



URBAN FORM AND CULTURAL SYMBOLISM IN RELIGIOUS GATHERINGS – A CASE OF KUMBH MELA

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Abstract

The Kumbh Mela, recognized as one of the world's largest religious gatherings, demonstrates the profound connection between urban form and cultural symbolism. This study examines how the festival's temporary cityscape accommodates millions of pilgrims while reflecting sacred cosmological principles and cultural heritage. Through a multidisciplinary approach combining spatial analysis, ethnographic research, and literature synthesis, the research highlights key elements such as grid layouts, concentric zoning, and architectural features like ghats and pontoon bridges. These features are intricately aligned with the sacred geography of the Triveni Sangam, embodying the cultural cosmology of the event. The festival's spatial organization not only addresses logistical needs but also facilitates rituals such as bathing, processions, and discourses, fostering a deep connection between physical spaces and intangible practices.

The findings reveal how temporary urban environments can serve as functional and symbolic spaces, blending sacred traditions with innovative urban design principles. By integrating natural and built elements, the Kumbh Mela illustrates the balance between ecological sustainability and spiritual significance. This study provides valuable insights into creating urban environments that preserve cultural identity while adapting to modern challenges, offering a framework for designing spaces that harmonize functionality with the spiritual and cultural values of diverse communities.

Keywords: Kumbh Mela, cultural symbolism, religious gatherings, architectural elements, sacred spaces, intangible heritage, urban form.

1. Introduction

Religious festivals play a pivotal role in shaping cultural identity and spiritual expression. Events like the Kumbh Mela transcend their immediate functional roles, acting as living embodiments of cultural heritage and spiritual symbolism. The Kumbh Mela, held cyclically at the confluence of the Ganga, Yamuna, and mythical Saraswati rivers, is recognized globally for its scale and significance, being inscribed on UNESCO's Representative List of Intangible Cultural Heritage of Humanity.

This study examines the spatial organization and architectural elements of the Kumbh Mela, exploring how they embody cultural and spiritual symbolism. The ephemeral city that arises during the festival not only caters to the physical needs of millions of pilgrims but also reflects deep-seated cultural narratives. By integrating urban design principles with cultural and spiritual dimensions, this research aims to provide a framework for understanding and enhancing the symbolic urbanism of religious gatherings.

2. Literature Review

2.1 Urban Form and Religious Symbolism

The relationship between urban form and cultural symbolism is central to understanding how cities and spaces are shaped by, and in turn shape, cultural and religious values. Sacred landscapes, particularly in religious contexts, are designed to reflect cosmological beliefs and serve as manifestations of spiritual principles. Figure 1 shows Architecture within these landscapes, such as temples, water bodies, and pathways, does not merely serve practical functions but also acts as conduits for spiritual experiences, bridging the material and the immaterial. This concept is particularly evident in the study of urban spaces used for religious gatherings, where the design of the space directly influences the rituals and experiences of those within it.



Fig. 1 –Relation between religious place and water (Source: <https://www.gosahin.com/places-to-visit/haridwar-kumbh/>)



Fig. 2 – Religious rituals in sacred water (Source: <https://historica.world/the-kumbh-mela/>)

Shinde (2012) notes that sacred spaces in traditional urban contexts often embody a spiritual dimension, wherein architectural elements are crafted to foster connections to the divine and the cosmos. These elements provide a framework for the social and spiritual practices as shown in figure 2 that take place within them, thereby embedding cultural meaning within the built environment. For instance, temples are more than just places of worship; they are symbolic representations of the cosmos, with their layout and orientation designed to mirror celestial alignments. Likewise, water bodies, pathways, and spatial zones are organized to facilitate rituals, which further reinforce the sacredness of the space.



2.2 The Kumbh Mela: A Unique Urban Phenomenon

The Maha Kumbh Mela is a prominent religious event in Hinduism, deeply interwoven with mythology and history. Occurring every 12 years, this grand festival attracts millions of devotees, ascetics, saints, and pilgrims from various backgrounds (Chakravarty, 2015). The festival finds its origins in the mythological story of Samudra Manthan, where the gods and demons churned the cosmic ocean to retrieve Amrit, the nectar of immortality (Bhagavata Purana, 2007). During this churning, drops of Amrit fell at four sacred sites in India: Haridwar, Ujjain, Nashik, and Prayagraj as shown in Figure 3, establishing these locations as the sites of the Kumbh Mela (Ghosh, 2012). The event is celebrated in rotation at these locations, which are aligned with specific celestial events, enhancing the spiritual significance of the gathering (Singh, 2014).



Fig. 3 – Sites of Kumbh Mela on India Map

Historically, the Kumbh Mela has served as a space for spiritual rejuvenation and purification. It is regarded as one of the world's largest human gatherings, with pilgrims journeying from all over India and abroad (Chakravarty, 2015). Each iteration of the Kumbh Mela offers a unique spiritual experience, where devotees bathe in the sacred rivers to cleanse themselves of sins, seeking atonement and salvation (Sharma, 2016).

Figure 3 shows the four locations where the Kumbh Mela takes place are Haridwar, situated on the banks of the Ganges; Ujjain, by the Shipra River; Nashik, on the Godavari; and Prayagraj, where the Ganges, Yamuna, and the mythical Sarasvati converge (Ghosh, 2012). These sites are revered for their divine and cosmic significance, providing a transformative experience for all participants in the festival (Singh, 2014).

The Kumbh Mela, an astrological event in Hindu tradition, occurs based on specific celestial alignments, symbolizing the passage of divine time. In 2025, significant astrological positions will determine the locations of the Kumbh festival. When Jupiter enters Aquarius and the Sun moves into Aries, the festival is held at Haridwar. If Jupiter moves into Leo, the Kumbh is at Nasik on the Godavari River. If both Jupiter enters Leo and the Sun enters Aries, the event takes place at Ujjain. Additionally, when Jupiter enters Libra and the Sun and Moon align during Kartik Amavasya, Ujjain hosts the Kumbh. If Jupiter, Sun, and Moon align in Cancer on Amavasya, the festival is held at the Godavari River. Finally, when Jupiter enters Aries and the Sun and Moon align in Capricorn, the festival is celebrated at Prayagraj on the new moon day, or when Jupiter enters Taurus while the Sun is in Capricorn.

The Kumbh Mela, one of the largest religious gatherings in the world, offers a unique example of the intersection between urban form and religious symbolism. The festival's temporary city, which accommodates millions of pilgrims over a brief period, is meticulously planned to embody both functional needs and spiritual significance. The layout of the Kumbh Mela's



urban space reflects the principles of traditional Indian cosmology, where the organization of the space is aligned with sacred geographies.

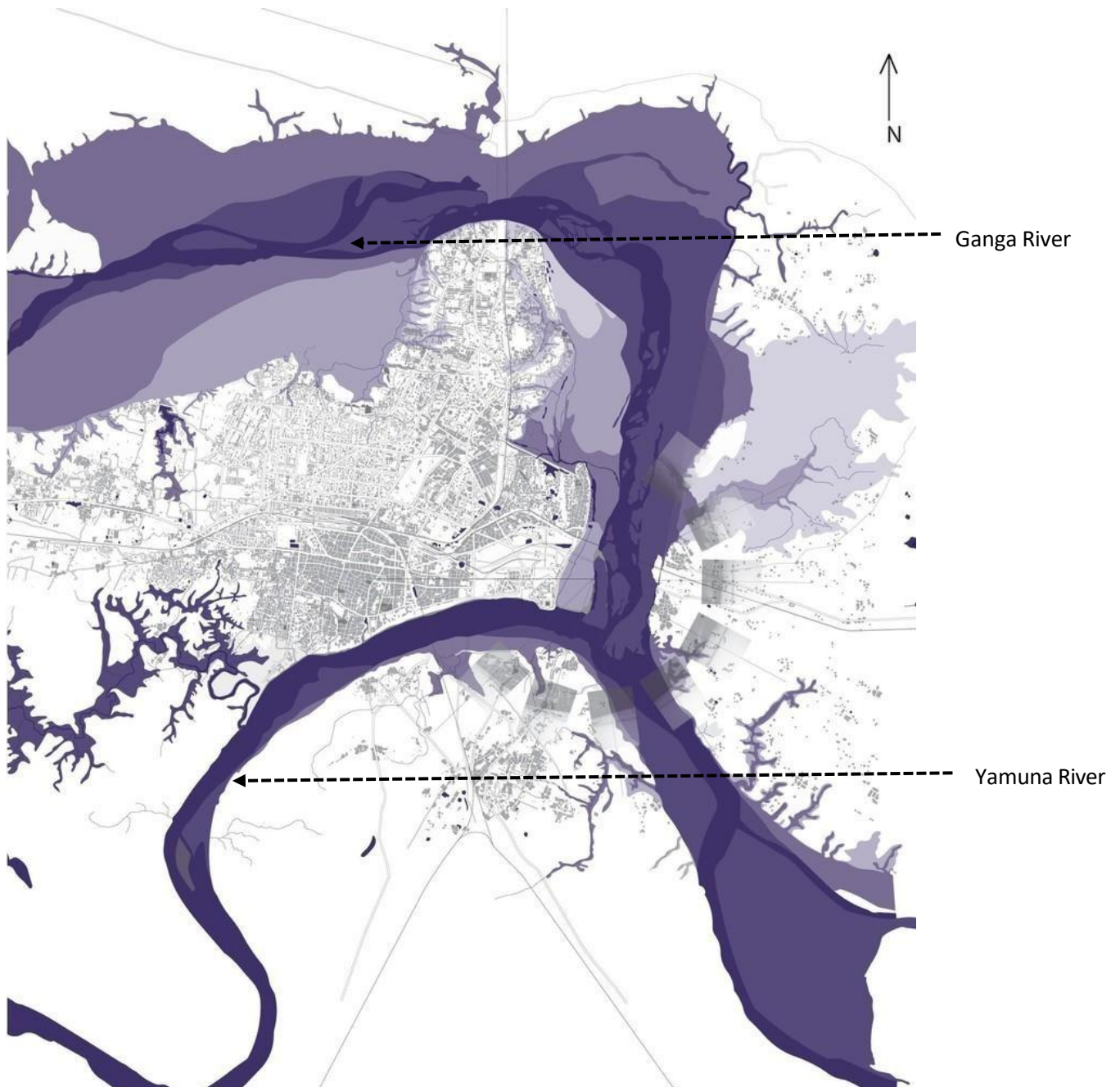


Fig.4 – Ganga and Yamuna rivers joining at Triveni Sangma (source: <https://www.archdaily.com/622177/kumbh-mela-a-temporary-but-not-instant-city-for-2-million>)

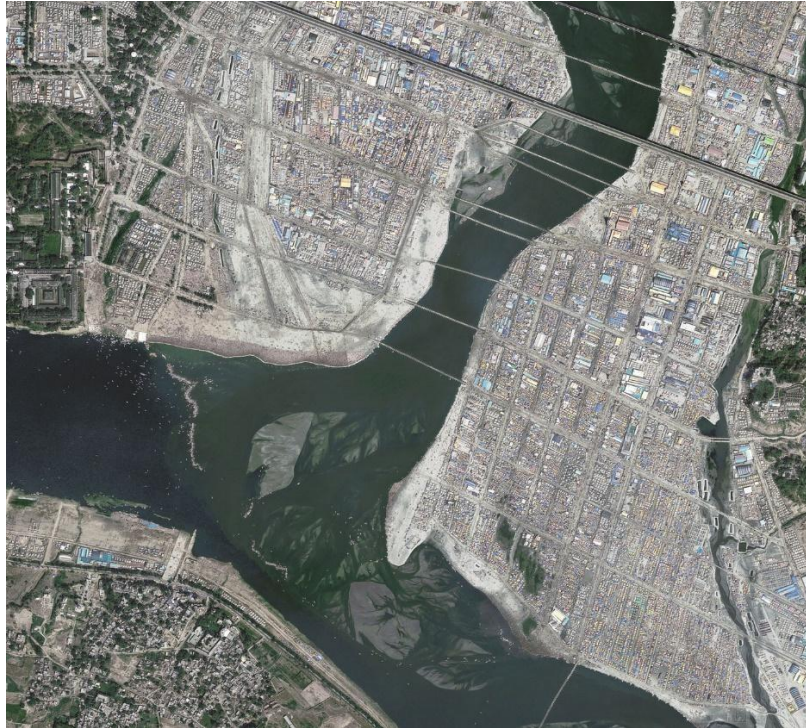


Fig.5 - Ganga and Yamuna rivers joining at Triveni Sangma (source: <https://www.nationalgeographic.pt/historia/karma-da-multidao> 55)

Yadav et al. (2024) highlight how the grid-like layout and concentric zoning of the Kumbh Mela's temporary city mirror the sacred geography of the Triveni Sangam, the confluence of the Ganga, Yamuna, and Sarasvati rivers, which is considered a highly sacred site in Hindu cosmology as shown in Figure 4. Figure 5 shows the layout ensures that the most important ritual spaces, such as the ghats for bathing and the central areas for major processions, are positioned in harmony with the divine axis of the space. The integration of natural elements, such as the river, with constructed features like pontoon bridges and ceremonial ghats, emphasizes the deep spiritual and physical connection between the festival's urban form and the natural environment.



Fig. 6 - (source: <https://www.theatlantic.com/photo/2018/11/the-pontoon-bridges-that-carry-millions-at-kumbh-mela/576823/>)



Figure 6 shows the pontoon bridges that span the river are not simply transportation infrastructure; they are symbolic conduits for pilgrims crossing from the material to the spiritual realms. As they walk across these bridges, participants engage in a form of spiritual passage, reinforcing the sanctity of the journey and the city's design. The ghats, with their carefully planned steps leading to the river, serve as spaces for purification and spiritual renewal, making them central to the festival's physical and spiritual experience.

2.3 Intangible Heritage and Spatial Practices

The Kumbh Mela is a remarkable example of how intangible cultural heritage specifically rituals, oral traditions, and community practices interacts with and influences the spatial practices of a religious gathering. Rituals such as bathing in the river, processions, and discourses are not simply actions performed in a space; they are deeply intertwined with the spatial organization of the festival as shown in figure 8 & 9. The layout of the Kumbh Mela is designed to facilitate the flow of these rituals, ensuring that each aspect of the event, from individual acts of devotion to large-scale processions, has its designated space.



Fig. 7 - (source: <https://www.pexels.com/photo/arial-view-of-kumbh-mela-at-triveni-sangam-30218192/>)

Buzinde et al. (2014) argue that the Kumbh Mela's processions and bathing rituals are integral to the cultural and spiritual practices of the gathering, influencing both the design of the space and the experience of the participants. The spaces where these rituals take place are not just physical locations but are imbued with cultural meanings that shape how individuals interact with the environment. The ritual of bathing in the river, for example, is deeply symbolic, representing purification, spiritual renewal, and the washing away of sins. This practice is facilitated by the design of the ghats, which are strategically placed along the river's edge to ensure that pilgrims can partake in the ritual in a manner that aligns with its spiritual significance as shown in figure 7.



Fig.8 - (source: <https://theartarium.com/blogs/news/mahakumbh-mela-2025>)

In this way, the spatial organization of the Kumbh Mela is a living embodiment of its intangible cultural heritage, wherein the physical environment and spiritual practices are mutually reinforcing. The urban form of the festival, with its careful integration of sacred symbols, architectural elements, and ritual spaces, provides a powerful example of how cultural values are embedded in urban design, creating a space where the material and the spiritual coalesce.



Fig.9 - (source: <https://www.firstpost.com/explainers/maha-kumbh-mela-2025-special-religious-gathering-importance-13851345.html>)

3. Methodology

This research adopts a mixed-methods approach to explore the urban form and cultural symbolism of the Kumbh Mela, combining spatial analysis, ethnographic research, and literature synthesis.



- a. **Spatial Analysis:** Geographic Information Systems (GIS) and historical records were used to map the grid layout, zoning patterns, and key architectural elements such as ghats and pilgrimage routes, providing insights into the balance between functionality and cultural symbolism.
- b. **Ethnographic Research:** Structured interviews and participant observations were conducted with pilgrims, planners, and local stakeholders to understand the cultural significance of the spatial arrangements, focusing on key rituals like bathing and processions.
- c. **Literature Synthesis:** A review of academic studies, government reports, and traditional texts contextualized the urban and cultural dimensions of the Kumbh Mela, linking historical narratives with contemporary practices.

By integrating these methods, the research offers a holistic understanding of the Kumbh Mela and proposes replicable strategies for urban design that harmonize cultural symbolism with functional efficiency.

4. Spatial Organization and Cultural Symbolism

4.1 Grid Layout and Sacred Geometry

The spatial organization of the Kumbh Mela embodies the principles of sacred geometry, deeply rooted in traditional Indian cosmology. Figure 10 shows the meticulously planned grid layout ensures both functional efficiency and spiritual symbolism, representing the journey towards moksha (liberation). This design reflects the principles of Vastu Shastra, which integrates cosmic forces into spatial arrangements (Singh, 2011).

The pathways, residential zones, and public spaces are aligned with cardinal directions to harmonize with natural elements, a practice inspired by ancient mandalas. These sacred geometric diagrams represent the universe and spiritual order, reinforcing the cosmological significance of the festival (Eck, 2012). The grid radiates outward from the Triveni Sangam, the confluence of the Ganga, Yamuna, and Saraswati rivers, considered the spiritual nucleus of the festival.

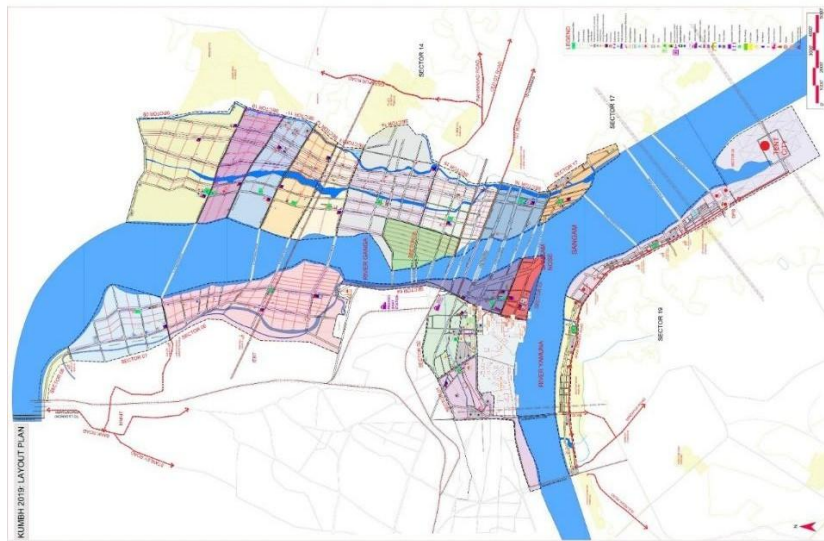


Fig. 10 – (source: <https://www.amandajeanelucia.com/scholarship/kumbhmela>)

This layout also accommodates the logistical challenge of hosting millions of pilgrims while guiding them symbolically and physically towards purification and spiritual renewal (Jain & Singh, 2020). The alignment of the grid with sacred principles highlights the spiritual intent of the Kumbh Mela as an ephemeral yet deeply meaningful urban form.

4.2 Zoning for Spiritual Practices

Zoning plays a pivotal role in the spatial and functional organization of the Kumbh Mela, with designated areas for specific rituals such as bathing, meditation, and religious discourses. The Triveni Sangam serves as the epicentre, with concentric zones radiating outward, symbolizing layers of spiritual proximity (Saraswati, 1998).



Fig. 11- (source: <https://mx.pinterest.com/pin/655133077022953603/>)

Figure 10 & 11 shows the innermost zones, closest to the Sangam, host primary rituals such as ceremonial bathing, while outer zones accommodate meditation sessions, spiritual discourses, and communal dining areas. This hierarchical zoning mirrors Hindu cosmology, where sacred realms emanate from a divine centre (Sharma, 2015).

Temporary structures, such as tents and pavilions, are allocated for individual and collective practices. The zoning also includes spaces for administrative activities, public utilities, and medical aid, ensuring both functionality and sanctity (Jain & Singh, 2020). This zoning reflects the dual purpose of the Kumbh Mela: a logistical marvel and a deeply spiritual experience.

4.3 Integration of Natural and Built Elements

The integration of natural and built elements at the Kumbh Mela exemplifies the interdependence of human activity and the environment. Key features such as ghats (stepped platforms) align seamlessly with the natural landscape, offering pilgrims direct access to the river for purification rituals. Figure 12 shows ghats are temporary yet robust, designed to withstand the massive influx of people and emphasize the sanctity of the river (Singh, 2011).



Fig. 12 - (source: <https://www.msn.com/en-ie/lifestyle/lifestylegeneral/folk-festival-which-has-featured-nick-cave-and-joan-baez-cancelled-in-60th-year/ar-AA1xnW9Q>)

Bridges and pathways constructed from eco-friendly materials like bamboo and jute enable efficient movement while minimizing environmental impact, reflecting the transient nature of the festival (Sharma, 2015). These structures serve both practical and symbolic purposes, fostering a sense of community and shared spirituality.



Temporary pavilions and shelters for religious discourses, meditation, and communal activities are designed to harmonize with the natural surroundings, emphasizing sustainability and simplicity as shown in figure 13. The rivers themselves, particularly the Ganga and Yamuna, play a central role in the festival's rituals, symbolizing purification and spiritual renewal. The mythical Saraswati represents knowledge and cosmic energy, completing the triad of sacred elements that form the spiritual essence of the Kumbh Mela (Eck, 2012).

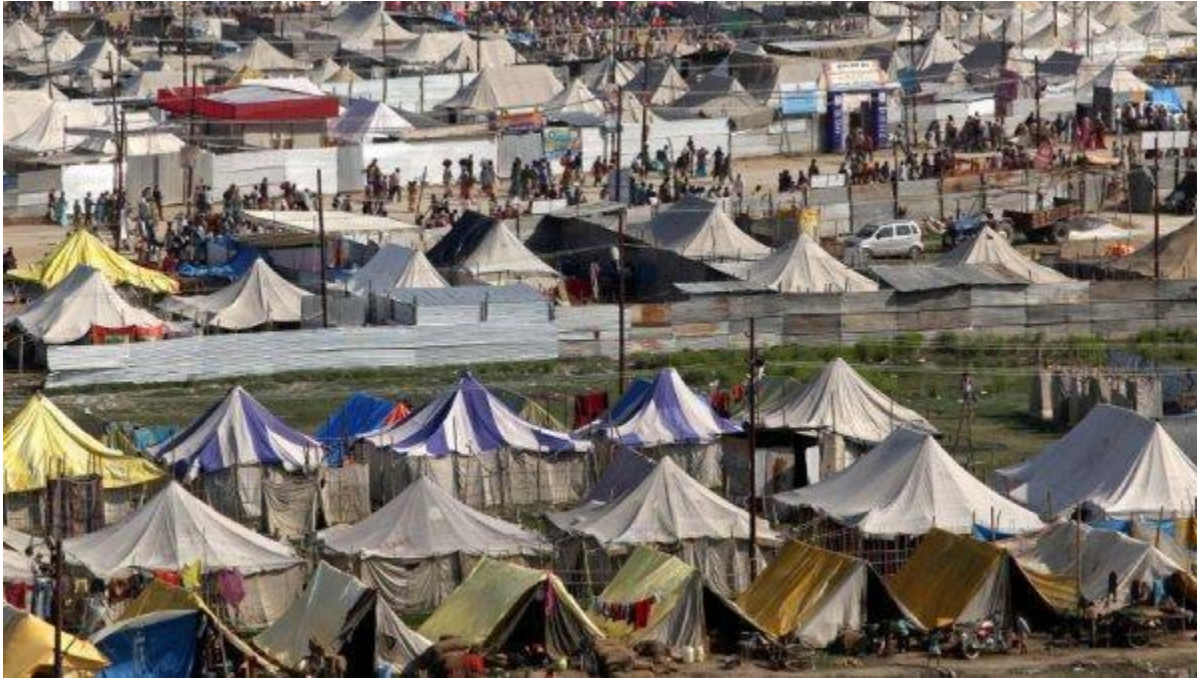


Fig. 13 – (source - <https://www.oneindia.com/partner-content/the-evolution-of-accommodation-at-kumbh-mela-from-modest-tents-to-luxurious-camps-3821067.html>)

This thoughtful integration of natural and built elements underscores the sacred nature of the event while promoting ecological consciousness. The harmonious coexistence of nature and humanity at the Kumbh Mela serves as a powerful testament to the sustainability principles inherent in Indian spirituality (Saraswati, 1998).

5. Architectural Elements as Cultural Symbols

5.1 Ghats and Bathing Areas

The ghats at the Kumbh Mela serve as pivotal architectural and cultural symbols, embodying the transition from the mundane to the sacred. Figure 14 shows tiered steps and ceremonial platforms provide direct access to the sacred rivers, enabling millions of pilgrims to perform rituals of purification. The act of descending the steps and entering the water is deeply symbolic, representing a spiritual journey of cleansing, renewal, and liberation (moksha) (Eck, 2012).



Fig. 14 - (source: <https://theconversation.com/the-worlds-largest-gathering-how-india-plans-to-keep-400-million-pilgrims-safe-at-the-maha-kumbh-mela-festival-247210>)

Ghats are designed to accommodate vast numbers of people, ensuring accessibility and safety during rituals. Temporary structures and bamboo railings are often added to reinforce the ghats, reflecting a balance between permanence and ephemerality. The act of bathing in the Triveni Sangam, the confluence of the Ganga, Yamuna, and mythical Saraswati, is particularly significant, as it symbolizes the merging of physical and metaphysical realms (Singh, 2011).

5.2 Pontoon Bridges

Pontoon bridges, constructed specifically for the Kumbh Mela, are temporary yet vital infrastructural elements. These floating bridges facilitate efficient movement across the river, accommodating the massive influx of pilgrims while minimizing environmental disruption. Beyond their functional role, these bridges symbolize the transient and cyclical nature of existence, resonating with the festival's themes of impermanence and renewal (Sharma, 2015).

The construction and dismantling of pontoon bridges underscore the impermanence of human life, mirroring the festival's spiritual teachings. Their design integrates local materials and craftsmanship, exemplifying sustainable practices and fostering a sense of community participation (Jain & Singh, 2020).



Fig. 15 - (source: <https://www.theatlantic.com/photo/2018/11/the-pontoon-bridges-that-carry-millions-at-kumbh-mela/576823/>)

5.3 Tent Cities

The tent cities of the Kumbh Mela are a striking example of ephemeral urbanism, providing shelter for pilgrims, ascetics, and spiritual leaders. These temporary structures symbolize the egalitarian ethos of the festival, as they house people from diverse social, economic, and cultural backgrounds. The tent city layout fosters a sense of community, encouraging collective spiritual practices such as meditation, prayer, and discourse (Saraswati, 1998).

Figure 16 shows the simplicity of the tents reflects the ascetic ideals central to the festival. Despite their temporary nature, these structures are thoughtfully organized into sectors, ensuring access to utilities, food, and medical services. This organization highlights the intersection of spirituality and functionality in the architectural elements of the Kumbh Mela.



Fig. 16 - (source: <https://english.metrovaartha.com/news/national/mega-pavillion-luxury-tents-better-air-connectivity-govt-beckons-tourists-to-maha-kumbh>)



6. Intangible Practices and Spatial Dynamics

6.1 Processions and Pilgrim Flows

The Kumbh Mela's spatial organization is meticulously designed to facilitate the movement of millions of pilgrims, particularly during processions. These processions, often led by saints and spiritual leaders, are central to the festival's intangible practices, symbolizing collective devotion and the journey toward spiritual enlightenment. Strategically planned pathways and open spaces ensure seamless pilgrim flows, preventing congestion while maintaining the sanctity of rituals. The integration of temporary infrastructures, such as pontoon bridges and cordoned routes, enhances this dynamic interaction between intangible practices and physical spaces, allowing for an immersive spiritual experience (Singh, 2011; Jain & Singh, 2020).

6.2 Discourses and Assemblies

Designated zones for spiritual discourses and assemblies serve as hubs for cultural and spiritual dialogue. These areas host teachings and discussions by revered saints and scholars, fostering cultural continuity and spiritual introspection. The ephemeral architecture of pavilions and tents is meticulously crafted to provide comfortable yet symbolic spaces, reflecting the transitory nature of the festival. These gatherings emphasize the collective sharing of knowledge and reinforce the festival's role as a center of intellectual and spiritual exchange (Saraswati, 1998).

6.3 Community Participation

Local communities are integral to the Kumbh Mela's spatial dynamics, contributing to the festival's planning and execution. Their involvement in organizing infrastructure, catering to pilgrims, and preserving rituals ensures the cultural authenticity of the event while adapting to contemporary requirements. This collaboration underscores the dynamic interplay between tradition and modernity, highlighting the role of community participation in maintaining the festival's intangible and tangible heritage (Sharma, 2015).

7. Discussion

7.1 Balancing Functionality and Symbolism

The Kumbh Mela exemplifies the intricate balance between functionality and symbolism in urban design. Its spatial arrangements address the logistical challenges of accommodating millions of pilgrims, including transportation, safety, and access to resources, without undermining its cultural and spiritual essence. The grid layout, temporary infrastructure, and zoning reflect both practical efficiency and symbolic resonance. For instance, pathways are aligned to facilitate processions, while zones are dedicated to specific rituals, ensuring a harmonious blend of functionality and sacred geometry (Singh, 2011). The festival's design also integrates natural and built elements, such as ghats and rivers, reinforcing their role in spiritual purification rituals while catering to the practical needs of bathing and congregation (Saraswati, 1998).

7.2 Lessons for Contemporary Urban Design

The Kumbh Mela provides valuable insights for urban design, particularly in contexts requiring a balance of cultural sensitivity and functionality:

- a. **Participatory Planning:** Engaging diverse stakeholders, including local communities and religious leaders, ensures that designs are culturally appropriate and inclusive. This participatory approach fosters collective ownership and aligns with local traditions (Sharma, 2015).
- b. **Adaptive Infrastructure:** The festival's use of temporary and flexible structures demonstrates how urban design can address functional demands while resonating with cultural narratives. These structures embody sustainability by reducing permanent environmental footprints (Jain & Singh, 2020).
- c. **Holistic Approaches:** Integrating intangible cultural practices into planning fosters spaces that resonate with collective identities. Recognizing the importance of rituals and symbolism in urban contexts creates environments that inspire social cohesion and cultural continuity (Saraswati, 1998).

Conclusion



The Kumbh Mela exemplifies the dynamic interplay of cultural symbolism and urban design, demonstrating how temporary spaces can embody profound spiritual and cultural values. By integrating traditional cosmological principles with functional urban planning, the festival showcases a model of sustainable, inclusive, and symbolic urbanism. The meticulous zoning, spatial hierarchy, and seamless integration of natural and built elements highlight the potential of ephemeral cities to balance logistical demands with cultural authenticity. Insights drawn from this study underscore the necessity of embedding intangible heritage in urban planning to foster spaces that resonate with collective identity and spirituality. Future applications of these principles can enrich urban design globally, bridging the gap between cultural preservation and contemporary urban challenges.

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