



RESEARCH ARTICLE

HERITAGE AND TOWNS : UNDERSTANDING THE INFLUENCE OF MONUMENTAL ARCHITECTURE ON THE SPATIAL CONFIGURATION OF TOWNS OF MADHYA PRADESH, INDIA

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ABSTRACT

Architecture speaks of time and evolution, and while it narrates its observations, it unknowingly becomes an epicentre of a lot of 'socio-philic' processes that cultivate art, culture, and religion in which it transforms into an architectural monument. During this monument conversion process, civilisations gradually fit in to become a part of it, and this is exactly how the metamorphosis of towns take place. In exceptional conditions, the adverse of a civilisation first and then a monument later is observed. While this development goes on, a certain configuration of spaces gets generated. The research is intended with the aim of understanding the influence of historic centres on the spatial configuration of towns of the state of Madhya Pradesh, India. The entire research is based on the idea of human preferences and choices generated through the space syntax methodology of space analysis.

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INTRODUCTION

Why does the need to understand user preferences, human nature and spatial configuration arise amidst advanced systems of modern technology? The answer lies within approaches of modernisation that swing around cities and take along heritage buildings by affecting them in a not-so pleasant manner. The ancient town of Maheshwar, is located in the North Western region of the district of Khargone in Madhya Pradesh and is 13 kilometres North from National Highway 3, whereas 91 kilometres from the commercial capital of the state- Indore. Apart from its rich culture and heritage, Maheshwar is a well known pilgrimage centre on the banks of river Narmada and is famous for its textile industry of Maheshwari sarees, inspired from the local river of Maheshwari. The Maheshwari river in the south meets the Narmada. A series of small islands were generated by the flow of the Narmada river in the Nimar region of Madhya Pradesh with Maheshwar being one of them, limiting the scope of settlement. By the Narmada in the south and the Maheshwari in the north, the town of Maheshwar is now expanding towards the Barwah-Dhamnod axis. Hence, with constraints that limit the town's settlement and growth pattern, the research would conclude by the analysis of the local factors and to check if the Ahilya Fort has a role to play

in the configuration pattern or not. Also, can the role of the historic centre draw a relation between the culture and the spatial configuration of the town?

History and historic fabric

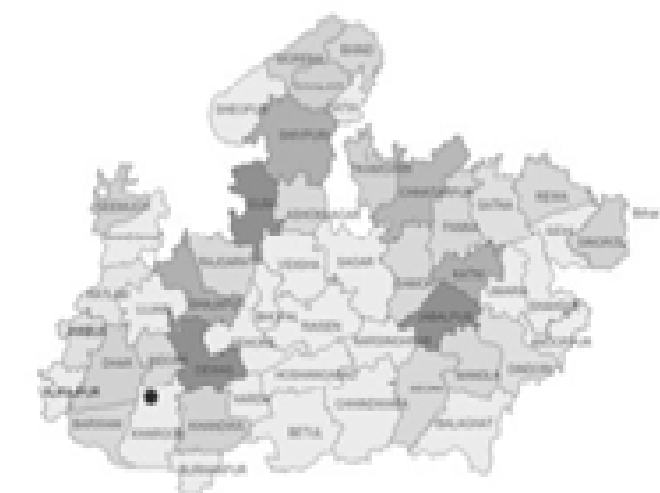
The town of Maheshwar, gaining its name from the ancient town of *Mahishmati*, is known for its folk art and cultural heritage. It was established by King *Mahishman* from the *Soma* dynasty. The description of this ancient town has found mention in various historical texts as well as is known for its mention in the *Mahabharata* and the *Ramayana* specifically. Back then, it was the capital state of the South Indian reign of *Avanti* or *Nimad*. The town of *Mahishmati* was very prosperous and had a well established system with other historic towns of *Avantika*, *Patliputra*, *Paithan*, *Kashi*, *Bhadauch*, *Kutch* etc. Not only amidst its proximities, but the town was itself known for its spiritual, religious, administrative, literary and cultural activities. The iconic Maheshwar Fort was built during the reign of the Mughal emperor Akbar who were dethroned by the *Peshwas* and then became the capital of the Holkar dynasty by *Rani Ahilyabai Holkar* in 1767 that lasted till 1795.

Elements of the town - non spatial

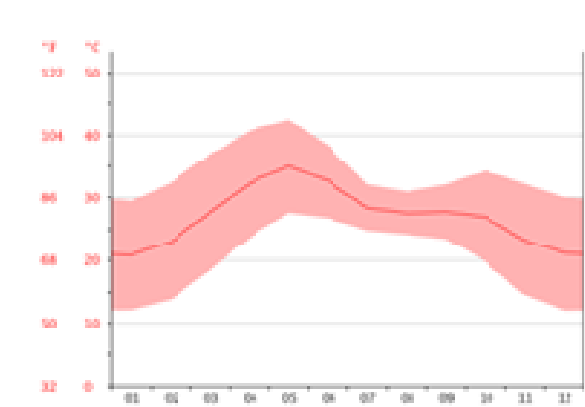
Population -The town of Maheshwar, administratively named as the Maheshwar Nagar Panchayat is spread in an area of

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1247 hectares and has a population count of 19649 according to the India Census of 2001. The Bhagat Singh Ward no. 3 has the maximum population count of 951 while the Indira Gandhi Ward no. 4 with the least count of 180. The approximate population density is summed to 346 persons/hectare.



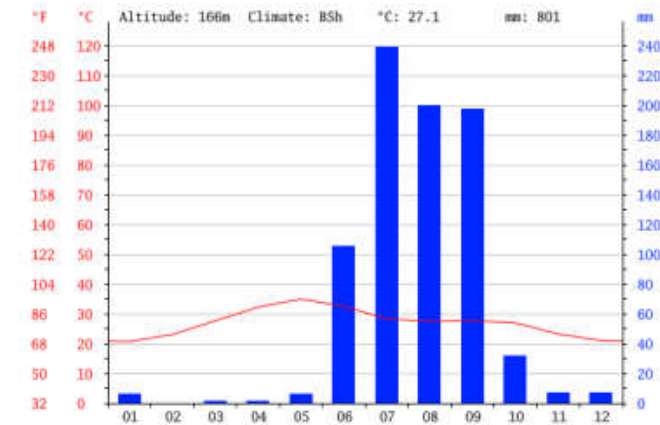
Location of the town in a) Indiab)Madhya Pradesh



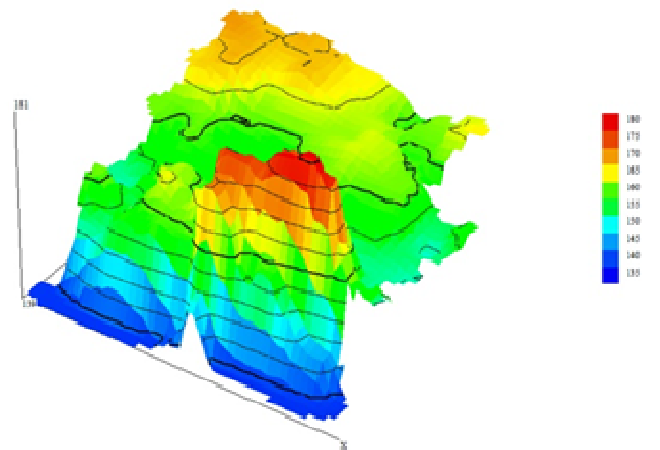
Annual Temperature Range Graph

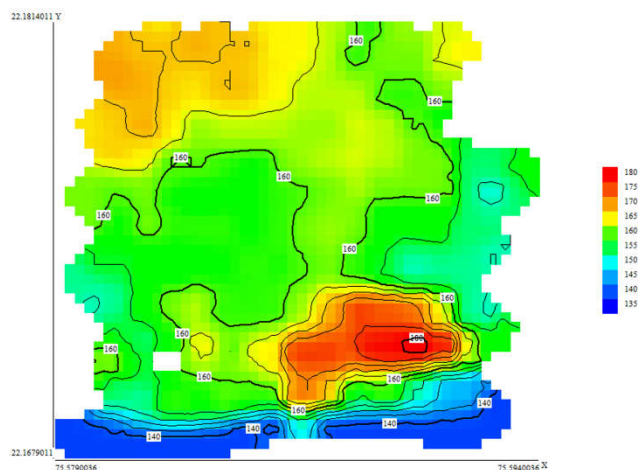
month	1	2	3	4	5	6	7	8	9	10	11	12
mm	6	0	1	1	6	105	239	200	197	32	7	7
*C	20.7	23.0	27.6	32.2	34.9	32.5	28.3	27.5	27.7	26.9	23.2	21.0
*C (min)	12.1	13.7	18.3	23.7	27.5	26.7	24.7	24.1	23.4	19.6	14.4	12.0
*C (max)	29.4	32.3	36.9	40.7	42.4	38.3	32.0	30.9	32.0	34.2	32.1	30.0
*F	69.3	73.4	81.7	90.0	94.8	90.5	82.9	81.5	81.9	80.4	73.8	69.8
*F (min)	53.8	56.7	64.9	74.7	81.5	80.1	76.5	75.4	74.1	67.3	57.9	53.6
*F (max)	84.9	90.1	98.4	105.3	108.3	100.9	89.6	87.6	89.6	93.6	89.8	86.0

Annual Average Temperature and Rainfall Chart



Annual Temperature and Rainfall Bar





Administration and Functioning- The percentage of working citizens for Maheshwar is estimated to be 35.2% more than the district percentage of 30. Out of total 6992 working citizens, the division of the primary earners is evaluated as-

Class of Workers	Total number of Workers	Percentage
Farmers	375	6.0
Farmers - Labours	741	11.9
Household Workers	839	13.5
Others	4273	68.6
Total number of workers	6228	100

Industries - Maheshwar houses a classical method of hand-woven sarees, peculiarly known as Maheshwari Sarees. The handloom cottage industry of Maheshwar forms the basis of business in the town. Handloom societies include the Rehwa Society, the Mominpura Weaver Governmental Society and others. The maximum handloom production is contributed from the saree production which is about 70 of the total. The Handloom Industry has been active since 1956 for training and earning purposes of the residents.

Business and Commerce - Because Maheshwar is a small town, the sustainability of large scale businesses is a large leap. Hence, the entire concentration of business remains in the retail industry. Small markets on M.G.Road, Bhavani Mata Road, Peshwa Road are established for the daily needs of the citizens. These markets supply the daily needs of the citizens of the town while the major material is imported from Indore and nearby towns.

Tourism - The tourist outline of the state, finds Maheshwar as a notable place in the entire frame. It is one of the five religious locations of the state - Omkareshwar, Maheshwar, Ujjain, Amarkantak and Chitrakoot.

Pilgrim Locations - Kalyanrudra Tirth, Swarnadeep Tirth, Angirarudra Tirth, Triveni Tirth, Sahastradhara Tirth.

Temples and Cenotaphs - Rajrajeshwar Temple, Akhileshwar Temple, Bhavani Mata Temple, Kaleshwar Shivalaya, Jaleshwar Shivalaya, Baneshwar Temple, Pandrinath Temple, Matangeshwar Temple, the cenotaph of Bithobaji, Other Pavilions.

Ghats - Ahilya Ghat, Narmada Ghat, Nav Ghat, Peshwa Ghat, Imli Ghat, Kaleshwar Ghat, Rajeshwar Ghat, Kashi Vishweshwar Ghat, Mantangeshwar Ghat.

Other interests - Ahilya Fort, Rajgaddi, Deva Pooja, Rajwada, Bharthari Kho, Rehwa Society.

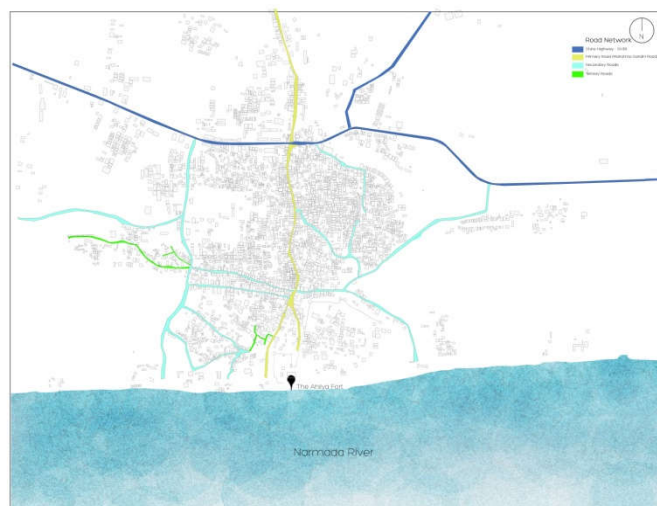
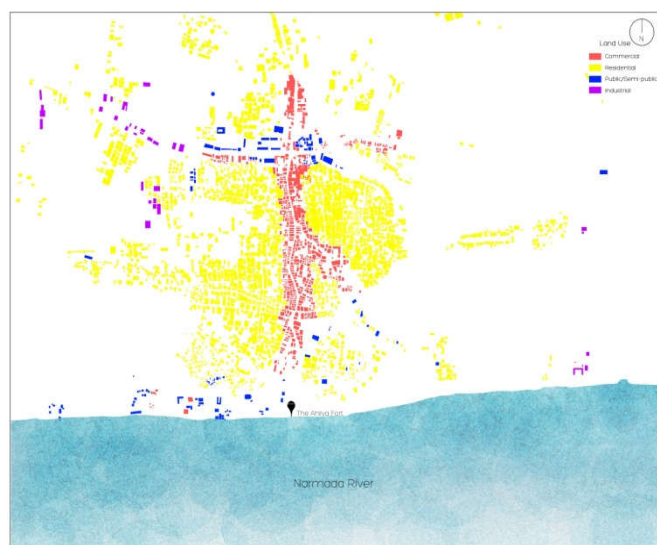
Elements of the town – spatial

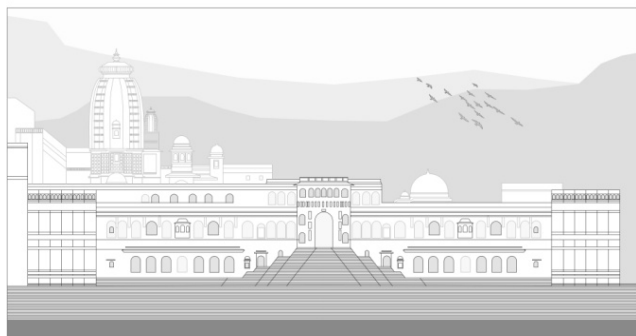
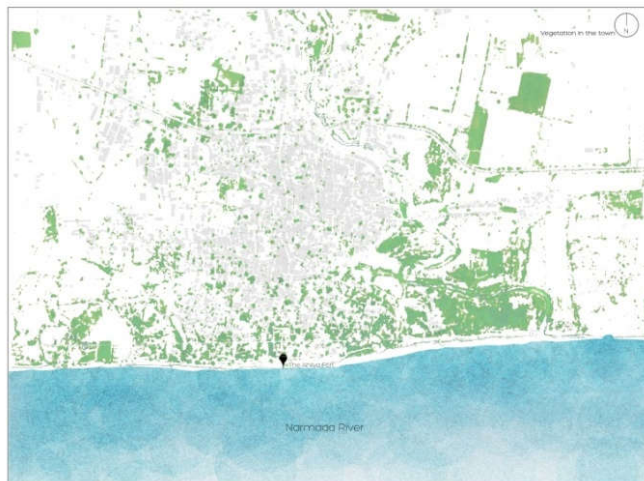
Location - The town of Maheshwar is located on the bank of river Narmada that finds its origin from the town of Amarkantak, Madhya Pradesh and concludes in the town of Bharuch, Gujarat.

The town falls in the Khargone district, this district lies entirely along the Narmada River Basin with the *Vindhyan* Mountain Range in the North and the *Satpura Range* in the South.

Topography - The town being surrounded by the Narmada river in the south and the Maheshwari river in the north, has a flat nature holistically, but being a river basin, gains undulations during the movement towards the river belt. The soil type is black and alluvial, with adequate fertilization properties suitable for farming in the nearby regions.

Town Planning - The development of the town of Maheshwar developed in accordance with the Narmada River that attracted the Mughal Empire for the commencement of the Ahilya Fort, this led to the Holkars gaining reign and hence the development of the town, explained as a system of spaces.



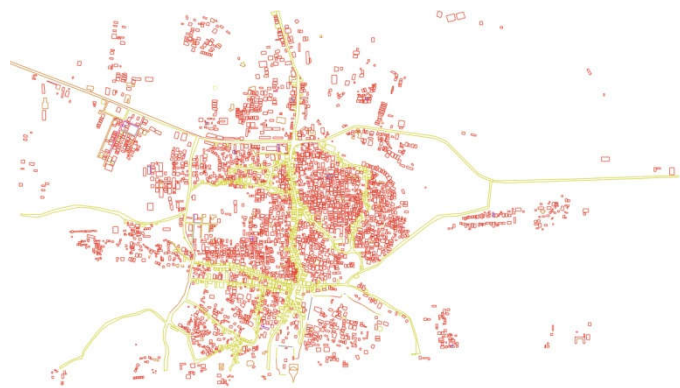


Spatial analysis of the town of Maheshwar

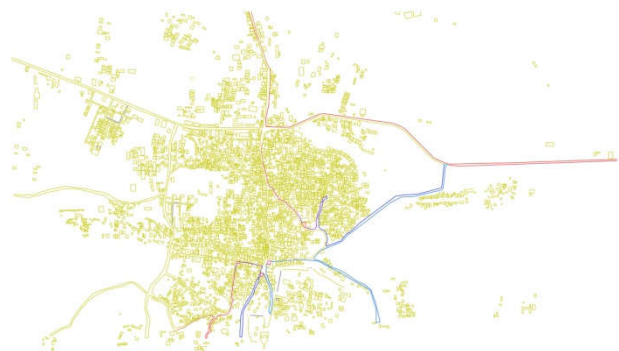
The term space syntax encompasses a set of theories and techniques for the analysis of spatial configurations. It was conceived by Bill Hillier, Julienne Hanson and colleagues at The Bartlett, University College London in the late 1970s to early 1980s as a tool to help urban planners simulate the likely social effects of their designs. The general idea is that spaces can be broken down into components, analyzed as networks of choices, then represented as maps and graphs that describe the relative connectivity and integration of those spaces. On the basis of the town map, the street system is transformed into an axial map which is the geometrical model in space syntax theory. The development of Maheshwar is syntactically investigated by performing segmental analysis at various scales. In this manner the spatial characteristics of the system of spaces is analyzed, both: globally and locally, to gain better understanding of the development of the spatial organization of Maheshwar.



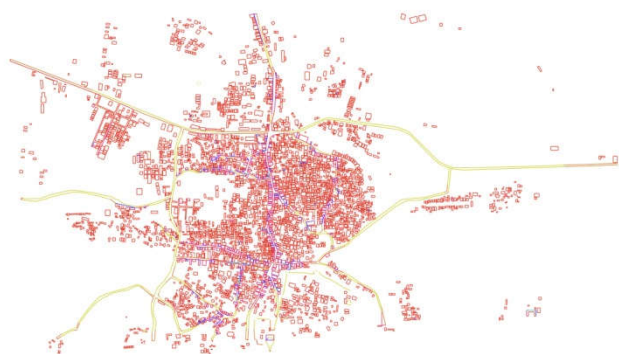
Axial Map Analysis



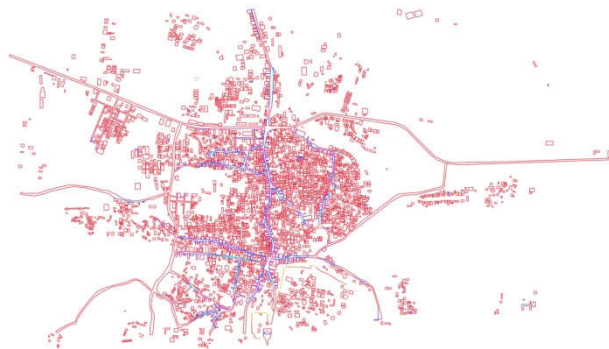
Choice Analysis



Integration Analysis



Angular Connectivity Analysis



Angular Connectivity Analysis

The interpretations of axial maps depicts the value of depth that is observed in the town. According to the methods, depth refers to the number of intermediate steps that are needed to be covered from movement from one space unit to another. The higher values of choice depicts the most probable areas that are

selected by choice by the masses, which is observed near the southern node, expressing the density of preference near the fort. The interpretation of integration is contrary to the data that is supplied by the axial depth map. Integrated spaces are those that are closer to the other areas in general, which are again observed near the eastern edge of the southern tip of the fort. Connectivity data, both based on angles and segments is observed to be uniform in the entire town and greater along the primary street, supplies evidence for its high value of connectivity.

Conclusion

The type of settlement and growth in the town as well in the outer developing areas affect the historical centre as the context, in terms of their global integration and connectivity. Even if it does not accompany any measure of growth, the context finds a presence in the town which maintains an average correlation which proves the fact that the historical integrity plays the key role in the spatial organization of the city. Historic centers and the land use will maintain the social and economic positions in the whole city. The correlation between connectivity and global integration is an important

indicator of how clear a system of spaces gradually develops and finds its growth amidst the context being a stable factor. Out of all the modes of data that has been interpreted by the Space Syntax Method, the set explains the preference and ease of use that is observed near the fort making it an important aspect of dominance.

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