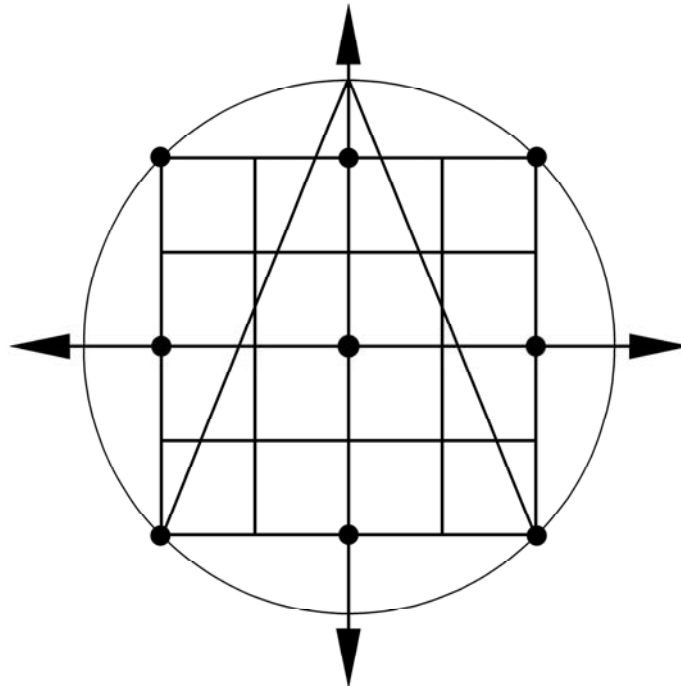


Fig. 1. The basic frame of the Cosmogram.

In Oriental World the principles and processes of city planning and landscape formation were at once unable in a substantive manner to provide inhabitants a harmony contained within spatially limited, marginally productive habitats, where spiritual territorial human constructs were transformed on the earth's surface to search the place of man in the cosmos (Singh, 1990: 2). Although true to a limited extent today, in the pre-industrial cities of the world, cosmology and city planning were often inseparable. In fact, "Metaphysical ideology based on cosmological principles was once a dominant force shaping the cultural landscape" (Nemeth, 1987: 3). This was man's revelation for a "rediscovery of the dialectic nature of wholeness" in the realm of humanness, where "nature, cosmos, and humanity form a whole and that whole means holy" (Buttimer, 1989: 263).

If the idea of architecture is to be used as "planned human construction", the designing of a city is essentially a specific transformation of human creativity, often interpreted in the context of signs and symbols and the invisible meaning preserved there. The presentation of wholeness – the representation of cosmos – leads to form a sacred geometry referring to the spiritual and archetypal dimensions of pattern/relationship, order/sequences and temporality/changes. This frame forms a harmonic and sensual bondage between man and his habitat, the city. In Oriental World, "sacred schemata and meaning are most important ones, and cities in those cultures can be understood only in such terms" (Rapoport, 1990: 28). Denny (1991: ix) also described the sacred city in terms of cosmology, "A city can be sacralised by the laying out of its plan according to the cosmology of the region, thus uniting realm and ruler in a pattern of sacred kingship." Yet there are many ceremonial centres that possess potent qualities of cosmic orientation without sacred kingship or an intentional foundation ideology. However, they are considered as the most sacred centres. Varanasi is one of the most potent and well-accepted sacred cities in the latter context.

Describing the sacred structure of cities, Meyer (1991: 149, 157, 170) proposes two groups: (1) the *cosmocised sacred city*, which records orientation in space and its alignment with the geometry of the universe, where the cosmic axes cross in the centre of the city, and (2)

the holy city of local sacrality, recording religious meaning and organising space according to a sacred model like pilgrimage routes and associated shrines. Varanasi (Banaras), in Meyer's scheme, does not fit fully as the city of the first group because it has no records of sacred kingship. In theological context, Varanasi developed originally as a sacred city and later became a holy city. Varanasi is what it is because of pilgrimage circuits, the interlinking shrines and temples and the manifestive powers imposed therein at different degrees. Kashi is a cosmogram. The ancient name of the city-territory is Kashi, i.e., *Kashya eti Kashi*. Where the light of cosmos concentrates and illuminates in circular territory is known as Kashi. This idea is eulogised in the *Puranic* literature describing the limits and boundaries of the city. Eck (1982: 5) has rightly remarked that Varanasi "has rarely been an important political centre, and the rise and fall of kings through its long history have had no role in the take of the city's sanctity told by its own people.... It is not the events of its long history that make it significant to Hindus; rather it has such a long history... because it is significant to Hindus."

In contrast to its historical role as political centre and sacred kingship, Varanasi records the longest period of human settlements, at least since about the 10th century BCE and continued until now. Its uniqueness lies in the spatial alignments and structure that developed "without the world of control", i.e., outside the normal boundaries of spatial religious boundaries or code of conduct which govern society. It is accessible to everybody without the sense of affiliation to a caste or outcaste. One may experience this sense at the time of pilgrimage journeys, when all normal distinctions are equalised.

The various routes of pilgrimage journeys never form the identical geometric shape in Varanasi. However, Hindu religious geomancers and cartographers cosmocised the irregularities into a geometric plan of circularity, and sometimes in combination of other forms, leading to a cosmogram.

The city of Varanasi reflects all the basic criteria for cultural and natural heritage and preserves the political, cultural and didactic meanings as suggested in the scheme of UNESCO's World Heritage City (see Singh, 1993b: 299-300). Here attempt has been made to present a comparative view of some of the basic dimensions of sacred plans and structures, orientation to directions and geometric outline, supporting to form a cosmogram [for details of shrines, taxonomic frame and performances, see Singh, 1993b: 40-60].

One has to remember that "culture is what makes humans human" (Rapoport 1993:12). The sensory modalities promote behavioural, psychic setting in the spatial and temporal organisation of cultural landscape as exemplified by the existing traditions of pilgrimage circuits in Varanasi. The comparative study of the cosmogram and pilgrimage system reflects that the organisation and symbolism evolved in the past are still preserved and practised by the devotees and pilgrims. If traditions are lost, our identity will be in danger!

2. From Macrocosmos to Mesocosmos

In most of the old cultures, religion was an essential part of the symbolic nature of city planning and of the individual structures within cities, in which the analogy of human body has been accepted as a representation of the universe. The manifestation of a transcendental element (called *hierophany* by Eliade) may be translated into a parallelism between the macrocosmos (cosmos/ heaven) and the microcosmos (temple/ human body). In between these two polarities one can also perceive mediating spatial sacred space of the large-scale natural world and the built-up environment, called the *mesocosmos* (the earth). The archetypal frame of Varanasi may be considered as a *mesocosmos* mediating between the *macrocosmos* of the universe and the *microcosmos* of the individual unit (Singh, 1993a: 240). This is the basic notion of a city's cosmogram.

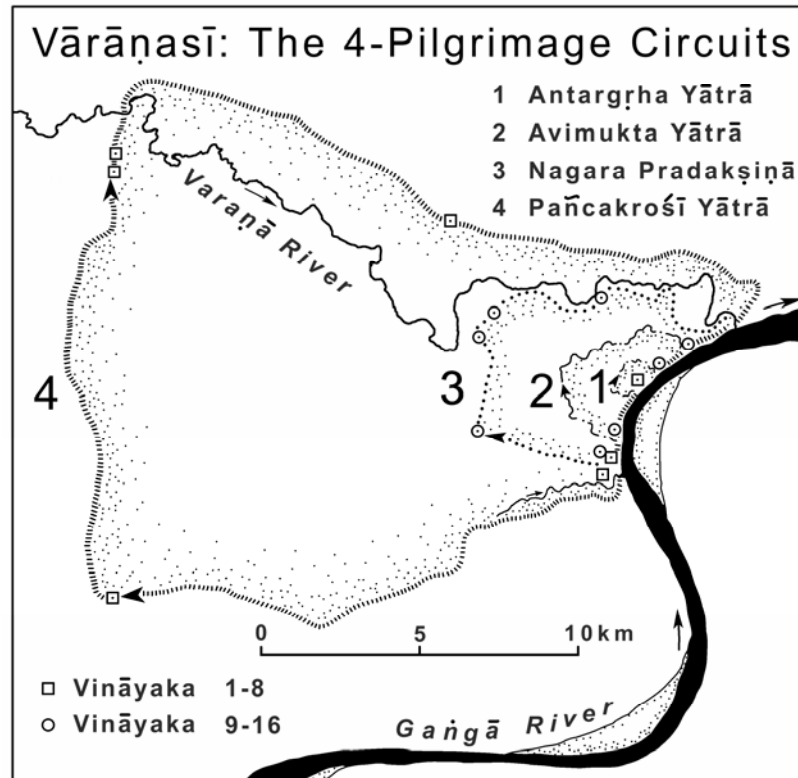


Fig. 2. Varanasi: The 4-Pilgrimage circuits.

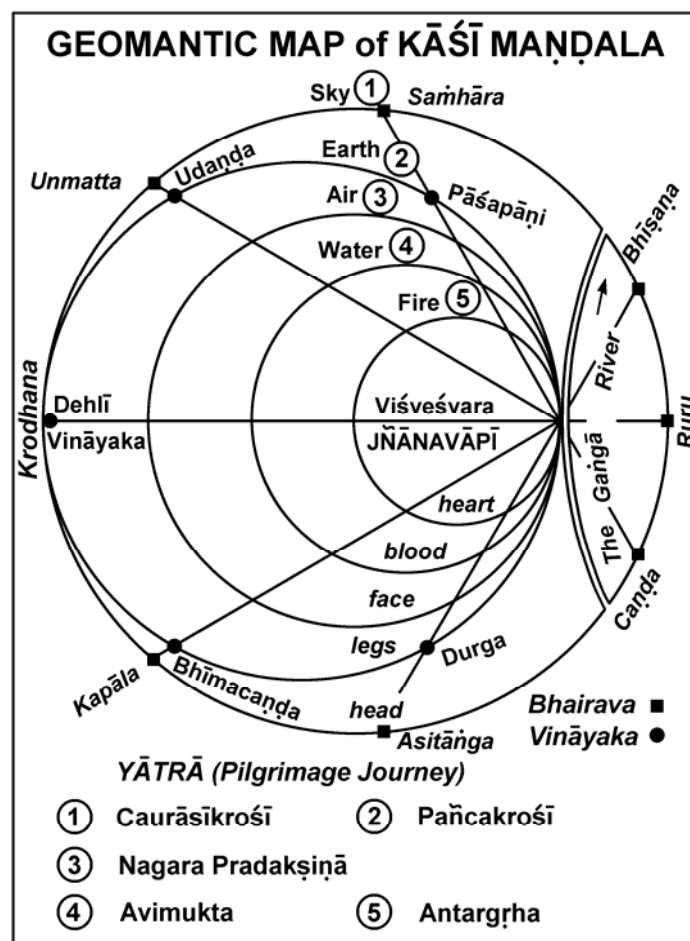


Fig. 3. Geomantic Map of Kashi Mandala.

According to the *Manasara*, a 10th century CE text of Hindu architecture, the layout of the Hindu city is based on the “Cosmic cross”, the cardinal points of which are the comers of the universe. Thus the whole city is a celestial city, a cosmogram (Singh, 1988: 444-445). The developed form of the cosmic cross is not evident in Varanasi. However, its irregular pattern exists, and pilgrims still follow the route. This is an indication of the perception of reality. Says Wheatley (1969: 9), “Only the sacred was ‘real’, and the purely secular – if it could be said to exist at all – could never be more than trivial”. To maintain a harmonious relationship in the universe, Hindus construct temporary or permanent representations of a significant part or the whole of cosmos, referred to as “*axis mundi*” by Eliade (cf. 1959: 36-55). In Varanasi, the *axis mundi* is the Jnanavapi Kupa (‘Well of the Wisdom’), where the liquid form of the patron deity Shiva dug up the earth by his trident and offered the water to another of his forms, Avimukteshvara (the most ancient form of Shiva in Varanasi; see Singh, 1994b: 219-20). That is how Shiva promised to take up his abode in the well and reside there forever. Shiva’s pseudonym Ishvara (*ish + cara*) itself identifies his identity at the centre of the cosmos (*ish*) from where He controls the rhythm of cosmos (*cara*). He represents the highest divine being and ultimately the worldless absolute. After a passage of time by demolition of temples by the Muslim rulers (especially during 12th and 17th centuries), the shrine of Avimukteshvara lost its identity, and its mystic power transferred to Vishveshvara/ Vishvanatha (known as Golden Temple in the West). Presently, pilgrims perform initiation and completion rites at this site, together with Jnanavapi Kupa.

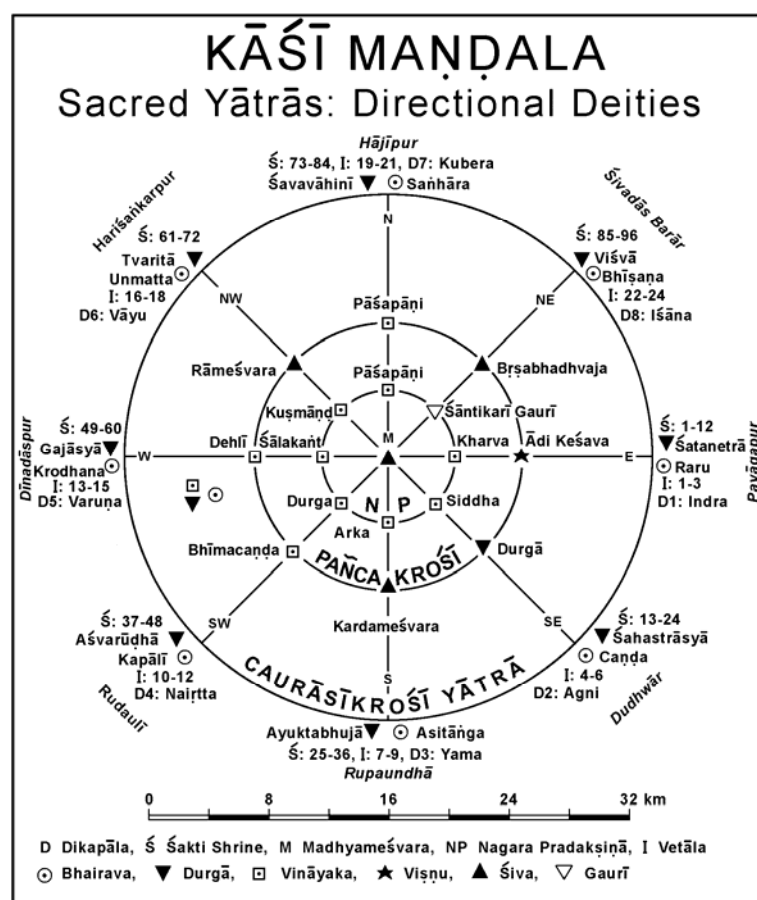


Fig. 4. Kashi Mandala. Sacred Yatras: Directional Deities

Varanasi contains many sacred territories defined in different contexts. Among them, five are the most popular as eulogised in mythological literature (Fig. 2). All have irregular shapes, except the outer one, which runs as a circle; however its pilgrimage is no more practised at least since last fifty years. In theory, the four inner sacred journey routes meet at the point of *axis*

mundi, Jnanavapi, while the outer circle covers up all the rest and meets in the west at Dehli Vinayaka, the gate to the cosmic territory, Kashi. Dehli means “gate” where Ganesha (“elephant-headed god,” the son of Shiva), as Vinayaka, provides relief from all the obstacles and also gives wisdom.

The five sacred journeys represent the five gross elements of Hindu cosmogony, respectively as sky/ether, earth, air, water, and fire (Fig. 3). In the human body, these elements symbolise the head, legs, face, blood, and heart, respectively. This spiritual homology of the sacred territories further shows the interlinking relationship between human beings and the cosmos, occurring in a strong state of connection to the sacred, where “one sees one’s own soul” (Singh, 1993a: 240-42). Jnanavapi, conceptualised as the *axis mundi* of the cosmos in the *mesocosmic* sphere, is outside mundane space and time, even though it is a visible site on the earth as well (Singh, 1997a).

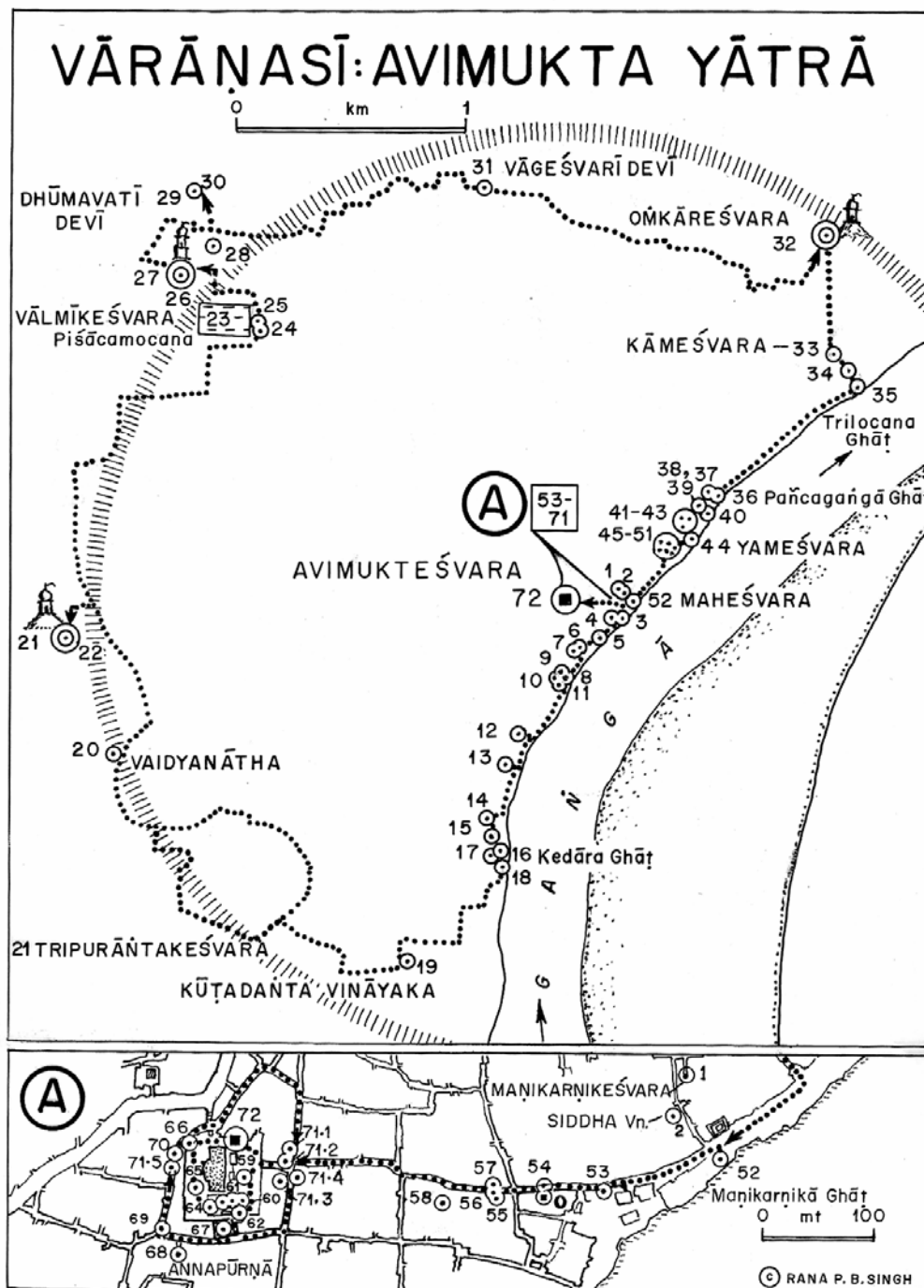


Fig. 5. Varanasi : Avimukta Yatra circuit

The outermost sacred circuit (**Chaurashikroshi Yatra**), symbolising the shadow of cosmic light, is defined with reference to the shrine of Madhyameshvara as the centre and Dehli Vinayaka as the radial point, at a distance of 5 *kroshas* (equal to 11 miles/ 17.6 km). Its circumference identifies the cosmic territory called Kashi Mandala (Fig. 4). In each of the eight directions exist 12 power-goddesses (*Shaktis*), one energy-goddess (*Durga*), one of her male partners (*Bhairava*), 3 local assistant demigods (*Vetalas*), and one directional deity (*Dikapala*). Their total number reaches 144 (for the full list see Singh, 1993b: 40-41).

The second circuit (**Panchakroshi**) covers a distance of 88.5 km (25 *kroshas*), where there are 108 shrines. This journey was referred to in a text of the 12th century CE. However, the details are given in a 16th century text. This is the most popular pilgrimage journey completed within 5 days (four, or five night halts; for details see Singh, 1991b).

The third sacred circuit delimits the city territory according to various myths, called **Nagara Pradakshina**. The route covers a distance of 25 km and links 72 sacred shrines and spots. Commonly, the pilgrims complete this journey in two days while halting at Pashapani Vinayaka (no. 36).

The fourth sacred circuit refers to the zone “Never Forsaken” by Shiva (**Avimukta**). According to a myth of the *Skanda Purana* (16.25-35), Surya (Sun) advised Shiva to live in this area forever, hence the name *avimukta*. The centre of this territory is the shrine of Avimuktेशvara, from where the circular route moves at the radial distance of about 2 km. However, it never crosses the Ganga river. Rather, the route follows the left bank of the river (Fig. 5a). The three shrines making the reference points, lying on the raised mound, from south to north are: Tripurantakeshvara (no. 21), Valmikesvara (no. 27) and Omkareshvara (no. 32). These three mound shrines are also symbolised as the three edges of Shiva’s Trident (*Trishula*). The processional route from no. 52 (Maheshvara) moves in a complex spiral form, turning four times before finally reaching Avimuktेशvara (see Fig. 5b).

The fifth circuit, the inner *sanctum sanctorum* (**Antargriha**), moves seven times around the temple of Vishveshvara (Fig. 6a). It symbolises the cosmic integrity, i.e., 7 *chakras* (spinal energy zones, or plexuses) and 8 cardinal directions. This is how Shiva protects his territory in the same way as Kashi protects his own body. The seven-round spiral symbolises the understanding of reality, both physically and transcendently, and reminds the pilgrims that the resort of the patron deity Shiva is everywhere but the circumference nowhere (Fig. 6b). In terms of hermeneutic philosophy, this may be seen as the essence of the archetypal “circle that never closes.” Such spiral structure is the result of the process of gnomonic growth, of which the square and its gnomon can be considered the archetypal form (Lawlor, 1982: 66).

The eight conjunction points on the outer circuit are controlled by the eight forms of Bhairava (Shiva’s fierce form looking after the “Time” and “Death” in cardinal directions), of which three are across the Ganga in the right side (see Figs. 2 and 4). The remaining five are at the left side of the sacred circuit and refer to the five halting places on, the Panchakroshi route. This idea is comparable to the shrinking universe, or the practice of adjustment-and-abstraction in Hindu religious practices.

The number of sacred sites and shrines along the five pilgrimage circuits symbolises the cosmogonic integrity. The symbolic cosmic number and their products can explain this (cf. Table 1). The total number of all shrines comes to 468, which in itself forms a parallel to the product of 9 planets x 13 months (including an intercalary month) x 4 directions, or mythical parts of a day. It is also a product of 12 zodiacs x 13 months x 3 mythic realms. The symbolic forms and numbers characterising the shrines and sacred circuit have emerged to form an established order (a frame of evolving cosmogram) through the binding of faith and belief system (see Singh, 1993a: 247-49).

Table 1. Kashi: Pilgrimage Journey and the Cosmogonic Integrity

Sacred segment/ route of Pilgrimage Journey	1. Macro- cosmos: Planet	2. Meso- cosmos: Direction	3. Micro- cosmos: 3 realms/ 2 parts of a day	Shrines on the route = 1 x 2 x 3
1. Chaurashikroshi	9	8	2	144
2. Panchakroshi	9	4	3	108
3. Nagar Pradakshina	9	4	2	72
4. Avimukta	9	4	2	72
5. Antargriha	9	4	2	72

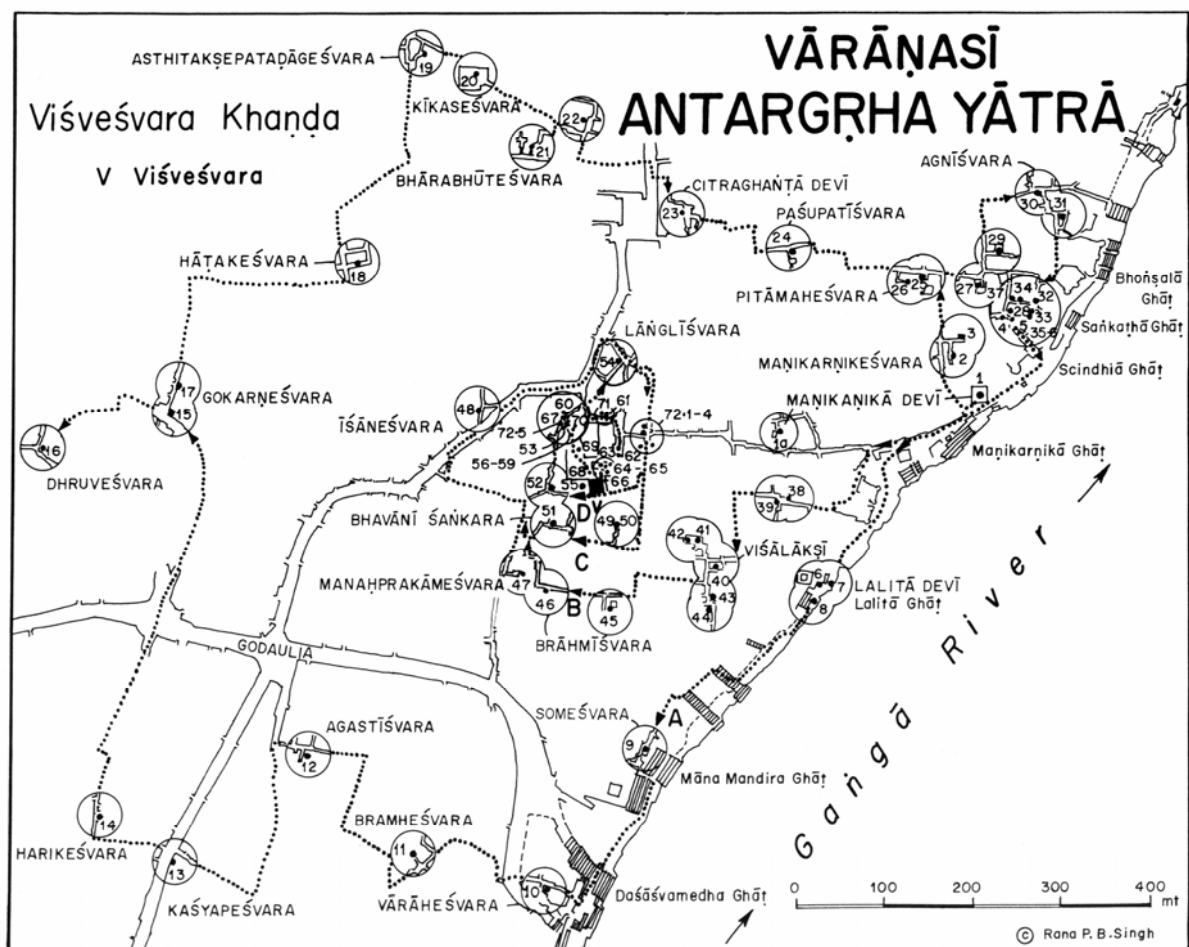


Fig. 6. Varanasi : Vishveshvara Antargriha Yatra circuit

This system is further developed in the arrangement of 56 Ganesha/ Vinayaka shrines. Vinayaka protects the dwellers or visitors to this city from obstacles at eight cardinal directions in all the seven layers of the realm between earth and heaven (symbolically representing seven layers of the atmosphere). They serve as *lokapala*, the directional guardians of the universe and residents at all the cardinal junctions. The number and location of 56 Vinayakas can be represented in a spatio-cosmological model showing the eight directions, seven layers, three sacred segments of Varanasi and the interlinking routes of pilgrimage journeys in spiral form (Fig. 7). The sequential arrangement of 56 Vinayakas, is arranged in a model as described in the mythologies and followed by the pilgrims performing the sacred journey. The arrangement symbolises the concept of universe within universe, i.e., interconnecting *macrocosmos*, *mesocosmos*, and *microcosmos* (see Singh, 1995a, 1995b). This can be experienced and revealed only by eternal sense, soul – a subject beyond the bodily experience; it is the

complement of spiritual experience which some of the pilgrims receive, of course there is no language for expressing the ultimate nature of revelation and eternal experience.

3. From Microcosmos to Microcosmos

The use of the symbolism of the human body reveals another level of meaning of the microcosm. This was vividly described in the *Vastu Vidya*, the science of architecture. Though it was already an accepted branch of knowledge in Vedic times, this structure was interpreted in a religious context, especially with the symbolism implicit in it and canonisation of forms. By the principle of existence which forces to assume and retain a certain form has been set in order, the basic form of which has been *Vastu-Purusha Mandala* – a phenomenal structural plan, which can be explained by the Vedic sacrificial rite. The spiral form symbolises movement, the cyclic movement of time. This is how the circumambulation is performed. A round altar symbolises the terrestrial world, and a square in it, the celestial (cf. Volwahren, 1969: 44).

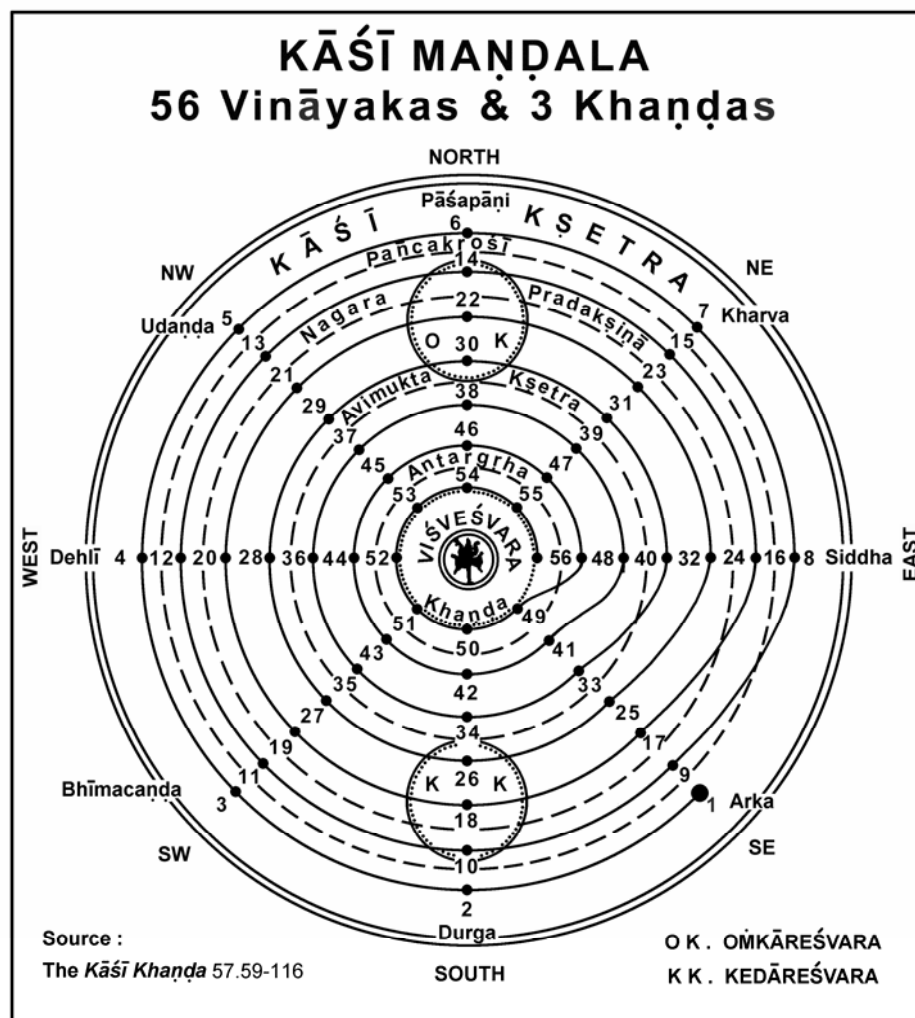


Fig. 7. Kashi Mandala: 56 Vinayakas and 3 Khandas

The ground plan of the temple itself is a mandala, representing an “image of the laws governing the cosmos, to which men are just as subject as is the earth on which they built” (*ibid*: 44). The circumambulation symbolises the cosmic journey and its cognition. According to the *Vastushastras* (manuals on architecture), the basic cosmogram (*Vastu-Purusha Mandala*) for a surface plan can be drawn in 32 ways; the simplest one consists of a square, which may be divided into 4, 9, 16, 25, 36, 49, 64, 81, 100 and so on up to 1,024 squares. The size chosen for

these drawings is immaterial. The most common number chosen was 81, *Ekashiti Pada* (9 x 9 grids, *Padas*). The *Brihat Samhita* indicates that 81 squares was the proper foundation for cities, palaces, and houses, while that containing 64 squares was appropriate for temples.

According to the *Matsya Purana* (253.21), a 9th century text, the city plan needs to be developed in this form with the allocation of space to various divinities. Brahma (the Creator) is said to preside over nine squares in the centre, forming an open quadrangle. The placement of divinities is according to their status and importance in Hindu ritual practices. The eight cardinal directions are controlled by the territorial deities as watch guards. This plan represents the symbolic merger of body, space and cosmos. The city of Madurai in south India may be cited as an example. In Varanasi such a mandala system no longer exists. It is obvious that “In every Hindu city, the most accessible demonstration of the merging of macrocosm and microcosm is the temple” (Malville, 1994: 172). In fact, “in both a cosmology and a cosmogony, the temple provides a map of the universe as it exists today and a representation of those creative, cosmogonic processes which have led and are continuing to lead to its production” (Malville, 1992: 25). During 12th -17th centuries of Muslim rule, most of the temples of Varanasi were demolished. That is how the basic structural plan lost its identity. Later, when the situation became peaceful, the temple was rebuilt at a different site.

4. Vishveshvara/ Vishvanatha Temple

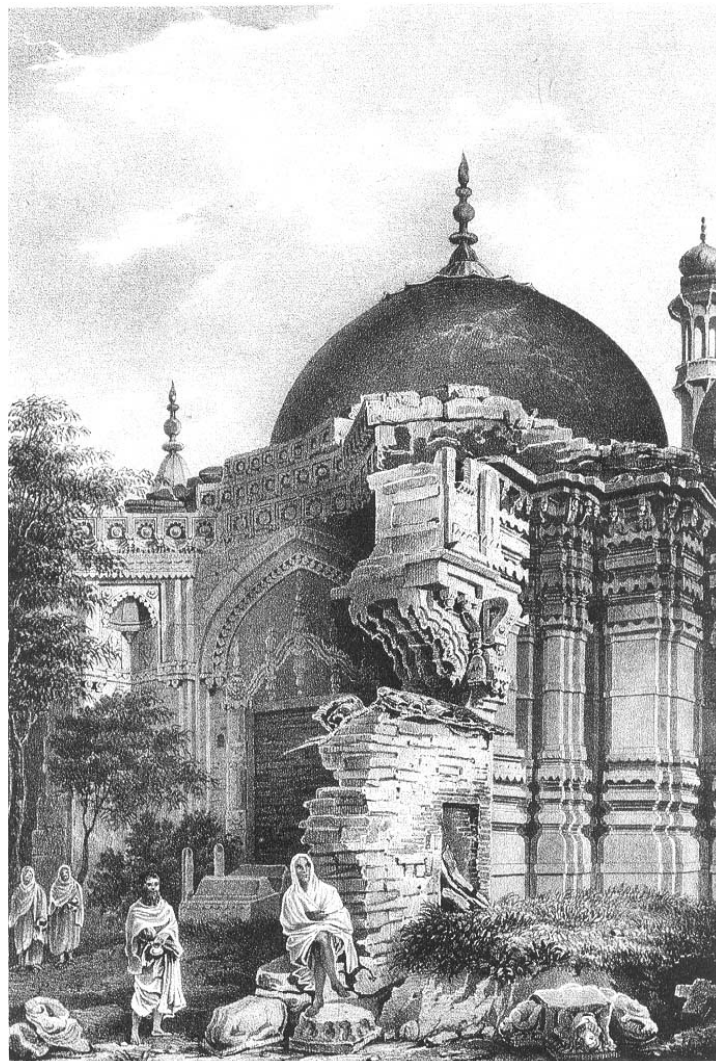


Fig. 8. Ruined portion of the old Vishveshvara temple, back part of present Jnanavapi Mosque (after Prinsep, 1832).

The most popular and mythologically eulogised Shiva *linga* is Vishveshvara, known as Vishvanatha (the patron deity of Varanasi). Between CE 1194 and 1670, this temple was probably pulled down at least three times. The *Tristhalisetu* of Narayanabhatta (ca. 1585) describes the glory of this temple. It is believed that he built the temple in the late 16th century, which was torn down by the Mughal king Aurangzeb in CE 1669. It appears from the description in this text that during the greater part of his life, there was no regular temple of Vishvanatha at Varanasi (Altekar 1937). After demolishing the temple, Aurangzeb had built a mosque there. However, part of the back portion was left as a warning and an insult to Hindu feelings (Fig. 8).

The ground plan of the ancient temple of Vishveshvara was reconstructed by James Prinsep in 1831 (Fig. 9). The main temple was square; each side being 108 ft (32.92 m) divided into 27 grids (*padas*) in one dimension. In reality, of course, only 26 grids exist, and an additive was adjusted to make the cosmogram real in numerical symbology. Regarding the square plan, Malville (1992: 25) comments, "The square protects the interior and may also represent the ecliptic, the cyclic pathway taken by the sun as it measures out time." The main shrine lying in the centre was also in a square of 64 (8 x 8) grids, each grid was 16 sq. ft (1.49 sq. m). This is a form of *manduka mandala*, at the centre of which was the main *linga*, Shiva's symbol lying in an ornamental reservoir. "Its corners are at the same time the corners of the external outline of the cell" (Volwahren, 1969: 52).

Adjoining the central sanctuary, there were four ante-chambers (*mandapas*) corresponding to *Jnana* (wisdom), *Mukti* (liberation), *Shringara* (decoration), and *Aishvarya* (glory), respectively symbolizing the east, south, west and north (see Altekar 1937). Each of the *mandapas* had an area of 16 x 16 ft (16 grids). The inner sanctuary represented the first circular form, while the four cardinal *mandapas* represent the second circle and cardinality. At the third level in the rest of the four cardinal directions, existed four ancillary shrines, each with an area of 9 grids (12 x 12 ft) corresponding to Tarakeshvara (SE), Dandapani (SW), Ganesha (NW) and Bhairava (NE). The whole temple in complete form must have been a picturesque group of nine spires. The height diminished from the centre outward in the ratio of 16, 8, and 6, as may be inferred from the ground plan (Fig. 10). This way, the grid-mandala consisting respectively of 64, 16, and 9, together reflect the sacred geometry. The four main directional grids of 16 each had emerged into 64 at the centre. In addition to ancillary *mandapa*, closely also existed eight more 9-grid chambers; thus their number reached 12. This is comparable to $9 \times 12 = 108$. In total, calculated this way:

$$[(16 \times 4) + 64 + \{(9 \times 4) + (9 \times 8)\}],$$

The final number of open-chambers comes to 236. The triple circle symbol was formed on the basis of a framework and grid consisting of essentially the representation of the three mythic realms, symbolising the power of Shiva as the controller of the three realms, i.e., earth, atmosphere, and heaven.

In Indian classical calculations pertaining to construction of a temple and its characteristics, the integer was taken as the base and the remainder as the means of decision. Strictly speaking a 'doctrine of remainder' was followed (see Volwahren, 1969: 50-51). Following that principle, the Vishveshvara temple may also be placed on that scale (Table 2).

The temple was built on a *navaratna* plan, i.e., nine spires altogether including the highest central one (128 ft/ 39m). The corner spires were about 48 ft/ 14.6 m high and those over the *mandapas* were 64 ft/ 19.5 m (Verma, 1971-84: 201). The main ground plan recorded a series of 676 grids, *padas* (26 x 26), of which each grid was 4 ft x 4 ft. In addition, at each of the four corner extensions, there were six such grids. Furthermore, seven grids were also at the four directional parts. Thus in total, the number reached 728. With a minor adjustment of 1, the number reached 729, symbolising the product of 27×27 (lunar asterisms), i.e., meeting of macro and micro cosmos, a cosmogram.

Table 2. Geometrical properties and related characteristics

Se.	Attribute	Dimension	Remainder	
			No.	Refers to
1.	<i>Yoni</i> (direction)	(temple width x 3) / 8	4	West
2.	<i>Vyasa</i> (planet)	(width x 9) / 10;	2	Moon
3.	<i>Nakshatra</i> (lunar asterism)	(length x 8) /27;	0	Jyestha
4.	<i>Aya</i> (zodiac, or month)	(length x 8) /12;	0	Aries, or Chaitra
5.	<i>Vara</i> (the day)	(circumference x 9) / 7;	3	Tuesday
6.	Tithi (time)	(circumference x 9) / 30	18	the 3rd of the Light-half (waxing)
7.	<i>Varna</i> (caste group and colour)	(length x width x 9) / 4;	0	Brahmin, colour White

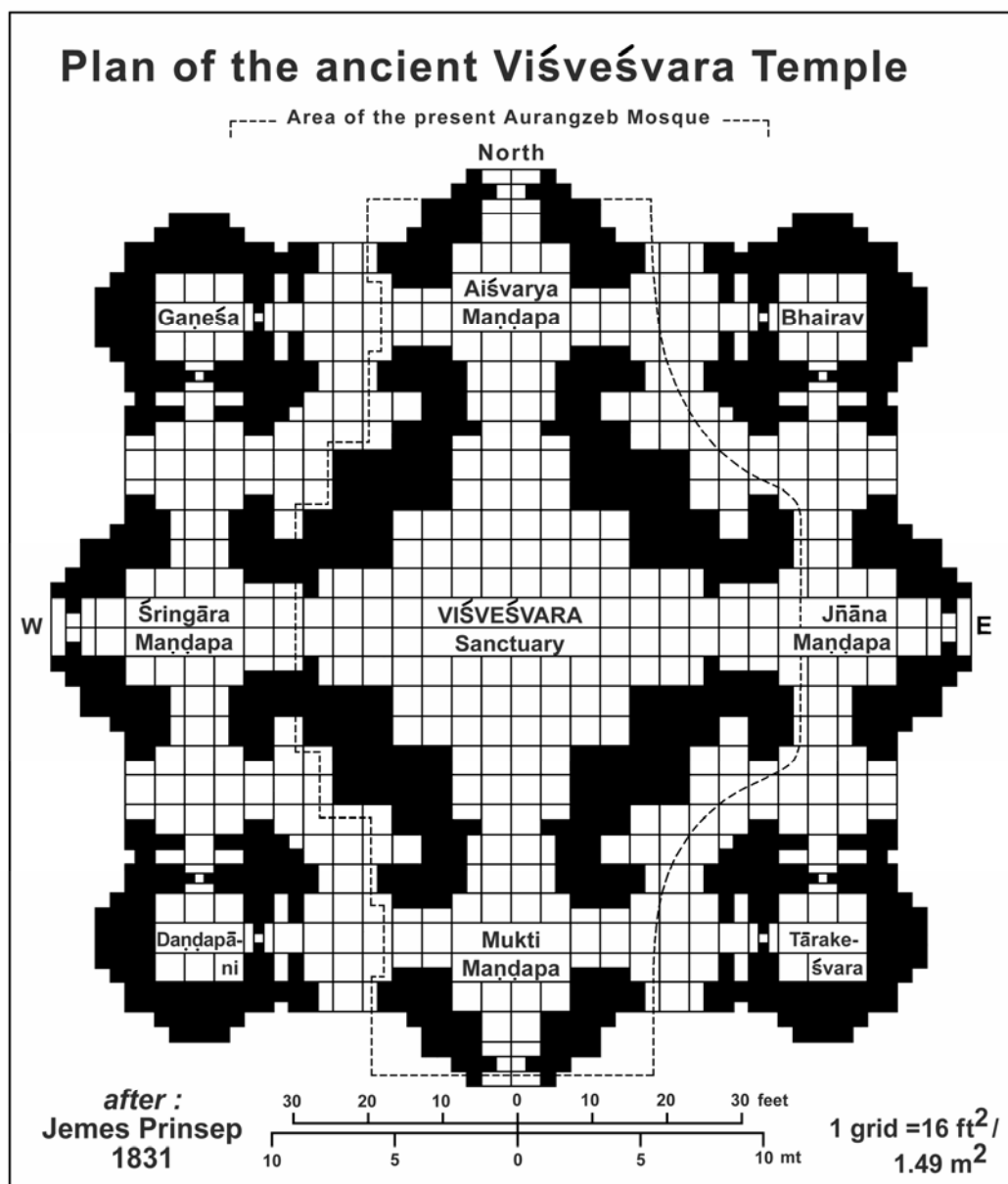


Fig. 9. Plan of the ancient Vishvesvara Temple

Plan of the ancient Viśveśvara Temple

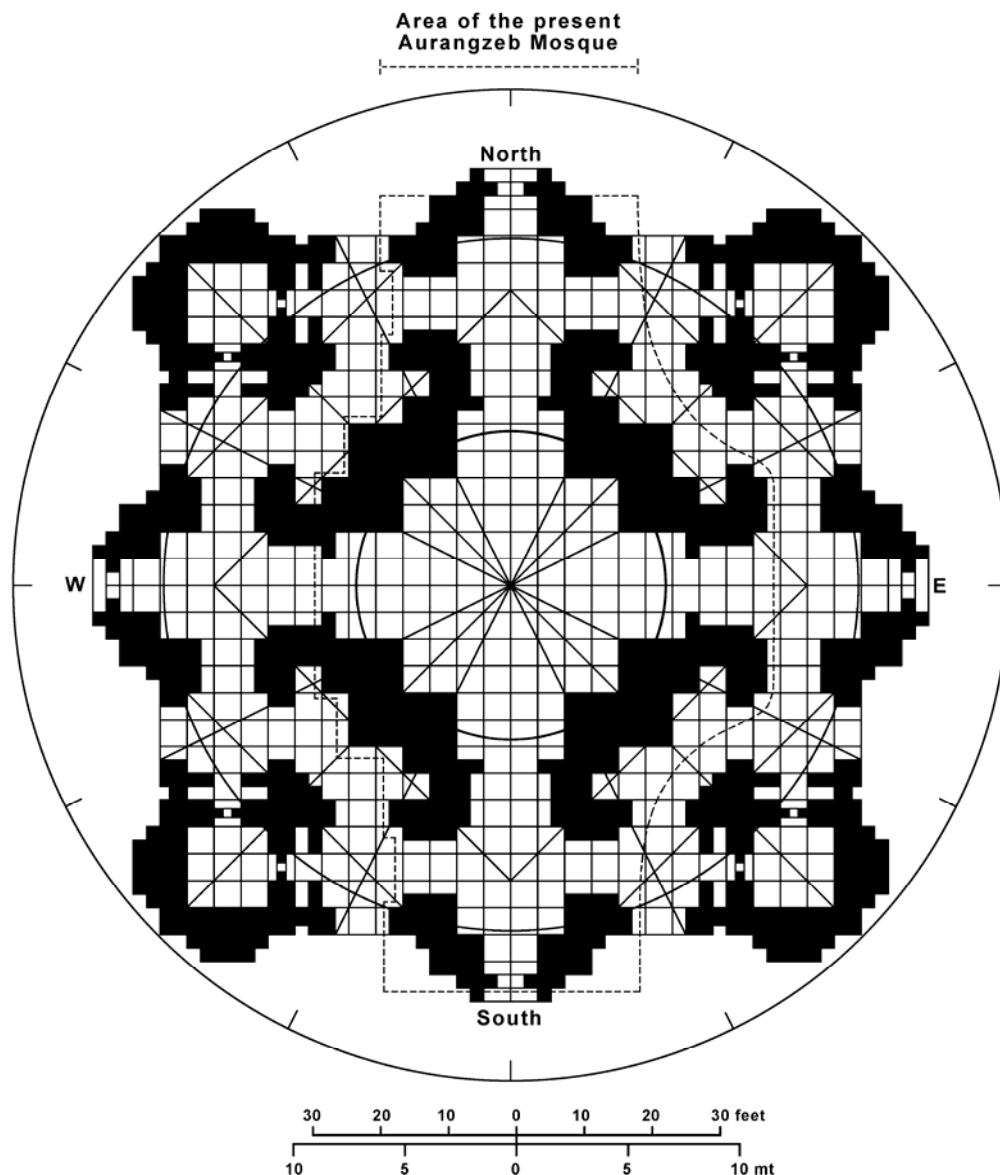


Fig. 10. Plan of the ancient Vishvesvara Temple: Orientation and alignment

The ancient plan of the Vishveshvara temple can also be tested in the light of geometric structure. There existed three basic circles which were homologous to the three phases of life (birth, flourishing, and death- and-rebirth), further corresponding to the three mythic realms (*lokas*), viz. earth, sky, and heaven, and three stages of time (*kala*) – time past, present, and future. The triplication of the geometric form further merges into square pattern. Remarks Maxwell (1991: 286): “TriPLICATION of such a continuum-symbol merely presents three aspects of the same eternal process. In such a beginningless and endless system, geometrically defined space proper to the system itself (as distinct from borrowed constructs) is bound to be cyclical and the definitions are bound to be generated naturally rather than imposed.”

The four cardinal chambers were in between the two outer circles in the angular space of 37° , thus $37 \times 4 = 148^\circ$. The four directional chambers were in the angular space of 53° , thus $53 \times 4 = 212^\circ$. This way, finally, they cover all of the degrees of a circle, 360° . This exercise of correspondence suggests that the temple was planned on the basis of a network, angular space and associated grids; of course this is merely a geometrical formalisation. The structure of

triplication has a close association with Shiva: three eyes, trident, controller of the three realms, and several such symmetrical triads. Stella Kramrisch's (1946: 23) remark is appealing in this context: "The Indian temple, an exuberant growth of seemingly haphazard and numberless forms ... never loses control over its extravagant wealth.... It visualises the cosmic force which creates innumerable forms, and these are one whole, and without the least of them the universal harmony would lack completeness." This intuitive understanding is confirmed by the sacred plan of the ancient Vishveshvara temple (Fig. 10). In fact, the temple was the real representation of *Purusha* ("Supernal Man"), and also was a mnemonic for a number of cosmological concepts (cf. Malville 1991: 123).

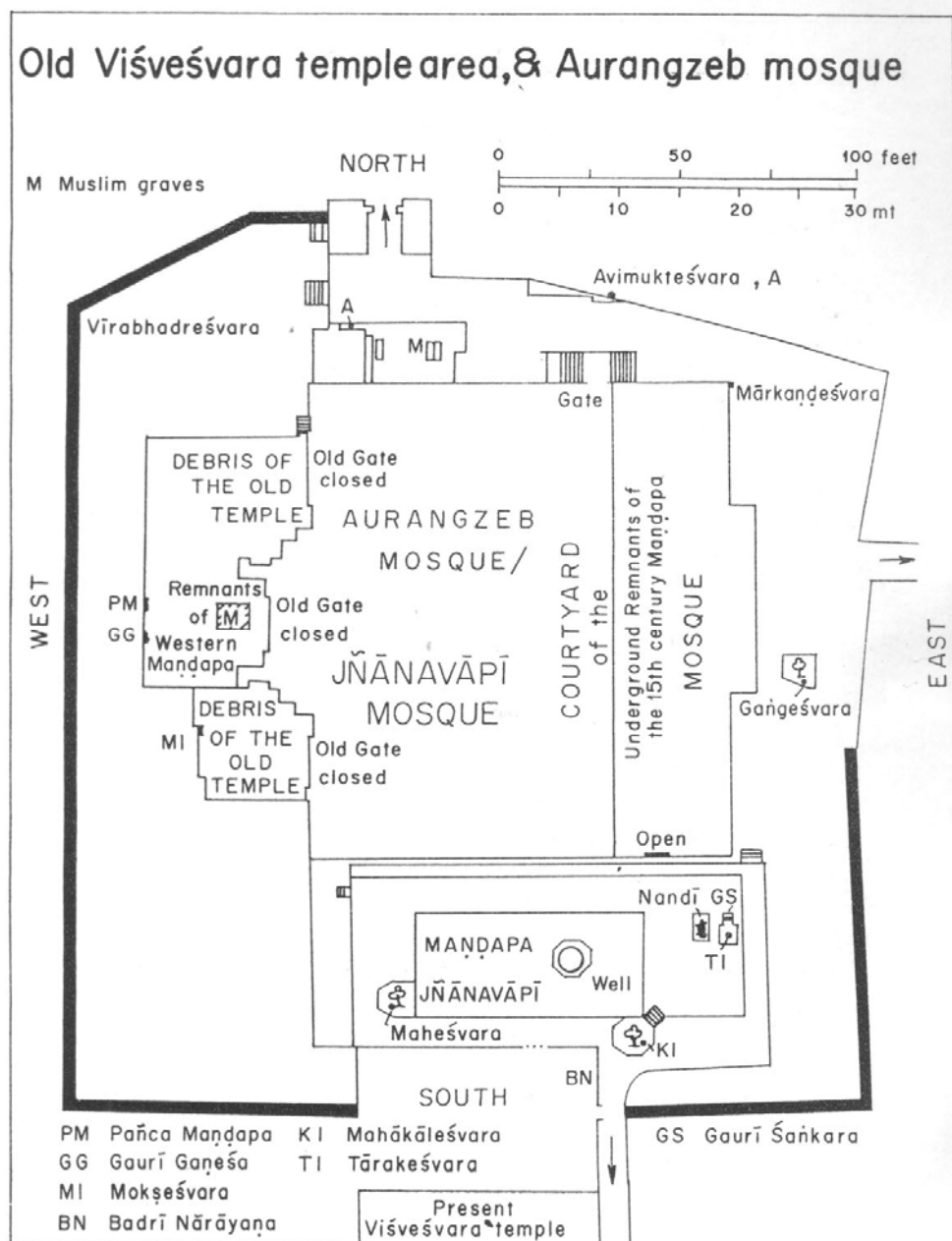


Fig. 11. Old Vishveshvara temple area, & Aurangzeb mosque.

The temple of Vishveshvara symbolises the fire pillar connecting heaven and earth, and the nearby holy well of Jnanavapi is the source of primordial water. The area around the present mosque of Aurangzeb (known as Jnanavapi mosque) was the path of circumambulation (*pradakshina*) around the old Vishveshvara temple. There were many ancillary shrines on the temple walls that lost their identity after its conversion into a mosque. *Puranic* mythology also describes Jnanavapi to the south of Vishveshvara. After demolition of this temple, a mosque

was erected there (see Fig. 11). Later in late 18th century, Queen Ahilyabai Holkar built a new temple of Vishveshvara in the southern vicinity.

5. Other Shiva Lingas

In various temples of Varanasi one finds special forms of *lingas* associated with sacred geometry and cosmic connotation. A few examples may be cited. The Bayalisha-Lingi *Linga* at Kapiladhara on the Panchakroshi route (see Fig. 12) represents the total form of Shri Yantra's triangles. Shri Yantra is drawn from nine triangles, four pointed downward and five upward, thus forming 42 (6 x 7) triangular fragments around a central triangle (see Singh, 1991: 122-23).

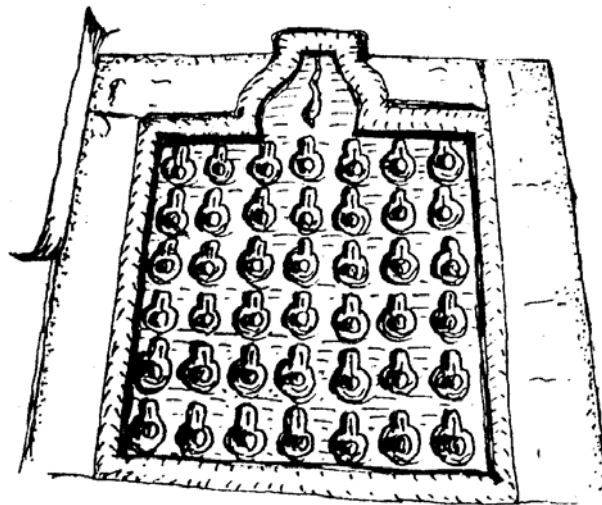


Fig. 12. Bayalisha-Lingi Shiva Linga

There is probably no other set of triangles that interlock with such integrational perfection. This is also represented as a symbol of life, both universal and individual. In other ways, the seven sheaths (*chakras*) and six directions (including above and below) together make 42. Shiva is described as the greatest yogi who in all the junction of space, time and energy cycles reveals the cosmos. According to the *Kashi Khanda* (73), Shiva controls the three realms (heaven, earth, and the netherworld) as a Yogi by His manifestive power of two layers of sheaths (seven up from navel base, and seven down), i.e., 14. This way, 3 x 14 becomes a total of 42. There are 42 different *lingas* at various places in Varanasi. However, all of them are represented in one structure at Kapiladhara (for list, see Singh, 1987b: 506). In this way, 42 represent the super-state of consciousness where macro and micro cosmos meet.

6. Dvadasheshvara *Linga*

By the process of spatial transposition, all twelve *Jyotira* (light-manifestive *lingas* of Shiva) located in different places in India including the one at Varanasi, i.e., Vishveshvara (cf. Table 3), are re-established in Varanasi (cf. Fig. 13a, b). The spatial pattern of *Jyotira lingas* makes Varanasi a microcosmic or mini-India. Pilgrims perform sacred journeys and auspicious sights to these *lingas* on special days. This way, pilgrims feel that they have acquired the merit of auspicious sight to all the *lingas*. At another level, a special *linga* of Dvadasheshvara in the early 19th century CE temple, known as Panchakroshi temple (house no. CK 5/ 33 Gola Gali, Bhikharidas Lane, Chauk), carries twelve miniature *jyotira lingas* made of crystal, at one base. These *lingas* are sequentially coded, and Vishveshvara (no. 9) lies at the centre (Fig. 13c). The three-level spatial affinity and replication may be compared to the idea of emergence and

replication from *macro* (India-level) to *meso* (Varanasi city-level) and *micro* (Dvadasheshvara) cosmic representation. The number 12 represents the annual rhythm of space and time.

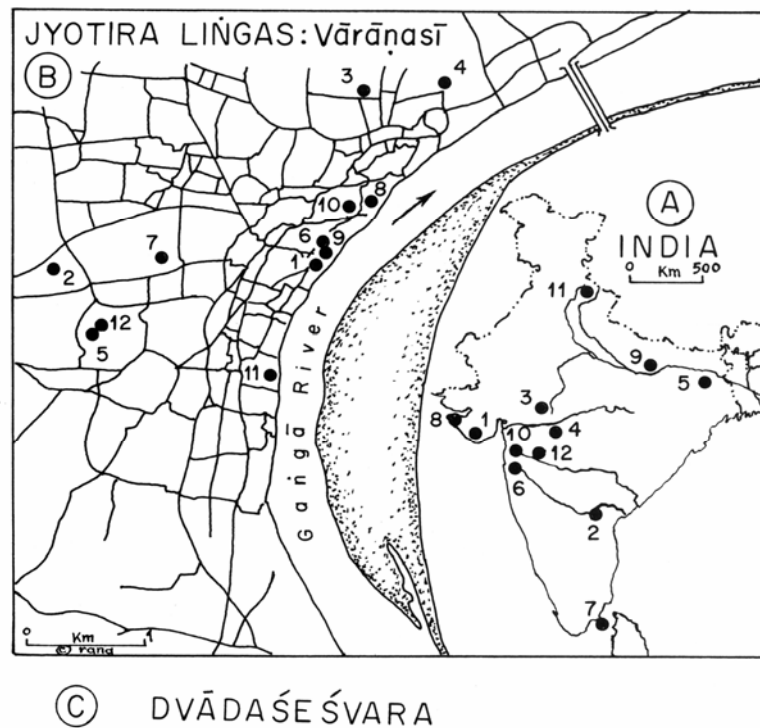


Fig. 13. Jyotira Lingas : (A) India, (B) Varanasi, (C) Dvadasheshvara.

Shiva linga is also represented with the human face (*mukha*), numbering from one to five, and symbolising various states and roles of Shiva from *Ishvara* (the Supreme Lord) to *Pancamukha*, the controller of the five basic organic matters. Several other interpretations of cosmicised numbers related to different forms of divinities like Durgas (9), Chandis (9), Matrikas (9), Gauris (9), Bhairavas (16), Rishi-*lingas* (7), Vishnu (8), Suryas (12), etc., may also be explained in this context (cf. Singh, 1987b; Singh and Malville, 1995).

7. The Gurudham Temple

The temple as cosmogram is clearly exemplified by Gurudham temple where symbolism of space, cosmo-magical form and body forms a web of Tantric mandala. This was built by Jai Narayan Ghoshal in CE 1814. The temple compound covers an area of 4.86 ha. The seven body-sheaths (*chakras*) are fully represented in its basic spatial plan (see Figs. 14, 15). In this temple, 4 microcosmic view of the seven most holy centres (*puris*) of India, and stages of meditation are spatially represented. Similar temples in India are at Bansbaria (Hamseshvari), near Chidambaram (Satya Jnana) and Prayaga/ Allahabad (Hamsa Tirtha in Jhunsi).

Table 3. Varanasi : Jyotira Lingas, Light-Manifested Forms of Shiva

Se	The Linga	Original place in India	Location in Varanasi, House No.	Latitude, N X° Y'	Longitude, E X° Y'
1	Someshvara	Somnath, Gujarat	<i>Someshvara</i> , near the Man Mandir Ghat, D 16 / 34	25 18.498	83 00.636
2	Mallikarjuna	Shrishail, Andhra Pradesh	<i>Tripurantakeshvara</i> , Sigrā (Sivapurva) Tila, D 59 / 95	25 18.505	82 59.261
3	Mahakaleshvara	Ujjain, Madhya Pradesh	<i>Vridhakeshvara</i> , Mahamritunjaya, K 52 / 39	25 19.361	83 00.911
4	Omkareshvara	Mandhata, Madhya Pradesh	<i>Omkareshvara</i> , Pathanitola, A 33 / 23	25 19.539	83 01.355
5	Vaidyanath	Deoghar, Bihar	<i>Vaidyanatheshvara</i> , Kamachha, B 37 / 1	25 18.171	82 59.411
6	Bhimashankara	Pune, Maharashtra	<i>Bhimeshvara</i> , Kashikarvat, CK 32 / 12	25 18.662	83 00.638
7	Rameshvara	Rameshvaram, Tamil Nadu	<i>Rameshvara</i> , Rama Kund, D 54 / 45; (at 4 sites more)	25 18.565	82 59.826
8	Nageshvara	Near Dvaraka, Gujarat	<i>Nageshvara</i> , Bhonshala Ghat, CK 2 / 1	25 18.822	83 00.921
9	Vishveshvara	Varanasi itself	<i>Vishvanatha-Ji</i> , Jnanavapi, CK 35 / 19	25 18.637	83 00.594
10	Tryambakeshvara	Nasik, Maharashtra	<i>Tyayambakeshvara</i> , Baradeo, D 38 / 21	25 18.599	83 00.392
11	Kedareshvara	Chamoli (U.P.), in Himalaya	<i>Kedareshvara</i> , Kedar Ghat, B 6 / 102	25 17.985	83 00.425
12	Ghushmeshvara	Ellora, Maharashtra	<i>Ghushrinishvara</i> , in Kamachha, B 21 / 123	25 18.216	82 59.556

(The latitudes and longitudes are based on GPS values, using GPS Garmin 12X, © Rana P.B. Singh) (Source: Singh, 1987b: 503, 504-505)

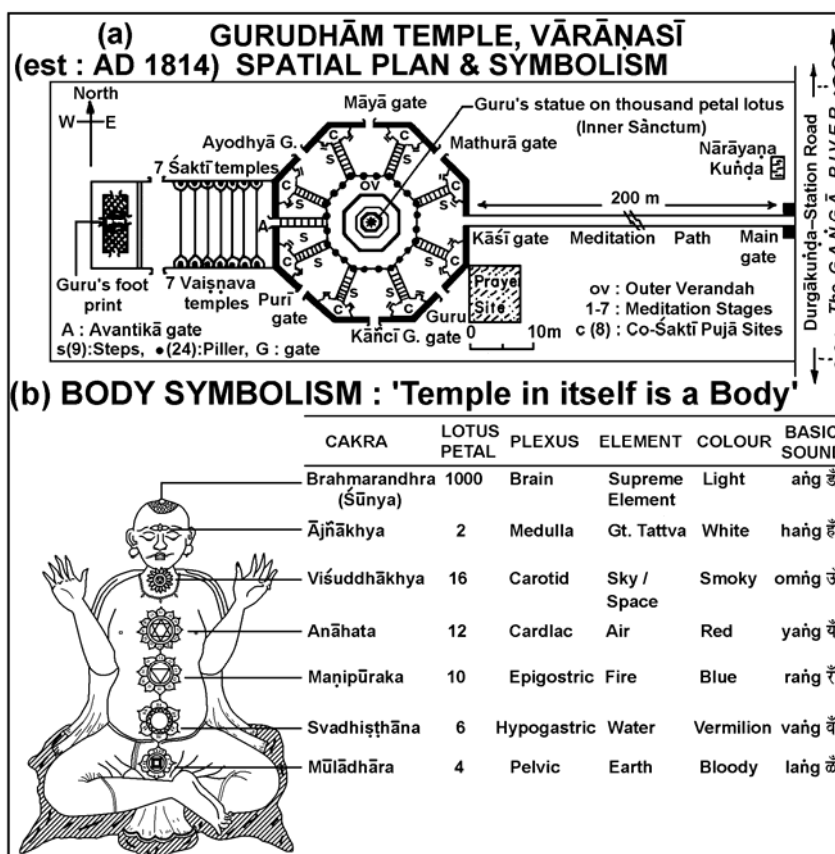


Fig. 14. Gurudham Temple, Varanasi: Spatial plan and symbolism

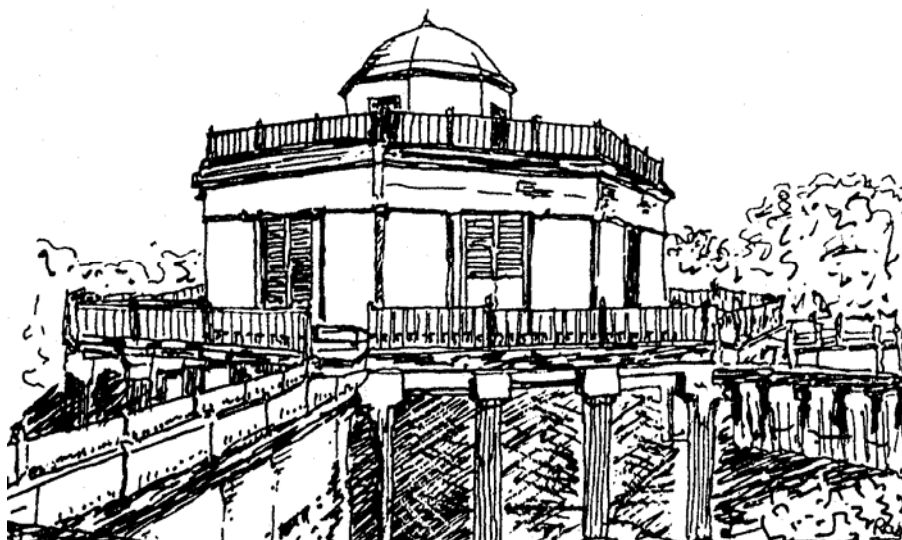


Fig. 15. Gurudham Temple, Varanasi: A sketch view

The temple is perceived as the preserver of light, reflecting the highest state of Guru and the ways of meditation. The basic structure is octagonal in form, containing a gate symbolising seven of the most holy sites bestowing salvation (*puris*), and the last one, the gate of Guru himself. These eight gates also refer to eight directions. Further, a sense of divine and mystic belief is also imposed like Shaivism (Avanti, Kashi), Vaishnavism (Ayodhya, Mathura, Puri), and both together (Kanchi), and Shakta/ Tantric (Maya/ Haridvara). These three groups can be identified with three schools of Hinduism. The Guru is separate from them, as he is the superb integration of these. With his guidance, one can attain that state of divine bliss. Moreover, number eight can be compared with various divine forms, like eight Bhairavas, eight Devis, eight Candis, etc.

In the inner sanctum of the temple, on a thousand-petal lotus, Guru's icon is established along with the icon of his divine energy: both are made of mixture of eight metals (*ashta dhatu*). The lotus expresses a twofold symbolism of exoteric and esoteric. It symbolises a symmetrical and spatial emanation of 'the one', like the root-word, *Om*. The lotus, in the widest sense, denotes creation generated from the primordial seed of the cosmic waters; the *Taittiriya Samhita* (Sv.1, 3c) says that "the lotus is the earth itself on those same waters." According to another text, the lotus is the symbol of the plane of spiritual unity, revealing itself in the centre of the mysterious space (*akasha*) in the depth of the heart (*Chandogya Upanishad* 7.3.1).

The conception of Guru in this temple is a symbol of Brahman, a Supreme One, who has at once a manifested and a non-manifested aspect. In one way, He encompasses the whole universe, and in other way reflects the concept of pantheism: the One differentiates into Many, and in their togetherness the Many constitute a Whole (Rudhyar, 1983: 31-32). Says Rudhyar (*ibid.*: 43): "Wholeness is in every whole, but it also is in what are inadequately called the 'parts' of a whole." In fact, "there are no parts, only wholes – a hierarchy of wholes – that is, of organised fields of activity and consciousness having a limited span of existence" (*ibid.*).

Following the analogy that "*temple in itself is a body*", the plexus system of *kundalini*, as described in the Yoga system, can be compared to the Gurudham temple. Each spot from lower to higher (seven layers) is symbolised by lotus petals, i.e., 4, 6, 10, 12, 16, 2 and 1000. A meditator has to follow the system in this sequence with the aim of reaching the highest state. Only then can he receive blessing from the Guru through touching his feet, as shown in the spatial plan of the temple (Fig. 14).

Presently the condition of the temple is very bad, mostly due to negligence, illegal occupancy of open space, and encroachment by the nearby settlers and colonisers. This temple

will soon be out of the scene from the cityscape, and only the memory and remnants of such a great heritage will remain in stories.

8. City as Cosmogram: Images of Kashi

We are surrounded not by sense objects but by images that are invisible to everybody else. The symbolic expression of place, the set of symbols that gives the people of a culture orientation in space and time, is pervasive in Hindu culture. We find in Hinduism that places like special sites or natural sceneries, rivers, mountains, grounds, sacred buildings and sacred cities replicate the form and process of the cosmos. In fact, a passion for placement is basic to Hindu thought. Sacred place as “storied place” is eulogised in Hindu mythology, or oral epics, with divine connotation – there intersects myth and *terra firma*.

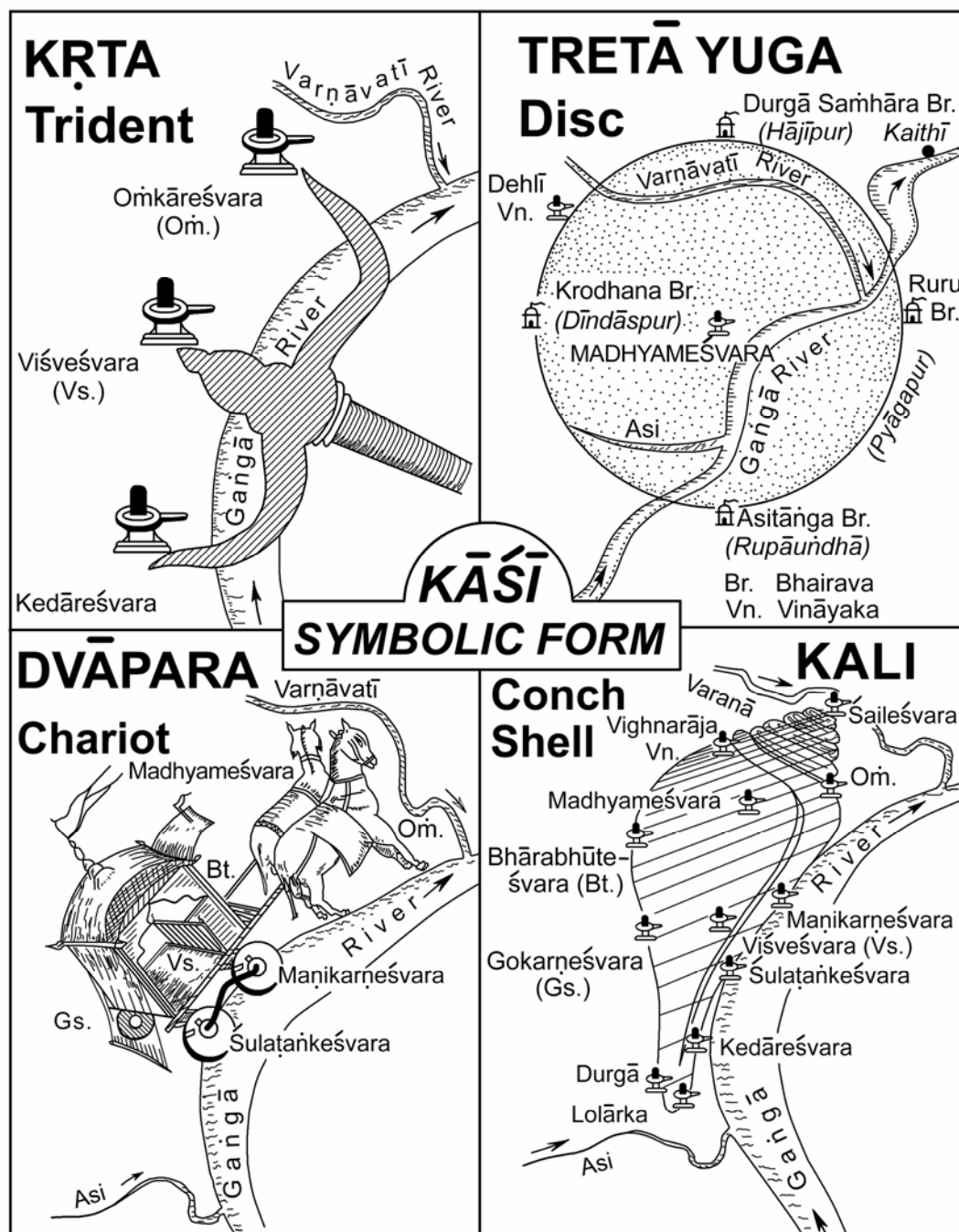


Fig. 16. Kashi: The Symbolic Forms

In the *Vedic* literature, Varanasi has, of course, not received much attention. However, in the *Puranic* literature and treatises, its glory has been vividly stated. The concept of image is described with various names like Kashi (The “Luminous”), Avimukta (The “Never Forsaken” by Lord Shiva), Anadavana (The “Forest of Bliss”), and Rudravasa (The Dwelling place of Shiva). The *mahatmya* (glorification) literature describes its various forms, shapes, territories, and associated sacred numbers. Among such symbols, the description of varying symbolic forms of Kashi/ Varanasi in mythical time is unique in spatial exposition (cf. Singh, 1988b: 3-5). The *Nagara Khanda* of the *Skanda Purana* (ref. the *Kashi Rahasya*, SB Tika, p. 119) describes the territorial form of the sacred city as it was in the four mythic eras (*yugas* in Hindi cosmology). Accordingly, the shape of Kashi was like a Trident (*trishula*) in *Krita/ Satya* (an era of 1,728,000 years), a Disc (*cakra*), in *Treta* (1,296,000 years), Chariot (*ratha*) in *Dvapara* (864,000 years), and a Conch-shell (*shankha*) in *Kali* (432,000 years). These four forms clearly indicate the peopling, and territorial demarcation through the sites of various shrines (Fig. 16).

The three forks of trident are represented by the three basic segmentary Shiva *lingas*, i.e., Omkareshvara in the north, Vishveshvara in the centre, and Kedareshvara in the south. These three *lingas* refer to the areas around them that were settled in ancient times and also are the patron deities of their respective segments (*khandas*). Metaphorically, it is said that Kashi lies upon the trident of Shiva.

The disc-form was developed in *Treta* and corresponds to the *Caurashikroshi Yatra* as a circle with Madhyameshvara at the centre and Dehli Vinayaka (i.e., gate to the cosmic circle, controlled by Ganesha as guardian) as the radial point. It covers a circumambulatory circumference of 184 miles/ 296 km, and symbolises the circumambulation of the cosmos. However, this journey is now rarely performed. At the four cardinal points, there exist four Bhairava shrines. Bhairava is perceived as the terrifying form of Shiva who controls *kala* (time and death). He is also known as Kala Bhairava.

The form of a chariot (in *Dvapara*) may be explained with the location of seven forms of Shiva *lingas* as referred to in the text: Gokarneshvara, Shulatankeshvara, Manikarnikeshvara and Bharabhuteshvara as the four wheels of the chariot on which Vishveshvara is sitting, and Madhyameshvara and Omkareshvara as the driving horses, with the Ganga river as the path. The direction of movement towards north metaphorically indicates the search for Shiva’s abode in the north (i.e., Kailasha), and also the search for the radiant spot on the cosmic path.

The present form (in *Kaliyuga*) is comparable to a conch-shell. Including the above six *lingas* (as in *Dvapara*), Vighnaraja Vinayaka in the north-west, Shaileshvara in the north along the Varana river, Kedareshvara in the south-east, and Lolarka in the south, it makes the shape of a conch-shell.

The description of the above four symbolic forms of Kashi is comparable to territorial strategy that establishes different degrees of access to people, things, and relationships to the scales of space, time, and faith. In all four forms, the Ganga river is the base. According to another description, the two water channels, which delimit the territorial extent of the city in the north and south, can be compared to arteries of Shiva’s mythical body. In the language of *yoga*, the rivers Asi and Varana, respectively, symbolise *ida* and *pingala*, and the third artery interlinking the Ganga to the Matsyodari, or the Brahmanala is referred to as *sushumna* (cf. *Kashi Khanda* 5.25-26; 33.167). The various holy sites are said to correspond to the parts of the body of Shiva, as he himself said, ‘Kashi is my body’ (*ibid.*: 55.44).

According to another description in the *Kashi Khanda* (33.167-172), the city of Varanasi is Shiva’s body, whose different parts are represented by the selective 18 *lingas*. The number 18 symbolises the 18 branches of knowledge, including the four *Vedas*, six parts of the Vedic divisions, and the rest of the branches. In this way, the city itself is the symbol of total knowledge. The visitation and performance of rituals at these sites provide the total knowledge. However, even by visiting a single *linga* of Puraneshvara (Krittivasheshvara), one can receive the similar merit (cf. *Kashi Khanda* 33.132), as this *linga* symbolises all the 18 *lingas* at another level (see Fig. 17).

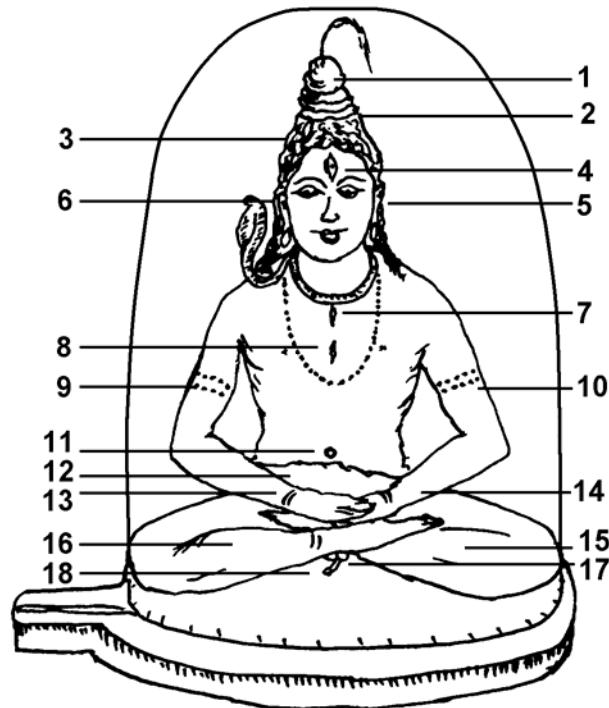


Fig. 17. Krittivasheshvara linga as Shiva's body. Symbolically consisting of 18 Shiva lingas, that is how it shows Kashi as Shiva's body: 1 Omkareshvara, 2 Shrutishvara, 3 Mahadeva, 4 Trilochaneshvara, 5 Bharabhuteshvara, 6 Gokarneshvara, 7 Vireshvara, 8 Chandreshvara, 9 Avinukteshvara, 10 Dharnieshvara, 11 Madhyameshvara, 12 Jyestheshvara, 13 Vishveshvara, 14 Manikarnikeshvara, 15 Karpadishvara, 16 Kaleshvara, . 17 Kedareshvara, 18 Shukreshvara. (cf. KKh 33.167-172).

Following an oral tradition, the city also symbolises Vishnu's body. The *Panchatirthis* (the five most sacred *Ghats* among the total 84 along the Ganga) symbolises the microcosmic body of Vishnu. Asi is the head, Dashashvamedha is the chest, Manikarnika is the navel, Panchaganga is the thighs, and Adi Keshava is the feet (Singh, 1994b: 217). This reminds us that Vishnu first placed his holy feet in Varanasi; that is why the area along the Ganga river is Vishnu's body (Singh, 1996: 95). The *Kashi Khanda* (84.114) says that "Having bathed in the five tirthas, a person never again receives a body of five-elements. Rather, he becomes the five-faced Shiva in Kashi." These myths refer to the close interdependency between Vaishnavite and Shaivite traditions; according to myth, Shiva and Vishnu are the one integral identity in Kashi (*ibid.*: 50.144).

Kashi is compared to a woman (*Kashi Khanda* 7.66) 'whose two beautiful eyes are Lolarka (in the south) and Adi Keshava (in the north), whose two arms are the Varana (in the north) and the Asi river (in the south). That is how the territory between the two rivers and two divine spots merges into a divine energy represented in the form of a woman. At the next level, there are two shrines of the 'City as Goddess.' The small shrine of Kashi Devi at Lalita Ghat is eulogised as the giver of relief from all the sins and the cycle of transmigration (cf. *Kashi Rahasya* 17.29). Similar description is also narrated for Varanasi Devi, whose shrine lies in the Trilochan temple (cf. *Kashi Khanda* 33.127). However, sometimes the city itself is referred to as the mother goddess (cf. *Kashi Khanda* 30.71).

The city is endowed with a special sense of immortality. The myth mentions that even during the cosmic dissolution, the city stands upon Shiva's trident like a lotus (*Kashi Khanda* 44.29). The *Kashi Rahasya* (2.89) says:

What is that divine light reflecting over water in arc,
Which even during cosmic flood seen as it was! (*Kashi*).

Moreover (*ibid.*: 2.95),

As an umbrella in the sky there lies divine light,
Whose rays come on the earth and make the Kashi bright.

9. Yupa

There still exists a sacrificial post known as *Yupa Sarovara* in the form of a stone pillar (*yupa*, or *stambha*), about 16m in height and about 2m in diameter, along the Panchakroshi route (near Sarang Talab; Fig. 18). The *yupa* symbolises the central post of the universe, the *axis mundi*. It also represents the full Man, divided into fourteen parts: seven parts above the navel, and the same number below. In this way, the pillar integrates the seven sheaths of Cosmic Man and the earthly man; it shows the mesocosm. According to folk legends, this is related to the mythic story of Karna, the son of the Sun-god, born from virgin mother of Pandavas, Kunti. This pillar represents archetypal separation of heaven and earth, and probably as the gnomon, it was erected and used to cast measured shadows. Now this site, like other sun-shrines and sacred spots, is in ruins; the stone there is quiet at the corner of a pond (see Malville, 1985: 220).

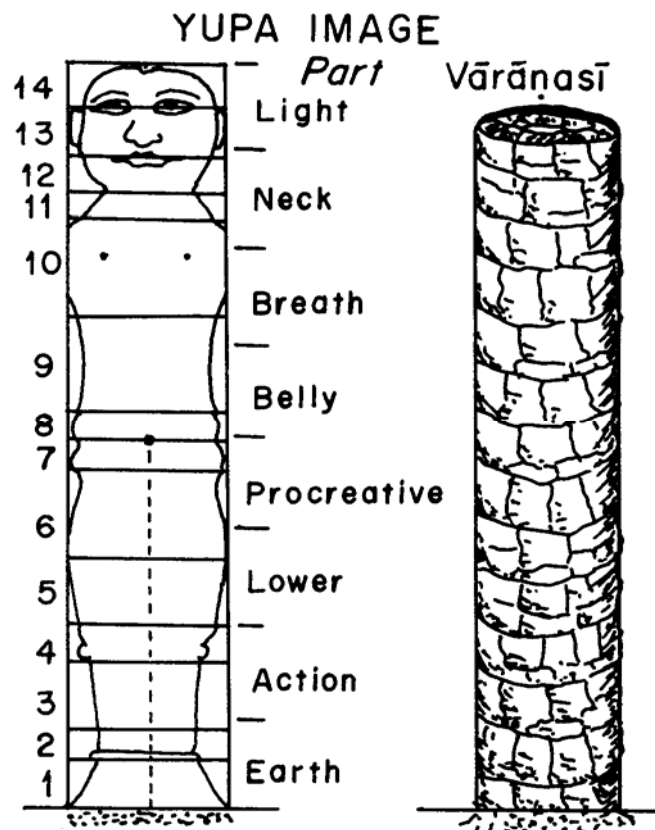


Fig. 18. Yupa Image, Yupa Sarovara.

10. Concluding Remarks

Following the axiom that 'reality is not external; reality exists in the human mind, and nowhere else', the sacred geometry of Varanasi can be understood as a result of the state of consciousness where cosmic mystery be perceived through the symbolic expression and experiences. Without imperial system of growth the city has evolved its own cosmogram. The complex structure of the city expresses how *puranic* myths and the spatial dimension of sacrality can interact with each other and finally result to a synthesis of the holy and cosmic.

Gutschow (1993: 170) has rightly stated that “The idea of a spatial mandala did not precede the town on the contrary, the mandala mirrors in already existing world; it represents, somehow, the “real” image of an otherwise confusing reality. It gives order to the unordered “natural” topography of a spatial setting”. In fact, the idea of the mandala conveys the Hindu notion of cosmic order (*ibid.* : 172).

The spiritual sense of sacred geometry can furnish information, a background, but it cannot provide a compass. Myth supplies this compass and also helps to discover how to orient the spiritual map of this city. However the modern man has lost his sensual skill to orient the map in this direction. Nevertheless the idea of expanding universe can be clearly explained by these cosmo-magico models. From inside to outer side the universe territory expands, however the intensity of its mystic power decreases. This inverse relationship shows the idea of expanding universe.

At present with the impact of Westernisation and materialism modern man is trying to substitute the mythological and cosmological orientation of cities which was so important in the ancient past, by new mythologies of technocracy where distance of harmonic relationship between Man and Cosmos is increasing. Of course, the solution is not so easy! Nevertheless, the historical background to cosmic layout of habitat would certainly provide some lessons to seriously keep in mind making *balance* in the future.

When and how the sacred geometry took the shape in evolving cosmicised structure of this without support of imperial power is still an issue to be searched and re-searched. Parallel to James’ view, with the unconscious effect, the cosmicised frame became as much a part of Varanasi’s personality – in all its mystic power and radiance (cf. James, cited by Mumford, 1961: 68).

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