CHAPTER 3

ANCIENT SETTLEMENTS IN LITERATURE

The Indian town-planning seems to have been systematically pursued. Aryan traditions trace its origin to Brahma, the creator-aspect of God. In townplanning, we have to deal with what is technically designated above as 'dhara' (ground) and incidentally with 'harmya' (building). Certainly the people who could imagine to construct iron fort, plan colonnaded large buildings, lay out the large towns, can be credited with some scientific knowledge of the civic arts.

The Manasara¹ and the Mayamata² discuss the following relative topics of town-planning :

- Examination of soil (bhu-pariksha)
- (1) Selection of site (bhumi-samgraha)
- (2) Determination of directions (dikapariccheda)
- (3) Division of the grounds into squares (padavinyasa)
- (4) The offerings (balikarmavidhana)
- (5) The planning of villages and towns (gramavinyasa, nagaravinayasa)
- (6) Building and their different stories (bhumividhana)
- (7) Construction of gateways (gopuravidhana)
- (8) Construction of temples (mandapavidhana)
- (9) Construction of royal palaces (rajaveshmavidhana)
The ancient Indian town-planner first had to determine the site with a special view to the extent to which its natural situation could best be turned into fortifications, and to allocate and distribute the towns of a kingdom on religious, political, commercial, as well as geographical considerations which go far to limit their area.

The sites of towns were carefully chosen according to principles, ritualistic and sanitary, preserved in the traditions of the Ancient Indian master-builders as well as laid down in their treatises. The bank of river or a sea-shore, the site of a lake or big tank were the most favoured and generally accepted places, so that ample bathing facilities were easily accessible.

The Manasara directs the examination of the site as to its fitness from its colour, smell, taste, shape direction, sound, and touch.

Mayamuni's test does not materially differ from that of the Manasara. In addition to the attributes required by the labour requires that the soil should be fertile enough for all varieties of seeds to sprout up in it.

In ancient India there were wards in a town which were exclusively inhabited by people of the same caste. The beneficent peculiarities of the ground are said to have been different for the different castes. The Manasara divides the soil into four species and points out in order of superiority what is considered auspicious for residence of each of the four classes with reference to the seven qualities already alluded to i.e., colour, smell, taste, form, direction, sound, and touch. Samarangana Sutradhara\(^3\) a medieval text on ancient town- planning tradition which was prevalent in Western India gives vivid description regard to various subjects pertaining to village, towns, examination of soil, offering etc. Sutradhara Mandana, in his Vastu Rajavallabha\(^4\), differentiates and enumerates the qualities as follows :- “The
plot fit for the Brahmanas is white, emanating fragrance like ghee and agreeable to the taste; that suited to the warrior class is red smelling like blood, astringent in taste; the ground suited to the Vaishyas is yellow emitting smell like seasum oil and sour to the taste; while the ground which is black, gives out a fish-like odour, and is pungent becomes the Sudras.”

There were many ways to ascertain the solidity of the ground. The following rule is laid down in the first section of the Kasyapa, in the 4th chapter of the Mayamata, in the 253 chapter of the Matsya Purana⁴, and in the Raja-vallabha, which shows it was a universal rule: “Dig out a pit one cubit deep in the ground and again return the earth into it. If the earth more than fills up the pit, then the ground is good; if it is just sufficient then it is middling or indifferent while if it falls short, the ground is bad. The good and indifferent varieties are acceptable, but the bad should on no account be accepted.”

Mayamuni’s examination of the rule is slightly different. He would fill up the pit with water in the evening and examine it early next morning. If there is remnant of water in the pit, then the ground should be welcome for all purposes. If the pit is found moist and muddy, then the ground will spell ruin for human habitation, and the aridity of the pit signifies lose of grains and wealth. The reason of the above rule easy to find in a single piece of land all the qualifications prescribed in the foregoing paragraphs. Indeed no place on earth is endowed with the ideal contributions of geology and physiography, and no capital or hills, rivers, seas, and forests in the manner described above and also to command the vegetable and mineral resources of the country. It was enough if there was nothing to be said against the sanitation and the economic self-sufficiency of the city.
VILLAGES

A group of villages gives rise to a big town. Village is a town in miniature and hence in India from the standpoint of planning there is no difference between a village and a town.

Visvakarama-Vastusastra describes 12 types of villages.

1. Mandaka  
2. Prastara  
3. Bahulika  
4. Paraka  
5. Caturmukha  
6. Purva mukha  
7. Mangala  
8. Viswakarmaka  
9. Devarat  
10. Visvesa  
11. Kailasa  
12. Nitya-Mangala

There is no hard and fast rule for fortification to the first three types but next four are surrounded by ramparts and may be deemed as special habitations. The Viswakarmaka is a very large village may be called a town. Its site is laid on the bank of a river. Here there is a provision for a place of the king. Devarat is a temple village. Visvesa is a commercial village. Kailasa is directed to be laid out on the sea coast or on the slopes of a hill and it is also protected by ramparts. Nityamangala is a big village with 6000 people.

Like the ‘Samarangana’, the ‘Aparajita praccha’ also does not treat the villages in any details. Both these texts being contemporary show the medieval tendencies of urbanisation when big cities especially the capital cities were more prominent in the minds of the authors who mostly courtiers and naturally were biased with the imperial set up. There is not much
difference between a village, town and a fort. All are fortified places intended for the residence of the people. A town is the extension of a village. A fort is principally meant for the purpose of defence, while village or town is mainly intended for habitation.

'Manasara' describes eight types of villages:

1. Dandaka 5. Svastika
2. Sarvatobhadra 6. Prastara
4. Pandmaka 8. Chaturmukha

'Mayamata' and 'Silparatna' describe eight types of villages.

1. Dandaka 5. Svastika
2. Sripatisthita 6. Prastara
3. Nandyabarta 7. Paraga
4. Padma 8. Prakiranaka

'Kamikagama' describes fifteen villages.

1. Dandaka 9. Sripatisthita
3. Pandmaka 11. Prakimaka
4. Svastika 12. Samoatkara
5. Prastara 13. Kumbhaka
7. Karmuka 15. Vaidika
8. Chaturmukha
**Dandaka**, Literally means a village that resemble, a staff. Its streets are straight and cross each other at right angles at the centre, running west to east, and south to north. Sarvatobhadra is oblong or square. Nandyavarta is just like Sarvatobhadra and is very auspicious. Padma or Padmaka shape is just a like lotus. Svastika has got a special feature that its streets should be planned in conformity with the figure Svastika. Prastara- etymologically means a village resembling a conch. Karmuka, is bow-shape. Caturmukha is square or blong lying east-to-west-wise so that its walls are also of similar shape. Prakarnaka has five varieties according to the Maya text. It really means a camara a fan made with big chowries (hairy tails) of yaks fastened to a handle.

Paraga, as its nomenclature implies is of cob-webbed shape and has a such are number of street that facilitates the traffic and locomotion of the village. Srivatsa and Vaidika are also of the auspicious varieties, have the common planning but denoting some trait or the other as their names indicate towns.

Villages intended for the residence for artisans, labourers and less cultured are described. They are Kheta, Kharvata, Palli, Ghusa and Abhira.

**TOWNS**

The town has been variously defined, but its broad distinguishing features are that:-

Its population is denser than in rural area and is settled in restricted area and is predominatly in non agricultural in occupation. Town is dependent on rural areas for the supply of food and raw materials. The following are ten
abstract criteria to distinguish the earliest city from any older or contemporary village:

1. In point of size the first towns must have been more extensive and more densely populated than any other previous settlements, although considerably smaller than many villages of today.

2. While there might be peasants cultivating lands outside the town. All towns must have accommodated in addition non-food producing classes-full-time specialist craftsmen, transport-workers, merchants, officials and priests-supported by the surplus produced by peasants.

3. Each primary producer paid over his tiny surplus to a deity or divine king who thus concentrated the surplus.

4. Truly monumental buildings not only distinguish each known town from the village but also symbolize the concentration of social surplus.

5. All those not engaged in food-production were supported in the first instance by the surplus concentrated in temples or royal granaries and were dependent on the temple or court. But naturally, priests, civil and military leaders and officials absorbed a major share of the concentrated surplus and thus formed the 'ruling class' which did confer substantial benefits upon their subjects in the way of planning and organization.

6. The ruling class was compelled to invert systems of recording and exact, but practically usefull, sciences. The more administration of the vast revenues of a Sumerian temple or an Egyptian Pharaoh by the perpetual corporation of priests and officials obliged its members to devise conventional methods of recording that should be intelligible to
all their colleagues and successors, that is, to invent writing and numeral notation. Writing is thus a significant, as well as a common trait in Egypt, Mesopotamia, the Indus valley and central America.

7. The invention of writing enabled the leisured clerks to proceed to the elaboration of exact and predictive sciences—arithmetic, geometry and astronomy.

8. Other specialists gave a new direction to artistic expressions. Artist-craftsmen—full-time sculptors, printers or seal engravers—began to carve, model or draw according to conceptualized and sophisticated styles.

9. A further part of the concentrated surplus was used to pay for the importation of raw materials needed for industry or cult and not available locally. Regular “Foreign trade” over quite long distances was a feature of all early civilizations.

10. So in the town specialist—craftsmen were provided with raw materials needed for the employment of their skill and also guaranteed security in a state organization based on residence rather than kinship. Itinerancy was no longer obligatory. The town was a community to which a craftsmen could belong politically as well as economically.

Mandan’s ‘Rajvallabha’ describes 20 types of town:

1. Mahendra: It is a square town.
2. Sarvatobhadra: It is a rectangular shaped town.
4. Varuna: Optical or oblong shaped town.
5. Nand: It is a town with empty corner.
6. Nandyavartak: It is of swastika form.
7. Jayant: Wheat or oat form
8. Divya: It is a town situated at top of mountain
10. Paurusha: A town with male form
11. Snaha: The town situated in the valley of mountain
12. Dandanagar: It is a ribbon form town
13. Sakrapur: The town is situated on the east of river side
14. Kamalpur: The town is situated on the west of river side
15. Dharmikpur: The town is situated on the south side of river
16. Mahajaya: The town is placed between two river
17. Saumya: The town is situated on north side of river.
18. Srinagar: The town is surrounded by one fort.
19. Ripughna: The town is surrounded by two forts.
20. Svastika: The town is with eight corners.

In 'Nagara disanjna' nine synonyms have been given for growth of town. They are:

1. Nagara
2. Mandira
3. Durga
4. Puskara
5. Samparyika
6. Nivasa
7. Sandana
8. Sadma
9. Ksaya & Ksitilaya
The Sadana, Ksaya, etc., are synonyms of houses which also indicate a group of houses develops in to a village and emerges into towns, Puskara indicates towns developed on bank of rivers or on the seashores. Durga indicated a fortified town, and mandira, the temple have been the nucleus of the development of great towns.

In “Sabda-Kalpadruma” synonyms of towns have been mentioned. They are:

1. Geham
2. Hattadivisista-sthanam
3. Vahu gramiya vyavahara sthanam
4. Puri
5. Nagar
6. Pattanam
7. Sthaniyam
8. Katorkam
9. Pattam Nigam
10. Putabhedanam

Geham – a house, rather a patriarchal family is the nucleus round which developed villages of the type of ‘Ekhouga’ such petty village combined themselves and rose to great towns.

Hattadivisista-sthanam and Vahu gramiya vyavahara sthanam both these words signify that city was a market village grown to greatness.

Pattanam is also a commercial town. Venkatarama Ayyar, has furnished with an instance of such a commercial town: ‘Kaveripumpattinam’.

River sites sea-coast, especially, the mouths of rivers offer the best facilities for origin and growth of towns, because a river is not only a means of communication with the interior of the country, a way of transport and
locomotion, but it also offers an outlet unto the outer world, thus encouraging commerce.

Nigama is also a commercial centre Sanskrit ‘Nagara connection may be studied with Tamil Nakar. It is used variously in Tamil literature to mean a house, a temple, a place or a castle and a city. It is thus in nutshell the chief dynamic principle of ancient town planning that these separate items should be so coordinated and each assigned such an important place in the city that the arrangement conduces to the efficiency of town life.

Sthaniyam, Katakam and Pattam. All denote defense. It was an ancient custom in India to plan fortresses for efficiency of administration and government in the midst of villages, which were grouped under their jurisdiction and supervision. Kautilya prescribes in Arthasastra that “There shall be sthaniya in the centre of 800 villages, a Dronamukha in center of 400 villages, a kharvatika in the midst of a collection of 10 villages.

Aryavarta was the country where Aryan civilization was promulgated first and this is the part of India which was watered by Indus and Ganges, two great river systems.

To these reasons combined with local advantages the evolution of a great settlements found in the shape of riparian towns. Riparian towns illustrate the type of Putabhedanam.

Visvakarma Vastusastra describes as many as 20 types of towns:

1. Padma  
2. Sarvatobhadra  
3. Visvesbhadra  
4. Karmuka  
5.  
6.  
7.  
8.  
9.  
10.  
11. Devanagara  
12. Vaijayanata  
13. Putabhedana  
14. Jala-nagar  

51
5. Prastara
6. Swastika
7. Caturmukha
8. Sripratisthita
9. Balideva
10. Pura
11. Ditya
12. Jayanta
13. Snaha
14. Uttara
15. Dharma

The Vijayanta Nagara is said to be situated at the sea-coast, on the bank of a river or at the edge of the forest. Patabhedana is described as having sites found naturally formed with the contour of a conch which are chosen for this city. The Girinagara as its name signifies, must be built on the top of a hill and similarly the Jalanagara is in the midst of a lake or in the midst of a big river. Guha is constructed within a cave, leading upward downward or horizontally or in intermediate directions. The Astamukha may be deemed a special variety because its shape is circular with eight entrance-gates. As regards the last variety, the Rajadhani town, it is a capital city where tributary princes, Ministers and commanders have all their residences and the nucleus must be the imperial place, with all its appurtenances and vast paraphernalia of establishments.

'Apajitaprccha'\textsuperscript{14} describes 20 types of towns:

1. Puspaka
2. Sarvatobhadra
3. Simhavaloka
4. Varuna
5. Nand

11. Ditya
12. Jayanta
13. Snaha
14. Uttara
15. Dharma
7. Mahendra 17. Nandyavarta
8. Sripura 18. Sakrada
10. Rupamardana 20. Paurusa

Samarangana Sutradhara uses some different terminology for the types of towns.

According to Manasara\textsuperscript{15} towns are divided into eight classes as:-

1. Rajadhi-nagara 5. Kheta
3. Pura 7. Kubjaka

It may be noted that the town called pattana is a big commercial port. It is situated on the banks of the sea or river and is always engaged in exchange and commerce with foreigners.

As regards the classifications given in the Mayamata\textsuperscript{16} and Silparatna, there is not much difference with Manasara. All these taken together (Kamikagama and Isanesiva-gurudevapaddhati, Mansar, Mayamata, Shilparatna etc.) may be tabulated as under:-

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53
1. Nagara  
2. Rajadhani  
3. Durga  
4. Pattana  
5. Kheta  
6. Kharvata  
7. Sibira (Senamukaha, Skandhavara)  
8. Sthaniya  
9. Dronamukha  
10. Kotya-Kolaka  
11. Nigama  
12. Matha or Vihara.

Nagara: Pura and Nagara may be taken synonymous. Nagara is surely a fortified town as its etymology signifies immovable, implying permanence and strength with reference to stone-walls etc. The Vedic puras were mere forts, while pura as in Tripura and Mahapura was much bigger (Tait. Sam. VI, 2, 3, 4; Kath. Sam. XXIV, 10; sat. Bra. VI, 3, 3, 35; Ait. Bra., II, 11; Mait sam. III, 8, 1) Thus pura might have been the prototype of pura, the developed city, and Nagara the full-fledged capital city.

Rajdhani Mayamata gives a glorious description of the royal capital with its imperial castle. Sukracarya's description has something more to add. It must have the sabha or Council Hall in the centre.

Pattana: It is a large commercial port, situated on the bank of a river or sea.

Durga: It is a fortified town.

Kheta: It is a small town situated on the plain near a river or in the forest by the side of hillocks and is girt with a mud-wall. According to the Silparatna, if such a town is thrown out by local industries, such as mining, it is known a Sakha – nagara.
Kharavata: It is exactly similar to a Kheta and is also defended with a girdle of wall and is located in the country side. According to Kautilya wall is located in the country side. According to Kautilya it is situated in the centre of two hundred villages.

Sibira: It is a military campus. Banabhatta's description of Skandhavara of HarsaVardhana. It is also laid out when a king was out on an expedition of fresh conquest and an annexation. It has two more sub-varieties base, rear station where the military staff carry on their duties away from the battle-field.

Sthaniya: According to Kautilya, there shall be set up a sthaniya fortress in the centre of 800 villages. It is like head-quarters of the districts

Dronamukha: It is a market town frequented by traders, lying on a river bank or sea-shore, generally at their confluence, known also as Dronamukha. It is a harbour. If it were populous place in the midst of villages it is termed as Vidamba.

Katmakolaka: It is a popular settlement in a hilly or wild tract.

Nigama: It is a market mainly of artisans though other castes also live.

Matha or Vihara: It is a university-town, called vidyasthana, Matha or Vihara. Literally 'it means students quarters or college. Hence it is a residential university where not only the learners board and lodge but religious itinerants or monks also reside.

FORTS

Visvakarma – Vastusastra describes the following twelve type of forts. Forts are of 12 kinds according to the site chosen.
1. Giridurga: The first is hill fort.
2. Vanadurga: The second is protected by forests underground passage are provided for this class of for.
3. Jaladurga: The third type is either in the midst of the sea or large rivers.
4. Irinadurga: The fourth is the fort in the desert country.
5. Daivadurga: Fifth is a natural fort i.e., a place in which formation like ramparts have been formed by nature. It is called Daivata fort.
6. Ekamukhadurga:
7. Dvimukhadurga:
8. Chaturmukhadurga: These three types are built on the bank of rivers or at the sea-coast. They are provided either with a single gate, two gates or four gates as safety will allow.
9. Kurmadurga: The ninth is called the tortoise fort. It is generally intended as a trap for the enemy. The site is either the middle of a forest or the foot of a hill. It is provided with concealed approaches and spring traps work by concealed machinery. Five or six ramparts protect the place and it is studded with concealed marshes and mire. This type of forts is generally constructed at short notice to entrap the enemy and is demolished soon after.
10. Parvata durga: The tenth is a well-defended place of safety for temporary rest in the midst or fierce battle.

11. Prabhudurga: The eleventh is well-provided fort with strong defence in unapproachable ground either in the midst of a forest, a hill or other place with natural defence. It has but a single gate and is protected by series of a dozen prakaras (walled-enclosures). There are structures in the walls for sounding the alarm when necessary. Such structures are known as Karanas (the ears of the fort). Gates within gates with double latches protect the place and the fort is well provided with all provisions for a long siege.

12. Yuddha durga: The twelfth type is called war fort. It is especially intended as a place of safety from which to attack the enemy and it has all structures for offense and defense with various weapons. Hidden pathways, and underground passages with stair cases abound.

Sutradha Mandan’s ‘Rajvallabha’\textsuperscript{18} describes four types of forts:

1. Bhumi Durga  
2. Jai Durga  
3. Ekir Durga  
4. Ekavhar Durga

‘Mansar’\textsuperscript{19} describes eight type of forts:

1. Sibira  
2. Vahini Mukha  
3. Sthaniya  
4. Dtonaka  
5. Samviddha  
6. Kolada  
7. Nigama  
8. Skandhavara

‘Mayamata’\textsuperscript{20} describes seven type of forts:
There are nine principal varieties of forts according to the 'Silpa Sastras'.

1. Mountain Fort
2. Forest Fort
3. Water Fort
4. Mud Fort
5. Desert Fort
6. Man Fort (Nar durga)
7. Mixed Fort (Misra durga)
8. God’s Fort (Patxa Durga)
9. Krataka

Regarding classification of forts in Mayamata and Silparatna there is not much difference so all these are taken together may be described as under:-

1. Mountain fort: Its three sub-varieties are already referred to, they are called according to the Mayamata-Girimadhya, Giri-parsvaka and Giri-Sikharaka, the last is also called prantara and is most auspicious.

2. Water Fort: It is rendered difficult of access by natural circulating water. It was also two sub-varieties – atar-dvipa (island fort) which in the words of is Sukracharya is a nandi-durga as on its both sides river flows. It may be built in the midst of a sea also. The other variety is called sthala-durga which is situated on a high land girt round stagnant unfathomable water. It may be laid out in the midst of a lake or a vast tank.

3. Desert Fort: (Dhanvana) is in the midst of a desert devoid of any water. Nirudaka and `Airana` are its principal varieties. The former is
characterized by barren tract, latter made barren by and saturated with salt of brine water.

4. Forest Fort: (Vana – durga) has also two sub-varieties ‘Khanjana’ and Stamba-gahana the latter termed by Manu as Varksa. Khanjana is hemmed in by ferns variegated with thickets and through shrubs while its companion is environed by a dense jungle of lofty trees.

5. Earth Fort: (Mahidurga). It has three species - ‘parigha’, ‘panka’ and ‘mrd-durga’.

6. Man-Fort: (Nardurga): It defense lies in the strength of man – Power. It is also sub-divided into ‘Sainya-durga’ and ‘Sahayadurga’, which are quite clear.

7. Mixed Fort (Misra-Durga): is a combination of Giridurga and Vana-durga.

8. God’s Fort (Daiva-Durgaf): may be defined as a fort unapproachable on account of its vary natural circumstances like Mt. Everest.

9. Krataka: Lastly the Kra taka is the artificial fort.

The study of the above mentioned scriptures on ancient town planning give enormous details regard to different types of towns existed in ancient India. However, special emphasis has been laid in the study of Aprajitaprccha, Samarangana Sutradhara, Visvakarma Vastusastra and Rajvallabha by Mandana as these texts contain town planning tradition which were prevalent in Western India. Therefore slokas are cited from these texts in supports of the interpretation of the types of ancient and medieval town planning of Gujarat area.


5. Matsya Purana. 1972. B.C. Majumdar and others Oriental publisher Delhi, Ch.253, p-293.


7. Manasara, op. cit. ch.9, p-63, 64, 65.

8. Mayamata, op. cit. ch. 9, p – 57


18. Rajvallabha, op. cit, ch. 4, p-59.


21. Begde Prabhakar V.1977, Ancient and Medieval Town planning in India, Sagar Publication-New Delhi,Ch.8, p – 81-100.
TOWNS AS PER ANCIENT TEXT

Nandyavarta in Manduka

Nandyavarta in Circular plan

Padmaka

Padmaka in Sthandila

COURTESY: B.P.Y.

FIG: 31
TOWNS AS PER ANCIENT TEXT

Prastara

Karmuka (khadga)

Karmuka

Chaturmukha

COURTESY: B.P.Y.

FIG. 32
TOWNS AS PER ANCIENT TEXT

Prakirnaka

Sampatkara

Paraga

Kumbhaka

COURTESY: B.P.V.

FIG: 33