The presence of men anywhere is thus essentially transitory and changing. It is the result of double evolution. The growth of populations is in the first place a function of the demographic factors which are part of field of population geography: marriage, births, illness, deaths, age and sex composition—these are not just accidental: when one has evaluated them, one cannot explain them without again considering the physical, biological, economic, technical and psychological factors. The combination of these demographic factors demonstrates some of the fundamental characteristics of population like population growth, age composition, fertility, mortality, mobility etc.

Human societies exist and change, but they also active in impressing their mark, with greater or less force. On their own environment—houses, forest clearings, cultivated fields, factories, routeways. What are these activities? How can man guide them towards a successful end? How are they distributed within a society? Are they adopted to the natural condition or how are they supported? Are they adopted to the natural condition or how are they supported? To answer these questions it is necessary to know not only the age and sex composition of the group being studied but also something of their health, their physical aptitudes and their technical and intellectual equipment, and in addition the natural and amplitude of their action and state of their relation.

Recently, Wilber Zelinsky (1966) defines the 'population geography as the science that deals with the ways in which the geographical character of places is formed by and in turn reacts upon a set of population phenomena that vary within it through both in space and time, as they follow their own behavioral laws, interacting with each other and with numerous non demographical phenomena'.

Peter Haggart (1965) emphasised the locational order shown by the phenomena and has studied traditionally as human geography. In his work he deals with settlement as one of the models of locational structure.

Roots of Population Geography:

It will be argued here that the nature of contemporary population geography owes more to the radical changes in approach and method operating throughout human geography in the 1960's and 1970's than to the particular emergence and development in the 1950's of population geography as a recognised branch of geography; yet these early roots must at least be acknowledged and traced briefly. In authoritative review of the evolution and nature of geography, Hartshorne (1939) and Woodbridge and East (1951) make not a single reference...
to population geography, thus indicating the late entry of population geography into the recognized systematic branches of the subject. Zelinsky (1966) attributes this to the late arrival and modest impact on the academic scene of demography (compared with, for example, the role of economics in stimulating economic geography) and also to a dearth until fairly recently of population statistics, especially for sub-national areas. Another factor would be the strong interests of many of the leading human geographers like Brunhes and Demangeon in settlement geography, where the distribution of population was studied through what was thought to be the more geographically acceptable medium of the cultural landscape. Population per sex was relegated to consideration in the more sterile forms of regional geography as part of a Place-Work-People chain, with a naive implicit assumption of unidirectional causation in that the physical environment was thought to strongly influence economic activities, which in turn controlled population patterns.

It was in the early 1950's that population geography finally emerged as a systematic branch of geography in the sense that it dealt with a recognizably distinct group of phenomena and systematically related process, the study of which involved a particular form of training. Much of the credit must go to Trewartha, who used the platform of his presidential address to the Association of American Geographers. He argued that population was 'the pivotal element in geography, and the one around which all the others are oriented, and the one from which they all derive their meaning '. Other important formative statements were made at this time by George P. (1951) and James synthesizing introductory texts appeared in the 1960s. Illustrative of growth in the subject at this time, papers in population geography increased from 3 percent in 1962 to 13 percent in 1972 of papers presented at the annual meetings of the Association of American Geographers, and from 5 percent to 12 percent at the same time of papers in the leading American geographical journals. Spatial distribution and areal differentiation of population attributes were clearly the unifying threads within population geography at this time. Thus Trewartha (1953) saw its purpose as 'an understanding of the regional differences from place to place in the number and kind of human inhabitants'. The role of the population geographer was regarded by Zelinsky (1966) as studying 'the spatial aspects of population in the contest of the aggregate nature of places', present environment context'. More explicitly, Clarke (1956) stated that the population geography is concerned with demonstrating how spatial variation in the distribution, composition, migrations and growth

of populations are related to spatial variations in the nature of places.

In these traditional approaches a focus on spatial distribution was thought sufficient to distinguish population geography from demography, which is much more concerned with the intrinsic nature and universal attributes of population and with a temporal, rather than spatial, dimension. But a problem had always existed in specifying population attributes appropriate for direct study by the population geographer. There is agreement on a core comprising distribution, density, age, sex and marital composition, fertility, mortality and migration, but opinions differ widely on the inclusion of attributes like occupation, religion, language and ethnicity. A neat rule-of-thumb way of circumscribing the field, suggested by Zelinsky (1966), is that attention should be confined to those human characteristics 'appearing in the census enumeration schedules and vital registration systems of the more statistically advanced nations', but inevitably there are data recording variation between such nations, and, more critically, there is no theoretical justification for the suggestion.

Two questions have dominated the traditional approach of the geographer to population study: where? and why there? the first has been responsible for considerable work in observing, identifying and above all, depicting patterns of spatial distribution. Mapping of cross-sectional patterns thus dominated the early work in population geography well exemplified by James (1954)\textsuperscript{12} devoting more than three-quarters of his discussion of research frontiers in population geography to problems of mapping. Various commissions of the international geographical union have been active in this area (William - Olsson 1963, Prothero 1972, Kormoss and Kosinski 1973) and many geographers have developed considerable expertise in population mapping, prompting one human ecologist, worried about the narrow focus of his discipline at one time on the mapping of social phenomena, to exclaim: 'It is something difficult to understand why this kind of work should be called anything other than geography, accept possible - out of difference to the geographers - because of the inferior cartographic skill which is often exhibited' (Hawley 1944).

Why there? takes the population geographer's approach a step further into an essentially ecological field, since 'the areal facts of population are so closely to orchestrated with the totality of geographic reality' (Zelinsky 1966). Consequently, the analysis and explanation of complex inter-relationships between physical and human environments on the one hand and population on the other... is the real substance of population geography' (Clarke 1965). But for some time there has been a nagging unease among populate geographers.

about what some regard as inadequate theoretical and analytical rigour in much of their traditional work. The problem has been addressed explicitly by Woods (1979)\textsuperscript{13} in his attempt to introduce population geographers to a wide range of analytical methods from formal demography.

**Modern Population Geography: Its Changing Emphasis:**

The spatial and ecological approach to population phenomena remains the dominant and distinctive dimension of population geography, but the practice of the subject has changed appreciably in response to the winds of conceptual and quantitative change which have swept through human geography in the last two decades. Nearly all of these changes were introduced and developed in branches of the subject outside population geography, most notably in economic and urban geography where the new outlooks and procedures were derived from other social science disciplines, but their take-up by population geographers has been rapid and substantial - so much so that the methods they adopt have become less unique to demography and population geography, and more representative of the methods widely practiced throughout human geography. Some might regret this as eroding the reason d'etre of population geography, but an alternative view is that such integration of methods and communality of ideas augurs well for the health of the greater body, the parent discipline of geography. Indeed, this brings us back to an early statement by James (1954): 'To recognise population geography as a distinct topical specialty is not to think of its as separable from whole field of geography. ' Several stands of methodological transformation can be identified, although they are obviously more interactive and less compartmentalised than the following list suggests.

**Quantification:**

The traditional geographical means of presenting and analysing population patterns has been essentially cartographic. Thus 'the map is the fundamental instrument of geographic research ' (James 1954), with particular reliance on dot maps for population distribution and on choropleth maps for the distribution by area of population characteristics. The nature of such map as essentially graphic devices greatly limits their use as analytical tools, and for explanation of patterns population geographers have often resorted to subjective and unreliable visual comparision of distribution in an attempt to assess correspondence and possible causal connection. But with the growing awareness of quantitative methods within geography, an

alternative means of describing numerical distribution within space has been adopted increasingly - the matrix - since this offers superior opportunities for subsequent analysis. A matrix is an ordered array of numbers, and general form of a geographical data matrix. The statistical analysis of areal based data sets is taken a step further in to the realm of multiple correlation and multiple regression (Johnston 1978)\(^{14}\) by those population geographer who seek relationship between one dependent variable, whose spatial pattern they are seeking to explain, and several hypothesised independent variables additional examples of statistical methods increasingly adopted in population geography.

**Computer graphics:**

Increasing access to and familiarity with computers has stimulated the adoption, not simply of advances statistical methods, but also of automated cartography. Population geographers have benefited from the use of computer mapping systems like SYMAP, which produces choropleth and isopleth maps by printing or over-printing characters or symbols to produce required densities. The advantage over conventional hand-drawn maps are essentially in accuracy and speed of production when maps of several variables are required for a common areal base, thus allowing the initial programming and data preparation time to be effectively spread.

**Models:**

Much of the traditional work in geography adopted a descriptive, historical approach to what were considered to be unique situation, but growing familiarity with the methods of physical and social sciences has encouraged geographers to seek assiduously for patterns, regularities and order in space. This approach is expressed in the formulation and testing of generalizing concepts, law-statements and, above all, models. A model may be regarded as a representation of reality whose purpose is to give 'a conceptual prop to our understanding, and, as such, provide a simplified apparently rational picture for teaching and a source of working hypotheses for research' (Hagget 1972).\(^{15}\)

The response of population geographers to this search for regularity was, initially, a qualified and hesitant one. Thus James (1954) described the important pioneering of Stewart (1947)\(^{16}\) on a formula to describe population grouping around urban centers in these terms:

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'As a device for uncovering some kind of theoretical order in the process in particular places. Likewise, Zelinsky (1966) warned that the complexity of population patterns 'denotes relatively strong individuality for specific area and wide. If potentially explainable departures from predicted patterns. There may, then be no simple formulas to explain the geography of the world’s population; at best, only useful fragments of such laws may be available.' But more recent work in population geography, particularly in the study of migration as a form of spatial interaction, has conformed to the regularity-seeking trend in geography as a whole, as Zelinsky’s own work (1971) on the mobility transition demonstrates.

**Process Study:**

There has been a growing awareness in human geography that too much attention in teaching and research has been given to the observation and identification of spatial patterns and too little attention to the process which create and subsequently modify such patterns. More it is being appreciated that form and structure—the static’s—are dependent on process and spatial interaction—the dynamics. Indeed, 'in proper perspective, the distinctions we make between spatial process and spatial structure disappear because they are based upon a limited time perspective'. Process and structure are, in essence, the same thing. When we distinguish spatial process from spatial structure we are merely recognising a difference in relative rapidity of change... Properly considered, the spatial structure of a distribution is viewed as an index of the present state of an ongoing process' (Alber, Adams and Gould 1971).

Accordingly, geographers have become reluctant to infer process from structure, but ever more anxious to research the nature of the formative processes, not simply to explain past and present patterns but also to provide the basis of sound forecasting. Moreover, an important logistical advantage noted by Brookfield (1973) is 'our fundamental shift away from the study of differentiation toward that of process carries with it liberation from any blanket - like constraint of scale in defining a geographical problem. The appropriate level of resolution becomes that at which the relevant process may best be recognised and analyzed. 'Writing in 1967, Heenan (1967)' argued convincingly that 'population geographers have hitherto tended to concentrate their interest very heavily upon the end product or summation of'

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of change in preference to the study of those dynamic processes whereby change is wrought. But more recently population geography has been among the most responsive branches of human geography to the new emphasis on process-oriented study. A collection of papers of population geography on Demko, Rose and Schnell (1970) is clearly designed to place reader attention on the process dimension, as are reviews by Clarke. The structure of this book has been designed specifically to recognise the prime explanatory importance in contemporary population geography of the dynamic components-fertility, mortality and migration-and the processes that fashion them; it is their spatial and temporal interaction which produces changes in population numbers, distribution and composition. Interaction is all important, and none of the dynamic components and their associated processes can be studied effectively in isolation. Consider, for example, how appreciable emigration (selective in terms of young male adults) from congested famine-ridden Ireland in the nineteenth century promoted in the age-, and marital - structure of Ireland which in turn had repercussions on the level of birth, death and marriage rates and on wide range of social and economic structures.

It has been the spur of process study that has stimulated the theoretical, model-based and simulation-oriented work on the spatial diffusion of ideas, behavior and technology which arguably has been one of the very few significant strands of indigenous theory developed within geography, as opposed to theory derived from other sciences. Diffusion studies of the type pioneered by Hagerstrand (1968) have a clear relevance to an understanding of many of the key demographic processes. It is possible, for example, to consider, although not necessarily to accept, that spatial patterns of both fertility and mortality reduction reflect the spatial diffusion of innovations like contraception knowledge and public health technology, with diffusion from metropolitan innovation centers being controlled by spatial and urban hierarchical proximity.

Behavioral Geography:

As a response to what some geographers regard as the excesses of macro-level deductive theorising, of mechanistic qualification and of spatial fetishism, links are being forged increasingly with the behavioral sciences in order to appreciate better how the decisions which collectively form the basis of geographical processes and patterns are made. This approach has been extensively and fruitfully by population geographers in studies of the socio-

psychological determinants of migration - one of the most overt expression of spatial behavior. Wolpert (1965) provided the seminal geographical work in this field in his attempts to model the behavioral processes underlying the migration patterns which traditionally had been analysed by spatial scientists using little that aggregate census data.

Despite a widespread satisfaction in geography with the intellectual rigour imparted to the subject by recent conceptual and technical developments, there exists and equally widespread concern that the subject has not been contributing powerfully to solving the pressing problems facing mankind. House (1973), maintains that ‘particularly disadvantageous to geography is the widespread inability or disinclination by administrators to view problems, decisions or policies in a spatial frame work, or even as having an important spatial implications.’ Yet others, like Smith D.M. (1977) feel that ‘the spatial or areal perspective imbused by geographical training may itself impose blinkers that obscure the operation of “non-geographical” variables.’

Population geographers in the Soviet Union have been centrally involved in settlement and economic planning (Clarke 1973) but in the west their applied role has been more tentative (Udo 1976). Yet the modest growth in applied and socially reverent work can be illustrated by reference to three areas. First effective development planning in the Third World is enhanced by a full appreciation of the spatial population patterns traditionally prepared by population geographers from census and other data; examples from Africa include the work of Hilton (1960). Second, the geographer’s interest on optimisation or ‘bets location’ has important applications in the population field. Work by Robertson (1972) is an example of the application of statistical and cartographic methods to a matrix of population data on a regular grid to give precise yet flexible answers to problems of facility location when maximum accessibility of population to facilities is desired. Third, significant contributions are being made by some population geographers to the construction of spatially desegregated population forecasting models (Rees and Wilsons 1977).

Ideology:

Often associated with calls for a more socially relevant, human and welfare-oriented approach in geography have been strictures about the value judgements implicitly adopted in academic studies. Harvey (1974) has demonstrated powerfully, with particular relevance to the active debate in the global population-resource balance, that in geography as elsewhere there is no such thing as an ethically natural scientific methodology, and Hurst (1973) has accused human geography of largely sorting the status quo and predisposing people to an acceptance of the social ills accompanying capitalism. Perhaps the area of population geography most influenced by a modern radical perspective has been that of development related population processes in the Third World. Brookfield (1973) has shown that geographers, because of their deep commitment to Eurocentric values, have uncritically viewed development as a desirable process of diffusion of Western culture and technology to a less favored areas. It is now being recognised that alternative explanatory models are available, notably the in equality-perpetuating 'core-periphery' or 'dominance-dependancy' relationship, and that goals like the achievement of self respect and self reliance might be considered no less desirable in meaningful development process than material gain. One radical geographer has also argued with reference to the third world that 'the poverty which is regarded as symptomatic of reckless population growth is rather a structural poverty caused by the irresponsible squandering of world resources by a small handful of nations' (Buchanan 1973) and that the current western promotion of birth control programs arises less from genuine humanitarianism than from the attempt of white northern imperialism to preserve the global status quo and its own privileged access to the resources of the dependent international periphery. Whether or not a Marxist mode of analysis gives more perceptive insights to population study than those grounded in capitalism in perhaps a less important matter to population analysis than the need to at least recognise and acknowledge the guiding framework of one's ideology and values.

Recently Punjab University has conducted a thorough population study which seems to be a major landmark in the study and development of population geography in India. In subsequent years gradually many other postgraduate departments in the colleges and universities in the country started teaching population geography and conducting research in problems relating to it. As such now, it stands out as one of the major subdivisions of the discipline of geography in India.

Population geography of India by Bhattacharya (1978)\textsuperscript{32} is a recent work, where
the author deals with the aspects such as distribution, migration, marital status, literacy, religious
composition, ethnic composition, linguistic composition of population on the basis of census
data of 1961. The author clearly shows how these aspects have an impact upon the social
bearings of the people.

Mishra R.N.\textsuperscript{33} in his paper on "Growth of Population in Lower Ganga Ghagra
Doab" explains that the growth in population has three modes of increase. 1) The areas of
maximum growth 2) The areas of medium growth and 3) low growth. At a glimpse of his
paper, it is realised that the problem of lower Ganga Ghagra Doab, the means of subsistence
is totally unable to feed the extra burden of population. The variation of population is closely
associated with the carrying capacity of land, nature of soil, irrigation facilities, nature of crops,
means of trade and commerce, low death rate and high birth rate and full control over diseases.
Goswami D.B.\textsuperscript{34} In his paper "Challenging agro-land use and growth of population in India"
explains the general distribution of land for its permanent pasture and other grazing land and
cropped area in India. An attempt has also been made to assess the possibilities of getting
more land for agriculture purpose, as well as securing intensive uses for more agricultural out
put. The effects of increasing population pressure of density of population per square kilometers
on area of agro-land use types like forest, permanent pasture, grazing land, culturable waste
land, fallow land and cropped area (in India) also have been analysed in his paper. Tiwari
R.C. and Nandalal\textsuperscript{35} in their paper on "Growth and structure of Rural Population in Raibareli
District" explain that if the present population growth continues it will bring more poverty and
distress to rural areas forcing out the village folk to move towards neighboring towns for
earning their livelihood. They opine that efforts should be made to restrict the of population
by pragrating family planning measures and bring down birth rate. They say that attempt
should also be made to mobilise additional resources by introducing new farming techniques
and developing secondary source of livelihood.

\textsuperscript{33} Mishre R.N. (1970) : "Growth of Population in Lower Ganga Ghagra Doab" Ghorakpur University. India
\textsuperscript{34} Goswami D.B. (1990) : "Challenging agro-land use and growth of population in India " Geographical
Review of India, Vol 52 no. 4 pp 16-26
A journal of the Association of population Geographers of India. vol pp11-19.
Balwinder Singh Waraich\textsuperscript{36} in his paper explains the spatial variations in growth rate were associated largely with migration differentials in the study area. Similarly, there were wide differentials in the population growth rate between scheduled castes and non-scheduled castes and among different religious communities. The proportion of different castes and communities to the total population changed due to uneven growth rate. Net population growth rates were modified by the magnitude of in and out migration. The mechanisation in agriculture, increase in population pressure on agriculture land, rise in literacy rate, awareness and better ruralities towards urban areas to seek jobs. Different demographic responses by different caste and communities clearly show graphic change. Considerable variations were reported in the growth rates of various communities similarly striking variations emerged in the growth rate of scheduled castes and rural population.

Swarnjit Mehta and Avatar Singh Matharoo\textsuperscript{37} in their paper "Spatial Pattern of population change in the Bist Doab" opine that, the spatial patterns of population growth in the region are a manifestation of the spatial dimension of socio-economic dynamism. The rural and urban areas do not differ marked in matter of broad pattern of population change. After all the growth behavior of an individual urban center generally cannot be at a much variance from that of larger rural tracts in which it is located. That is why their study has been discussed with references to the general growth type to which they belong vocationally. There have been significant spatial variations in the growth rate of rural and urban areas. Rural population showed much under variations ranging from net decline in some villages. Broadly speaking the upland plain and the dissected foothill plains are conspicuous by high densities. By contrast the flood plains and the hilly tracks are characterised by low density. The impact of physical resource base on the regional pattern of growth has been broken at local levels. In this respect urban centers and highway have played a major role in shaping the spatial pattern of rural population change in the "Bist Doab region", rural tracts, adjoining large urban centers such as Jalandhar and Phagwar and a long major highway, recorded, explosive growth in their population during the decade. Through what process the big urban centers themselves and the rural tracts which adjoin them and also some other predominantly rural tracts receive larger share of development inputs and recorded faster growth in their population, while other areas continue to witness a depletion in their resource base are some of the questions which need further probe in studies of population growth of Bist Doab.


Prabha. S. Shastri\textsuperscript{38} in her paper on "Spatial Variation in population growth of Vidarbha", analyses the spatial variations in population growth in Vidarbha region. The pattern of population growth can be revealed when it is treated with a spatial perspective. Problems of various dimensions emerge from the differential rate of population growth and increase in population density. The population changes are studied on three levels in the paper namely regional, district and thansil, by different statistical methods and maps. On regional level, the centrographic measures are calculated to describe the centrality of population of the region in selected years, on district level, change in the proportion of population in each district to total population of the region, lastly population growth regions are demarcated by studying the increase in population on thansil level.

Mathur R.N. and Saharia R.B.\textsuperscript{39} in their paper on "Growth of population in Uttar Pradesh" reveal that Population growth attributed to many related factors such as high birth rate, low mortality rate, in-migration, lower literacy rate, slow industrial development and more persons engaged in agricultural pursuits. More important and alarming is the fact of decline in the percentage of workers. This may be related to the migration of working force to Punjab and other states and partly due to less involvement of women at various types of activities. It is therefore, suggested by them a programmed plan to curb the birth rate. An all out effort is to be made to educate the masses through compulsory primary and adult education for population, and to carry out rapid industrial growth exploiting all the available natural resources in the state.

Mehar Singh Gill\textsuperscript{40} in his article "Patterns of growth of rural population in Hissar district - Haryana" explains that the pattern of growth of rural population in Hissar district mainly determined by availability of irrigational facilities, primarily by Bhakra Canal water. Whereas high growth of population has been a characteristic feature of areas with frontier conditions and those adjoining the rapidly growing urban centers, relatively low growth has been in the tracts characterised with dense population and poor agricultural economy. Based on the growth rate of rural population four types of area are distinguished in Hissar district. Namely, areas of rapid increase of rural population growth, area of moderate increase of rural population growth, area of relatively low increase of rural population, and areas of absolute decrease of rural population. Growth rates of various religious communities differed widely from each other reflecting their varying migrational propensities. The number of scheduled

caste people increased faster than the rate of their growth bringing out their immigration mainly to areas of new settlement and the tract near the main urban centers. These changes, however, are spatial differences depending upon area to area, variations in the interplay of the various economic and demographic factors.

Chandana R.C. 41 in his paper "Growth of population in Haryana 1961-1971" highlights that the unprecedented rate of population growth experienced by Haryana in sharp contrasts to the adjacent areas has brought out intra-state contrasts in the population growth of different population groups inhabiting the state. The study discovers and interprets the intra-regional disparities in the population growth of Haryana. The high population growth of Haryana in contrast to that experienced by Punjab, Rajasthan and Uttar Pradesh, was largely due to its relative high rate of natural increase and a significant net in migration to the state from adjoining area in response to the progress made by the state both in the field of agriculture and industry. From among the various population groups, the Muslims and scheduled castes recorded a high growth mainly due to a relatively high rate of natural increases among them. A negative correlation between density and growth and a positive correlation between proportion of scheduled caste population and growth rate have been observed.

Gopal Krishana 42 in his paper on "Distribution and density of population in Orissa" explains that the spatial variations in distribution and density of its population are mainly associated with factors related to agriculture. Among the various physical factors, the role of relief has been paramount and to a great extent the demographic relief of Orissa is inverse of its topographic relief. However, the factors of political history, cultural background, economic systems and external relations have been also potent in influencing the distribution pattern of population. Broadly speaking, the density of population and the proportion of tribal population are inversely related to each other in Orissa. During recent years, the regional personality of the state has undergone some significant changes with the extensions of irrigation, exploitation of minerals, development of industries and generation of hydroelectricity. It has set in a process of redistribution of population in the state. There is some out-migration from the densely populated coastal plain to the interior Orissa offering new economic opportunities. It is in a bid towards attaining a demographic equilibrium in relation to resource base of different parts of the state. The areas notable for in-migration are, the Hirakud project territory, the Rourkela-

Rajanpur industrial region and the Dandakaranya tract where some land has been reclaimed for agricultural settlement.

Mukharji A.B. 43 in his paper on “Regional Contrasts in Distribution Density and Relative strengths of Scheduled Caste Population in Andhra Pradesh”, feels that schedule cast people have largely been used by the higher castes for their economical and social prosperity and they themselves have remained poor in the process. The regions of high, moderate and low proportion of scheduled caste population in Andhra Pradesh have been identified, by him. The concentration is observed to be closely associated with the quality of agriculture, industry and other economical activities that are conductive to large employment.

Shinde. S.D. and Shrikhane. S.S 44 in their article on “A spatial analysis of rural population of Maharashtra state”, explain the rural and physiological densities of different areas of the state. The paper reveals that the productivity of the land and the security in agriculture have great influence upon the distribution and the density of rural population. The heavy concentration of rural population is found in river valleys. The distribution and the density of population is closely associated with the food production possibilities. Western Maharashtra supports more rural population as compared to Vidharbha and Marathawada regions. The rural densities are highest in cultivated river valleys and the rice lands. Population of the areas where irrigation facilities are being developed, are likely to grow in future.

Tiwari R.C. 45 in his paper on “Temporal and spatial trends of population in the lower Ganga-Yamuna Doab”, explains that the area is a thickly populated part of the country which is witnessing vigorous growth of rural population in recent years. It has reached such an optimum level of population growth that its rural resources are overburdened. If this present trend continues, it will bring more poverty and distress to the rural areas forcing out the village folks to move to neighboring towns for earning their livelihood. Efforts should, therefore, be made to restrict this menacing growth-trend by propagating family planning measures and bringing down the birth rates. Attempts should also be made to mobilise additional resources (such as introducing new framing techniques, developing secondary sources of livelihood like village and small-scale industries etc.) for all round up-liftment of the villages, so that this trend of migration could be reversed and rural areas could be able to bear greater pressure of population in coming years. A massive programme of rural electrification, providing linkage

facilities (in the form of all weather metalled village roads), improving village sanitation and housing conditions, educating village folks, restoring tiller’s right to the land and introducing new social and cultural reforms should be launched to give fillip to the village economy and to make rural areas attractive and live. Ram Payare in his paper on “Spatial distribution and temporal trends of population in Bundelkhand region”, explains the regional disparities in the distribution of population numbers and has tried to focus on the salient features of the differentials rates of population growth during the twentieth century. The region exhibits an example in which one can see wide variations in the population rush, so that when one moves from north to south population steadily declines. While from west to east it declines over certain regions, but suddenly increases towards the east. As regards growth, Jhansi has witnessed relatively faster growth rate than other districts. Similarly, the population pressure also seems to be more pronounced in plains than upland parts of the region. It is felt that the region should be planned such way that its resources, which have not yet been fully utilised, may get due attention and the imbalance in growth in effectively checked.

De and Bera in their paper “Spatial aspects of population distribution in Bankura District”, explain about the rapid growth of population caused by number of socio-historical factors. Rapid population increase in backward district like Bankura where standard of living is comparatively low, make it imperative to allocate a large share of national revenue. The low allocation of national revenue severally limit opportunities for improving the living standard of the population. Unemployment and hunger still pose a threat for the existence of thousands of people. At present, family planning programme of one type of another are being implemented in the district, However, success in efforts to bring down the birth rate and limit population growth depends directly upon district’s social and economic development. Agricultural, industrial, mineral resource planning and population planning are a must in the district for economic development.

According to Shinha’s paper “Population Analysis in Orissa”, the fertility, mortality, and migration are the three dominant factors that govern the growth of population. The frequent changes in the growth of population in the past decades and disparity in the present fertility and mortality rates can not be successfully applied in forecasting population trends for future years to come.

Arun Kumar Singh in his article gives an account of the "Population growth, sex-ratio and age structure of five cities of West Bengal" namely: Burdwan, Hooglychinsura, Howrah, Chandernagar and Durgapur. The analysis of population growth varying sex ratio and age composition, however crude of gross, these might have been clearly exhibited the essential facts regarding five cities of West Bengal. The most fundamental of these according to Arun kumar Singh is the fact that each one of these cities has discrete urban experience accommodating different forms of urban economics and interacting the phenomenon of population growth, sex-ratio and age structure in distinctive styles.

Ayyar N.P. and Shrivastava D.S. in their article explain urban and general sex-ratio patterns, sex-ratio and occupational structure, urban sex-ratio and SC/ST population, and sex-ratio and class of towns. Sex-ratio not only influences marriage, birth, and death rates, but many economic and social relationship are also closely related to the balance or disparity between males and females.

Mehta S. and Kaur G. in their paper on "Rural Urban Differences in sex-ratio of Rajasthan" explain about rural-urban differences in Rajasthan which is characterised by low sex-ratio both in rural and urban areas, being the lowest in India. Assuming little differences in sex-ratio at birth both in rural and urban areas, sex selectivity have been found inversely related to the growth rate of urban population. Generally, urban sex ratio is lower than rural because of male selective inflow of migrants to the urban centers. Urban sex-ratio has been found to be higher in areas characterised with predominately small and stagnant towns and in those where the Marwris, and Jats and the Rajputs are predominant. In contrast, urban centers with cantonment, mining and industrial centers and mass educational centers reported significantly low sex-ratio.

Siddique N.A. and Qazi. M. Ahmed in their article "Regional variation of the sex-ratio in the population of Haryana", explain about analysis of the sex-ratio's at the district level and major religious groups with their rural urban break up. The population characteristics actually varies from district to district. The ratio of total population of a district is different from that of either its rural or urban population. The population is classified on the basis of

52. Siddiqui N.A. and Qazi M. Ahmed (1971); "Regional variation of sex-ratio in the population of Haryana", The geographer vol. 18, pp. 99 to 114.
religious composition which shows regional variation of sex-ratio for the same religious group and within its rural and urban components. The study reveals that there are definite regional patterns of distribution of the sex-ratio. Even the study at district level shows clearly that sex-ratio vary with the population groups based on the religious as well as rural urban composition. The smaller the population group, the greater is the range of variation of the sex-ratio. Similarly the areas which have higher urban percentage in the population have lower sex-ratio but it varies in the different religious groups within the same area.

Sharma J.C. in his article on “Sex composition of urban population of Rajasthan”, explains the causes of sex-ratio in urban area. He divided causes into three groups i.e., Biological, social, and Economic. But these deterrents of sex-ratio do not operate with the same intensity everywhere, nor do they act with equal force at all times. The uneven nature of these forces and their inter-action create differences in sex-ratios. Author broadly divides Rajasthan’s sex-ratio regions on the basis of differences in sex-ratio: as “areas if exceptionally high sex-ratio”, “areas of high sex-ratio, areas of low, areas of very low sex-ratio and areas of moderate sex-ratio”. In each group of sex ratio author explains the causes of the urban sex-ratio in Rajasthan. Prem Sagar in his article explains the spatial variation in literacy and development of the population in developed countries has achieved in the final stage of literacy transition. The population of third world countries like India is still characterised by a wide range of both literacy. The chief objective is to examine the disparity in both time and space.

Gosal G.S. and Gopalkrishna in their article “Occupational structure of Punjab’s rural population” reveal that occupation is of a paramount importance since it exerts vital influence on several personal, social and demographic characteristics. In turn, it is often a relation of variety of cultural traits of workers, especially in country like India, where the cultural mourning have strong bearing on what a person is to do for earning a livelihood. In this paper study is made on areal perspective of the occupational structure of Punjab rural population. Because of lack of participation of females in occupational work, continuing out-migration of active workers in excess of the incoming migrants and swelling of population in the 0-14 age group, the proportion of workers to total rural population in Punjab has only 36 per cent which is lowest in India. There is inverse correlation between diversification of economy and female participation.

Bhardwaj and Harvey\textsuperscript{56} in their paper on "Occupational structure of scheduled castes and general population of the Punjab: A comparative multivariate analysis", this study attempted to determine the extent of occupational convergence between the S.C. and General population in the state of Punjab. Besides multivariate analysis of variance, a special index of occupational divergence was developed and apply to the S.C. and G.P data collected from the 1961 census of India. The analysis showed that in both rural areas occupational convergence was most evident in non household industries. It also clearly illustrated the projection in to the urban setting of ascriptive rural occupational patterns. Of more practical importance was the conclusion that, in the long run emancipation of the S.C cannot be effected by "Protective legislation", but by the establishment of more non traditional avenues of employment. Economic wellbeing of the S.C, it is argued, is a necessary condition to generate a de facto egalitarian social mix.

Swaminathan E\textsuperscript{57} in his paper on "The occupational structure of small towns in Coimbatore district in Tamilnadu: A factorial approach", explains small towns of academic interest because they act as service centres for the rural population on the one hand and provide links to the urban centres on the other hand. The small towns also constitutes the residential and or industrial suburbs of large towns and cities. Hence an analysis of occupational structure of the small towns helps in the understanding of their service character. This paper aims to discover the underlying dimensions of the occupational structure of the small towns in the Coimbatore district of Tamil Nadu. There are 40 small towns in the district. About 20.6 percent of the urban population of this district lives in small towns. The analysis reveals the existence of five dimensions underlying occupational structure of small towns. They represent five levels of occupational hierarchy of small towns in this district. The 'principal component' technique employed in the present investigation has given encouraging results. However, it is felt that the same way may be tested in other regions also.

Alka Goutam \textsuperscript{58} in her paper on "Pattern of population distribution and occupational structure in upper Sutlej catchment area", explains that the physical conditions exercise a most important influence on the distribution of population in human settlements. Large area of harsh climatic and steep inclines are uninhabited or carry few human settlements. There is


\textsuperscript{58} Goutam. A. (1973): "Pattern of population Distribution and occupational structure in the upper sutlej catchment Area".
clustering of habitations in the region. Most of the settlements in this area exist on high altitudes along river bank and its tributaries. Here population distribution is affected by physical conditions where by one can notice small and medium size settlements, in which worker's percentage is among the highest agriculture constitutes the back bone of the economy of the area, but being insufficient it is supplemented by small scale industries and other miscellaneous jobs.

Roy B.K (1973) in his paper “Migration pattern in Uttar Pradesh” attempts to analyse some aspects of migration, based on census data for four district of study region, to understand the quantum of migration. Having a perspective of the evaluation of census data, an attempt has been made to present some analysis of migration pattern of selected settlements on the basis of a data collected by the author to highlight sex, age and duration, social set-up and net movement of migrants in general. Further investigation may be useful to determine migration-industrial programme relationship, socio-economic aspects of migration differentials i.e. urban to rural, rural to urban, urban to urban etc, and possibilities to create migration opportunities in the country.

Jayaraman (1985) in his article “Seasonal migration of Tribal labour: an irrigation project in Gujarat” observes that every year, once the agricultural activity comes to an end after the harvesting of monsoon crops, the incident of out migration from Panchamahals tends to start as the householders do not have any other economic activity to follow at the place of their origin. Most of the migrants are land owners. The variations in the actual earnings per household at origin and the expected earnings at the destination bear a significant relationship migration.

Roy B.K. (1980) in his paper “Internal migration in India’s manpower resources” brings out the characteristics of migration streams in India based on 1971 state level data. The analysis of four streams of migration of the one-third population of the country, which is considered to be migrant according to birth place, reveals some sociological imbalances in the regions of out-migration. The short distance migration is on account of social factors and is dominated by the female population. The long distance migration is prompted by economic incentives and is dominated by the males. Besides, large human agglomeration act as centers of pull for being important nuclei of man power and resources.

61. Roy B.K (1980): “Internal migration in India’s manpower resources”. Heritage Publisher New Delhi, pp 160-178.
Savanth and Yusuf Khan (1991) in their article “Variations in the distribution of immigrants in Maharashtra” reveal that factory workers, population per telephone, railway network and road network are important parameters in order of the importance influencing the percentage of immigrants in the state of Maharashtra. The state of Maharashtra has received larger proportions of immigrants in urban area particularly from the developed countries of the world. It has received higher number of females from African country due to return family immigrants. Among the various socio-economic factors, population per bed in hospital, number of post and telegraph offices and population per telephone have shown inverse relationship with size of immigrants, while the factors which have positive bearing upon immigration are the factory workers, railway network, road density, level of urbanization, number of commercial banks as well as institutions of higher leanings.

Geeta R. and Nagabhushanam in their paper “Pattern of change of in-migrants in Andra Pradesh” reveals that in-migration is the process of immigration to place of which one is not a native for the purpose of permanent residence. In-migration is an important aspect of migration studies, because it is one of the important components that determine the growth rate of population. As long as economic pressure plays an important role the urban areas become attractive to rural people who find it difficult to earn their living because of lack of job opportunity at their places of origin. Among social factors, the desire for further education and family reasons act as migratory motives. Regarding the family reasons, people move either to follow the head of household or for marriage. The in-migration between the rural and urban areas are probing complex problems leading to over-crowding, housing shortages and pollution which have to be tackled scientifically.

Singh R.N. and Chaturvedi R.B. in their article “Dynamics of population growth in Bundel Khand region: A case study”, explain that the region being predominantly agricultural where 90 percent of population depends on agriculture, the danger of population outstripping the means of subsistence in future decades is very obvious. This will create a very high pressure on limited cultivable land and force the people to migrate towards the urban centres and bring storming unemployment situations every where. Therefore, they suggest family planning as the only way out to control and manage population.

Sardar Singh Dhabriya in his article “Utilization of human resources in the Kujbaj cities of Rajasthan” represents the six major regional centers of Rajasthan situated in arid, semi-arid, Aravalli and Hadoti region. The crude participation rates and age specific participation rates have been calculated to know the specific structure of the working population in relation to total population of each city. The age specific male participation rate vary between 85.1 per cent to 77.8 per cent at Jodhpur, while age specific female work participation rate is much lower and vary between 17.3 per cent at Udaipur to 8.8 per cent at Jodhpur. The lower female participation rates in all the Kujbaj cities amounts to heavy loss of female power in non-productive works. The Purdah system and some other social culture and economic reasons are mainly responsible for the lower female participation rates in the Kujbaj cities of Rajasthan. Regional variation in female participation rates in Kujbaj cities of Rajasthan are rooted in the variability of natural conditions in its arid, semi-arid, sub-humid and humid regions, which stretches from west to east. There is an urgent need to increase the participation rate particularly female work participation rate to accelerate the production in factories and fields both of which are symbiosis and to reduce the dependency ratio and create a balance between the workers and the non workers.

Singh G.S. in his study: “The geographic basis of human resources” observes the following: “If the rising tide of population is not checked, or industrialization and immigration not popularized, the future will naturally be gruesome. The U.N.O. is trying to study the problem at first hand. Statistical collations are being carried out, but neither they are easily obtainable nor completely reliable. It is estimated that the world population is rising by nearly thirty million annually. This figure is going to be exceeded with passage of time and the trends of Southeast Asian countries as well as Latin American countries are quite threatening. The population research at Princeton University has forecast that in 2000 A.D. the world population may be over 5,000,000,000 and according to Stamp the figure would 1,266,000,000,000 in 2500 A.D. It is only natural that populous communities will seek more voice in international politics with increase in the means of communication. If Asia becomes industrialize like the West, the centers of “Power” will shift towards the East. Still one may very well wonder if by the time Asia reaches the level of European or American industrialization, which is bound to take some decades, will her population, which shall have grown to fantastic proportions survive?

The cultivable lands of the world are by no means unlimited. More and more emphasis is being placed on conservation. This leads to the assumption that even for the present population,

or the population to be born in the near future, the present resources shall not be indefinitely tapped.

Reduction in the birth-rate, which one may expect to follow, in the latter stage of the “Population Cycle” seems to be a “lasting” solution to our future problem of land hunger that led countries like Italy, Japan and Germany to attack Ethiopia, Manchuria and Poland respectively. In urban areas voluntary birth controls are becoming more and more popular and the industrially advanced North Western Europe is a good example of considerably reduced birth rates. Emigration is another solution but it is not so possible now as in the last century. In the 1882 the U.S.A began passing bills to prevent influx, and by the W.W.I. Period, most “coloured” countries were barred. In 1924 the quota system was adopted favoring only a few countries, particularly Great Britain. That system was abolished last year. The “White Australian Policy” dating back 1885 and Britain’s legislation of 1962 are other examples of check on “coloured” immigration. The bill of Human Rights of the U.N.O. does not approve of the spirit of such checks, and it may help to reduce the racial background of anti-immigration laws. Improvement in technology and production of concentrated foods are that other solution. It is quite a fond hope of some scientists that they should be able to produce enough of such eatables as can last long and have enough capacity to satisfy hunger. This would relieve the world of the fear of Malthusian “Compulsion” gripping us since his theory was introduced in 1798. As the F.A.O has made us believe, about half mankind is already living on starvation diet. Some experts however are quite optimistic: R.M. Slater, of the U.S. Soil Conservation services hopes to increase the U.S. food production by 75 per cent, without any increase in the acreage, just by following improved farming methods, hydroponics, the art of growing plants in water, is a great source of hope to many. A scientist has estimated that the U.S.A would have about a thousand million persons around 2050 A.D. and its density would be like today’s Connecticut State, which is none too crowded. Nobel Prize winner Schordinger feel that it is in the very nature of men to find ways and means to solve the problem of over population, by legislation and by provision of food for the hungry. It shall remain the aim of the political Geographers examine the problem of improving human resource from the national and international point of view. As the preceding analysis shows population is both an asset and a liability. For peace and prosperity, a careful reappraisal of our human resource, preen and potential is necessary.

Be the study of human resource based on its significance as a source of national strength: military, economic or cultural, be it diagnostic or prognostic, or based on international or intra-national locations; there is no disputing of human resource in terms of the pattern of its distribution in relation to other significant locational phenomena, examine their relationship. Measurement, mapping and explanation of these relationships are one of the immediate tasks.
of those interested in the GEOGRAPHY OF RESOURCES, in this case the human resource. Based on census data and fieldwork, a meaningful unit, like a State or a physical region, studies can be organised along the following lines, to begin with:

(a) Human Resource as the basis of national strength
1. Size, quality and sex-ratio of the people.
2. Pattern of distribution: concentrated, uniform, disparate or others.
3. Density type: urban, rural transport-oriented, cultural (per unit engineers, doctors, teachers, etc.)
4. Spatial variations of language, race, religion and other cultural variants.

(b) Projection and Prognosis
1. Increasing or decreasing trends and consequences.
2. Change: quantum and direction in terms of occupational categories, level of training, sex-occupation ratio, etc.
3. Impact of/on man of/on cultural viewpoint.
4. Solution of population problems.

(c) Balance of Power
1. Occupational categories of population.
2. The central tendency (mean, medium, mode, gravity center, etc.) of population
3. Change in central tendency of human resources over a critical period of time in terms of election affiliations and results.
4. Change in central tendency of human resources, over a critical period of time, in terms of its share of mineral resource, power resource, land resource, water resource, cultural resource (craft and skill), etc.

Rao T.V (1989) 67 in his article “Planning for human resource development” explains that Human Resource Development is the process of helping people to acquire competencies. In an organisation context HRD”…is a process by which the employees of an organization are helped in a continuous and planned way to:
- acquire or sharpen capabilities required to perform various functions associated with their present or expected future roles.
- develop their general capabilities as individuals and discover and exploit their inner potential for their own and/or organizational development purposes.

- develop an organizational culture in which supervisor-subordinate relationship, team work and collaboration among sub-units are strong and contribute to the professional well-being, motivation and pride of employees. "HRD process is facilitated by mechanisms (instruments or subsystems) like performance appraisal, training, organizational development (OD), feedback and counseling, career development, potential development, job rotation, and rewards. Employees are continuously helped to acquire competencies through a process of performance planning, feedback, training, periodic review of performance, and assessment of the development needs, and creation of development opportunities through training, job rotation, responsibility definition, and such other mechanisms.

Focus on Human Resource Development:

Ranjankumar Lahiri (1989) in his article "The Philosophy behind human resource development", explains evolutions in agricultural, industrial, social, cultural and economic developments in their natural courses that have witnessed various changes in the sphere of human behaviour, custom, values and also in the working conditions of people engaged in different professions. It appears that during such processes of development, there have always been some spontaneous changes in the pattern of human life. It has further been observed that the pattern of life at its different stages has always tried to invite affluence. With the passage of time, a tendency towards the formation of an affluent society has been developed among people. The formation of such affluent society has again resulted into the creation of various classes of demands, particularly in the areas of obtaining various services towards satisfaction. The development of industrial economy possibly speaks of the greater need for more service to the people. The gradual increasing demand for more services to the people has ultimately given rise to the necessity for larger production and better services to the people. But, as always, production is a function of a combination of inputs-men, material and money. In a similar manner, services are also the functions of human beings and many other associated inputs. All these indicate that of the various resources usually employed in the different development processes, human resource is assumed to the most important and unlimited one. It is probably a more important aspect of achievement than any smooth and effective direction of things to the done. The only thing is that such a resource always needs a little bit of orientation. That is, human resource is

always to be harnessed through orientation in the nature of work and also to be exploited in
the accomplishment of duties.

Verma P.K. (1989) in his study "Human resource development" Says that the
real strength of the country lay in the development of the human mind and body." No doubt
the natural resources is also one of the important factors for the country's development but the
human resource has got its own importance. It is the process of increasing the knowledge, the
skill and the capabilities of all the people in a country. It plays an important part as both means
and ends in the economic development. Actually man is both means and end of production.
The nation can not develop without the effective use of the efficiency of human mind and
body.

India's greatest resource is her people. Development of human resources is not
only a means to economic growth and social progress, it is an end in itself. The development
of human resources is not the same thing as the development of the mineral resources, power
resources or the development of forest resources. We develop mind for the proper use of the
products of the natural resources. In case of human development we develop the human
beings for the benefit of the of human being themselves. That is, the object of development
and the subject for which the development is meant are exactly the same. In the above
paragraph we have realised the importance of human resource development. As such to
keep pace with the country's development it should be organised and managed in a better
manner than any other resources.

Human Resource Development and Management:

The importance of Human Resource Management as an instrument for accelerating
economic growth in any developing country can hardly be exaggerated. The main objective of
developing the economy of the country is to raise the standard of living of the people. Labour
resource or human resource management in a developing economy deserve special study and
attention because in the broader sense, labour taken as the total labour force is the most
abundant resource available in the economy and therefore its sustained and stable growth
depends in a very large measure upon the proper utilization of this resource (manpower) and
in the restricted sence labour constitutes the proper and often exploited section society and
the broader objective of economic development is to raise their standard of life. Organisation
is the foundation of all the management whether it is human resource management or
management for any establishment of all the members of the organisation.

development strategic approaches and experience" Arihant Publishers Jaipur,
India. pp 30-34
Organisation and Human Resource Management:

Organisation has an important role to play in the success of any mission. Organisation is the framework of management because it sets out the dissection and distribution of the total responsibility into relevant sections or groupings for more effective performance. Organisation is the mechanism through which management directs, co-ordinates and controls business. In view of the vastness field of management it is beyond the power of the manager to manage everything himself. He needs the help of persons who can share responsibilities with him. Organisation exists for certain objectives. For example, they may have been set up to provide industrial finance, to export goods and services, to undertake construction work, to engage in mining activities, to render transport services etc.

In order to achieve these objectives both human and non-human resources are engaged day in and day out. Human resources are the active factor of production and non-human resources are the passive factor of production. The human resources which consist of managers on the one hand and workers on the other in conjunction with non-human resources creates goods and services. It is the manager class which is more important than the workers, because it is they who develop the atmosphere of work, design working condition both for the workers as well as the non-human resources. Managers either big or small (i.e., the top level, middle level or lower level managers) renders four important functions-planing, organisation, direction and control. They are grouped into two categories—the thinking function and the doing function. The manager renders these functions through what we call decision making, delegation and co-ordination. Decision making is the most important hallmark of the manager. Managers at the top are more involved in the thinking function and less in the doing function. On the other hand managers at the middle and bottom are more concerned with the doing function and less with the thinking function. In view of the fact that the top manager is the chief of the organisation, he must ensure that all the functions rendered by all the managers big or small under his spread over different levels of organisation hart or physically operating plants separated by distances conform to this scheme of things. This he does through developing an institutional framework which consists of policies, procedures and methods. They in short, are guidelines and detailed instructions to all those persons who are working in the organisation. They are duty-bound to follow these guidelines and instructions because this way of functioning at the chief envisages, can alone lead them to achieve the objectives of the organisation. Therefore, procedures and methods assume their importance. If the chief has devised them scientifically they will help the members of the organisation to achieve the objectives. If not, they will fritter away their energies leading to their failure in achieving the objectives.
Procedures and Human Resource Development:

Procedures are guides to action rather than to thinking. They detail the exact manner in which a certain activity must be completed. "A procedure may be defined as a series of related task that make up the established way of performing a work, giving due consideration to the objective, policy and facilities available including the time, money and manpower. Thus a procedure indicates mainly how each task will be performed. It is tailor-made procedure to achieve particular item of work. It generally applies to those of a repetitive nature. In an enterprise there may be much work of this type. So once a procedure is established, it can be used over again".

Procedure involve a series of tasks required for performing a complete phase of work. Procedures must be prepared by striking a balance between the needs of the situation and the physical facilities of the enterprise. Needs of the enterprise are dictated by its objectives and policies, whereas physical facilities exist in the shape of human and non-human resources (such as man, machine materials and money). Procedures aim at adopting the facilities to the needs of the case. Therefore, procedures must not be idealistic in character, or prototype of other enterprises. As matter of necessity, they must be designed to suit the particular needs and situations of the company and should be perfectly tailor made rather than readymade ones.

Procedures must be followed up so as to ascertain their efficacy. By prescribing one standard way of doing a work, procedures discourage the search for any improvement or innovation in work performance. More effective ways of doing the work may be lost sight of unless procedures are reviewed and appraised from time to time for the purpose of making improvement there in. Policy and procedures are the foundation of management because they help in taking decision in utilizing human and non-human resources for achieving the objectives of an organisation. Hence the importance of effective procedures can not be over emphasized. They must be prepared by striking a balance between the needs of the situation and physical facilities of an enterprise.

Various Approaches to Human Resource Development:

Krishna Mohan Mathur (1989) in his article "Human Resource Development in Administration", explains about different thinkers and scholars that have developed different approaches to human resource development. Mathur "Human resource development strategic approaches and experiences" Arihant Publishers Jaipur, India. pp 55 - 56
concepts about HRD in accordance with the needs of various societies. Sharu Rangnekar has identified these approaches as follows:

1. Queen Bee approach in which one particular individual like a chieftain, king or tribal leader utilises all available resources for his own development.
2. Brahmanic approach wherein all resources are primarily used up for developing an elite group or section of the organisation;
3. Inputs approach which regards HRD as a mathematical equation of an assigned input and corresponding output in a mechanistic manner;
4. Automation approach which believes that HRD efforts can be over simplified and rationalised with creation of ability to work with computers and modern technology.
5. Motivational approach which regards HRD as a means of motivation to all employees for greater productivity and efficiency; and
6. Creative approach which insists on creativity and innovations as the main focus of HRD efforts.

In developing countries, like India, HRD should be synonymous with manpower planning, the whole object of which is to make available sufficient number of qualified men for skilled positions, which are created with onward march of the society. Due to corruption, nepotism, caste, creed and other considerations many unqualified and incompetent persons manage to get key positions, while qualified and suitable persons feel discriminated against. Training programs rarely focus adequate attention on development per se of the personality of the individuals. Training programmes generally seek to achieve limited objectives and not the ultimate object of developing individuals who can provide dynamism to Indian administrative system. The HRD concept starts with McGregors theory 'Y' and presumes equitable distribution of talents and capabilities amongst all individuals in the administration. The HRD in administration assumes the possibility of development of the capabilities of all individuals depending upon the availability of the opportunities for development.

**The context and the need for human resource development:**

Today, there is practically no government or international agency that does not see the importance of human resource development. The World Bank, the United Nations and its constituent bodies including, UNDOP, UNIDO, ILO, UNICEF, UNESCO, UNFPA, UNESCAP, regional bodies like ASEAN and SAARC; the South Commission, the Commonwealth Secretariat; international non-governmental organisation; (NGOs); and bilateral aid agencies, all recognize the need for, and the importance of, human resource development. The components and dimensions of human resource development, which they perceive as
being of strategic importance at a given point of time, for a given country or group of countries, may vary, but the focus is uniform.

The context for the renewed emphasis on human resource development is significant. The structural adjustment programmes adopted in a number of countries have brought home the vulnerability of human development variables. The linkages between investments in human development programmes and economic development have become sharper. There have been major international developments—such as the opening of global markets, the increased market orientation of economies and the restructuring in socialist countries—which have given rise to an increased competition, forcing developing countries to produce and market quality products at competitive prices. At the same time a range of concerns, including environmental issues, the changing role of women, the new information culture and demands for liberalization and democracy, are influencing policy and practice.

The knowledge base surrounding human resource development is increasing rapidly, within governments and agencies. It is an area where there are many pressing demands. These demands have to be balanced. Resources have to be found, frontiers agreed upon and strategies formulated. These are issues with which policy makers, planners, decision-makers, sectoral planners and government managers have to contend.

The concept and its dimension:

People make things happen. If people have to make things happen, they need a set of 'circumstances' to make them happen. However, it is the people who create 'circumstances' that can help them and others in making things happen. HRD is the process of enabling people to make things happen. It deals both with the process of competency development in people and creation of conditions (through public policy, programs and other interventions) to help people apply these competencies for their own benefit and for that of others. There are things included and implied in such a definition of HRD. These are now briefly explained.

Competencies and Benefits:

Competencies may include knowledge, skills, attitudes and values. The competencies also may deal with any field: agriculture, industry, science, technology, management, various professions (like medicine, law, engineering and teaching), politics, public administration, home science, cooking, labour, telecommunications, research and tourism. The capabilities may be developed in individuals, groups and communities or collectives. The competencies may be simple, like learning the alphabets, or complex, involving high technology applications relating to medicine, space, telecommunications, defense, environment, etc. The competencies so
developed could 'enable' people to act and improve their own lives and those of others. Through such an enabling process people can create more alternatives for themselves and for others and increase their choices. The above definition also emphasises the purpose of HRD as benefiting people, the individual, group or the community of which the individual is a member. Such benefits may be in terms of basic needs and welfare including a decent living or high-level comforts, leisure and self-actualising opportunities. The individual or the group should perceive the benefits as benefits for others. Thus increased income or purchasing power may be a benefit for some, while freedom to choose one's representative in the political system and freedom of expression may be benefits for others. Thus what is beneficial depends on the time, group and other circumstances, and may keep changing.

**Human Development and Human Resource Development:**

Some agencies and individual writers have made a distinction between human resource development and human development. For some, human development is a much larger and an all-encompassing concept, while HRD is limited to the skill development and knowledge acquisition often demanded by organisations for employment purposes. They take a limited view of HRD and attribute it as relevant to personnel management practices of the organised sector. Such a distinction, however, is slowly disappearing with the realisation that the broadness and all-inclusive nature of the concept of HRD depend on the context in which it is used. For example, it may have somewhat restricted meaning when used in an organizational context, though even in an organisational context there evidence of it being used in the same sense as in human development. However, there seems to be a convergence of the needs and priorities set out by various national governments, international agencies and experts in this area, whether they use the term human resource development is that it is a narrower concept and it connotes more of skill development. Another objection, rather a mild one, is that the word 'resource' somehow seems to imply that human beings are being treated like material and other resources and as 'instruments' of development rather than the beneficiaries of development. The differences are more linguistic than conceptual and seem to depend more on the region or affiliation. The term human resource development and the UNDP prefer human development. In the recent past, even UNDP has indicated a broad meaning it is giving to the HRD within the context of human development. It defines HRD as referring to those. Policies and programs that support and sustain equitable opportunities for continuing acquisition and application of skills, knowledge and competencies which promote individual autonomy and are mutually beneficial to individual autonomy and are mutually beneficial to individuals, the community and the larger environment of which they are a part (UNDP, BPPE, 1991, p. 19).
HRD Needs and priorities:

As mentioned earlier, HRD is a continuous process. While the ultimate objective of HRD is to develop competencies in individuals, groups and collectives, developing competencies is a never-ending process. As one level of competencies is developed in an individual or a group, another set of needs may arise requiring the development of another set of competencies. The side effects of development in terms of the greenhouse effect and environmental degradation requiring attention to be given to new issues and environment-friendly technologies are an illustration of this. So is the increasing incidence of human immune deficiency virus (HIV) in a world that has increased greater longevity and life expectancy. Increased conflicts, suppression of human rights, terrorism and fundamentalism, leading to intolerance for fellow human beings is another illustration of the developmental needs at political and spiritual levels. The point is that the HRD needs are never-ending. However, a government or a society or a group may have HRD needs and priorities, which are unique to them, depending on where they stand and what they have or do not have. In a world where information travels fast and communications have tremendously improved through radio, television and other media, people get to know very quickly about what is possible and what others have, and thus substituting new HRD needs or goals quite soon. Similarly, some of those who have achieved a certain level of development and comforts derive satisfaction in helping the less fortunate ones to acquiring what they do not have. Of course, a few also live on the misfortunes of others by continuously suppressing or exploiting them.

In all this, the national governments and intergovernmental and international agencies have a responsibility to ensure that a certain minimum level of development takes place for all people and all societies. Thus the first goal of any government is to ensure that basic minimum capabilities of people that are required for survival and healthy living are developed. This is the reason for considering programs that ensure the availability of food and basic nutrition, water, sanitation and other health facilities as the first-level, basic HRD programmes. They ensure that people survive to develop themselves further. Also included in this basic list are the basic education programs for literacy and primary education and income/employment-generation programs for the poor. These are considered basic because in the modern world basic literacy and education are expected to equip the individual with instruments for an informed and self-sustaining living, although in exceptional cases and in some it is possible to have such an informed and self-sustaining living without literacy and with some other forms of education. However, this situation is changing fast, with the world moving towards a global village. Such societies and groups may not last much longer or may be exploited by others in the changed
scenario. At least to escape such dangers it is necessary to equip people with literacy, basic education and income generation skills. It is therefore the responsibility of national governments to provide these basic HRD facilities to all people. National development policies and programs should take care of need. Public policy interventions through resource allocation and program formulation try to achieve these goals. In the past some countries have: (a) either neglected this and therefore allocated very few resources without releasing the long-term effects of such lopsided policies, (b) or have implement such programs very ineffectively, and as a result the benefits did not reach those for whom they were meant and benefited those who were already part of better group. The poor do not have a voice and therefore those responsible for administering them got away, and continue to get away, taking a major cut from what is meant for the; poor, the hungry, the illiterate, the sick and the voiceless. In the changing world, governments can no longer be blind to this. With international pressure and the work of some NGOs and missionaries, even reluctant government is being required to formulate HRD policies and programmes to meet the basic HRD needs.

In the past, mistakes were made by governments and international agencies even with good intentions or out of a lack of understanding and knowledge. With the increasing knowledge base, national governments and international agencies are becoming wiser and are trying to give the right kind of emphasis to HRD policies and programmes. For example, until a few years ago the consequences of neglecting the human dimensions of development had not been recognised. The structural adjustment programmes of some countries-particularly those in African countries-brought out the vulnerability of HRD policies and programmes, and the consequential fall in human development variables and their impact on the economic well-being of countries. Also, the linkages between investments in human development programmes and economic development variables have become sharper. At the same time, another development that has taken place internationally is the opening of global markets and increased market orientation of economies. Competitiveness has gone up globally, forcing developing countries to produce and market quality products at competitive prices. Even knowledge has become a highly priced commodity. With these changes cutting into the economy of developing countries which enjoyed certain market share in the past, such countries are required to change their strategies and improve their technologies to compete in the global market. This required them to pay attention to another level of human resources developing that provides quick results and protects the economy. Thus form of HRD dealt with the development of technological capabilities, requiring investments in science, technology, research and development and industrial high-tech products. This also required policies and programmes that deal with higher education, science and technology, and industrialization. The competition
in the global markets requires competitive technologies and managerial efficiencies; most developing countries have found themselves lacking in both of these. They had accumulated a large degree of inefficiencies in the form of many layers of administration, bureaucratic procedure and accommodating employment polices, resulting in a lot of dysfunctional and unnecessary fat that became a drag on the nation. They also had outdated technologies and were required to pay a heavy price for borrowing these from the industrialized countries to make products for the very countries from which they imported the technology. It has not taken too long for the developing countries to realize the impact of the neglect of scientific talent, technology and effective management. Resource crunch added to this problem. Thus governments are faced with a situation where they are hit on both sides due to the neglect of competency development. On the hand is the importance of providing basic HRD services to people (as it is the responsibility of the governments, and failure to do so will affect the economy and development in the long run), and on the other, to invest in science, technology and other economic activities to compete in the global markets. Both these are resource-intensive, putting strain on the already resource starved economies. Added to this is the increasing population growth, which puts strain on the resources even further. How to balance these? How does one find resources? What strategies can be used to get out of these problems? It is easy to solve all these problems. However, what would be attempted is to learn from the success stories of some countries and failures of others from the past.

The Renewed Emphasis On Human Resource Development:

Rationale and Assumptions Concerning Human Resource Development:

Several reasons provide the rationale for the renewed emphasis on human resource development, and certainly the contextual situation outlined above is a paramount consideration. The following would seem to be the key assumptions and premises concerning human resource development:

- Human resource development is a complex and multifaceted concept. It is also a continuous process. It requires sensitivity to changing needs in order to set priorities accordingly.
- Human resource development is both a means and an end. A balance should be maintained between the two. If a choice between these two aspects has to be made, it should be in treating HRD as an end rather than as means, since ultimately what is important is human satisfaction and the quality of life.
- Developing people is the essence of any human resource development effort and it is an important goal of all other development activities (plants, policies, programmes,
establishment of new structures, mechanisms). All forms of development (economic, technological, ecological, agricultural, industrial, etc) are ultimately meant to serve people in terms of improving their happiness through better quality and standards of life.

- Human resource development also holds the key for economic development through enabling people to become more productive. As economic development also depends upon the level of industrial activity, investments in developing science and technology become critical.

- In the last few decades some countries have developed well, economically, technologically and in human terms. Life expectancy has increased incidence of illness reduced and starvation has nullified. The percentage of the poor has also reduced considerably in these countries. Some of the developing countries are in the process of joining the industrially developed group while others have not been able to make much progress. Human resources development strategies followed by the more successful countries seem to have made the difference. While a few other countries have done well economically in terms of their per capita CNP, etc., the benefits were limited to the rich. The number of poor has even gone up in such countries and quality of life and access to basic minimum facilities have even gone down. The distribution of economic benefits has been very unequal.

- Currently, for most of the developing countries, human resource development strategies should focus on alleviation of poverty existing at present and possibly in the future. For this purpose, investments in education and health services at the basic levels and the creation of employment and/or self-employment opportunities become very critical.

- The world is becoming a global village with improvements in technology, trade, mobility and communications. Increasing globalization and significance of information technology have thrown up new opportunities for some countries, and challenges for others, to cope with changing world and compete in the open market with the industrially developed countries.

- Learning from past experience, many development agencies, and particularly national governments, are becoming increasingly aware of the need to involve people through participation, empowerment, better access and opportunity.

- The national development policies are increasingly becoming oriented of the need to involve people through participation, empowerment, better access and opportunity.
The national development policies are also increasingly becoming aware of the criticality of human factors in development and the principles of democracy and just and honest government.

There is an increased understanding of the strategic role of women in human resource and economic development.

Attention should be focused on the ineffective utilization of the existing stock of human resources, as evidenced by the growing unemployment of youth and their inability to transform themselves from job-seekers to job creators.

Serious resource crunch faced by various developing countries requires these countries to seek solutions for a right kind of allocation of existing resources combined with a search for mobilizing new resources and effective use of the existing resources.

The tendency of some countries undergoing structural adjustment to ignore social dimensions has resulted in a decline of the quality of human resources and social development, particularly of the poor and the vulnerable.

There has been confusion in the integration of planning due to the inability to see and monitor the linkages between different sectors.

Privatization, sometimes without a socially responsible private sector, has lead to the exploitation of the poor.

The expectation that external aid will solve all human resource development problems.

Development is increasingly being seen as people centered and there is a need to focus on the underprivileged.

Increased presence and the successful change-agent role played by the NGOs in bringing about change points towards public policy/programmes and their efficiency.

There is an increased understanding of the linkages that exist between literacy, basic education, health, nutrition, sanitation, environment, population growth, technology, role and status of women, unemployment, quality of human resources as indicated by the composition of their capabilities (knowledge, attitude and skill base).

There is an increased criticism of the inefficiency or low effectiveness of the public services and the proportion of taxpayer's money spent to maintain government staff.

The synergistic value of the human resource development concept and its ability to focus on the right kinds of groups, problems and issues that have potential for sustained development are increasingly being recognized. Choices need to be made between target groups, between sectors and between different strategies of implementation.

These are some of the key points concerning human resource development, which
are both emerging from and being applied in the current approaches to human resource development. They are increasingly being placed on international and national agendas as the next subsections help to highlight.

**Human Resource Development the International Agenda:**

A number of UN agencies have emphasized the importance of human resources development and have offered their approaches and definitions. Some have suggested policies and programmes formulated with the help of member governments. An overview of the key policies and plans is given together with a few salient points.

**Unescap and the Jakarta plan of action:**

The Jakarta Plan of Action (JPA) was an outcome of a series of deliberations by UNESCAP which reaffirmed human resource development as a vital aspect of the integrated national development efforts and recognised the need for informed, concerted national and regional action in the field of human resource development. The JPA highlighted that the development of the full potential of human beings stands at the center of the economic and social development process. It identified three priority areas for attention in the immediate future. First, employment and manpower development, for which the JPA envisaged a strategy of creating broad based productive capabilities and entrepreneurial skills to take advantage of the emerging economic opportunities. Second, for science and technology, the JPA draws attention to the need for preparing people to understand, adapt, use and contribute to the advances in science and technology. And third, in relation to quality of life, the JPA envisaged that the quality of life of the disadvantaged groups should be realised through programmes for the improvement of education, health, population and environment. The JPA emphasises integration, which is best facilitated if the emphasis is placed on those elements of human resource development which are capable of producing interactions and synergistic effects. The theme and strategy of integrating these themes is called an integrated thematic strategy of human resource development. Under this strategy, policy-making, planning and programming should be done in a coordinated, international manner. Intersectional planning is expected to be facilitated by interagency coordination to have synergistic effect.

**The report of the United Nations committee for development planning:**

The United Nations Committee for Development Planning (UNCDP) expressed concern that with structural adjustment, human development programmes have been savagely cut and the brunt of adjustment has fallen on the poor.
This has weakened long-run prospects for development while increasing inequality and poverty. It would instead have been much better restructuring (Sic) human development programmes, to reduce inefficiency, to improve targeting and, where necessary in order to maintain the existing level of services, to introduce discriminatory user charges. The UNCDP treats human resource development as the process of enhancing human capabilities. It recognizes education, health and nutrition as playing important roles in developing human capabilities and as essential for accelerating the pace of economic growth. The Committee recognised the linkage between education of young women, birth rate, population growth, health and nutrition. Better health and improved ability of children were also underlined.

Krishan Chand Ramotra (1997) in his article “Socio-Economic Status of Women in India and Maharashtra”, explains that it is intended to determine the status of women in India in general and in Maharashtra particular, by constructing the composite index based on the 1981 and 1991 census data. The attempt is also made to assess the differentials in the status of women of the Scheduled Caste, the Scheduled Tribe and the Non-Scheduled Communities. It is found that the females in south India possess a better position than the women in north India. The females of down-trodden sections of society have low level of status as compared to the privileged class females. In Maharashtra, Marathwada region has been identified with low level of position of women. According to author, there has not been much change in the overall status of women during 1981 and 1991.

Reddy N.R.S. and Reddy N.B.K. (1993) in their article “Spatial Pattern of Carrying Capacity of Land in Cuddapah district”, explain that the arable land is a finite natural resource. It cannot feed an indefinite number of people within a measured area. Hence, increasing the carrying capacity of land with the objective of feeding the ever increasing population is of paramount importance. In this study an endeavour is made to assess the carrying capacity of land in Cuddapah district, Andra Pradesh based on the standard Nutrition Units of both production and consumption. The density of population per hectare of land under food crops is also calculated, which is called as “Food Crop Density”. Food Crop Density is compared with the carrying capacity, thus arriving at a population food balance ratio. Based on the population-food ratio, the surplus/deficit areas are identified in the district.

The views, ideas and projects that are mentioned in this chapter have greatly helped this researcher to carve his thesis. However, he is not able to carry out every aspect of population study as quoted in this chapter due to several constraints on his part. However, this chapter is able to show the path of research in population geography. Therefore, depending upon availability of data, time, money and necessity one can do a meaningful research at various levels of a region.