The distribution of rural settlements is the cumulative result of the interactions among diverse ecological resources, cultural perception, technological ability, and the historical conditions existing at the time of occupance and in the subsequent periods. It is the most significant expression of the contemporary cultural-ecological relationships, the historical phases of occupance, and territorial expansion of settling.(1)

Distribution, in the present context, has a wide connotation. It includes location of settled and unsettled areas and three essential properties, dispersion, density, and pattern in settled areas. Dispersion refers to the degree of spread of settlements relative to the extent of an area. In terms of dispersion settlements can be of three types: concentrated, in which they are separated by extensive empty spaces; uniform, in which they are nearly equidistant; and random, when they are closely spaced at some places and wide apart at others. Throughout the region, one finds a
repetitive mixed fabric comprising of one large cluster, several small clusters, and a few individual houses. This characteristic fabric gives a false impression of a uniform distribution. (Fig. 31)

The settlements are dispersed over the entire area, of course, with quite a few empty stretches of land which are covered with protected and reserved forests. (Fig. 7) According to the scatter of rural settlements three types of areas have been identified, which have (i) moderate; (ii) low; and (iii) high degree of dispersion.

Low degree of dispersion is found in the relatively inaccessible regions, such as the upper reaches of the mountain streams, the massive north facing scarp overlooking the Satluj valley, the densely forested areas, and the Siwalik Hills. The upper reaches are comprised of the high Himalayan ridges and valleys where the recurring ridge crests are almost devoid of settlements. The ridge crest, though an ideal site, has not attracted many settlers. It suffers from inaccessibility and absence of springs, and its agricultural activity is greatly handicapped by the incidence of frost. Contrary to the stereo-typed explanation of the siting of settlements in terms of defence, we find that in the Himalaya, the primary consideration in the selection of the
site on the ridge crest was the availability of cultivable land which in the rugged Himalayan terrain is highly limited. The fact that the crest sites are naturally well defended has been practically of no consequence. Moreover, historically, the Himalaya has always been a peaceful region, a region of refuge. It is only in the recent past that people started moving up the slopes from their initial slope-foot settlements following the incentives offered by the British rulers. During the British period the prospective settlers were encouraged to clear small patches of forest on the ridge crests and cultivate them. They were not required to pay any revenue to the government. Their settlements served as forest protection posts (chauki or thana).(2) The recency of settling on the crest has restricted further proliferation and spread of settlements. Their upward spread has not been motivated by the objectives of defence but by the search for cultivable land.

The upper reaches of the mountain streams and the densely forested areas are concurrent. Limited water resources and arable land have handicapped agricultural activity and discouraged settling on the scarp slopes.

In the Siwalik Hills too, the settlements have very low degree of dispersion. They are more or less agglomerate.(Fig.15) The study area has only ten settlements in the Siwalik Hill zone.
and since the number of settlements is small there is little
dispersion. Also the Gujar mode of living has contributed to
the process of agglomeration. The typical characteristic of
a Gujar settlement is behra. All the houses of the nuclear
families of a gotra which stand adjoining each other open into
the behra. In a settlement in which a gotra is represented
by several lineages, each lineage has its own behra.

In the Dun, the degree of dispersion is moderate, the
number of settlements in a unit area being almost equal to
that expected on a pro-rata basis. (Fig. 32) The revealed
uniformity is related to the repetitive occurrence of such
geomorphic features as alluvial fans. It validates the Finder
and Witherick proposition that in an area of uniform topography
we should expect uniform pattern of distribution. (3)

In contrast, the naban region has a high degree of
dispersion. (Fig. 33) Here, the arable land is very scarce
and wherever found it is intensively cultivated. Only a little
of it is covered by settlements. As the population grows
through natural increase and modernisation creeps in, the
extended family tends to disintegrate. The involution is
followed by diffusion of settlements and building of new
dwellings within the same mauza. (4) This sequence of
processes results in a high degree of dispersion.
Dispersion of rural settlements in the Dun

Fig. 32
Dispersion of rural settlements in the Lower Himalaya

Fig. 33

0 1 Km.
The second expression of the spatial distribution of rural settlements is density, computed as the number of settlements per unit of area. It is defined as overall frequency of settlements relative to the size of area. As such, it indicates the degree of compactness. Density bears a positive correlation with the degree of dispersion. Hence, the areas with high degree of dispersion have high density of settlements.

There are marked variations in density of settlements in the region corresponding to the diversity of the ecological bases of settling. Field observations reveal that the inhabitants have, in general, selected the sunny slopes (adret or sonnenseite) and avoided, wherever possible, the shady (ubac or schattenseite) slopes. The sites so selected experience longer duration and high intensity of the sun, which protect standing crops against frost.

The large and small but compact settlements are typical of the Dun and the Siwalik Hills where the density is either moderate or small. (Fig. 34) This is related to the typical genre de vie of the inhabiting groups, the Jats and the Gujars who, consistent with their traditional mode of living, have preferred to live in agglomerate and widely spaced settlements. Both the groups have practised, in the recent past, the
Fig. 34

STUDY AREA

DENSITY OF RURAL SETTLEMENTS
bhai.vachara land tenure system under which a settlement is established by a group of families belonging to the same gotra, and the economic, social and political institutions are governed by the descendants of the founding families. The widely spaced settlements are related to large village territories providing extensive land to the Jats for agricultural and to the Gujars for pastoral activities.

In contrast to this, the pahar has numerous, closely spaced settlement units. Each village has several settlement units scattered throughout the mauza. The degree of their scattering is so large that even though they actually belong to the same village, they do not appear to be so because of the large inter-dwelling distances. Also, a superimposition of maps showing the location of settlements and that of the cultivated area reveals that the densely settled and cultivated areas are more or less co-extensive. A patch of cultivated land inevitably implies a settlement site attached to it. This explains the higher density in the Lesser Himalaya.

Pattern, the third property of distribution, refers simply to the geometric arrangement of settlements irrespective of the size of the area. It is equally varied and diverse in the study area. In the Siwalik Hills, the settlements assume
a linear pattern because of their siting on either choe 
terraces or at the foot of the slope. (Fig. 15) The slopes are used as grazing lands. In the Dun, settlements are lineated along the cultural and natural features, for instance, roads, paths and choes, and form a radial pattern along the alluvial fans. (Fig. 32)

Following the courses of the main streams and their tributaries, settlements form dendritic pattern in the Lesser Himalaya, where, as discussed earlier, flat land and water resources are the pre-requisites for the selection of settlement site. (Fig. 33) The valleys of mountain streams are not only rich in flat arable land and water resources but have provided arteries of penetration into the mountainous interior. Hence, the dendritic diffusion of settlements.

Thus, the study area displays uneven distribution of rural settlements in terms of dispersion, density, and pattern. The unevenness reflects and is intimately associated with the role of historical factors and the differences in ecological resources and cultural traits of the inhabitants of the region.

References and Notes

2. Personal communication. Forest Range Officer, Mahilpur Range, District Hoshiarpur.


4. Mauza is a territory and a revenue estate and contains majra and agricultural and non-agricultural land.