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An Evolution of Town Planning Through the Ages: Tracing *Vāstuśāstra's* Impact (150 BCE to Modern era)

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Abstract: This article aims to illustrate the evolution of town planning from ancient India to modern times by studying the influence of *Vāstuśāstra* through a detailed examination of Kautilya's *Arthaśāstra* (150 - 300 CE), and *Mānasāra-śilpaśāstra* (700 CE). '*Vāstuśāstra*' often translated as 'science of architecture,' encompasses more than just architecture. It refers to everything constructed or built. Man is considered the creator and destroyer of beauty beyond mythological tales. Societies develop and fulfill our desires through continuous changes. Change is inevitable, and with time, our livelihoods and thoughts evolve. In ancient times, kings aimed to build towns larger than villages to accommodate people and trade basically. Today, well-planned cities attract residents due to facilities like schools, hospitals, and transportation. This research uses an interdisciplinary approach, combining historical analysis, architectural studies, and town planning theory to trace *Vāstuśāstra's* influence on town planning from ancient to modern times. Throughout this paper, the words 'town' and '*nagara*' both carry the same meaning.

Key Words: *Vāstuśāstra, Nagara, Janapada, Sthānīya, Pattana.*

1. INTRODUCTION:

'*Ārkidakṣtaurya*' is the root of the Latin word 'architectura', from which 'architecture' comes. The word '*Ārkidakṣtaurya*' has three parts '*Ārki*', '*Dakṣ*' and '*Taurya*'. '*Ārki*' means Manu, son of Sun, '*Dakṣ*' means skill, '*Taurya*' means architect or knowledge. Thus '*Ārkidakṣtaurya*' means the knowledge of Manu's skill[1]. According to the Bhojadeva's '*Samaraṅgaṇasūtradhāra'* the earth is the primary *vāstu*[2], and what is produced in that earth for habitation is the secondary *vāstu* (*Viśvakarmaprakāśa* 4).

In Sanskrit, the word used for 'town' is '*nagar*,' which means a place where high palaces are constructed resembling mountains, as mountains cannot move[3]. A town is not only characterised by tall buildings; however, as stated by Śrīdharasvāmi, the perfect definition of nagara is:

'A town where skilled traders of the four castes gather to buy and sell goods, where artifacts created for all castes of society are assembled for purchase and sale, and where temples for worship of all deities take place daily' (translated by me)[4].

The concept of such a town requires a large space, covering a larger area than a village. Why then have not all villages developed into small towns? Every small village could potentially become a town, but it is not feasible.

Therefore, a different environment is necessary for town development. It is also true that many of the

[1] one story says that once '*Ārki*' or '*Tvaṣṭā*', the artist god, gave a round shape and made the sun very beautiful, thereby reducing the sun's ferocity and allowing the earthlings to bear its heat. Thus, Manu, through his skill brings about the welfare of man and teaches the earth fit to live in through *Vāstuśāstra. Viśvakarmaprakāśa,* p. 4.

[2] '*bhūreva mukhyaṃ vāstu tatra jātāni yānihi*'- *Viśvakarmaprakāśa,* p. 4.

[3] *'nagāḥ iva prāsādā santy atra'*- *Vācaspatyam,* see word *'nagara'.*

[4] *'paṇyakriyādinipuṇaiścāturvarṇyajanairyutam /*
anekajātisambaddhaṃ naikaśilpisamākulam /
sarvadaivatasaṃbaddhaṃ nagarṃ tvabhidhīyate ///' Vācaspatyam, see word *'nagara'.*

small towns we see today were once villages in ancient times, gradually evolving into the cities they are now. The prerequisites for establishing such a town must be determined and planned in advance. All architectural monuments found in ancient India were constructed based on *Vāstuśāstra* principles. In this article, I will discuss town construction as described in *Vāstuśāstra*. In this article, I have taken two primary sources: Kautilya's *Arthaśāstra* (150 - 300 CE), and *Mānasāra-śilpaśāstra* (700 CE), where the concept of *Vāstuśāstra* is discussed in relation to town construction.

2. Literature Review:

During the writing of this article, as part of the literature review, I have read several articles on the concept of town planning in Mānasāra Vāstuśāstra. For instants:
(i) 'Town Planning Concept in *Mānasāra Vāstuśāstra'*. (*SOCIO-GATHERERS* 2020)
(ii) 'The Indian Ancient Architecture And Town Planning'. (Kalluraya 2024)
(iii) '*Mānasāra's* Eight Types of Plans for Designing Towns'. (Khan 2024)

In such articles, the authors have mentioned that there are eight types of towns according to *Mānasāra Vāstuśāstra*, namely '*Daṇḍaka*', '*Sarvathobhadra*', '*Nandyavarta*', '*Padmaka*', '*Svastika*', '*Prastara*', '*Kārmūka*', and '*Caturmukha*'. The authors have also included pictures corresponding to the meanings of these names. However, I have not been able to locate any primary source for this information.

The fact that, in the book '*Mānasāra'*, available in PDF format and edited by the eminent scholar Prasanna Kumar Acharya, all these above-said eight divisions are mentioned for villages in the ninth chapter named *Grāmalakṣaṇavidhāna* (verse no. 1 to 2). In the Tenth Chapter named *Nagaravidhāna*, there is no such division of Nagara. Rather, *Mānasāra* had divided the town or nagara into eight classes: *Rājadhānī*, *Nagara*, *Pura*, *Nagarī*, *kheta*, *Kharvaṭa*, *Kubjaka*, and *Pattana*[5], which I have mentioned here with the proper primary source.

3. Objective:

The present article claims to discuss town planning as conceptualized by Kauṭilya in the *Arthaśāstra* and by Mānasāra in the *Mānasāra-Vāstuśāstra*. While these two texts undoubtedly remain foundational in the discourse of ancient Indian urban planning, the title of the article—*An Evaluation of Town Planning through the Ages: Tracing Vāstuśāstra's Impact*—suggests a broader scope than what is actually provided. An "evaluation" of town planning "through the ages" necessarily implies not only a description of theoretical models but also an exploration of how those models evolved over time, how they were adapted in different historical contexts, and how they were concretely realized in actual urban centers across India.

4. Research Methodology:

The present study is based on a **textual and historical-analytical methodology**. Since the focus is on tracing the evolution of town planning in India and evaluating the role of ancient **Vāstuśāstra**, particularly the works of *Kauṭilya s Arthaśāstra* (c. 3rd century BCE) and *Mānasāra Vāstuśāstra* (c. 5th–7th century CE), the methodology involves three interrelated approaches:

- **Primary Textual Analysis**
    - The primary sources of this study are *Arthaśāstra* of Kauṭilya (Book II, Chapter 4) and *Mānasāra Vāstuśāstra* (particularly chapters dealing with *Grāma-lakṣaṇa-vidhāna* and *Nagara-vidhāna*).
    - These texts have been critically read to identify theoretical concepts of town planning such as spatial organization, fortification, street layout, and functional divisions of urban spaces.
    - Comparative reading of these two texts was done to identify commonalities and differences in their approach to urban planning.

[5] '*sarveṣāṃ nagarādīnāṃ bhedaṃ lakṣaṇamucyate/*
nagaraṃ rājadhānīyaṃ kevalaṃ nagaraṃ tathā//
puraṃ ca nagarī caina kheṭaṃ kharvaṭameva ca /
kubjakaṃ pattanaṃ caiva śiviraṃ vāhinīmukham //' *Mānasāra*, 10/19-20.

- **Secondary Literature Review**
    - The study relies on published works of modern scholars such as P.K. Acharya, D.N. Shukla, James Fergusson, and recent journal articles on Indian urbanism.
    - Literature on archaeological findings has also been reviewed, especially studies on **Indus Valley cities (Harappa, Mohenjo-daro)**, **Mauryan cities like Pataliputra**, **Medieval towns such as Jaipur**, and **colonial urban centers like Calcutta and New Delhi**.
    - Online resources and digital archives were consulted for updated research and visual representations of ancient and medieval urban layouts.
- **Historical-Comparative Method**
    - The research adopts a chronological framework, tracing town planning traditions from **150 BCE to the modern era**, showing how concepts changed in different socio-economic and political contexts.
    - Examples include: the orthogonal planning of **Pataliputra** under Mauryas, fortified towns of **Gupta and medieval periods**, planned capitals like **Jaipur (18th century)**, and colonial-era urbanism such as **New Delhi (20th century)**.
    - These examples were compared with the theoretical prescriptions of Vāstuśāstra to evaluate their practical application.
- **Analytical Framework**
    - The study evaluates how far Vāstuśāstra's ideas were applied in actual town planning across different ages.
    - The relevance of these principles in modern India has been assessed by considering their adaptability to **contemporary socio-economic-political conditions**, especially in sustainable urban design, disaster resilience, and cultural identity in city planning.

5. Town Planning Described in *Arthaśāstra* (150 - 300 CE):

In *Arthaśāstra*, Kauṭilya discusses town planning in the '*Janapadaniveśa'*, which is the 1st Chapter of the 2nd *Adikaraṇa* known as *Adhyakṣapracāra*. One of the king's most important duties is to expand the kingdom. However, managing a vast kingdom alone is impractical, so the king appoints adepts in each state to administer it. These appointed individuals, known as Principals (*Adhyakṣa*), reside in the townships of their respective states and govern them. In Kautilya's *Arthaśāstra*, the author describes the features of a town while explaining *Janapadaniveśa*. According to Kautilya, a place that serves as the center of eight hundred villages and is larger than any village is called *Sthānīya* (town)[6]. This *Sthānīya* is considered a part of the '*janapada'*, where '*jana*' refers to all people of the four castes in society, '*pada*' denotes the place where people can live, and '*niveśa*' signifies establishment. The characteristics of such a place where all members of society can live are further elucidated in the commentary of *Śrīmūlā*, which includes *Sthānīya*, *Droṇamukha*, *Kārbtika*, *Saṃgraha*, and *Grāma*, among others[7].

A township may already exist in a state or may be newly created. In both cases, two things are very important. First, '*Paradeśāpavāhana* '- the king can bring people from other states and settle them in his own state. Second, '*Svadeśābhiṣyandavamana* '- if there is an excess of population in the king's own state, he can move people from there and arrange for them to live in new settlements. Without the existence of people or '*prajā'*, there is no value of a '*janapada*'. One of these '*Janapada* 'is '*Sthānīya* '- which is like the present town. The perimeter of that '*sthānīya* 'is said to be a collection of eight hundred villages, in the center of which this '*sthānīya'* or town will be. We must know what the extent of the village was in those days. Without knowing the extent of the village, we cannot estimate the

[6] '*aṣṭaśata-grāmyā madhye sthānīyam*'- *Arthaśāstra*, 2.1.1.
[7] '*janaścaturvarṇāśramajātilakṣaṇaḥ padaṃ tasya sthānaṃ sthānīya-droṇamukha-kārvaṭika-saṃgraha-grāmādikaṃ, tasya niveśaḥ racanātrābhidhīyate iti sūtrārthaḥ*'- *Śrīmūlā*, p. 3.

circumference of eight hundred villages. In those days, farmers lived in villages. At least a hundred families would live in a village. The distance from one village to another should be one *krośa*[8]. Affinities will also be maintained between the two villages to help each other for protection. *Arthaśāstra* mentions the construction of a special town. According to it, the king will build a *Sthānīya* (town) in the middle of the township. This town will serve to protect the king's treasury and will be situated either on a river confluence or near a natural lake with water. The shape of this town would be round or rectangular, surrounded by deep ditches or moats. Such a town is referred to by Acharya Kautilya as '*Pattana*'. The reasons given by the author for having waterways all around are twofold: to protect the town from enemy attacks and to facilitate trade by using the waterways for buying and selling goods from different countries. As described Kangle:'*Paṇapattana'* is ordinarily 'a market town' but in the text, it refers principally to 'a port' not an inland town. This may suggest that market towns were principally situated on river-banks or sea-coast (57).

The writer also mentions that there will be three trenches in a row around the *Sthānīya*, with a distance of four cubits between each trench. An important aspect is ensuring that the water in the trench contains aquatic animals, snakes, crocodiles, etc[9]. (Kauṭilya 182).

The significance of creating a town according to Kautilya's *Arthaśāstra* lies in its multifaceted role in governance, security, and economic prosperity. Kautilya emphasizes the strategic importance of towns for various reasons:

- **Protection of Treasury:** Towns, known as '*Sthānīyas'* or '*Pattanas'*, are strategically located to protect the king's treasury. Placing the town in the middle of a township and fortifying it with deep ditches or moats serves as a defensive measure against external threats, ensuring the safety of valuable resources.
- **Economic Hub:** Towns serve as economic hubs, fostering trade and commerce. Kautilya highlights the importance of waterways surrounding towns for trade with foreign countries.
- **Administrative Centers:** Towns are administrative centers where officials and administrators are appointed to govern the region efficiently. The establishment of towns allows for the systematic administration of territories and ensures the smooth functioning of governance at the local level.
- **Strategic Defence:** The design of towns with multiple trenches around them, containing water with aquatic animals like snakes and crocodiles, serves as a deterrent against enemy attacks. These defensive measures not only protect the town but also safeguard the surrounding territories under the king's rule.

In summary, according to Kauṭilya's *Arthaśāstra*, creating towns holds significant strategic, economic, and administrative importance. They serve as centers of governance, trade, and defence, contributing to the overall stability and prosperity of the kingdom.

6. Town Planning Described in *Mānasāra-Vāstuśāstra* (700 CE):

Mānasāra, penned by the sage Mānasāra, deals with the matter of *Vāstuśāstra*. This book is also known as *Mānasāra-Vāstuśāstra*. Acharya Prasanna Kumar also named it *Mānasāra-Śilpaśāstra*. The first part of the third chapter of *Mānasāra* describes what vastu is and divides it into four classes. The place where gods (*taitila*) and men reside is called vastu. This includes the ground (*dharā*), the building (*harmya*), the conveyance (*yāna*), and the couch (*paryaṅka*). Among of these, the ground is the principal one, for nothing can be built without the ground as a support[10]. It is very noteworthy that before constructing a town or tall building in a town, the ground must be examined for its contour, colour, odour, features, taste, and touch[11]. The level of the ground, as well as the characteristic vegetation of the site where the town or tall building is to be built, are also minutely examined (Acharya 36). At that time, the sage mentioned

[8] *Kośa* or *krośa* is Sanskrit word used in ancient India as a measure for distance . *Arthaśāstra* standard unit of *Kośa* = 3075 meters in SI units= 3.075 kilometres - Google.

[9] 'He should cause three moats to be dug round it, at a distance of one *daṇḍa* from each other, fourteen and ten *daṇḍas* broad, three-quarters or half of the breadth deep, one-third (of the surface-breadth) at the bottom or square with the bottom, paved with stones or with the sides (only) built of stones or bricks, reaching down to (natural springs of) water or filled with water coming from elsewhere, with (arrangements for) draining excess water, and stocked with lotuses and crocodiles'- Kangle, p. 62

[10] '*taitilāśca narāścaiva yasmin asmin pariṣṭhitāḥ /*
Tadvastu sūribhiḥ proktaṃ tathā vai vakṣyate dhunā //
dharā harmyādi yānaṃ ca paryaṅkādi caturvidham /
dharā pradhānavastu svāttattajjātiṣu sarvaśaḥ //' - *Mānasāra-Vāstuśāstra,* 3/1, 2.

[11] '*etān parīkṣya kramaśaḥ sā bhūmir mānaniśceyā*'- *Mānasāra* 3/8, p. 6.

two scientific methods of examining good land for building on the selected ground, both of which should still be followed today:

- **1st method:** A square or round hole of one cubit deep should be dug on the selected ground and filled with water for twenty-four hours. After this time, the chief engineer should observe the condition of the water. If all the water has dried up by this time, then the ground would be considered unsuitable. However, if there remains some water in the hole, the ground would be fit for any building purpose (*Mānasāra* 5/10 -12).

In the context of soil mechanics, the method mentioned in *Mānasāra* 5/10 -12, is associated with the test of soil permeability. Permeability is the ability of soils to transmit water and air through its layers (Anon). Soil permeability depends on several factors including voids ratio, distribution of inter-granular pores, and degree of saturation (Elhakim). Soil having lower permeability has greater contact between particles and greater effective stress. Therefore, low-permeable soil is suitable for construction of buildings.

- **2nd method:** A similar hole is dug on the selected ground and filled with soil (without any kind of force) taken out of it. If this soil fills up the hole exactly, the land is fair. If the soil is not quite enough to fill the hole, the ground must be very bad. However, if the soil overfills the hole, the ground must be very good for any building purpose (*Mānasāra* 5/13 -15).

eventually, in the latter case, the scientific method is particle density[12] of soil, which is the core subject of physical geoscience. In this case, when the soil taken out from the ground is not quite enough to fill up the hole, then the land is bad, as the particle density is low. Loose soil is said to be unfit for any kind of building. Apart from this, we can confidently conclude here that in the future, the constructed building would collapse, even without any earthquake.

As *Mānasāra* stated regarding the measurement of the smallest town unit, they are 100 x 200 *danṇḍas*, whereas the largest town unit measures 7,200 x 14,400 *daṇḍas*. In a town, there should be one to twelve large streets. The town should be built near a river or a mountain and should have facilities for trade and commerce with foreigners. It is also mentioned that, for military defence purposes, towns are generally well fortified.

According to Mānasāra, towns are divided into eight classes: *Rājadhānī*, *Nagara*, *Pura*, *Nagarī*, *kheta*, *Kharvaṭa*, *Kubjaka*, and *Pattana*[13]. The details figures as described in Mānasāra is given below:

(i) ***Rājadhānī:*** A place surrounded by eight forts, where several towns are situated, built in the center of a state or on the banks of a river where many pious people live happily, and where there is a royal palace and a *viṣṇu* temple, is called the *Rājadhānī* (*Mānasāra* 10/21 -24). Metropolitan cities like Kolkata, Delhi, and Mumbai fall into this category.

(ii) ***Kevala Nagara:*** The *Kevala Nagara* is characterised by four large gates, one of which should be a '*gopura*' or grand gate, where several protection houses are strategically located for security. It serves as a bustling center for trade, where businessmen gather for commerce and various shops thrive. People from both inside and outside the town frequent its streets. Additionally, the capital town is adorned with several temples, adding to its significance and grandeur (*Mānasāra* 10/25 -26).

(iii) ***Pura:*** A *pura* is a small part of a large town, where several gardens, parks and residences of common people can be found. Business is of utmost importance here, and at least seven temples dedicated to seven different deities are located within its vicinity (*Mānasāra* 10/27).

(iv) ***Nagarī:*** When the King's house (*Rājalaya*) is constructed at the heart of the town, it is termed *Nagarī* (*Mānasāra* 10/27).

(v) ***Kheṭa:*** The town of *Kheṭa* was specifically built for *śūdras*, typically situated alongside a river or hill, especially in areas experiencing heavy rainfall (*Mānasāra* 10/28).

(vi) ***Kharvaṭa:*** A place surrounded by hills, where people of all four castes reside together, is termed *Kharvaṭa* (*Mānasāra* 10/29).

(vii) ***Kubjaka:*** *Kubjaka* is a town similar to *Kheṭa* and *Kharvaṭa* but has no fort or moat (*Mānasāra* 10/30).

(viii) ***Pattana:*** It is to be noted that the town called '*Pattana* situated be should which port, commercial big a is [14]' on the bank of the sea or a river and always engaged in exchange and commerce with foreigners dealing specially in jewels, silk, clothes, and perfumes imported from other countries (Acharya 40). It is also noteworthy that the

[12] Particle density is the density of the solid particles that collectively make up a soil sample. The common range among soils is 2.55 to 2.70 g cm¯3 .

[13] '*sarveṣāṃ nagarādīnāṃ bhedaṃ lakṣaṇamucyate/*
nagaraṃ rājadhānīyaṃ kevalaṃ nagaraṃ tathā//
puraṃ ca nagarī caina kheṭaṃ kharvaṭameva ca /
kubjakaṃ pattanaṃ caiva śiviraṃ vāhinīmukham //' *Mānasāra*, 10/19-20.

[14] '*ratnairdvīpāntarānītaiḥ kṣaumaiḥ karpūrakādibhiḥ /*
etatpattanamākhyātaṃ vaprāyatasamanvitam' // - *Mānasāra*, 10/33.

ancient author considered the protection of the town. The town management should build forts around the town. All the forts are surrounded by strong and high walls and ditches. At that time, these walls were also constructed with bricks, stones, or any suitable materials for building. The height of the wall would be 12 cubits and the width at least 6 cubits. Such walls are still standing in archaeological places.

In conclusion, the teachings of *Mānasāra*, as outlined in the *Mānasāra-Vāstuśāstra*, hold significant relevance in both historical and modern contexts of town planning and construction. The text provides comprehensive guidelines for assessing land suitability, ensuring structural stability, and promoting the overall well-being of towns and settlements.

Mānasāra emphasises the importance of meticulous examination of the ground before initiating any construction activities, highlighting key factors such as contour, colour, odour, and soil characteristics. Through scientific methods such as infiltration and particle density analysis, the text offers practical insights into evaluating land quality and suitability for building purposes.

Overall, the principles elucidated in *Mānasāra* continue to offer valuable insights and guidance for contemporary urban planners and architects, contributing to the sustainable development and resilience of towns and cities in the present day and beyond.

7. Discussion of Findings:

Town planning in India has a long and layered history. From the ancient prescriptions of *Arthaśāstra* and *Vāstuśāstra* to modern urban design, the planning of settlements has reflected the social, political, economic, and cultural needs of different times. While the core ideas of order, symmetry, and functionality have remained important, the changing contexts of each era have shaped towns differently. This note traces the shifts in town planning from 150 BCE to the present, examines the role of *Vāstuśāstra*, and evaluates its continued relevance in modern India.

- **Early Historic Period (150 BCE – 300 CE)**

During this period, town planning was closely tied to administrative and commercial needs.

- **Pataliputra (Mauryan capital, c. 3rd century BCE)** – Megasthenes describes the city as fortified with wooden palisades, massive gates, and a grid of roads. Defence and administration were central concerns, reflecting *Arthaśāstra s* prescriptions.

- **Ujjain and Mathura** – These cities thrived as trade centers, with organized marketplaces, riverfront access, and religious structures. This aligns with *Mānasāra-Vāstuśāstra s* emphasis on locating towns near rivers, ensuring sacred spaces, and accommodating traders.

Key Shift: Towns were built to balance defence and commerce, while maintaining symbolic alignment with religion and cosmology.

- **Classical and Early Medieval Period (4th–12th Century CE)**

Urbanization in this period reflected growing temple economies and regional kingdoms.

- **Kanchipuram (Pallava period)** – Planned as a temple-town, its streets radiated around major shrines. The town planning reveals *Vāstuśāstra s* mandala model where the sacred temple is central.

- **Anuradhapura and later Vijayanagara** – Large water tanks, fortifications, and religious complexes highlight the integration of hydraulic engineering with sacred geography.

- **Nāgara Divisions in *Mānasāra*** – The text classifies towns into eight types (like *Sarvatobhadra*, *Nandyāvarta*, *Swastika*), prescribing layouts for specific socio-political needs.

Key Shift: The focus moved from administrative centres to religious and cultural centres, where sacred geography dictated urban form.

- **Sultanate and Mughal Period (13th–18th Century CE)**

Islamic influence brought new models of urban design, blending with indigenous traditions.

- **Delhi (Sultanate capitals like Siri, Tughlaqabad, and Shahjahanabad)** – Emphasized citadels, walled cities, central mosques, gardens, and bazaars.
- **Fatehpur Sikri (Akbar, 16th century)** – Showed careful planning with palaces, mosques, and administrative complexes arranged around open courtyards.
- **Shahjahanabad (Old Delhi, 17th century)** – Featured a central axis (Chandni Chowk), Red Fort, and Jama Masjid, reflecting both imperial authority and community life.

Key Shift: The introduction of Persian-Islamic planning (charbagh gardens, courtyards, axial roads) merged with Indian traditions, creating hybrid models of town planning.

- **Colonial Period (18th–20th Century CE)**

The British redefined town planning through modern engineering, sanitation, and administrative rationality.

- **Calcutta, Bombay, Madras** – Grew as port cities with segregation of European and native quarters.
- **New Delhi (Lutyens, 1911–1931)** – Designed as a grand imperial capital with wide avenues, hexagonal intersections, and monumental axes.
- **Civil Lines and Cantonments** – Showed functional planning for governance, military, and trade, but with sharp racial segregation.

Key Shift: Planning became a tool of colonial control, emphasizing administrative order, sanitation, and European aesthetics rather than traditional Indian cosmology.

- **Post-Independence and Modern Era (1947–Present)**

Independent India sought modernity, science, and functionality in town planning.

- **Chandigarh (1950s)** – Designed by Le Corbusier with grid-based sectors, modernist architecture, and separation of functions. It marked a break from traditional models.
- **Gandhinagar, Navi Mumbai, and Bhubaneswar** – Showcased planned cities focusing on functionality, administrative convenience, and industrial needs.
- **Smart Cities Mission (21st century)** – Emphasizes sustainability, digital infrastructure, and resilience.

Key Shift: Modern cities prioritize transport, industry, sustainability, and technology over sacred or cosmological alignments.

8. Importance of Ancient *Vāstuśāstra* in These Changes

Despite these transformations, *Vāstuśāstra* has continued to influence Indian planning in several ways:

- **Principle of Orientation and Symmetry** – Many historic towns (Kanchipuram, Jaipur, Bhubaneswar) followed the *mandala* or grid layout prescribed in *Mānasāra*.
- **Integration with Nature** – The emphasis on rivers, water bodies, and sacred landscapes finds echoes in today's sustainable urbanism.

- **Holistic View of Space** – Unlike purely functional models, *Vāstuśāstra* integrates material, social, and spiritual needs.

9. Missing Dimension: Evolution of Town Planning

A historical evaluation must necessarily demonstrate how the theories of Kauṭilya and Mānasāra were received, adapted, or transformed in subsequent centuries. For example:

- **Early Historic Period (Mauryan and Gupta Towns):** Cities like *Pataliputra* show evidence of planned layouts with wooden palisades, moats, and orderly streets—reflecting ideas consistent with Kauṭilya's prescriptions.

- **Medieval Period (Temple Towns):** Cities like *Kanchipuram* or *Thanjavur* were designed around temple complexes, demonstrating the Mānasāra's emphasis on religious and ritual centrality in urban planning.

- **Medieval Ports:** The town-type *Paṭṭana*, as described in Mānasāra, is well exemplified by ports like *Mamallapuram* or *Surat*, where trade, especially international commerce, shaped the layout and function of the town.

- **Islamic Influence (Delhi, Jaunpur, Fatehpur Sikri):** Here, urban planning combined Persian-Islamic principles with older Indian traditions, representing a clear stage of evolution where Vāstuśāstric principles were neither abandoned nor strictly followed, but rather transformed.

- **Colonial Period (Calcutta, Bombay, Madras):** British planning introduced grid systems, railway links, and administrative zones that differed radically from Kauṭilyan or Mānasāric ideals, yet often incorporated older town cores built around temples, forts, or markets.

10. Relevance for Modern India

The principles of town planning elucidated in *Arthaśāstra* and *Mānasāra* offer valuable insights for addressing modern urban challenges. In an era of rapid urbanisation, environmental degradation, and socio-economic disparities, these ancient texts provide a holistic framework for creating liveable, resilient, and inclusive cities. By integrating traditional wisdom with modern planning approaches, urban planners, architects, and policymakers can promote sustainable development, enhance urban resilience, and improve the quality of life for urban residents.
The article also does not clarify why Kauṭilya's and Mānasāra's town planning should be considered "relevant" today. In contemporary India, socio-economic and political contexts have shifted drastically:

- Modern towns must address issues like industrialization, rapid population growth, urban slums, and environmental degradation, which were not concerns in Kauṭilya's or Mānasāra's time.

- Today, sustainability, inclusivity, and smart technologies dominate planning discourses, which were absent in ancient models.

- Fortification and rigid caste- or class-based divisions of space, central to ancient models, are no longer relevant in democratic India.

Nevertheless, certain principles retain significance: the emphasis on harmony with nature (sitings near rivers, attention to soil and geography), the insistence on systematic layouts (streets, markets, residential zones), and the idea of balancing economic, social, and religious needs in a town. These can inspire modern urban planners, but cannot be transplanted uncritically.

11. Conclusion:

The study of town planning as outlined in *Arthaśāstra* and *Mānasāra-Vāstuśāstra* reveals a sophisticated understanding of urban development, governance, and architecture in ancient India. These texts emphasize meticulous planning, strategic location, and the integration of economic, social, and spiritual elements into the fabric of urban

settlements. From Kauṭilya's focus on security, administration, and economic prosperity to Mānasāra's detailed guidance on land assessment, structural stability, and environmental considerations, these treatises offer timeless principles for sustainable urbanization.

Modern urban challenges such as unplanned growth, environmental stress, and socio-economic inequalities underscore the relevance of these ancient insights. The emphasis on holistic town planning, community engagement, and harmony with nature offers a blueprint for creating sustainable, resilient, and inclusive urban spaces today. By bridging traditional knowledge with contemporary practices, these ancient principles can inspire innovative solutions to meet the demands of our rapidly urbanizing world while preserving cultural and ecological integrity.

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