CHAPTER IV

LOCATIONAL FACTORS IN URBANIZATION
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The geographical viewpoint seeks to investigate the spatial variations in terms of geographical factors. These may operate directly. They may also operate indirectly, i.e. through operation of other factors that are themselves basically controlled by geographical factors. River towns can be cited as an example of the latter. They have always been important. In the early days perhaps riparian location had a paramount importance, since modern of means bringing water from sources situated scores of miles away were not available. (Taylor, G., 1964, 12).

Human settlements in general and towns in particular are the centres of highly organised human activity. These settlements respond to the intricate complex of influences and controls of various environmental factors, physical as well as socio-cultural (including levels of technology) in a number of ways. Even granting that these forces affect towns together and in an intermingled way, it remains the task of the geographer to identify and evaluate the role of geographical factors upon form, function and external relations of towns as well as upon their spatial parameters, such as the distributional pattern. In other words, he palpates the
invisible nexus between the various elements of towns and those of geographical personality of the region.

Geography concentrates its attention upon the setting of the towns. In thus describing the geographical context of the towns, it is desirable to distinguish different aspects of position, which may be designated as location, site, and situation. (Smiles, A. E., 1967, 40). The geographical milieu of the towns is analysed within the conceptual framework of these parameters of location, site and situation. Location, apart from its general comprehensive meaning, connotes, in this context, the specific co-ordinate values of position of a town on the surface of the earth, such as the values of its latitude and longitude. It has, thus, little practical meaning for the actual environs of towns. Site specifies the type and nature of local ground actually occupied by a town and its immediate surroundings. It has many imports of immediate and local significance. Situation, on the other hand, marks a much wider area, which, through the specific orientation of its physical lineaments to the towns has very significant bearing upon it. The influence of situation upon the destiny of towns is profound and far-reaching, and permanent also, though often it is less obvious and is intermingled with the influences of other types of forces.
Life Cycle of the Factors of Location of Towns

In a general discussion regarding the locational analysis of towns, the term 'location' is employed in a general sense, encompassing both the immediate local topography called site as well as the wider regional setting called situation.

Whatever the initial advantages of an urban site, these factors are of vital importance to the town only in the early stages of its growth. As the town expands in dimension and attains functional viability and maturity, it comes to depend less and less upon these purely physical factors and, instead, depends more and more on economic and other cultural factors, particularly the route modality from important centres of trade and industry. The initial decisive advantages such as the proximity of a rivulet, a fording point upon a big river, advantage our point upon the high bank of a river, meander or a hill feature, soon loose much of their importance. In the case of a rapidly expanding town, which by now has acquired a momentum that makes continued growth rather independent of the initial site factor, the site factor is irrelevant to the subsequent growth vigour. Moreover, by about this stage the initial specific site factors tend to become inhibitive of further expansion of such towns. Features such as
rivulets, hillocks etc. simply remain as underdeveloped belts or areas, sometimes presenting only slumscapes or areas of sewage and sullage disposal. It sometimes lands to direct need for alternative sources of water. (Jain J.L. 1979). 'That towns do nevertheless continue to grow, painfully accommodating themselves to these disabilities is a measure of the importance of the capital already invested in an essentially immobile equipment'. (Smilas, 1967, 52).

However, the bearings of situation through their control on the orientation of channels of transport and communication change less frequently. Rather, as noted earlier, while site factors do not take long to change from positive to negative, the economic factors based on route convergence through a given location gain weight with passage of time. A good example of this intricate operation of locational forces is provided by Ranchi. This town was originally sited close to the Singuri river. Later, as the rivulet started becoming more of hindrance to expansion, the growing town expanded in southerly direction, away from the river and along the route to Sagar. (Plate 9).
Locational Types of Towns

Although no two towns have exactly similar sites, it is not difficult to recognise well-defined categories of town-sites. Certain physical features, for one reason or another, have been favour for the siting of towns, and provide a basis for classification of towns according to site types. (Smiles, 1967, 42)

An examination of sites of towns of the Narmada Valley leads to their grouping into the following major types.

1. River bank location
   (i) In the loop of a river - Hoshangabad, Betul-Bazar.
   (ii) Confluence of rivers - Maheshwar.
   (iii) Just opposite the mouth of a tributary river - Harda.
   (iv) High river banks - Narsinhapur, Gadarwara, Khandwa, Alirajpur, Timarni, Seoni-Velwa, Khargone, Sihora.

2. Spur location: (above flood level of the river): Khategaon, Kannod, Barwani, Jobat.


4. Location in level and agricultural plains in the undulating country: Sondhwa, Jabalpur, Betul, Alirajpur.
5. Location on a hill – Acropolises – Pachmarhi.
6. Route-nodal location – Harda, Babai.

To examine the site and situation of towns falling under these classes, a sample of towns, at least one representing each type, was made out. The description that follows is mostly based on field observations of these selected towns. Other towns of interesting sites, however, have also been examined.

Jabalpur

The city enjoys an excellent natural defensive site in the rocky basin. Towns are maintained only by the intrinsic resources of their sites. The situation governs their growth. The city is surrounded with Kariapather ridge to the north, Sita Pahar and Pandari hills to the east and Madan Mahal hills and rocks to the south-west with plains towards west and north west.

The situation of Jabalpur in the Narmada Valley is on an elbow where the west – east corridor of the Narmada Valley is abutted on the east by the Maikal plateau and eastern Gondwana hills, and there opens out another corridor of Hiran Valley to the north-north-east. Thus, the routes from west through the Narmada corridor turn at about this point to north east, ultimately
seeking the Grand Trunk route of the north Indian Plain at Allahabad. The route from north-west also continues to south across the Narmada, heading towards Nagpur, apart from its bifurcation to the west through Khanda. Other routes radiate to Mandla on south-east and Amarkantak to the east. The site of Jabalpur is on a small plain girt by numerous hills which, however, permit the passage of these routes through the numerous gaps in the hills. Moreover, it has a wide opening towards the rich Haveli plain on the north-west, from where goes a road into the interior country side. This plain provided a bountiful hinterland in the early stages of the town. Also, this Haveli plain being bottled up on south by the Narmada, on the north-west by Bhandar range, and on the east by an off-shoot of eastern Cordwana Hills, Jabalpur naturally had an exclusive command of this hinterland. The only rival, Sihora, is much too humble a town.

The present city can be distinctly indentified within the railway 'u' clamp and Cantonment defensive areas. Geographically it has a central situation and as such it has a huge military establishment and is an important centre for defence production. It is also a big marketing centre. Thus the situation of the town has greatly helped it to grow and gain importance.
The city is located above 433 m above mean sea level. Many small hills, generally rising about 75 to 100 m above the ground, are scattered in the city. The river Narmada is only 10 km to the south from the city. In the west and north-west of the city is the famous fertile Haveli plain of the district.

The city is situated in a rocky basin surrounded by granite hills which are not more than 530 m above sea level. The lowest part of the basin has an elevation of about 433 m while the hills to the east of the town rise to 543 m. The highest point is reached near Sindhaba temple in the north which is about 500 m.

The city lies in the south-eastern segment of the district. It consists of a long narrow plain running north-east and south-east and is shut on all sides by highlands, forming an offshoot of the great valley of Narmada. The main water reservoirs of Khandari and Paribat are located to the north-east of the city. These topographical features have arrested the contiguous growth of the city toward the respective directions and have acted as physical barriers. The western horizon is dominated by sand-stone cliffs of the Vindhya, and the eastern by metamorphic rocks of Bhitorgarh range. (Plate, 10).
NARMADA VALLEY
LOCATIONAL ANALYSIS OF TOWNS

SOURCE: SURVEY OF INDIA, TOPOSHEETS
The flat ground combined with hills has greatly facilitated the functions of a big town from older periods. The hills prompted its establishment in the first place while the flat ground was helpful in its subsequent growth. It is the flat open ground which could accommodate large population and some important manufacturing establishments. Thus, its site has been one of the main factors responsible for the survival and continued growth of the town. The site has been able to fulfill the present and past demands of the urban expansion.

**KHANDWA**

Khandwa stands a little to the north of the confluence of two small rivers—Wana and Abna—which through the Chhota Tawa river, ultimately pour into the Narmada. At about the same point a few other rivulets join the Abna river. This further enhances the channelising effect of the site upon routes. However, the situation of the town derives its significance substantially from the fact that routes from north and east towards the south are obliged to pass through this point by gaps in the rather low hills of Satpura. In particular, the railway line from Itarsi
to Bhusawal through Burhanpur finds it convenient to pass through this point, which helps it avoid crossing too many rivers. Moreover, it was only from this point that a branch line to north-north-east, going to Indore, could beat by bifurcated through Bhoreghat in the Vindhyan scarp. This latter feature particularly rendered Khandwa a natural junction point. The road from Burhanpur to Itarsi also follows closely the railway line after Khandwa, although a more southerly route from Khandwa to Itarsi is also available via Asapur.

The area immediately north of the Abna river is a good plain dotted with many settlements.

The salient features of its site are as follows—

(i) The town is sited at the river Chhota tawa.

(ii) The terrain of the site is uniformly level.

(iii) The town is situated between two highest peaks of the Satpura. It is sited in the gap between the Satpuras; only through this gap is the connection with southern India.

(iv) The city, unlike the other two, is situated on a high plateau.

The situation in the gap is of utmost importance. It has been important for the same reason from olden times. The city is provided with good water supply from
springs as well as tanks. The town is sited on the bank of the river which provides ample water for drinking and other purposes. The shape of the city is delineated by the river, the roads and the railways. There is no dearth of building stone here.

Endowed with this natural modality of routes and equipped with railway junction, the town being in rich cotton growing area soon attracted cotton ginning industry and has grown to quite a viable size. (Plate 10).

HOSHANGABAD

The historic town of Hoshangabad stands on the south bank of the river Narmada where it takes a broad north-ward bend. Here the Vindhyan range on the north sends an imposing spur to the south, so that the hilly upland comes almost up to the river. The location of Hoshangabad lies in line with the gap in the hills. Called the Barbhera gap it is used for going towards north in the vindhyan scarp. It is through this famous gap that the railway line finds its way north to Bhopal. At the mouth of this gap stands the town across the river. The location on the southern bank is also quite significant. Whereas on the north the whole area is a highly dissected and forested hilly country with very scant population, on the south there is a fairly large expanse of level plain which is agriculturally productive
and densely populated. Thus, Hospangabad has a location on the bank of Narmada and facing the fertile plain. The siting of Hospangabad derives further advantage from the fact that the gap in Satpura range is followed by the railway line and road to leading to further south east to Betul.

However, it should be remembered that this is an old town grown around a historic temple on the bank of the holy Narmada.

Though the greater part of through traffic passes by a shorter route 6 kilometers to the south, the railway line lies 18 km away.

The supposed founder, Hospang Shan, the second of the Gori Kings of Malwa, died and was buried in the town but his mortal remains were subsequently removed to Mandu. Hospangabad remained insignificant till the conquest of Bhopal in about 1720, when a massive stone fort was constructed, with its base on the river, commanding the Bhopal road.

Hospangabad Valley may be generally described as a valley of varying breadth, extending for 150 miles between the river Narmada and the Satpura range. The soil consists chiefly of black basaltic alluvium, of more than 20 feet depth. Along the banks of the Narmada
the fertility of the land compensates for the tedious uniformity of the scenery. As far west as Handia, only an isolated rock breaks at intervals the monotony of the plain rich crops of wheat clothing the gentle undulations.
(Plate 9).

**Betul**

Betul is one of the marginally located southern towns of the Narmada Valley, lying almost wholly on the Satpura plateau. It occupies nearly the whole width of the Satpura range between the valley of the Narmada to the north and the Barar plains to the south. Standing at the southern foot of the Satpuras, Betul commands a cross-road situation. It stands in the broad opening of a re-entrance to southern foot of Kali-Bhit hills. It is about here that the narrow gauge railway line from Itarsi in north to Chhindwara in the east descends down the Kali-Bhit hills taking an eastward bend. This, in conjunction with the natural convergence of roads from Itarsi, Multai and Ellichpur, gives a commanding position to Betul. There is sufficient open plain for the expansion of the town situated under the shadow of the southern scarp of the Kali-bhit hills. It is, however, the gaps in this scarp which are of critical importance for the situation of the town here. Small river Machana
joins Sapna river just south of the town. This adds
to the value of the site of this town. The road from
Ellichpur crosses the Sapna river just down this
confluence.

Thus, the town appears to occupy a piedmont
location whose site was rendered greatly significant
due to the natural gap in the hill range to the north,
which are occupied by routes.

However, the old town has shifted to its present
location only lately, for the shape of the proximity of
railway line. Originally, there was but a modest village
called Badnu at this spot.

The district derives its name from the small
town of Betul-Bazar about 5 km south of Badnu which
served as the headquarters of the district. During the
Maratha regime, as also in the beginning of the British
rule, Betul or Betul-Bazar was the district headquarter.
In 1822 the district headquarter was shifted to the
present place, then only a village known as Badnur Dhana,
I.e. Badnur village in the local dialect. Now, even
after such a long time, not only the district retains
the old name, but the name of the new headquarter town,
Badnur, has also been superimposed by 'Betul'.
BETUL-BAZAR

The old town of Betul, about 5 miles to the south-east of now called Betul-Bazar, occupies an excellent position in a broad loop of the Sapna river, and is centrally located for the small basin of upper Machna river (of which Sapna is a tributary). The broad morphological structure of the town, at least on the south-west side, is controlled by the shape of the loop of Sapna river. The road from Multai, carefully following the interval between Sapna river, Singanwari, naturally passes close to the town. Tracks radiate to all directions to numerous villages from this small.

It thus occupies an excellent central location in the upper Machna basin, in a bend of river. It is essentially the service town of this basin.

NARSINGHPUR

This town carries a good deal of religious importance in its inception and the historical temple of Narasimha still stands on the right bank of the rivulet-Singhri Nadi, by name— from which the town derived its name (Imperial Gazetteer of India, Vol. VII, p. 62, 1908). In the early stages it was a central place of a rich agricultural hinterland and served as an entrepôt for
its grain and cotton. It occupies a central position upon the best level plain of the hinterland which is criss-crossed by numerous rivulets. Its position as a centre was greatly enhanced when Marathas made it their military base in the Narmada Valley, and thereafter in the British times.

Besides, its situation also augments the natural orientation of channels of transport through this point. The trunk route of the Narmada Valley is almost traced to pass through this location, because further north the terrain is much dissected by the system of Sher river. If the routes take a more southerly direction, they would be forced to cross a number of channels of the Barurewa river system. Only a few kilometers to the west is Kareli which stands opposite the gap in the Vindhyas scarp followed by the road from Sagar to Nagpur (N.H.26) through Kareli and Marsimhapur. Moreover, the Mahadeo Hill and related uplands of the Satpuras on the south also provide some gaps through which pass the roads to Lakhnadon and to Chhindwara. It thus commands the whole plain of upper Narmada south of the river (Plate 9).

**BARMANTI**

This historic town occupies a road bifurcation and avoids a rough and highly dissected topography.
To the south of the river Narmada the terrain is immensely gullied by innumerable seasonal 'nallas' which give a particularly rough disposition to the topography, and wash the northern slopes of the western Satpura. Here the road from Anjad on east follows a gap between the Satpura upland and a chain of hillocks to the north. Where this chain comes to an end in west, there is a good point for this road to turn towards the Narmada river in the north. Furious seasonal hills further strengthen the position of this bend for the road to follow a course of least obstacle. At this site, not only the southern upland merges with the plain area and the hillock chains come to an end, but there is also a small 'nalla' which was further facilitated by the siting of the settlement there. A branch of the road continues westward to Pati through a rough wild tract. Barwani thus holds a good road bifurcation site further strengthened by local topography and drainage. (Plate 10)

HARDA

This typical central place commands a rich agricultural area. It stands by a small river. Another small river joins it a little down stream. Eventually it Ajnal river which flows into the Narmada. Here all
the rivers flow west. Apart from the fact that it stands on the important road and railway line between Khandwa and Itarsi, the critical importance of the site derives from the fact that here a convenient road branches of towards Handia in the north-west which was the classical fording point on the Narmada. Harda otherwise is simply an excellent central place amidst a rich agricultural area. (Plate, 9).

**PACHMARHI**

Pachmarhi is an example of a modern acropolis. But in the siting of this town defence has not been the consideration, for at the time of its establishment general insecurity of the Medieval times was gone and a general stability in the society prevailed. The town is sited on a plateau, 68 sq km in area, providing sufficient level ground for the establishment of a town. The site of the town provides the means to use of the beautiful climate of this place. The question, why the town was not sited at any other high place, may be mentioning by the availability of flat ground here. (Plate, 11).
REFERENCES


