The secluded, rugged and mountainous border district of Kinnar with its awe-inspiring hoary heights, gorge like valleys, harsh climatic conditions and age-old practice of polyandry experienced a population growth of 44.70% during 1951-71. This growth is in marked contrast to the stagnating population numbers earlier. Similarly the rate of literacy in the district marched ahead from 9.15% in 1951 to 27.70% in 1971.¹ The tract which was once an 'outward looking' border area became 'inward looking' in the wake of Independence in 1947 in general and the Chinese aggression of 1962 in particular. Prior to 1947 the district of Kinnar heavily depended upon Tibet, located across the international border, for its socio-economic needs. Its social as well as economic relations with the rest of India were far less. The district had not only a flourishing trade with neighbouring Tibet, but also close social ties with the people of that land. This was particularly true of the Poon division.² In 1948 when the area was merged with the newly created Chief Commissioner's territory of Himachal Pradesh, the region joined the mainstream of India.

¹ According to Provisional Population Totals: 1981 the literacy rate has risen to 37.02%.
² District Gazetteer - Kinnar, Simla, 1971, p. iii.
Although the trade with Tibet continued almost unabated, yet for some needs the tract started looking toward India. Since 1962, however, when the border with Tibet was sealed as a consequence of the Chinese invasion, the district had to depend upon India for all its economic and social needs. Thus, the district of Kinnaur, once an 'outward looking' tract became an 'inward looking' region.

The occupation of Tibet by China in 1958 and the Chinese invasion on Indian soil in 1962 gave this region a totally new dimension. The complete reversal of socio-economic orientation of the area has brought about many interesting and far reaching changes in the socio-economic as well as demographic landscape of the district. Consequent upon the initiation of planned socio-economic development in India in 1951, the area started receiving a sizeable number of migrants in the form of labourers, technical hands, administrative personnel, etc. After Chinese invasion of 1962 the numbers of immigrants were swelled with the entry of defence personnel and para military forces. Against heavy odds of nature, the National Highway 22 has been constructed passing through the district. Modern amenities and different developmental projects have made profound impact on the socio-economic scene of the tract. The building of roads and other means of communications have not only put an end to the hitherto barter economy of the district but have also increased the demand for fashion and luxury goods. Thus the compelling geo-political as well as socio-economic reasons besides shaking the neglected and unprivileged inhabitants,
have rapidly brought about far reaching changes in density and
distribution of population, literacy, sex ratio, age and
occupational structure, etc. These changes raise a valid question
as to what has been the impact of the altered circumstances on the
demographic personality of this region? This question generated
interest in taking up the present study which is concerned with
the significant attributes of Kinnaur's population and changes
that have occurred therein during 1951-71. There is some literature
on the mythology, history, culture, language, travel and regional
habitat of Kinnaur available in different forms but there has been
no systematic study on the aspects of population from the view
point of a geographer. The present dissertation attempts hopefully
to fill up this gap.

Field of Study

This work falls in the orbit of population geography.
Since population geography as a sub-field of specialization within
the major discipline of geography has been a late comer, its
contents and methodology have only recently been crystallised.
It was G.T. Trewartha who in the early fifties deplored the
neglect of population study at the hands of geographers. Keeping
in view the ever increasing numbers of human heads and all their
implications, he put forward a strong case for developing population
geography as a scientific and systematic sub-field of research.
Ever since geographers in many parts of the world have come forward
to define and bring forth the significance of differences from place

3. Trewartha, G.T., 'A Case for Population Geography', *Annals of the
to place in the number and kind of human inhabitants. 4 Bibliographic Guide to Population Geography as brought out by Wilbur Zelinsky\(^5\) in 1962 presented ample proof of the rapid development of population geography. Most of the studies thus far have, however, dealt with only selected attributes of population, such as its density, distribution, growth, urbanisation etc. But recently many studies dealing with other aspects of population including age and sex composition, literacy, occupational structure, migration etc. have started appearing. By now, population geography is no longer an untrodden path. The present study is an attempt to make a geographic analysis of all important aspects of population in the physically isolated district of Kinnaur.

In India where population geography has otherwise made a fair progress, little attention has been paid to isolated mountainous tracts. It is more so in the case of Tribal areas located along the international borders of the country. The district of Kinnaur, besides being a sensitive-mountainous-border region is also a tribal tract. In view of the special plans initiated for the socio-economic uplift of the tribal people, the present study assumes a distinct significance because an understanding of existing patterns and problems of population is fundamental to any realistic welfare planning aimed at the socio-economic resurgence of hitherto ignorant and innocent people. Knowledge of

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areal patterns of population characteristics and the temporal changes they have undergone, is of vital importance in a mountainous environment with varying degrees of inaccessibility, difficult locations, limited resources and peculiar cultural setting. They reflect the modes of human adjustment and work as criterion for fixing plan priorities and strategies for socio-economic development in the region. The chain relationship between stages of socio-economic development, endogenetic influence, cultural patterns, populace and resources can be easily viewed through such type of studies.

Population as a field of academic concern is not the exclusive domain of geographers. Whereas it received attention from the geographers only in recent years, the other social scientists like demographers, economists, historians, sociologists, psychologists and anthropologists, have been studying population in their own ways and for different purposes for a long time. A demographer theorises about population as a phenomenon; an economist probes into the inter-relationships that exist between unlimited wants and scarce means of man; an historian digs out the past trends of population, a psychologist enumerates human behaviour and the anthropologist studies man as a biological, cultural and social animal. The main object of a geographer in any study of population, on the other hand, is to understand the spatial aspects of population in the context of the aggregate nature of places. The approach of a geographer distinguishes his work from that of other

social scientists. It is the emphasis upon spatial distribution, spatial relationships and spatial interaction that appropriately differentiate the role of population geography from that of other social sciences. Thus by following the chorological approach a geographer gives a spatial perspective to the study of population. In the present study, different demographic characteristics of Kinnaur have been examined in that perspective.

In India many parts of the alluvial plains and the Deccan Plateau have been studied by population geographers. However, remote mountainous regions have received only scant attention. In geologically young mountainous regions with the dominance of towering hills and extreme ruggedness, the small size of population in relation to a large area, isolated and scattered habitations in valleys and the relative immobility of the natives render an impression as if the mountainous tracts are not faced with the problems of human numbers to the extent the plain tracts are. As opposed to this erroneous view, it has been observed that in relation to the directly usable land occupied by man and the existing resources, these areas are extremely densely peopled. The accelerating growth rate would aggravate the already existing population-resource problem. The district of Kinnaur, thus, presents a challenge in this regard and is an interesting area for a population study.

Period of Study

The present study has been confined to the period 1951-71. It was with the census of 1951 that printed village-wise data on various characteristics of population was made available in India. Since then improvements are being effected in the information and techniques as well as components of these data. This has enabled the mapping and analysis of village-level data on local scale. Mapping and analysis of demographic data by individual settlements bring us closest to reality and enable the examination of demographic phenomena, along with other related factors at local level. There are 77 census villages in Kinnaur district although the number of total hamlets constituting these habitations comes to 258.

8. Since the Provisional data with regard to the population as enumerated in 1981 census have been released, reference to available figures has been made wherever necessary so as to observe the trend. However, complete analysis is not possible for want of final data and statistics related to different attributes of population at village level.

9. At the time of 1951 census enumerations, Kinnaur formed a part of Mahasu district and Himachal Pradesh did not have its own Census Department. There were no roads, no high schools, no hospitals and other amenities in the district at that time. Thus in 1951 when the region had no facilities, there is every likelihood that some discrepancies might have crept in the data inadvertently.

10. The term 'village' in all censuses since 1901 has been used for an area for which a separate record of rights is maintained, which has been separately assessed for land revenue, or would have been so assessed if the land revenue had not been realised or compounded or which the State Government may, by general rule or special order declare to be estate. This definition of a village is identical with that of Mauza under section 3(1) of the Punjab Land Revenue Act of 1887. Quoted from Census of India. Punjab (1961), General Population Tables, Part II-A, p. 15.
The period of economic planning in India started in the decade of 1951-61. During the two decades under study four Five-Year Plans had been completed. In this tribal and isolated region planning under the tribal plan scheme was accelerated in the post Chinese aggression period and it was during 1961-71 that economic and social changes became more visible in the district. The period of 1951-71, however, forms a historical divide in Kinnaur between a long persisting period of indifference by the erstwhile princely rulers towards the genuine needs of the region preceding 1951 and the relatively fast tempo of socio-economic development following tribal plans during recent years. The socio-economic changes brought about on modern lines during 1951-71 created dents on the local culture long preserved. Thus to comprehend the long-standing modes of adjustment between the people and regional development and for portraying the changing practices in the years to come, the choice of the period 1951-71 is meaningful. The demographic implications of these socio-economic changes can be better viewed and understood through a study of changes that appeared in different aspects of the population of this district during this period.

Sources of Data

The present study has been based, as mentioned above, mainly on the population data for the study period. This data has been obtained from the published District Census Handbooks of Kinnaur and Mahasu (prior to 1960 district Kinnaur was the part of Mahasu district) districts as well as other reports,
village surveys and monographs published by the Census Department and other government agencies. Some of these census handbooks apart from providing very rich and fairly reliable data on population also provide a good deal of information on non-demographic elements such as agriculture, livestock, minerals, industries, transport etc. In this connection, the District Census Handbook of Kinnaur: 1961 is comparatively a good source of reference. The monographs on three villages brought out by the Census Department present a study of relationships marked within small village universes both for qualitative and quantitative analyses. The monographs thus were consulted to have a better understanding of the socio-cultural patterns prevailing in the region. Some data pertaining to land records and other aspects were also collected from the village revenue officials, development officials and also by interviewing the people. It is a hard fact that as compared to the plains and other developed and even developing areas, detailed data on all the required aspects of Kinnaur (temperature, rainfall, soils, forests etc.) are not available and the same may not be made available at conducive scale even for many years more but the geographer in his study of population unlike the demographer is not limited to areas for which a series of reliable censuses have provided good statistical data. The direct method of observations

11. A post-census check for 1951, 1961 and 1971 censuses recorded a percentage error of only 1.1, 0.7 and 0.5 respectively. Nevertheless, in view of extreme inaccessibility the district suffered from in 1951, the percentage of error in the case of Kinnaur is expected to be slightly more.

12. Trewartha, G.T., op. cit. (He cites Hettner in this connection), pp. 71-97.
in the field has been applied to a sufficient measure. The problem posed by the want of reliable data on some aspects such as migration, intra-district mobility etc. was resolved partly by tapping indirect sources of information and partly by meetings with the officials and other knowledgeable persons of the region.

**Methods and Techniques**

Maps are a basic tool of a geographer and the place of maps in the present study cannot be underestimated. So important indeed is the use of maps in geographic works that we can often judge the geographic quality of the man's work by the effectiveness with which he has presented it on the maps. If such a problem cannot be studied fundamentally by maps, then it is questionable whether or not it is within the field of geography. Thus the present study is mainly the result of study of patterns that have emerged on the maps prepared with data by individual census villages. To fill up certain gaps in information as also for explaining the patterns that emerge on the maps intensive field work of the district was undertaken. Field work and the knowledge about the region is *sine qua non* in every geographical study. In the present case, however, it was a vital point to visualize the existing conditions and obtain satisfactory results. Thus the close study of maps and field work brought out the spatio-temporal patterns in different population characteristics of the district.

Mapping of population data pertaining to the settlements located only along the main river valley and a couple of its subsidiary valleys was the primary work to be accomplished. In a region where scattered habitations are strung along some river valleys the cartographic portrayal would be unique. The purpose of a map is to portray reality in a way that the statistical complexities are simplified and the facts depicted on the map become comprehensible. Hence the choice fell on a combination of graduated circle (a derivative of point symbol) and coloured shade (an area symbol). The choice of number of categories had to be limited to six as our eyes are capable of distinguishing only a limited number of such categories. The intended purpose i.e. the spatial patterns of distribution, as well as the available technical means decided the number of categories. Average and median values and frequency graphs were made use of while determining the intervals for different maps. The selection of class intervals, a crucial problem in the preparation of such types of maps, was done after a thoughtful exercise so that maps should become medium of communication. The ratios of different elements no doubt showed wide variations and thus categorisation was often a problem. Yet, as far as possible, the final selection

14. While depicting the data by circles, overlapping is bound to occur in the case of hilly regions. Villages lying on the facing slopes of the valleys, when transferred on a flat piece of paper would obviously overlap each other when their areas or numbers are shown by way of circles. The reduction of scale no doubt leads to the elimination of overlapping in some cases but it is achieved at the cost of cartographic reality and comprehension.
was made keeping in view the regional averages, the span of figures and their frequency within a range. The aim has been to achieve meaningful simplified areal patterns and also not to sacrifice the statistical truth while portraying reality. In view of convenience and practical aims the maps have been prepared mostly in coloured shades.