POPULATION GEOGRAPHY

CONTENTS

LANGUAGE PRESERVATION AND IDENTITY AMONG THE RHAETOROMANS IN SWITZERLAND: A MODEL FOR THE PROTECTION OF ETHNOLINGUISTIC MINORITIES?

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Abstract

This article discusses concrete measures for minority protection through language preservation based on Swiss political experiences with the Rhaetoromans. The Swiss strategies towards their minority group have repeatedly been considered exemplary for the protection of ethnolinguistic minorities in general. Thus we will examine into why and how language-based identity and identification play a central role in minority protection policies. Following the theory is a discussion on the clamis and the reality of the Thaetoroman model and its significance for the protection of minorities.

The preservation of Rhaetoromansh has been greatly facilitated by a provision enshrined in the Swiss Constitution declaring the right to language equality, by the promotion of a unifying written version *Rumantsch Grischun* and by the publication of a daily newspaper *Quotidiana* throughtout the language area. Moreover, Rhaetoromansh services, like small schools, neologism programmes and a translation service, as well as media presence, are very important for a general awareness of the language in each language domain. Indentification with one's native speech community is encouraged through intensive cultural and social activities and the triennial *Scuntradas romontschas*. Language-based identity is high amongst the Rhaetoromans, the spoken dialect strongly determining identity.

On the basis of experiences made with Rhaetoromansh, four important aspects should be borne in mind for general protection of ethnolonguistic minorities: (1) Identity promotion is a fundamental pre-condtion for the success of politically initiated linguistic measures; (2) the promotion of minority languages should also encompass the promotion of bilingualism and multilingualism; (3) the adequacy of the territorial principal in language promotion should be questioned; and (4) linguistic policies within individual states should have an independent sphere of influence, integrated in appropirate economic and socio-political measures. Furthermore, linguistic protection should be considered a value in its own right.

On the Situation of Autochthonous Minorities in Europe

According to various estimates and diverging opinions as to the definition of minority status, between 30 and 50 million members of autochthonous minorities live in Europe, while the total of all minorities, i.e. including autochthonous minorities, is estimated at 70 to 80 million or 111 million persons (figures respectively without and including former Yugoslavia and the European part of the Russian Federation; Straka 1979, Mark 1992; Haarmann 1993; Moseley/

Asher 1994; Pan 1999, 160), Most European states see themselves quite decidedly as nation states, although only very few of them have minority groups accounting for less than 10% of the pupulation (Albania, Germany, Poland, Slovenia, the Czech Republic and Hungary). The remaining states with more than 20% minority population should rather be regarded as nationality states. The largest minorities are to be found in Moldavia (33.7%), Estonia (38.1) and Latvia (46.8%) (Brunner 1994). The questions of effective minority protection therefore is without doubt one of the central problems of European intergration. In the face of broad range of national minority policies, mutual exchanges of information and the evaluation of different concepts for minority protection are necessary, and interest in tried and proven measures with model character is considerable.[1]

The most important distinguishing characteristic of autochthonous minorities is as a rule their own language– with the clear consequence that minority protection is in a large part to be equated with the necessity for the protection, maintenance and promotion of the traditional language. This corresponds with the European Charter for Regional or Minority Languages effective since 1.3.1998, which was drawn up on 5.11.1992, and which sees the "recognition of the existence of regional and minority languages as an expression of the cultural richness" of Europe as well as calling for definite measures for their promotion, maintenance and development (Article 7, Part 1)[2].

The safeguarding of a minority language depends on the complex interaction of influences acting on three levels: (1) Higher political structures and attitudes at a national and international level are the foundation for the relation between the majority and the minority pupulation(s). National minority laws form the framework for concrete language policy measures. (2) At regional and local level, demographic, social and economic characteristics of the minority population play a role in deciding the potential for effective language protection. The same is true for social intergration, the economic base of the minority population, and the type of socio-economic change. In regions with several language groups, influences of everyday language use in different situations contribute to the choice and use of individual languages in the most important language domains of family, job, school and training or education. Here specific measures of language policy influence the potential and limits of language preservation. (3) Finally, individual choice of and support for a language are based on the degree of language-related identity and identification with a particular language, culture and history.

Only with the development of the concept of the nation state as well as the increasing intergration of previously peripheral areas inhabited by autochthonous population goups in higher political-administrative structures and economic system through consistent upgrading of infrastructure since the 18th and 19th centuries, did majority and minority relations begin to emerge for most of these groups as socially relevant influences and processes. Only by these means did a situation evolve for most minorities, beyond simple ethnolinguistic differentiation from the national majority population, of being pushed into an inferior and disadvantaged position, both quantatively and with regards to the exercise of power and scope for decision-making.

Following early precedents for the protection of minorities within nation states in the form of the Austrian Basic State Law (1867) and Wilson's declaration of the right of nations to self-determination (1918), questions of minority protection under international law only began to become internationally relevant in the course of decolonization in the 1960s (Pan 1999, 6-9, 72-89). Nevertheless, for a long time reference was made to the general declration of human rights, on the basis of which any further protection of minorites was

supposed to be superfluous. A breakthrough with binding treaties was only achieved in the early 1990s, after difficult negotiations which had long been unsuccessful. Since then the protection of minorities has been increasingly internationalized beyond European agreements – among these being the presentation of the Draft Convention "Protection of Nationalities in Europe", the so-called Bozen Declaration, in 1992, Ermacora / Pan 1993; and the 1992 "Charta for Regional and Minority Languages". Evidence for this is to be found in the UNO "Draft Declaration on the Rights of Indigenous Peoples" and the UN "Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities", both published in 1992. The internationally ratified documents also provide significant bases for the formulation and execution of national protection policies, so that since then the recommendations for catalogues of measures for European minority protection have been becoming increasignly concrete and are bringing results in national and regional promotion measures.

In this context it is the aim of this study to outline concrete measures for the protection of minorities through language pormotion using the example of Swiss minority policy concerning the Rhaetoromans, which is frequently citied as a model for Europe, and to demonstrate why and in what manner language-related identity and identification are thereby of central significance. Building on this, the ideals and reality of the Rhaetoroman model will be discusses and some implications for generrral ethnolinguistic minority protection deduced.

The Rhaetoromans in Switzerland : Characteristics and Processes Peculiar to Minorities

The most important elements in the historic development and current situation of the Rhaetoromans in Switzerland will here be briefly introduced (for a detailed account see : Kraas 1992, 1995).

The Rhatoromans are an autochthonous ethnolinguistic minority, who have been living in their present-day settlement area and economic region for almost two thousand years. After the Roman conquest of large parts of the Alpine region during the campaigns of the emperor Augustus (between 25 and 14/13 B.C.), Rhaetoromansh began to develop by means of a gradual merging of the language of the pre-Roman Rhaetians with the vulgate Latin of the colonisers. The modern Rhaetoromansh language area is the result of a long process of diminution on a large spatial scale. Progressive Germanization from the north and Italianization from the south since the 4th century AD, the acquisition of land by German-speaking Valaisians from the 12th to the 14th century, the increasing Germanization of the capital Chur and the surrounding communities since 1464 continually pushed back the distribution of the Rhaetoromans. A marked acceleration of this process set in with economic and social transformation from the middle of the 19th century. Since then the high mountain regions have been increasingly linked into the supply and trade relations of the dominant German-speaking Swiss Confederation, by means of infrastructural development and increasing economic integration. In addition to this there came the indirect, creeping effects of economic change brought by the "innovation" of tourism, which significantly altered the existing settlement, economic and social structures.

The Rhaetoroman minority in the canton of Grisons – like many other minorities in Europe – today manifests many signs of peripherality: The most serious consequence of the socio – economic transformation of the past 150 years was a rapid decline in the percentage of speakers and the increasing fragmentation of the formerly coherent language area. Furthermore, Rhactoromansh is spoken in five chief idioms linked to

individual valleys and is thus further fragmented within itself. The linguistic differentiation is further emphasized on a denominational level, as the pupulation of the two largest valley communities is respectively primarily catholic or protestant. An unbalanced and unstable demographic structure in many communities is changing social relations: Marked overaging and ongoing, often selective, emigration of qualified workers ("exodus of the elite") produce quantitive change and qualitative weakening of social structure. As a result of the growing number of mixed language marriages, Rhaetoromansh is spoken less and less in families. Added to this is an unbalanced employment structure with above average percentages in the primary sector. Also lacking is a cultural and economic centre for the entire Rhaetormansh area, which could function as a policy – guiding centre for the minority, not only in the area of language. Finally there is no legal determination of a defined territory where Rhaetoromansh could be firmly anchored as the official language.

Those persons who in the relevant censuses gave Rhaeto - Romansh as their native or principal language are today considered as Rhaetoromans. The Rhaetoromans, with 39,623 (best-spoken principal language) or 66,356 speakers (language used regularly in the family, at work or in the place of education; Census 1990) are the smallest autochthonous minority in quadrilingual Switzerland, accounting for 0.6% or 0.95% of the total population. In 1990 34.7% of Swiss Rhaetoromans lived outside the traditional language area within the Canton of Grisons and 44.4% lived outside whole Grisons (Rhaetoromansh given as principal or family language). 77.6% (7,728) of them lived in urban aresa, 1,257 of these in Zurich (speakers with Rhaetoromansh as their principal language, Census 1990), 257 in Basle, 224 in Berne and 174 in St. Gallen. Many cultivate Rhaetoromansh as part of their origin and identity. The Rhaetoromans in the

language diaspora contribute significantly to the broad support for language minority protection in Swiss policy. Within the chief settlement area in the Canton of Grisons, 29,679 speakers of Rhaetoromansh are concentrated primarily in the Surselva (Upper Rhine Valley) and in the Inn Valley (Engadine and Muenster Valley). In comparison the mid Grisons area (Domleschg, Herinzenberg, Schams, Sursès) lags far behind with mostly small commumities of speakers. The largest number of Rhaetoromansh speakers in Grisons lives iñ the dominantly Swiss German – speaking cantonal capital of Chur (2,269 speakers with Rhaetoromans as their principal language, Census 1990; Furer 1996, 44, 46; 1997, 422-423).

The result of the last census in 1990 give deeper insights into language competence and use than purely quantitative information on numbers of speakers, which are of great significance for language policies. In the traditional Romansh–speaking areas in Grisons, i.e., where Rhaetoromansh was still the majority native language of the residents at the end of the 19th century, 29,679 persons (17.1%) gave Rhaetoromansh as their best–spoken language, 36,722 persons (21.7%) spoke Rhaetoromansh in the family, 13,178 (16.3%) at work and 4,727 (22.5%) in their place of training or education. A total of 41,092 (23.6%) persons claimed to speak Rhaetoromans at all (Bundesamt fur Statistik: Ergebnisse der Eidgenossischen Volkszahlung 1990). Nevertheless, the census data apparently do not reflect the actual usage of the language, which leads to a serious underestimation of the use of Rhaetoromans in Grisons. Surveys produced the impression that Rhaetoromans is more widely used than the census results would imply. In the Rhaetoromans communities on average 59% speak Romansh, but 69% of the population can understand it. In the Surselva the corresponding figures are 87% and 91%, in the Sutselva (where only 12% of the population gave Romansh as their principal

language in the census) the figures are 26% and 36%, and even in Chur 27% of the population understand Rhaetoromansh. Furthermore, in many communities with low figures for Romansh as principal language, it is represented as a family language at an above–average level (BAUR 1996, 53-56; Furer 1999, 42, 47).

The data cited here indicate a significant fact of language usage: Bilingualism is now almost universal, i.e. all Rhaetoromans speak at least one further language, usually Swiss German. It is characteristic that the nature and frequency of everday language use is quite different in the four central language domains : While the use of Rhaetoromansh is predominant in the private and social areas, the usage of Swiss German increases in the area of the media and dominates in the formal, written area.

An evaluation of the nature of bilingualism and multilingualism among the Rhaetoromans in Grisons is further made difficult by the fact that in everyday language use choices are made not between Rhaetoromansh and Swiss German, but also – as proven by long-term studies of linguistical sociogrammes and languages usage matrices – High German is used in the written form and *Schwyzertütsch* (Swiss German) in verbal communication (Ureland 1994). It is correspondingly difficult to determine the distribution of languages, as Rhaetoromansh or Swiss German or even a mixture of both are spoken. Language boundaries literally run in the minds of the speakers. For concrete language use for example it is true that: "In the Grison Romansh–German language situation the Romansh speaker chooses .. the basic system depending on the person addressed" and among "equal bilingual partners a conversation can take place in one language or the other without recognisable criteria" (SOLER 1999b, 297). Language shifts take place depending on the person spoken to and seem to be less dependent on linguistic competence. The actual language use of a speaker is thus apparently oriented more on a complex, open system of language and form than on a clearly recognisable, differentiated system of individual languages.

Measures for Language Protection, their Potential and Limitations

With regard to the breadth and unconventionality of the individual promotion measures, the firm organisational embedding of language protection and the general acceptance of minority protection within Switzerland, the Rhaetoromans are frequently perceived as a European model establishing a precedent. In order to find support of this statement the most important measures for language maintenance, their potential and limitations will be examined in more detail.

The umbrella organisation of the Rhaetoromans, the *Lia Rumantscha*, emphasizes seven preconditions as necessary for maintaining Rhaetoromansh. These preconditions are intended to serve to protect the endangered language, to bring about an improvement of its image and to limit the shift to Swiss German: (1) Preservation of a continuous language area by means of legal requirements (territorial principle), (2) Creation of a sound economic base through the development of supportive measures also serving the aims of language policy, (3) Encouragment of the general presence of the language in all sectors and language domains, (4) Creation of a Rhaetoromansh daily newspaper and development of radio and television programmes, (5) Propagation of a consistent written version of the language, *Rumantsch Grischun*, (6) Encouragement and preservation of bilingualism and (7) Securing the equal coexistence of the three languages of the canton. These preconditions also form the framework for the activities of the *Lia Rumantscha* resulting in concrete measures. Furthermore, in 1994 a strategy report of the "Arbeitsgruppe Sprachlandschaft Graubudden"

("Working group on language distribution in Grisons") was presented, where 39 concrete measures for the preservation and encouragement of trilingualism in the canton are listed (Gross 1999, 114). The subventions paid by the Swiss Confederation to the *Lia Rumantscha* amount to ca. 2 million SFr per annum, the annual contributions from the canton of Grisons are ca. 400,000 SFr. Publications, projects and services are financed with this money, employing more than twenty full-time and part-time staff (Baur 1996,81).

The three most significant language policy projects, which without doubt have model character for the protection of minorities, are the embedding of linguistic equality in the Swiss federal constitution, the creation of the standardized written language *Rumantsch Grischun* and the printing of a daily newspaper available in all the dialect areas, *Quotidiana*. Furthemore, support for small schools, media presence, a neologism programme and a translation service are of considerable importance for the presence of Rhaetoromansh in the most significant language domains. In particular identification with the speach community is promoted in a lively cultural and social life as well as through the *Scuntradas romontschas*, combined conventions, events and festivals, which take place every three years. In the following, the measures listed above will be explained individually.

Language article 1996: On 10.3.1996 the Swiss population agreed with a 76% majority to a revision of Article 116 of the federal Constitution, whereby Rhaetoromansh was elevated to the status of secondary official language beside the three official languages of Switzerland. Article 116 now reads as follows. "1. German, French, Italian and Rhaetoromansh are the national languages of Switzerland ... 4. The official languages of the Confederation are German, French and Italian. When dealing with Rhaetoromansh speakers Rhaetoromansh is also an offical language of the Confederation." Thus through an express statement of the Constitution it becomes a duty to actively promote the preservation and support of the four national languages and in the case of Rhaetoromansh to support the canton of Grison financially. Important publications must be translated into Rhaetoromansh, and Rhaetoromans have the option of dealing with the Conferation in their native language.

Rumantsch Grischun : As in the long term all five local dialects cannot withstand the pressure of increasing Germanization, and only a written language recognized in the entire Rhaetoromansh-speaking area will have realistic prospects of concrete support. The German-speaking Swiss Heinrich Schmid, professor of Romansh languages at the University of Zurich, was in 1982 entrusted with the conception of a standardized written language on the initiative of the *Lia Rumantscha*. Schmid decided on a balanced combinatory process, whereby common factors in the forms of the two chief dialects, *Surselvish* and *Vallader* formed the basis for the vocabulary of *Rumantsch Grischun*. In the case of dissimilarities between the two forms, the *Surmeirisch* idiom weighted the balance (Schmid 1982). The *Rumantsch Grischun* language hereby created is thus structured in its morphology and syntax in a type of mediating linking of the dialects. *Rumantsch Grischun* is particularly used where, not least because of financial considerations, only one written version of a text can be published in Rhaetoromansh.

The standardized written language produced contradictory reactions among the population, whereby social rivalries and those associated with cantonal politics are reflected. Its supporters are convinced that *Rumantsch Grischun* must be established in order to bring together the various tyes of Romansh and to ensure a Romansh presence in all important language domains through concentrated efforts. Rigorous, quick and binding putting through of the new form is demanded by the one side, while others are aiming for a

dissemination of the standardized written language based largely on free decisions. They cite Schmid: "The dialects can thus, *insofar as this is desired,* carry out their functions as hitherto, that is when only one of the various individual regions has to be taken into account. Thus nobody would be obliged to use the new written language if he doesn't wish to do so: *Rumantsch Grischun* was designed as an option for those who *want* to use it"(Schmid 1989, 23). The opponents of *Rumantsch Grischun* want to preserve the separate dialects in their individuality at all costs and to use them as written languages. In this context they refer to the proven value of the traditional, evolved language form with all the relationships, institutions and publications shaped by it. They see in the introduction of *Rumantsch Grischun* an experiment which will be fatal for the preservation of the language, by means of which the familiar dialects and the emotional-connotational, fundamental identity-shaping elements of the language will be superseded by the standardized language which they perceive as "artificial".

After the presentation of a representative study to determine the level of acceptance of the new language form (Gloor et al. 1996), *Rumantsch Grischun* as a standard language was elevated in 1996 to the status of official cantonal language by the cantonal government of Grisons. In the schools however the dialects continue as before as the basis for education.

The daily newspaper Quotidiana : Since the beginning of 1997 on five days of the week one single Rhaetoromansh newspaper called *La Quotidiana* appears in place of local Romansh newspapers which were only available in some valleys and dialect areas. All dialects are represented in this paper, and *Rumantsch Grischun* is used in particular in reports on cantonal affairs. International news reports are written by editors with varying dialect backgrounds, who regularly move from one section to another on a rota.

The daily newspaper is intended primarily to work against a separation of private and public as well as regional and national or international matters. Rhaetoromansh is thus not forced into the role of an occasional "leisure" language. Unlike radio and television, the newspaper demands more understanding and critical analysis in reading the articles. Written language requires more attention and encourages precision of definition, as well as language usage which is correct and of a higher standard. Finally, with the paper a mass medium is available for the entire Rhaetoroman region, which can encourage rapprochement of the various regions on a broad base.

After three years of its publication a first analysis can be made of its achievements. *Quotidiana* was a conventional daily newspaper for seven months, after that national and international news began to disappear, as reader's feedback led to the conclusion that international news was in very low demand. Also, an increasing number of German-language advertisements was accepted. Local and regional aspects (reports on life in the villages and valley communities, local events, births and deaths etc.) seemed to have too low a coverage in comparison with the previous reporting of the Rhaetoromansh weeklies. The main problem lies not in the quality of concept or language in *Quotidiana,* but in the already strong habituation to the German-language daily paper *Suedostschweiz.* Furthermore a lack of willingness to understand other dialects and low level of interest in the problem of other valley communities are to be observed. The number of subscribers has declined from 10,000 to 8,000; the critical commercial threshold is at 7,000. Since 1998 *Quotidiana* has had a facelift, it has a clear subdivison according to dialects and has switched to a systematic use of *Rumantsch Grischun* in the national section, whereby a deliberate integrative effect and creation of awareness are being pursued (Gross 1999, 116-117). To what extent the long-term aim of strengthening

the cantonal level of information and identification with reports on other regions can be achieved, can not be judged at the moment.

Small schools and mini-classes for Rhaetoromansh : Cantonal schools policy has since 1996 emphasized even more the inclusion of the Rhaetoromansh language, culture and literature at all possible levels of education. All teachers in the traditional Rhaetoromansh areas must have a good command of Rhaetoromansh. Apart from the provision of very small schools and mini-classes (from five children upwards) which was already possible, various school projects are now being carried out which include an extension of the curriculum in the Rhaetoromansh language as well as school experiments with the introduction of *Rumantsch Grischun* in Mid-Grisons (Gross 1999, 115).

Rhaetoromansh radio and television : Each primary official language in Switzerland has comprehensive radio and television stations. Rhaetoromansh is however included in the German-language channel SF DRS (Swiss Television in German and Rhaetoromansh speaking Switzerland). Radio programmes in Rhaetoromansh have been extended from one and a half hours daily in 1983 to fourteen hours daily (1999) and are thus at a good level. The most important tasks are to accustom the speakers of the dialects to one another, so that it should become ever more natural to listen to and understand the other dialects, as well as the mutual experience of the situation in other valley coimmunities. The situation in television continues to be entirely unsatisfactory: Three times a week short local news and once a weeks a magazine programme of just under three hours are broadcast in Rhaetoromansh - a total of only 45 minutes a week. Private stations ignore Rhaetoromansh altogether, children's programmes in Rhaetoromansh are not available.

Neologism programme for the

modernization of the language : Many new words have to be laboriously translated into Rhaetoromansh or new words "invented" in Rhaetoromansh. In 1984 the *Lia Rumantscha* brought into being a language centre solely for the systematic processing, administration and dissemination of neologisms. Since then the *Lia* has been publishing its own tables of new words in particular sectors (e.g. technology, professions, sport, natural sciences). The creation of new words in Rhaetoromansh usually takes place by means of lexical borrowing, whereby nominal syntagma are directly adopted or partially morphologized (e.g.: ,, angurtar,, for ,,angurten,, German for "to fasten one's seat belt"). In general usage many borrowed words are later replaced by endogenous concepts. New technical concepts can often be derived from existing words (e.g.: from ,, serenar,, (to cheer/brighten up) comes ,, serenera,, (sewage treatment plant), from,, sutga,, (chair) ,, sutgera,, (chair-lift) is derived). New meanings are given to old words (e.g.:,, cauma,,, which originally meant a resting place for cattle, is now the Rhaetoromansh words for ,, strike,,, Baur 1996, 110). The dissemination of new words in general usage is a problem. The *Pledari grond* (Lia Rumantscha 1993), a linguistic data bank created on behalf of the *Lia Rumantscha* up to 1993 with ca. 190,000 entries, is now available in book from and on disc.

Rhaetoromansh translation service: An essential precondition for the use of Rhaetoromansh as an official language guaranteed by the new language article is the translation service of the *Lia Rumantscha*, Which is increasingly being made use of by the Confederation, the canton, organisations, business and private individuals.

Rhaetoromansh culturcal and social life: For several centuries the Rhaetoromansh speech community has had considerable creative potential in the areas of literature, theatre and music (for an overview see: Baur 1996, 38-47). Keeping this potential alive in

the cultural and social life of the Rhaetoromansh-speaking area is one of the primary language policy activities in the canton. The theatre archive of the *Lia Rumanlscha* consists of more than 1,300 translations and original plays and provides an advisory service for drama groups. A similar service is availablbe for the collection of songs and music of native, in particular of Rhaetoromansh composers. The *Lia Rumantscha* subsidizes the publication of music and commissions compositions.

Scuntrada romontscha: Since 1985 a week-long festival with a congress, lectures, discussion forum, theatre performances, sport and games as well as workshops has taken place every three years. This is intended to help the populations with different dialects and from different valley communities to get to know each other. This large event is the only forum which enables direct encounters between Rhaetoromans of different spatial, dialect, denominational and political origins and from different age groups.

These measures of language policy in the Rhaetoromansh-speaking area represent far-reaching achievements for the preservation of the language, which can however only be maintained with considerable financial investment and personal involvement. Evaluation of individual measures is made more difficult by the fact that only indirect assessment of their effectivity can be made. Surveys point to a rise in general awarenes of the necessity to preserve the language, and that the services relating to language policy are accepted by the population (Gloor et al. 1996; Gross 1999). The success of the policies is most obvious in the schools, which have proven to be the language domain where a conscious policy for the encouragement of Rhaetoromansh is most clearly expressed (Ludi et at. 1997, 95). The territorial principle seems the most doubtful in Grisons: In the Rhaetoromansh-speaking area, where a strictly observed territorial principle should theoretically be most successful, studies have shown that the unifying potential of Rhaetoromansh is not adequate to integrate speakers of other languages (Ludi 1997, 589). It is true for all measures that they primarily represent services for the population, the acceptance of which is reflected in everyday language use. This is to a large extent dependent on habits, familiarity and the language related identity of the speaker and difficult to influence directly, which is why this level of language protection, usually anchored in individual psychology, must be examined in greater detail.

Language-related Identity

Language-related identity, in the sense of the self-image of an individual or a group acquired in the context of cultural history and relating to language use and language-dependent understanding of the world, develops within socially, ethnically and regionally defined milieux. In the course of this development the individual adopts values, norms, abilities and habits which are the basis for his/her integration in the community of society, ethnicity and language. Although identity exists without doubt as a multi-level, dynamic system of relations open to continuous, generally lifelong, change with varying group formation and spatial extent (Bossong 1995), usually a core area of long-lasting self-image remains. In the case of the Rhaetoromans, several levels of language-related identity can be observed which are of central significance for the preservation of the language and the minority and will be discussed in the following For, while language policy measures in a sense from the external national and regional framework of language protection, their success is ultimately dependent on the nature, expression, depth and vitality of language-related identity.

Within the canton of Grisons, both in general as well as in the special case of the Rhaetoromansh-speaking community, *a high level of dialect-related languae awareness* is to be observed. According to surveys, language

policy is the third most important issue in cantonal politics after environmental matters and unemployment (Gloor et al .1996, 128). Bauer et al. remark in this context: "The population here has a high level of awareness of language problems and usually also a sound cognitive-grammatical knowledge of its own language. The awareness of language problems arises from the daily struggle for survival in comparison with the dominant German, especially in its Swiss form, and from the tension between the supporters of the local dialects and the advocates of a supra-regional written language.. Language here signifies confrontation, contradiction, conscious adherence or renunciation, language is not spoken unnoticed by normal citzens here as elsewhere" (1989, 197). The question as to which form of language creates identity can however be answered quite clearly: "the uniqueness and particularity of one's own locally-coloured speech is of prime importance and is emphasized in language identity ... The sense of belonging to a wider regional speech community - a Rhaetoromansh speech community - is only to be found among a small minority. The majority identifies with the unique local language or regional dialect." (Gloor et al. 1996, 134).

Language as a fundamenlal element of group identity simultaneously has the function of affirming membership of one's own group as well as of negation and exclusion of other groups and can only be understood in the interplay of both functions. Thus, for the members of a speech community their language expresses their sense of belonging to a particular group, its environment, and also to a "special common destiny" (Camartin 1985, 59). Lanugage is "not a tool to be taken up and put down at will ..., with which one makes oneself understood, but rather a type of skin, grown onto us" (Camartin 1985, 62). Rhaetoromansh had for a long time relatively low prestige and is today frequently perceived as an obstacle to

good language competence in German. This is expressed in the phrase: "Rhaetoromansh is the language of the heart, German is the bread winning language". The stigma of an inferior "farmers' language", the low level of vocabulary adaptation in modern developments as well as the associated increase in linguistic shortcomings which have to be evened out by borrowings and foreign words from German, caused the prestige of Rhaetoromansh to fall steadily for a long time (Furer 1999, 29-30; Soler 1999a). The associated decline in the representation of the language as well as a bad image encouraged the switch to Swiss German. The necessity of bilingualism because of lack of provision in the area of schools and education (especially at higer levels) and the poor representation of Rhaetoromansh in the various language domains led to partial linguistic competence or even incompetence. Insufficient language-related infrastructure (education, media, clubs etc.) with dependency on German in the media weakened the representation of Rhaetoromansh in everyday situations. Thus the repression of Rhaetoromansh became more intense in the years following the Second World War and the language's unifying potential for group identity weaker.

Language as a link with the minonrity's own culture and history has a significant function in creating identity. An important facet of Rhaetoroman identity is mirrored in the great variety of literary works. These include numerous religious writings, edifying literature, and a fourteen-volume collection of sagas, fairytales, sayings and songs, Caspar Decurtins' "Rhaetoromansh Chrestomathy. Important lyrical works originated in the 18th century, including poems about homeland nature, native language and emigration, e.g. by Conradin de Flugi, Peider Lansel, Andri Peer and Giacun Hasper Muoth In recent times several novels have appeared, which often deal with the transition to modernity. In general Rhaetoromansh literature, oral heritage, theatre, visual arts

and music have a long tradition and characterized by a great breadth of contents and vitality and conribute significantly to the shaping of identity within the speech community (Billigmeier 1983, 88-116; Deplazes 1991; Baur 1996, 38-47).

Not only awareness of the increasing decline of their own language has strengthened Rhaetorcimans' consciousness of working together and more intensively than hitherto for the continuation of their own language - *emotional ties* based on familiarity and a sense of security are also most importaant. These individual perceptions vary markedly, whereby regional identity, the individual's level of education and duration of residence play an important role. Speakers in the regional core areas of Vallader and Surselva (Lower Engadine and Upper Rhine Valley), speakers with elementary school education and long residence identify most strongly with Rhaetoromansh.

What convictions, views and perceptions mediate emotional ties and cause speakers to work for the survival of their language? Without any doubt a fundamental *element of self-identification* is linked to language, beyond the aspect of communicative efficiency, for with the close interrelation of thought and speech, language is the medium which makes it possible for people to communicate with others and express their feelings. As a *system of mental order and for understanding the world* it establishes "which individual aspects of the world warrant expresssion in language. And thus also to which of its characteristics and interrelationships attention should be paid, which typologies, concepts, abstractions and idealizations are important,... [and thus not only do] the vocabulary but also the morphology and syntax of a language in daily use [mirror] .. the speech community's socially endorsed framework of references" (Schutz 1971, 402-403). At the same time language encompasses the levels of conscious and unconscious, rationality and irrationality- such

as in the area of aesthetic experience -, determines the relationship between a person's perception and thought and influences community behaviour relating to the group. Languåge is a constant *element of one's own unique personality and life history* - usually from childhood and youth - and thus a type of existential rootedness, "a living part of that which links a person with the past" (Sorell 1977, 26). The following statement must also be understood in this context: "to be for Romansh, to want to maintain it, means to preserve it for me, to capture thought, emotion and feeling in it" (Interview; Kraas 1992, 282).

It is particularly true of small languages that they are limited to a relatively narrow area as a means of communication: It is "as if the horizon would not move with you any more. One comes to a boundary and beyond it there begins something else. Thus one can early experience language painfully as restriction. ... The speaker's identity [changes] in relation to his ancestral language when he discovers how little he can travel with it" (Camartin 1985. 65/66).

Ideal and Reality in the Model

To what extent can Swiss minority policy concerning the Rhaetoromans be regarded as a general model for the protection of ethnolinguistic minorities? What is the relationship between ideal and reality?

It is without any doubt true that the four autochthonous speech communities in Switzerland live together without any greater conflict. Multilingualism is in this case not per se a burden on the nation state, on the contrary it is perceived as typical of Switzerland, is a part of Swiss tradition and the Swiss self-image as a nation state and embodies an ideal, lived out with conviction, of a principle of equality within the confederarion. The type and breadth of the protective measures for Rhaetoromansh are evidence of a strong will to maintain the

language as well as a high degree of support
with, in some cases, unconventional ways of
protecting the minority. In hardly any other
European state and beyond do such broadly
based protective activities and far-reaching
projects for language conservation exist as in
the case of the Rhaetoromans. Also as regards
ideological and financial support of minority
protection on the part of state and society, the
Rhaetoromans are in a very good position.
Thus, in these respects it is possible to agree
in principle with the term "model" - also in
the sense of having an exemplary pioneering
and orienting function.

The gap between theoretical equality
and actual equal treatment is nevertheless
large - as the indepth view from the inside
shows. Thus for instance, the three official
languages of the Confederation are not
actually treated equally. All basic official
documents are published in three legally equal
versions, but in the case of more specialized
texts short cuts are taken. The most general
laws, and those specifically affecting the
Rhaetoromans or the Rhaetoroman Grisons
are translated - but there translations have no
legal validity. And although Rhaetoroman
members of parliament now more frequently
begin their contributions and speeches with
short   symbolic   introductions   in
Rhaetoromansh, Swiss German and French
dominate by far. The same is true of the
cantonal parliament in Grisons: Although the
three official cantonal languages are legally
equal, little use is made of this in everday
language use. Members of parliament are not
taken seriously if their contributions are made
in Rhaetoromansh, also motions have to be
summarized in German. Only the German text
of judgements and orders of court is legally
binding for the Administrative Court. In the
case of written business with the administration
it seems that letters and petitions in
Rhaetoromansh actually take longer to process
and often earn a negative reaction (FURER
1999, 50-54). In some cases quite a fuss is
made about demands and concessions to the

language minority which are in themselves
most natural. Thus there exists formal equality
but in actual fact dicrimination continues.
Encouragement of Rhaetoromansh thus,
continues to be dependent on the good will
of the majority.

Consequences for the Protection of Ethnolinguistic Minorities

What consequences arise from the
Rhaetoroman example for the general
protection of ethnolinguistic minorities?
(1) *Encouragement of the development of a
separate identity as a basic precondtition for
language policy measures :* The issue of
language-related identity was long neglected
in the protection of minorities . In this context
understanding at a national level for minority
issues is of central significance, as are the
identity-strengthening effects of the different
dialects and regiolects at a local level.
Similarly, quantitative, statistical linguistic
studies of minorities, qualitatively oriented
studies must increase, which for instance
should examine issues such as the emotional
relationship with language as well as language
use in the private domain and not only in the
"public sphere".

(2) *Encouragement of bilingualism and
multilingualism :* The marked difference
identified among the Rhaetoromans between
the number of speakers using Rhaetoromansh
as their principal language and those who
speak or understand it in addition to their
principal language, leads to an examination
of ways in which language policy measures
could appropriately be altered. Instead of a
concentration of language policy measures
on the encouragement of language
competence in the minority language alone, a
policy could increasingly be pursued of
encouraging both the minority language and
functional multilingualism. In this case
particular significance would be attached to
the spoken form of language, which integrates
lexical or grammatical borrowings and
transfers from other language, which integrates

lexical or grammatical borrowings and transfers from other beyond the endolinguistic system, as well as to the social-communicative situation of variable language shifts. Thus thought must be given to the question, whether in the case of balanced bilingualism, a spoken "low variety" of the language should be supported with a view of everday communication, in addition to the protection of a "purist high variety" (Soler 1995; 1999a). Concentration solely on the encouragement of the minority language is mistaken in view of the actual long-established existence of bilingualism or multilingualism. This course does nevertheless bring the danger of further accelerated linguistic change.

(3) *Examination of the approriateness of the territorial principle:* The Rhaetoroman example shows that the territorial principle does not always function to protect language. In every individual case of a language minority an analysis must be made of the extent to which the preconditions for effective support on the basis of the territorial principle exist. In the case of consistent bilingualism in a minority population the aim of a well thought out language policy cannot be the restoration of a monolingual region, as this will not survive in the long term.

(4) *Maintenance of lingustic variety as a higher national issue:* Language policy should be assigned a political forum of its own within the states, which should be integrated with suitable economic and social policy measures. The fundamental principle of maintaining linguistic variety should thereby not only be encouraged from the minority perspective, but should become a matter of general concern as a value in itself. Such a fundamental understanding of the need to protect linguistic variety is not, however, uniformly accepted within the states. Even in Europe, some states, including France, have not signed the European Charta for Regional and Minority Languages.

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SOCIO-ECONOMIC TRANSFORMATION OF SCHEDULED CASTES IN INDEPENDENT INDIA

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Abstract

The paper attempts to examine the regional variations in levels of socio-economic development and changes therein of scheduled caste population in India. Three indicators on literacy, urbanization and occupational diversification of scheduled caste population have been picked up from the Census of India to measure socio-economic development of scheduled caste population.

It comes out of the analysis of data that there has been a faster than non-scheduled population change in socio-economic conditions of scheduled population in post-Independent India, narrowing down considerably the wide gap existed in wellbeing of the two segments of society in India. However, there are wide inter-state variations in socio-economic development of scheduled caste population. Social wellbeing of scheduled caste population is invariably high in union territories and the states in South India have also done better than the states in North India.

Introduction

The Indian State initiated a number of constitutional and administrative measures, including granting of political equality, abolition of untouchability, reservation in jobs and educational institutions etc. to safeguard the interests of scheduled castes in the post-Independence period. Political equality provided by the Indian democracy opened opportunities for their entry into the political arena, resulting in active involvement in political process, sharing of power and enjoying material benefits accruing out of it. The abolition of untouchability and the reservation of seats in educational institutions and the public sector enterprises contributed significantly to their upward mobility. This has resulted in higher educational attainments, occupational diversification, and rural-urban mobility of the scheduled castes, along with loosening the upper caste dominance. It has not only increased their awareness regarding socio-economic and political rights but also boosted their confidence and aspirations so as to overcome centuries old deprivations of all hues.

There are, however, wide inter-state disparities in their socio-economic well-being. Given the historical background, some states have done better than others for the upliftment

of this section of the Indian society. An understanding of regional pattern of socio-economic transformation of scheduled castes is essential to understand and implement strategies for socio-economic upliftment of this segment of the Indian population.

The Indian Census, which has a long history of wide coverage, reliability and uninterrrupted enumeration going back to more than a hundred years, collects significant information on the scheduled castes and tribe population since the 1951 Census. The base of this information was enlarged at the 1961 Census. Scholars have not made full use of this treasure of rich information to study the socio-economic transformation of the scheduled caste population.

In this paper a modest attempt has been made to study the regional patterns of socio-economic development and changes therein using the Census data on social and economic attributes of scheduled caste population in India. In addition, changing demography of scheduled caste population will also be examined. Three broad indicators, i.e. literacy, urbanization and occupational diversification have been picked up to study socio-economic changes in scheduled caste population at the state level. Increased literacy of scheduled castes has not only created greater awareness among them but also opened up new avenues of employment especially in public sector jobs mainly in urban areas. All the indicators are inextricably intertwined. Data on these indicators have been picked up from the Census of India. Seventeen states and three union territories, having together 99.9 per cent of the total scheduled caste pupulation in the country at 1991 Census, have been included in the analysis. The remaining eight states (including Jammu & Kashmir where the 1991 Census could not be held due to disturbed conditions) and four union territories have been excluded as only a negligible proportion of the total scheduled caste population of the country resides there. For studying change in the socio-economic

conditions of scheduled castes, a period spanning over three decades, from 1961 to 1991, has been selected. This period has been selected for two reasons. Firstly, a period of 30 years is long enough to assess the impact of change in the socio-economic conditions of the scheduled castes. Secondly, it was at the 1961 Census that for the first time detailed information on this segment of population was collected and published. The 1991 Census, where a detailed information is available, has been the latest in this series. Data on scheduled caste population from the 2001 Census is not yet available. To arrive at composite index of socio-economic development, the methodology evolved by the United Nations Development Programme (UNDP, 1999, p.134) for the construction of human development index has been used. Minimum and maximum limits for each indicator are 0 and 100, respectively.

The paper is divided in two sections. In the first, section, some aspects of regional demorgraphy of scheduled caste population have been examined. The second section emamines inter-state disparities in socio-eonomic development and changes therein.

Demographic Characteristics

'Scheduled castes'[1] is the official term now used to denote 'dalit' or oppressed castes of Indian society. The term 'dalit' itself came into wide currency in the later half of 19th century through the writings and speeches of Jyotiba Phule, the first reformer of the modern period to take up the cause of the untouchables in Maharashtra state (Gore, 1993,p.211). Castes having neither power nor privileges are equated with dalits. Both 'touchable' and 'untouchables' castes are included in this group.

According to the 1991 Census, 206 million or about 25 per cent of the total population of India belonged to the scheduled population(castes and tribes). In other words, every fourth person in India belongs either to

a scheduled caste or a scheduled tribe. Separately, two–thirds or 138 million (excluding Jammu & Kashmir) are scheduled castes and remaining one–third or 68 million scheduled tribes. In a way, every sixth person in India is a scheduled caste.

With the exception of Nagaland and the union territories of Andaman & Nicobar Islands and Lakshadweep, scheduled castes are found in all the states and union territories of India. However, they have a highly uneven regional distribution. In some states, they are highly concentrated whereas in others they make up only a small fraction of total pupulation. In Uttar Pradesh alone, there are 29.3 million or more than one-fifth (21.2 per cent) of the total scheduled castes in the country. Next to it, West Bengal accounts for another 16 million or about 12 per cent of the total scheduled caste population in India. These two states together share about one-third of the India's scheduled caste population. More strikningly, five states namely, Uttar Pradesh, West Bengal, Bihar, Tamil Nadu and Andhra Pradesh, each having more than 10 million scheduled caste population, have nearly three–fifth (57.3 per cent) of the wcheduled caste population in the country. In fact, more than 85 per cent of the total scheduled caste population resides only in ten states namely, Uttar Pradesh, West Bengal, Bihar, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Maharashtra, Rajasthan, Karnataka and Punjab. A majority of these fall in the North India. In comparative terms, four southern states (i.e., Andhra Pradesh, Tamil Nadu, Karnataka and Kerala) together have only about 23.0 per cent of the total scheduled caste population in India, whereas the share of the four northern states (Uttar Pradesh, West Bengal, Bihar and Madhya Pradesh) tends to be as high as about 49.0 per cent. Obviously, these castes have a higher concentration in the North than the South India (Table 1).

Moreover, the share of scheduled castes in the total population of individual states is also highly revealing. It varies from a high of

28.3 per cent in Punjab to a low of 0.1 per cent in Mizoram. In each of the four states of Punjab, Himachal Pradesh, West Bengal and Uttar Pradesh, scheduled castes consitutue more than 20 per cent of the total population. Against this, in states such as Arunachal Pradesh, Meghalaya, Mizoram and Nagaland where tribals dominate, the scheduled castes make less than one per cent in the total population. In fact, in areas dominated by the Christian, the Buddhist and the Muslim population, the scheduled caste population is conspicuously low. In the past, conversion of the low caste Hindus to Christianity, Buddism and Islam in such areas is mainly responsible for this as these religions do not accept caste system.

Four states of Uttar Pradesh, West Bengal, Tamil Nadu, and Himachal Pradesh have a higher share of scheduled caste population in comparison to their share in the total population of the country. For example, Uttar Pradesh accounted for only 17 per cent of India's total population against 21.4 per cent of the total scheduled caste population. Similarly, the respective shares of West Bengal are 8.3 per cent and 11.8 per cent. Such interstate variations in distribution of scheduled caste population are full of political implications for Indian democracy.

At the district level, scheduled castes form the majority only in the one district (Kochbihar in West Bengal) out of the total 446 districts in the country in 1991 (excluding Jammu & Kashmir). However, scheduled castes make at least one-fourth of the total population of 45 districts in the country. In another 64 districts, they make one-fourth to one–fifth of the total population. A majority of these districts belongs to states like Uttar Pradesh, West Bengal, Punjab, Himachal Pradesh, Haryana, Madhya Pradesh, Rajasthan, Tamil Nadu and Karnataka (Fig.1). All the 12 districts in Punjab, 10 of 12 in Himachal Pradesh, 37 of 63 in Uttar Pradesh, 9 of 17 in West Bengal, 6 of 16 in Haryana, 6 of 21 in Tamil Nadu, 6 of 27 in Rajasthan,

and 4 of 20 districts in Karnataka fall in this group. On the other side of the scale, in 60 distircts scheduled castes are less than 5 per cent of the total population. Strikingly, the total number of scheduled caste population is only 31 in the West Khasi Hills district of Meghalaya.

Obviously, scheduled caste population is highly concentrated in a few districts of the north Indian plains and coastal Tamil Nadu. Out of the 40 top ranking districts in scheduled caste population, 15 districts were in Uttar Pradesh, 9 in West Bengal, 4 in Tamil Nadu and 2 each in Rajasthan and Karnataka. In 1991, 85 out of 446 districts in India had a half of the total scheduled caste population in the country. On the other hand, 128 districts in India had just 5 per cent of the total scheduled caste population in India.

Another peculiarity of scheduled caste population distribution is the high degree of heterogeneity in terms of castes and sub–castes. In 1991, there were as many as 1091 sub–castes among the scheduled castes. Earlier in 1951, this number was only 779. Obviously, over the years more castes have been added to the scheduled caste list, mainly due to populist considerations. It has been influenced by the attractive benefits, including reservation in legislative bodies, government jobs and educational institutions. The number of castes varies from a minimum of four in Sikkim to a maximum of 101 in Karnataka. In other words, scheduled caste population is most homogeneous in Sikkim and the least in Karnataka. Also, the number of the sub–castes is quite large in states like Orissa (93), Tamil Nadu (76), Kerala (68), Uttar Pradesh (66), Andhra Pradesh (59), Maharashtra (59), Rajasthan (59), West Bengal (59) and Himachal Pradesh (56). In another seven states/union territories, the number of such castes was between 50 and 30. Among the union territories. Delhi and Chandigarh have the largest numer, each having 36 sub-castes.

However, only 10 out of the 1091 sub–castes subsume more than fifty per cent of the total scheduled caste population in India. Specifically, *Chamars* make more than half of this fifty per cent. In other words, *Chamars* constitute one–fourth of the total scheduled caste population in the country. In their spatial distribution, *Chamars* are highly concentrated in few north Indian states. According to 1931 Census, which last collected a detailed information on castes, 6.3 million or 24.4 per cent of the toal 25.8 million *Chamars* in India were in Uttar Pradesh (then known as United Provinces of Agra and Oudh). *Adi Dravida, Pasi, Madiga, Dusadh, Mala, Dhobi, Paraiyan, Mahar, and Adi Karnataka* contribute the remaining one–half. *Chamars* dominate particularly in Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh and Bihar; *Adi Dravida and Paraiyan* in Tamil Nadu; Madigas and Malas in Andhra Pradesh; Dusadhs in north Bihar; Dhobis in parts of Uttar Pradesh and Orissa; *Mahars* in Maharashtra; and *Adi* Karnataka in southern Karnataka.

Obviously, concentration of a particular caste in a state or part of it carries great significance in political mobilization and for riding the ladders of political power. The *Chamars* constitute between 40 to 90 per cent of all the scheduled castes in areas of their concentrations. Numerically, they dominate in western and eastern Uttar Pradesh, whole of Haryana, eastern Rajasthan, northern and eastern Madhya Pradesh, and northeast Punjab. Such a geographical distribution of castes has a significant role both in socio-economic development and poltical mobilization. High concentration of these historically oppressed castes in a region may help in their political mobilzation but poses serious challenges before the planners and policy–makers to create social harmony and achieve higher level of socio–economic advancement. In certain states, there exist antagonistic relations not only between the upper castes and the dalit castes but also within the dalit castes. For example, antagonistic relations between

Chamars and *Balimikis*, first and second ranking scheduled castes in western Uttar Pradesh become a cause of social unrest at several occasions, especially during the election process. Parallel examples can be cited that of *Paraiyan* versus *Pallan* in Tamil Nadu, *Madiga* versus *Malas* in Andhra Pradesh, and *Megh* versus *Chamars* in Rajasthan. The inter–caste antagonism not only disturbs the social harmony but also derails the process of socio–economic development.

The scheduled caste population is predominantly rural. In 1991, 81.3 per cent or more than four–fifths were living in rural areas. This proportion was 75 per cent for the country as a whole and only 70.8 per cent for non–scheduled caste population. Earlier in 1961, about nine out of ten scheduled castes (or 89.3 per cent) were rural by residence. This ratio was two out of ten for the non–scheduled caste population. There have been wide inter–state variations in urban–rural distribution of scheduled castes. In Bihar and Himachal Pradesh, this ratio was about one in ten. On the other side of the scale, in union territories of Delhi and Chandigarh this ratio was more than 8 in 10. It is only in industrially developed states of Gujarat and Maharashtra where this figure is about four in ten. Generally the states having a high degree of urban–industiral development have a higher proportion of scheduled castes in urban areas.

Evidently, in majority of states scheduled caste population is still predominantly rural. Some sub–castes are, however, highly urbanized. At least the nine sub–castes like *Bansphod, Baso, Gancha, Kanugh, Kingader, Naibut, Paky, Mala, and Singiwali* are wholly urbanized. They are found in the National Capital Region of Delhi, Rajasthan, Tripura, Gujarat, Karnataka and Maharashtra. Against this, 30 sub–castes are still living mainly in rural areas. They are found mainly in Tripura, Rajasthan, Himachal Pradesh, and Uttar Pradesh.

Nearly a half of urban scheduled castes come from *Chamars, Chuhras, Adi Dravida* and *Bauri*. Urban living and employment in tertiary sector have made them aware of their rights and induced awareness to fight against injustice. Being mostly literate, they are easy to organize politically. Hence, numerically large and urbanized sub–castes enjoy advantages over the others in the context of socio–economic advancement as well as political mobilization. *Chamars* who are relatively more urbanized and numerically preponderant in north Indian states of Uttar Pradesh, Punjab, Haryana, Rajasthan, Bihar and Madhya Pradesh are placed in advantageous position in comparison to the other ones in the area. The same applies to *Adi Dravida* in Tamil Nadu and *Bauri* in parts of Orissa, Bihar and West Bengal.

An examination of inter–state differentials in the growth of scheduled caste population is also highly revealing. Decadal population census is generally employed to study the growth of scheduled caste population. There are, however, some difficulties in this. Firstly, several new castes have been added to the already enlisted scheduled castes over the years. This affects comparability of scheduled caste population over the census decades. For example, the number of sub–castes of this segment of population increased from 779 in 1951 to 1091 in 1991. Secondly, as the Government of India decided in 1990 to extend the benefits of reservation policy to the neo-Buddhist population also, the neo–Buddhists also reported themselves as scheduled castes at the time of 1991 census resulting in a dramatic increase in scheduled caste population in Maharashtra where these people are mainly concentrated. The scheduled caste population almost doubled (4.48 million to 8.76 million) during 1981–1991 in the state. Thirdly, inter–state migration and the way information on migration is reported in the Indian Census also create difficulties in the study of temporal change in scheduled caste

population. Hence, one has to bear in mind all such factors while examining the growth of scheduled caste population in the country.

The scheduled caste population registered an absolute increase of 74 million during 1961–91, i.e., from 64 million in 1991, giving an annual increase of 2.55 per cent. During the same period, growth of non–scheduled caste population (excluding scheduled castes and tribes) was much lower (2.08 per cent). Beside, there are wide inter–state variations in the growth of scheduled caste population (Table1). It varied from a high figure of 4.56 per cent in Maharashtra to as low as 1.89 per cent in Tamil Nadu. Exceptionally high growth rate of scheduled caste population in Maharashtra is attributed to counting of neo–Buddhists to the scheduled caste fold. In 10 out of the 17 states, included in the analysis, the annual growth rate of scheduled caste population was higher than the national average. Five such states (West Bengal, Madhya Pradesh, Rajasthan, Punjab and Haryana) fall in the northern plains, two in western India (Maharashtra and Gujarat), two in northeast (Assam and Tripura) and remaining one in South India (Karnataka). All the three union territories (Chandigarh, Delhi and Pondicherry) registered a very high growth rate. Interestingly, in four out of the five states having a high concentration of scheduled caste population the growth rate of scheduled caste population was lower than the national average. These include Uttar Pradesh, Bihar, Tamil Nadu, and Andhra Pradesh which have been experiencing sizable out–migration of the scheduled castes to other states.

The annual increase in scheduled caste population in urban areas was nearly twice of general growth: 4.53 per cent and 2.55 per cent, respectively. Notwithstanding the popular perception that scheduled castes are predominantly rural, growth of SC population in urban areas was faster than that of the non–scheduled caste population. During 1961–91, the former grew by 4.53 per cent, against the latter growing by only 3.26 per cent per annum. There are, however, wide inter–state variations in growth of scheduled castes in urban areas. Tripura registered the highest growth of 8.19 per cent. Interestingly, states such as Goa, Manipur, Meghalaya, Mizoram, Sikkim and Arunachal Pradesh, where scheduled caste population forms only a marginal proportion of the total population, registered an exceptionally high growth rate of these people (15.3 per cent) in urban areas, indicating rapid expansion in SC demographic space to new areas. All union territories registered a very high growth of scheduled castes in urban area. Pondicherry registered 9.31 per cent increase, followed by Chandigarh with 7.85 per cent and National Capital Region Territory of Delhi with 6.05 per cent. Union territories, which have predominantly urban character and provide better employment opportunities in traditional menial activities, such as sweeping and scavenging provide notable attraction to this section of population.

Socio–Economic Transformation

As stated earlier, development index, calculated to workout socio–economic development of scheduled castes, is based on the concept of human development index. The index value varies from 0 to 1. While 0 stands for no development, 1 stands for the maximum development from a threshold level.

Literacy and education play pivotal role in awakening an individual against socio–economic and political marginalisation. The literacy level of scheduled caste population is not only much lower than that of non–scheduled caste population, but also varies widely from state to state. In 1991, scheduled caste literacy rate was only about two–thirds of that of non–scheduled castes. Earlier in 1961, it was only about one–third of the non–scheduled castes literacy rate. Obviously, notwithstanding the low level of SC literacy, literacy among scheduled castes has been growing faster in the post–Independence period than that among non–

scheduled castes. However, there have been wide inter–state variations in SC literacy rates. It varied from a high of 80 per cent in Kerala to a low of 20 per cent in Bihar in 1991 (Table 2). Accordingly, the literacy index varied from a high of 0.797 (Kerala) to a low of 0.195 (Bihar). The index was lower than the average (0.374) in six states of Bihar, Rajasthan, Uttar Pradesh, Andhra Prades, Madhya Pradesh and Orissa. All these states have a high concentration of scheduled castes and with the exception of Andhra Pradesh, all are from the north Indian Plains. On the other hand, SC literacy rate is high in Kerala, Gujarat, Maharashtra, Assam, Himachal Pradesh, Tripura, and Tamil Nadu. The union territories of Delhi and Pondicherry also have high literacy rates. Earlier in 1961, Haryana, Punjab, Karnataka, Himachal Pradesh and the union territory of Pondicherry also had a low literacy index among these people (Table3)

In 1991, proportion of urban scheduled castes in urban area varied from a high of 37.9 per cent in Gujarat to a low of 6.3 per cent in Himachal Pradesh. Accordingly, the urbanization index ranged from 0.379 in Gujarat to only 0.063 in Himachal Pradesh. In 10 of the 17 states, the value of urbanization index for scheduled caste population was lower than the average for the country as a whole (0.187). The index value for non–scheduled caste population was as high as 0.292. Scheduled castes were hightly urbanized in union territories of Pondicherry, Chandigarh and Delhi. In Delhi it was as high as 0.884.

Earlier in 1961, inter–state variations in this regard were still wider. Then, the index value varied from 0.244 in Gujarat to 0.039 in Himachal Pradesh. In nine states, the index value was less than the average (0.107) for all the states. Scheduled caste population urbanized faster in the states of Assam, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tripura and Pondicherry (U.T) during 1961–91.

Rural occupational diversification plays an important role in raising the income level and social status of those working in non–farm occupations. In this context, scheduled castes are lagging far behind the non–scheduled caste population. In 1991, non–agricultural workers accounted for about 57 per cent of worker in the non–scheduled caste population. Against this, the literacy rate and degree of urbanization made about 65 per cent of the average for the non–scheduled castes. Evidently, the scheduled caste population was still predominantly agricultural, working mainly as agricultural labourers and casual workers. In 1991, the occupational diversification index varied from 0.441 in Gujarat to 0.102 in Bihar as against the average of 0.232 for all states. In six states of Bihar, Andhra Pradesh, Karnataka, Uttar Pradesh, Orissa, and Tamil Nadu, rural occupation diversification of scheduled caste population was low. In Himachal Pradesh, Madhya Pradesh, and West Bengal also rural scheduled castes have relatively low degree of occupational diversification.

A composite index of socio–economic development for scheduled caste population, evolved by averaging indices of literacy, urbanization and occupational diversification is highly revealing. The level of socio-economic development of scheduled caste population is quite low in comparison to the non–scheduled caste population. In 1991, the index of socio–economic development for scheduled caste population was even less than two–thirds of non–scheduled caste population. Earlier in 1961 it was only about a half that of index for non–scheduled caste population (Table 4). Evidently the development gap between the scheduled and non–scheduled castes though remains wide it has considerably reduced during 1961–91. Similarly, there are wide inter–state variations in socio–economic development of scheduled castes. In 1991, the index value for Bihar (0.129) was only about one–fourth (27%) of that for Gujarat (0.477). In all, the socio–

eonomic development level of the scheduled caste population in six states of Bihar, Uttar Pradesh, Andhra Pradesh, Orissa, Rajasthan, and Madhya Pradesh was low. Against this, five states of Gujarat, Maharashtra, Punjab, Tripura, and Kerala had high level in this regard. The remaining six states of Assam, Haryana, Tamil Nadu, West Bengal, Himachal Pradesh, and Karnataka fall in between the two extremes. Six states, where the level of socio–economic level the scheduled castes is high together have only 15 per cent of the total scheduled caste population in the country. The moderate category states together make another 27 per cent of scheduled caste population. In other words, the majority of scheduled caste population in the country has a low level of socio–economic development. With an index value of 0.740, the National Capital Territory of Delhi was at the top among all the states and union territories included in the analysis. Pondicherry had an index value of 0.397, which was about one–half that of the National Capital Territory of Delhi.

The value of development index rose to 0.264 in 1991 from 0.129 in 1961, suggesting a rapid change in socio–economic life of scheduled caste population in post–Independence period. In fact, value of development index for SC population increased by more than 200 per cent between 1961 and 1991. Against this, index value for the non–scheduled caste population has increased by only about 50 per cent. Evidently, socio-economic change among the scheduled castes has been faster that that among the non–scheduled caste population, confirming the positive role of programmes and schemes of socio–economic upliftment initiated by the government in the post–1947 period. The change in index value varied from a high of 0.284 in the union territory of Pondicherry to a low of 0.061 in Bihar. In other words, the rate of socio–economic change of the scheduled caste population in Pondicherry was about five times higher than that of Bihar.

Separately for U.Ts, against a speculative change in the case of Pondicherry, the NCT of Delhi registered a low change. Nevertheless, the level of socio–economic development of scheduled caste population in the case of National Capital Territory of Delhi has been the highest both in 1961 and 1991. Among states, it varies from 0.247 in Kerala to 0.061 in Bihar. In other words, there has been a slugglish change in socio–economic conditions of scheduled castes in Bihar, against a rapid change in Kerala. Besides Bihar, other states registering a low change in the socio–economic conditions of the scheduled caste population include Uttar Pradesh, Rajasthan, Andhra Pradesh, Orissa, Karnataka, and union territory of Delhi. On the other hand, five states including Kerala, Tripura, Gujarat, Maharashtra, and Himachal Pradesh registered relatively high degree of improvement in socio–economic conditions of scheduled caste population. Madhya Pradesh, West Bengal, Tamil Nadu, Haryana, Punjab, and Assam fall in the moderate category of socio–economic change among scheduled caste population. Interestingly, Madhya Pradesh marked by a low level of the socio–economic development of scheduled caste population falls in the moderate category of change. Against this Punjab and Assam, having a relatively high level of socio–economic development of scheduled castes, fall in moderate rate of change.

Briefly, the socio–economic development of scheduled caste population in India is not only low, but also displays wide inter–state variations. However, there has been a rapid change in socio–economic conditions of scheduled caste population during the post–Independence period. In fact, it has been faster than that of non–scheduled caste population. Nevertheless, there have been wide inter–state variations in socio–economic change. Some states especially Kerala, Tripura, Gujarat and the union territories have done very well in comparison to states like Bihar, Rajasthan, Uttar Pradesh and Andhra Pradesh.

Table-1

India : Some Demographic Characteristics of Scheduled Caste Population

State / UT	SC Population (000 persons)		% in total Population of State / UT	% Share in all-India SC Population	Cummulative Percentage	Growth Rate (%) (Annual)	Urban Population in (000 persons)		Urban Growth Rate (%) Annual
	1991	1961	1991	1991	1991	1961-91	1991	1961	1961-91
1	2	3	4	5	6	7	8	9	10
Uttar Pradesh	29,276	15,417	21.0	21.2	21.2	2.14	3,453	1,068	3.99
West Bengal	16,081	6,951	23.6	11.6	32.8	2.80	3,206	485	6.49
Bihar	12,572	6,537	14.6	9.1	41.9	2.18	2,475	673	4.44
Tamil Nadu	10,712	6,073	19.2	7.7	49.6	1.89	2,284	926	3.06
Andhra Pradesh	10,592	4,973	15.9	7.7	57.3	2.52	2,104	455	5.24
Madhya Pradesh	9,627	4,253	14.5	6.9	64.2	2.72	1,833	552	4.08
Maharashtra	8,758	2,227	11.1	6.4	70.6	4.56	1,724	508	4.15
Rajasthan	7,605	3,360	17.3	5.5	76.1	2.72	1,587	272	6.05
Karnataka	7,369	3,117	16.4	5.3	81.4	2.82	1,505	413	4.40
Punjab	5,743	2,632	28.3	4.2	85.6	2.60	1,180	341	4.22
Orissa	5,129	2,764	16.2	3.7	89.3	2.06	1,161	334	4.24
Haryana	3,251	1,268	19.8	2.4	91.7	3.14	1,135	350	4.00
Gujarat	3,060	1,367	7.4	2.2	93.9	2.69	576	118	5.43
Kerala	2,887	1,422	9.9	2.1	96.0	2.36	551	126	5.04
Delhi	1,795	342	19.1	1.3	97.3	5.53	535	122	5.05
Assam	1,659	731	7.4	1.2	98.5	2.73	229	60	4.55
Himachal Pradesh	1,310	610	25.3	0.9	99.4	2.55	92	9.5	7.85
Tripura	431	120	16.4	0.3	99.7	4.26	83	24	4.26
Pondicherry	131	57	16.3	0.12	99.8	2.77	71	6.7	8.19
Chandigarh	106	13	16.5	0.08	99.9	6.99	54	3.7	9.31
Others	129	128	1.8	0.10	100.0	0.03	41	0.6	15.3
All India	1,38,223*	64,242*	16.5	100.0		2.55	25,879*	6,849	4.53
Non-SC-Non ST Population	6,32,603	3,41,547				2.08	1,84,885	70,721	3.26

* Excluding Jammu & Kashmir where 1991 Census could not be held.

Note : 1) There is no Scheduled Caste Population in Nagaland, A & N Islands and Lakshadweep.
2) State/UTs having at least one lakh population of Scheduled Castes have been listed here. The rest of the states and union territories, including Arunachal Pradesh, Goa, Manipur, Meghalya, Mizoram, Sikkim, Dadra & Nagar Haveli & Daman & Diu, have been put under the category of 'others'.

Table 2
India : Indicators of Socio-Economic Transformation among Scheduled Castes by State/UTs, 1961 and 1991

States / UT	Literacy Rate		Urbanization		Non-Agricultral Workers	
	1961	1991	1961	1991	1971	1991
1	2	3	4	5	6	7
Andhra Pradesh	8.5	31.6	11.1	17.3	11.1	13.5
Assam	24.4	53.9	8.2	13.8	25.9	33.8
Bihar	6.0	19.5	5.4	9.0	8.9	10.2
Gujarat	22.5	61.1	24.4	37.9	33.9	44.1
Haryana	11.0	39.2	90.	17.7	27.6	35.2
Himachal Pradesh	9.2	53.2	3.9	6.3	13.0	24.7
Karnataka	9.1	38.1	16.3	23.4	19.1	21.2
Kerala	24.4	79.7	8.5	18.5	21.7	30.4
Madhya Pradesh	7.9	35.1	10.7	21.9	17.1	23.4
Maharashtra	15.8	56.5	21.8	36.6	30.7	35.9
Orissa	11.6	36.8	4.6	10.7	17.2	21.1
Punjab	8.9	41.1	130.	20.6	29.6	34.5
Rajasthan	6.4	26.3	12.3	19.8	22.5	26.0
Tamil Nadu	14.7	46.7	15.3	21.3	14.5	18.4
Tripura	13.4	56.7	5.6	15.8	17.6	37.0
Uttar Pradesh	7.1	26.9	6.9	11.8	13.7	17.7
West Bengal	13.6	42.2	9.8	15.4	19.0	27.6
Union Territories						
NCT Delhi	20.9	57.6	79.7	88.4	93.4	76.0
Pondicherry	10.6	56.3	6.6	40.8	16.7	22.0
All–India (SC Population)	**10.3**	**37.4**	**10.7**	**18.7**	**17.5**	**23.2**
Non–SC/ST Population	**27.8**	**57.7**	**20.6**	**29.2**	**35.3**	**40.6**

Source : Calculated from Census of India, *Special Tables on Scheduled Castes*, Part V, Register General of India, New Delhi.

Note :   1)   Census data on Industrial Classification of Workers for 1961 and 1991 Censuses are not comprable due to definitional change. Therefore, data for the third indicator relates to 1971 and 1991, done to maintain comparability.

2)   Chandigarh (UT) has to left out of the analysis for non–availability of data on selected indicators for 1961.

Table 3
India : Indicators of different Indicators of Socio-Economic Transformation among Scheduled Castes by State/UTs, 1961 and 1991

States / UT	Literacy Rate		Urbanization		Non-Agricultral Workers	
	1961	1991	1961	1991	1971	1991
1	2	3	4	5	6	7
Andhra Pradesh	0.085	0.316	0.111	0.173	0.111	0.135
Assam	0.244	0.539	0.082	0.138	0.259	0338
Bihar	0.066	0.195	0.054	0.090	0.089	0.102
Gujarat	0.225	0.611	0.244	0.379	0.339	0.441
Haryana	0.110	0.392	0.093	0.177	0.276	0.352
Himachal Pradesh	0.092	0.532	0.039	0.063	0.130	0.247
Karnataka	0.091	0.381	0.163	0.234	0.191	0.212
Kerala	0.244	0.797	0.085	0.185	0.217	0.304
Madhya Pradesh	0.079	0.351	0.107	0.219	0.171	0.234
Maharashtra	0.158	0.656	0.218	0.366	0.307	0.359
Orissa	0.116	0.368	0.046	0.107	0.172	0.211
Punjab	0.089	0.411	0.130	0.206	0.296	0.345
Rajasthan	0.064	0.263	0.123	0.198	0.225	0.260
Tamil Nadu	0.147	0.467	0.153	0.213	0.145	0.184
Tripura	0.134	0.567	0.056	0.158	0.176	0.370
Uttar Pradesh	0.071	0.269	0.069	0.118	0.137	0.177
West Bengal	0.136	0.422	0.098	0.154	0.190	0.276
Union Territories						
NCT Delhi	0.209	0.576	0.797	0.884	0.934	0.760
Pondicherry	0.106	0.563	0.066	0.408	0.167	0.220
All–India (SC Population)	**0.103**	**0.374**	**0.107**	**0.187**	**0.176**	**0.232**
Non–SC/ST Population	**0.278**	**0.577**	**0.206**	**0.292**	**0.353**	**0.406**

Table 4

India : Composite Index of Socio–Economic Transformation among Scheduled Castes and Change in Index during 1961-1991

States / UTs	1961	1991	Change 1961-1991
1	2	3	4
Andhra Pradesh	0.102(14)	0.208(15)	0.106(14)
Assam	0.195(3)	0.338(5)	0.143(9)
Bihar	0.068(17)	0.129(17)	0.061(17)
Gujarat	0.269(1)	0.477(1)	0.208(3)
Haryana	0.160(6)	0.307(7)	0.147(8)
Himachal Pradesh	0.087(16)	0.281(10)	0.194(5)
Karnataka	0.148(8)	0.276(11)	0.128(12)
Kerala	0.182(4)	0.429(3)	0.247(1)
Madhya Pradesh	0.119(12)	0.268(12)	0.149(7)
Maharashtra	0.228(2)	0.430(2)	0.202(4)
Orissa	0.111(13)	0.229(14)	0.118(13)
Punjab	0.172(5)	0.321(6)	0.149(6)
Rajasthan	0.137(10)	0.240(13)	0.103(15)
Tamil Nadu	0.148(7)	0.276(8)	0.128(11)
Tripura	0.122(11)	0.365(4)	0.243(2)
Uttar Pradesh	0.092(15)	0.188(16)	0.096(16)
West Bengal	0.141(9)	0.284(9)	0.143(10)
Union Territories			
NCT Delhi	0.647(1)	0.740(1)	0.093(2)
Pondicherry	0.113(2)	0.397(2)	0.284(1)
	0.408	0.167	0.220
All–India **(SC Population)**	**0.129**	**0.264**	**0.135**
Non–SC/ST Population	**0.279**	**0.418**	**0.139**

Note :   Figures in parentheses indicates rank of the state under consideration within the group of states/UTs included in the analysis.

Conclusion

Every sixth person in India falls in Scheduled Caste category. Though their demographic space has expanded in recent decades, they are still highly concentrated in the north Indian states of Uttar Pradesh, Bihar, West Bengal, Rajasthan, Punjab, Haryana and the union territory of Delhi. Maharashtra in the west and Tamil Nadu and Andhra Pradesh in the south too have high concentration of the scheduled caste population. In the centre and northeast, where tribal population dominates, scheduled caste population is generally low. Such a spatial distribution of scheduled caste population has a variety of implications both in socio–economic development as well as in political mobilization. The scheduled caste people are predominantly rural by residence, but their growth rate in urban areas has been much faster than in rural area. However, some of the scheduled castes are almost entirely urban by residence. Their population is growing at a faster rate than that of the non–scheduled castes. There is a large heterogeneity of sub–castes within the scheduled castes, at least there were 1091 sub-castes of scheduled castes in India at 1991 Census; the number of such sub–castes varied from a maximum of 101 in Karnataka to a minimum of four in Sikkim. Of the ten numerically preponderant sub–castes among the scheduled castes, *Chamars* were the largest in number. They make up nearly one–fourth of the total scheduled caste population in India and were highly concentrated in north Indian states of Uttar Pradesh, Punjab, Haryana, Rajasthan, and Bihar. In Uttar Pradesh alone, they account for one–fourth of the total *Chamars* in India.

Notwithstanidng the low level of socio–economic development of scheduled caste population in India, there has been a rapid improvement in their socio–economic conditions during the post–Independence period. It has even been faster than that of non–scheduled caste population, reducing the gap in socio–economic levels of these two segments of population in the country. This confirms the positive role of initiatives undertaken by the government in post–Independence period. The level of literacy, degree of urbanization and occupational diversification of scheduled castes have gone up considerably in the last thirty years, notwithstanding notable inter–state variations in socio–eeconomic improvement of these people. The level of socio–economic well–being is invariably high in union territories. Similary, southern states have done relatively better in comparison to the northern states in this regard. In western India, Gujarat and Maharashtra have also done well in this context. Gujarat, Maharashtra, Tripura and Kerala have achieved high rate of socio–economic upliftment of scheduled caste population. In contrast, the states of Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa have been logging behind in this regard.

Note

1. However, some scholars prefer to use this term in ideological and political sense. According to Sharma (1995,p.88) "the word *dalit* refers to ideological transformation of scheduled castes indicating their heightended protests against the upper caste domination by way of rejection of the upper caste cognitive paradigms and creation of their own cultural idioms, literature and ethnic harmony". He further adds, "the process of emergence of the word *dalit* is a part of journey which starts from *harijan* to 'scheduled castes' and from casters to *dalit.* (p.93).

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SEX COMPOSITION OF INDIA'S POPULATION, 2001: A GEOGRAPHICAL ANALYSIS

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Abstract

India's sex ratio is among the lowest in the world (933 females per 1000 males). Beginning with 972 in 1901, it has been declining consistently. The unusual shortage of females has been the outcome of working of a complex of social, cultural, economic and demographic processes which have varied both temporally and spatially. The existing sex ratio in the country is basically the product of differential in sex ratio at birth, and sex differential in mortality at various stages of life.

More males are born than females everywhere in India especially in the northwestern region. Although more males die than females in infancy and childhood, as is happening universally, in northwestern India it is more than counter balanced by higher female mortality in infancy, childhood and the reproductive period. In the last decade or so this gender bias has been accentuated by widespread female foeticide in northwestern and western India.

The sex ratio is also low in the new agricultural frontiers and highly urbanized and industrialised places mainly due to male selective inmigration to such areas.

Uttaranchal and southwest Himachal Pradesh are anomalies in the north. Here the excess of females is the result of a long tradition of male-selective outmigration to the growing urban places in the Indo-Gangetic plain and recruitment in armed forces.

In contrast to the unprecedented deficiency of females in the northwestern India, pracitally the whole of the South has a close to balanced sex ratio. In most of western costal belt and southern Tamil Nadu, in fact, females outnumber males, mainly as a result of male selective out migration induced by the poverty and pressure of population, among other factors. The status of women in the society has been relatively respectable throughout the past in the south. It goes a long way in their survival rate being almost at par with men in the region, leading to a nearly balanced sex ratio.

Introduction

Sex composition is one of the most important of all demographic characteristics. Sex composition affects directly the incidence of birth, death, and marriage; it appears as a differential in migrant status, occupational distribution, and in virtually all other distributions of characteristics, and it is used as a basis of distinction in almost every aspect of social structure.

With 933 females per 1000 males, as in 2001, India has one of the lowest sex ratios in the world - a fact which has vital implications in demographic, socio-economic and cultural terms for the country. Its deficiency of females over males is in general conformity with what is seen in many Asian countries (Japan, Indonesia and Vietnam being important exceptions), but it is in sharp contrast to the prevailingly large excess of females in most

POPULATION GEOGRAPHY

Table 1
India : Sex Ratio (females per 1,000 males) : 1901-2001

State/UT Code	India/State/Union Territory	Census Year										
		1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001
1	2	3	4	5	6	7	8	9	10	11	12	13
	INDIA[1,2,3]	972	964	955	950	945	946	941	930	934	927	933
1.	Jammu & Kashmir[2]	882	876	870	865	869	873	878	878	892	896	900
2.	Himachal Pradesh[3]	884	889	890	897	890	912	938	958	973	976	970
3.	Punjab	832	780	799	815	836	844	854	865	879	882	874
4.	Chandigarh*	771	720	743	751	763	781	652	749	769	790	773
5.	Uttaranchal	918	907	916	913	907	940	947	940	936	936	964
6.	Haryana	867	835	844	844	869	871	868	867	870	865	861
7.	Delhi*	862	793	733	722	715	763	785	801	808	827	821
8.	Rajasthan	905	908	896	907	906	921	908	911	919	910	922
9.	Uttar Pradesh	938	916	908	903	907	908	907	876	882	876	898
10.	Bihar	1061	1051	1020	995	1002	1000	1005	957	948	907	921
11.	Sikkim	916	951	970	967	920	907	904	863	835	878	875
12.	Arunachal Pradesh*	NA	NA	NA	NA	NA	NA	894	861	862	859	901
13.	Nagaland	973	993	992	997	1021	999	933	871	863	886	909
14.	Manipur	1037	1029	1041	1065	1055	1036	1015	980	971	958	978
15.	Mizoram	1113	1120	1109	1102	1069	1041	1009	946	919	921	938
16.	Tripura	874	885	885	885	886	904	932	973	946	945	950
17.	Meghalaya	1036	1013	1000	971	966	949	937	942	954	955	975
18.	Assam[1]	919	915	896	874	875	868	869	896	910	923	932
19.	West Bengal	945	925	905	890	852	865	878	891	911	917	934
20.	Jharkhand	1032	1021	1002	989	978	961	960	945	940	922	941
21.	Orissa	1037	1056	1086	1067	1053	1022	1001	988	981	971	972
22.	Chhatisgarh	1046	1039	1041	1043	1032	1024	1008	998	996	985	990
23.	Madhya Pradesh	972	967	949	947	946	945	932	920	921	912	920
24.	Gujarat[3]	954	946	944	945	941	952	940	934	942	934	921
25.	Daman & Diu*	995	1040	1143	1088	1080	1125	1169	1099	1062	969	709
26.	Dadra & Nagar Haveli*	960	967	940	911	925	946	963	1007	974	952	811
27.	Maharashtra	978	966	950	947	949	941	936	930	937	934	922
28.	Andhra Pradesh	985	992	993	987	980	986	981	977	975	972	978
29.	Karnataka	983	981	969	965	960	966	959	957	963	960	964
30.	Goa	1091	1108	1120	1088	1084	1128	1066	981	975	967	960
31.	Lakshadweep*	10063	987	1027	994	1018	1043	1020	978	975	943	947
32.	Kerala	1004	1008	1011	1022	1027	1028	1022	1016	1032	1036	1058
33.	Tamil Nadu	1044	1042	1029	1027	1012	1007	992	978	977	974	986
34.	Pondicherry[1]*	NA	1058	1053	NA	NA	1030	1013	989	985	979	1001
35.	Andaman & Nicobar Islands	318	352	303	495	574	625	617	644	760	818	846

Note : 1. For working out the sex ratio of India and Assam for 1981 interpolated figures for Assam have been used.
2. For woking out the sex ratio of India & Jammu & Kashmir for 1991. Interpolated figures for Jammu and Kashmir have
3. For working out the sex ratio of India, Gujarat and Himachal Pradesh for 2001, estimated figures for affected areas
of Gujarat and Himachal Pradesh have been used.
4. The sex ratio for Arunachal Pradesh is not available for the year 1901-1951 and for Pondicherry it is not available
for the years 1901, 1931 and 1941.
Source : Registrar General and Census Commissioner of India : *Provisional Population Totals*, Census of India, 2001
Series-1, INDIA, Paper 1 of 2001, p. 154.

parts of Western Europe, Russian Federation, U.S.A. and several countries in South America and Africa.

The existing deficiency of females over males in India is the outcome of the working of very complex processes which, to be sure, did not start at the same time in the past, nor work at the same rate at different points in time, not to speak of the spatial variations in the nature and working of such processes (Gosal, 1961, p.123). As a result of these complexities, it is extremely difficult to state in very exact terms the causal factors which have worked behind the general deficiency of females in the country. In fact, this overall deficiency has increased, almost consistently, over the whole 20th century during which India's sex ratio (number of females per 1000 males) has fallen from 972 in 1901 to 933 in 2001 (Table 1). However, within the country, the trends in sex ratio have been marked by inter-state and intra-state variations. These temporal - spatial variations in sex structure have jointly contributed to the existing sex ratio of India's population. An understanding of the sex ratio in the country as a whole, as also in its various regions, requires a close acquaintance with the social, cultural and economic history of the country, and the trends therein in recent times. Basically, two facts need to be gone into to understand India's existing sex ratio. First, males and females are not born in equal numbers, and second, they do not die in equal numbers either in infancy and childhood, in youth and old age, or in all ages taken together (Gopalaswamy, 1953,p.59). In other words, it is the differential in sex at birth, followed by differential in the rate of mortality in the two sexes at different ages, which together result in the existing overall sex ratio. The magnitude of migration into or out of the country is far too small to affect the sex ratio of India's population as a whole. Admittedly, however, the in-and out-migration is sizeable enough at certain micro and meso-regional levels within the country to make a significant

impact on their emerging sex structure.

In relation to the consideration of the first point made above, it is noteworthy that the imbalance in sex composition starts from birth. It is now universally accepted that more males are born than females, though in highly variable proportions, in the world at large. As a rule, the sex ratio at birth exceeds 1000 (males per 1000 females) and varies inversely with the frequency of pre-natal losses. Where pre-natal losses are low, as in the highly developed areas of the west, the sex ratios at birth are usually around 105 to 106 (males per 100 females). On the other hand, in less developed areas where the frequencies of pre-natal losses are relatively high, sex ratios at birth vary around 102 (Hauser and Duncan, 1972, p.363)· Thus, to begin with, deficiency of females is a biological phenomenon almost everywhere in the world, including India. In recent years, the excess of males over females at birth in most parts of India has become still larger as a result of the widespread occurrence of female foeticide, specially in northwestern India. It is the differing rates of mortality among males and females in subsequent years of life which complicate the patterns of sex structure during different age-groups, and as a whole. Interestingly, with more males born than females everywhere in India, as everywhere else in the world, a natural process of redressal starts immediately thereafter. More males die than females during infancy (0-1 year age-group). This sex differential in mortality rates during infancy is a common occurrence in most societies of the world - developed as well as developing.

As a consequence of the relatively higher mortality among male infants and male children, the imbalance in sex-ratio narrows down gradually. It is interesting to note that this higher mortality among males than in females during infancy and early childhood takes place despite severe neglect and discrimination which female children suffer from in many parts of India. But this natural process seems to be getting more than counter-

Table 2

India : Changes in Overall sex ratio and sex ratio of children in 0-6 years age group, 1961-2001.

Year	Sex Ratio in 0-6 age group	Overall sex ratio
1961	976	941
1971	964	930
1981	962	934
1991	945	927
2001	927	933

Source : Registrar General and Census Commissioner of India : *Provisional Population Totals*. Paper 1 of 2001, Census of India, 2001 Series-1, India. Published by the Controller of Publications, Civil Lines, Delhi, 2001.

balanced by the supposedly increasing rate of female foeticide and female infanticide in recent years. It is evident from the fact that the sex ratio in the age-group 0-6 has declined at a much faster pace than the overall sex ratio of the country after1981 (table2).

Sharp declines have particularly occurred in 0-6 age group sex ratio during the last decade 1991-2001 in Punjab (from 875 to 793), Himachal Pradesh (951 to 874), Haryana (879 to 820), Gujarat (928 to 878), Uttaranchal (948 to 906), and Maharashtra (946 to 917) These sharp declines seem to be indicative of an underlying trend of female foeticide over most parts of the country, though in varying degrees. Kerala, Sikkim, Mizoram, Tripura and Lakshadweep are the main exceptions. This trend on an extensive scale is sure to have a cascading effect on population over a period of time, leading to a further fall in sex ratio in the country. The increased imbalance that is setting in at this early age-group will be difficult to be wiped out. It will have its implications - demographic, social and economic - for a long time to come. A sex ratio of 927 females per 1000 males in 0-6 age group does not augur well for the future of the country (Banthia, 2001, p.96). For a comprehensive understanding of the causes and effects of this development, a thorough investigation covering various regions and

different sections of the society should be given high priority.

It is commonly agreed that conscious or unconscious neglect of female children is generally a feature of illiterate and poor families living in rural areas. This is probably connected with the dowry system which means a heavy demand on the limited resources of the girls parents. Although, according to the existing law, girls are entitled to inherit landed property, but ways and means are sought by people to deny them this right. In the past, girls were looked upon as a great liability. This attitude is not much changed even now, especially in villages and among conservative and illiterate families. Even among urban lower middle class families, dowry deaths are not uncommon. It is a blot on the society that such a thing should be happening in the 21st century. Cases of 'bride burning' are heard more in northwestern India than in the south. Though in greatly varying degrees, the still existing prejudicial attitudes against girls are reckonable factors in the low sex ratio of India's population as a whole, particularly in early years of life.

Another important causal factor in the low sex ratio is high incidence of female mortality during the reproductive period. Too early, too frequent and too many births cause physical and mental exhaustion of mothers,

ultimately leading to a variety of ailments and mortality among them in the later years of the reproductive period i.e between 35 and 44 years of age. Inadequate healthcare facilities, ignorant mid-wifery, shortage of nursing facilities and prevailingly poor nutrition account for heavy toll of life among the fair sex, specially in rural and backward regions, notable regional variations apart. Though much less now than before, maternal mortality is still persisting. Several of the areas of high fertility rates, among other factors, are also those of large deficiency of females. But for the increasing control over epidemic diseases and effects of famines on life, sex ratios would have become more imbalanced. Ironically enough, new ailments and new causes of mortality are coming to light in the fast changing patterns of life in the country. The factors responsible for general deficiency of females do not operate uniformly all over the country. With wide diversity in social, cultural and economic conditions in India, regional variations in sex composition are the natural outcome.

Spatial perspective on sex composition of India's population

In the preceding discussion the focus was on sex ratio in India as a whole, as recorded at the 2001 census. But a choropleth map based on districtwise data reveals wide spatial contrasts in sex ratio within the country(Fig.1). Three main types of areas are at once identifiable on this map: (A) Those where there is excess of females over males (with sex ratio of 1000 and above) which is unusual in the Indian context; (B) those where there are fewer than 900 females per 1000 males, showing great deficiency of women - the other extreme: and (C) those areas where there are 900 to 1000 females per 1000 males, with two sub-divisions; (a) 900 to 949 and (b) 950 to 999 females per 1000 males. While areas in C (a) sub-category are closer to those of great deficiency; those in C (b) are closer to a balanced sex composition.

A. Areas with 1000 and above females per 1000 males

Areas iricluded in this regional type are: (1) Malabar Coast, (2) Konkan Coast, (3) southeastern Tamil Nadu, (4) southern Orissa, northeastern Andhra and southern Chhatisgarh along with adjoining parts of southeastern Madhya Pradesh and northern Andhra Pradesh, (5) eastern and central Uttaranchal, (6) southwestern Himachal Pradesh, and (7) isolated areas in northwestern Bihar and eastern Uttar Pradesh. Out of a total of 593 districts in the country, the units with excess of females over males number 79.

(1) Malabar Coast: The whole of the Malabar coastal tract has had the distinction of having an increasing excess of females over males throughout the past one hundred years. In Kerala the sex ratio has almost consistently increased from 1004 females per 1000 males in 1901 to 1058 in 2001. With the exception of Idukki district where the sex ratio was 993 in 2001, everywhere else in the state females out number males. In nine of the districts there were more than 1050 females per 1000 males; only in four it was below 1050. In Udupi and Dakshina Kannada districts of Karnataka it was 1127 and 1023 respectively . The whole of the Malbar coastal zone has been experiencing male-selective emigration and out-migration for decades together. Apart from migraton to foreign lands, there has been considerable male-selective migration from Malabar coastal areas to the newly developing plantation agilcuiture on the upland areas of the adjoining states, and to metropolitan ciities in the country. With well developed healthcare system, high rates of literacy among men and women both in rural and urban areas, and well recognised status of women in the society, the females have been surviving almost equally well as men over the decades in Kerala. The impact of Christianity and exposure to the west for a long time had had their own effect on the social and cultural traditions of this tract.

The lack of a differential in mortality rates between males and females has been an important factor in this sex ratio.

(2) Konkan coast: The large excess of females over males in the Konkan coastal districts of Ratnagiri (1135) and Sindhudurg (1077) is almost wholly the function of male-selective out-migration to Mumbai's urban agglomeration and other industrial cities of Maharashtra. In 1991 the sex ratio in Ratnagiri district was 1205 - the highest in the country, but has since declined to 1135 by 2001, reducing the ratio to third rank in the country. The Konkan coastal tract is poor in resources, pushing out people in search of employment elsewhere in the western region. In recent years, however. with the completion of the Konkan railway project, there has been considerable developmental activity within the tract increasing employment opportunities, and thus decelerating the process of out-migration These developments have been instrumental in a sliding down of the sex ratio during the last decade from 1205 in 1991 to 1135 in 2001. Likewise the sex ratio has declined from 1137 in 1991 to 1077 in 2001 in Sindhudurg district.

(3) Southeastern Tamil Nadu: In this tract, facing Sri Lanka, the sex ratio ranges between 1000 and 1050. This tract has a long tradition of out-migration and emigration. The destinations of the emigrants have changed over the times, but the tradition of out-migration is continuing· This movement was often highly male-selective. The families left behind lived on the remittances received from the male members gone abroad. In the earlier part of the 20th century, Malaya, Ceylon and Burma were the main destinations. During 1922-1939, of the 1600,000 Indian arrivals in Malaya, mostly from South India (Tamils), 63 percent were men, 14 percent women and 23 percent children. Many of the migrants classified as children were actually boys who came to Malaya for employment. Rubber plantations, provided the main source for employment. Ceylon was the nearest

destination for Tamil immigrants, legal or otherwise. It continued upto 1939, after which it practically ceased. In 1946 the population of recent Tamil immigrants and their descendents in Ceylon was 6,66,000 with a sex ratio of 814 females per 1000 males (united Nations, 1952, New York, United Nations 1952, pp.29-38)· Such a male-selective out-migration left an excess of females in the remaining native population of that tract. This movement was mostly from among the agricultural labourers (Venkatswaran,1951, p.1971).

With the practical stoppage of migration to Malaya, Ceylon and Burma since the late 1930s, the excess of females in Tamilnad was reduced gradually. However, during the post-independence years, out-migration to large Indian cities, and emigration to other overseas lands picked up again. Later industrial and agricultural development in Tamil Nadu itself competed with the incentive for out- migration and provided new sources of employment, so that out-migration declined. As a result, the overall sex ratio declined. While the general sex ratio slided down from 1044 in 1901 to 1007 in 1951, it experienced further fall to 974 by 1991. In 2001, however, it increased to 986. In recent years the emigration was largely to the Middle East, Canada and the USA, mostly from among the educated youth. The unskilled labourers now move to work in cities in India. In most cases the source of out-migration is the southeastern tract of Tamil Nadu, where the excess of females over males is continuing.

(4) Southern Orissa, northeastern Andhra, and southern Chhatisgarh alongwith adjoining southeastern Madhya Pradesh: In these areas there is a small excess of females over males, the sex ratio ranging between 1000 and 1031. Most of the districts included in them are predominantly tribal, hilly or with poor resource base. They are poor and backward. Southern Orissa is often struck by drought conditions. There is male-selective out-migration from them to mining and

industrial towns in nearby areas. Skilled workers go even to distant places. Kolkata conurbation has been the greatest attraction to people from Orissa.

(5) Eastern and central Uttranchal: these mountainous areas of Uttranchal have a long history of excess of females over males, invariably connected with male-selective   out-migration to the states in the Indo-Gangetic plains, mostly to large cities where they work as cooks, domestic servants, peons in offices, chawkidars and other positions of low categories. But most importantly, the able-bodied youngmen from among them who are matriculates go into the army. There is severe shortage of arable land because of the mountainous terrain, and also there is general poverty of resources, which together become a push factor for the males to search avenues of employment outside the region. With 1147 females per 1000 males, Almora district ranks second in sex ratio among all the districts in India. Rudraprayag, Bageshwar and Garhwal districts have 1117, 1110 and 1104 females per 1000 males respectively. In Tehri Garhwal, Pithoragarh, Champawat and Chamoli, the sex ratio ranges between 1017 and 1051. The high sex ratios in eastern and central Uttrranchal stand in marked contrast to the serious deficiency of females in the neighbouring upper Ganga plain (western and central Uttar Pradesh).

(6) In southwestern Himachal Pradesh the districts of Hamirpur, Kangra and Mandi, the sex ratios are 1102, 1027 and 1014 respectively – all mostly linked with male-selective out-migration. Army provides a good opening to the youth from these areas. Also, Punjab, Chandigarh, Haryana and Delhi offer employment opportunities to them in low category manual jobs in their urban areas. The shortage of agricultural land and paucity of resources are generally at the back of their out-migration which is predominantly male selective.

(7) East-central Ganga plain covering parts of north Bihar plain and eastern Uttar Pradesh: Deoria, Jaunpur and Azamgarh districts in eastern Uttar Pradesh and Gopalganj and Siwan districts

in northeastern Bihar have an excess of females over males. This is a highly densely populated tract,suffering from acute pressure of population. The feudalistic conditions still surviving in parts of this tract make life difficult for those who belong to disadvantaged sections of the society, thus inducing out-migration to wherever they can go and earn livelihood. Before independence, Calcutta conurbation and the Assam Valley were among the important destinations for them. But in recent decades they have shifted their movement to Delhi, Haryana, Chandigarh and Punjab. In the rural areas they provide farm labour, and in the cities they ply rickshaws,   operate pullers / petty businesses and work in construction and do other manual jobs. These migrants are overwhelmingly male-selective. As a result, the sex ratio in their source regions becomes female-dominated.

(8) In the northeast, the sex ratio is close to a balance in parts of Meghalaya and Manipur, but excess of females over males is a distinct feature of only two districts: Bishnupur (1004) and Imphal West (1007). In these hilly states several of the tribes are still practising matriarchal system in which women enjoy a better status and have a higher survival rate. There is practically no outmigration from these areas. Instead, there is in-migration predominantly of males in administrative, developmental and military sectors as a result of which the proportion of females in the population falls.

It emerges from the above discussion that excess of females over males is primarily the outcome of male-selective out-migration and emigration.   In Kerla, where a well-planned integrated healthcare programme has been developed and where the females enjoy a desired level of autonomy and social status, lack of differential in mortality rates among males and females in different age groups works as an additional important factor in its high sex ratios.

B. Areas of great deficiency of females: with fewer than 900 females per 1000 males.

Areas with fewer than 900 females per

1000 males are apparently those of severe deficiency of females arising from a highly complex socio-economic and cultural history. It is noteworthy that some of the factors which triggered off trends toward this deficiency may be no longer in operation in the contemporary situation, but their implications may still be continuing, though indirectly.

The areas with fewer than 900 females per 1000 males comprise 152 districts in all. They include (i) northwestern India, especially the states of Punjab, Haryana, Delhi, western, central and southern Uttar Pradesh; (ii) western and northeastern Rajasthan; (iii) northwestern Madhya Pradesh; (iv) highly urbanised districts of Mumbai, Thane, Surat and Ahmedabad; and (v) isolated districts in the east and the north-east.

(i) Northwestern India: In terms of both area and population, this is the largest region in the whole country with a pronouced deficiency of females- a deficiency which was also existent in 1951, with only a few modifications (Gosal, 1961,p.129). In the whole of Punjab, with the exception of Hoshiarpur and Nawanshahr districts from where there has been continous male-selective emigration resulting in a little higher sex-ratio of 935 and 913 respectively, there are 850 to 890 females per 1000 males. Only in Ludhiana district, which is highly urbanised, the sex ratio is 824- the lowest in the state. In the state as a whole there has been consistent improvement in sex ratio from 815 in 1931 to 882 in 1991. Only during the last decade it declined from 882 in 1991 to 874 in 2001. But the decline in sex ratio of children in the 0-6 age group in Punjab was the sharpest in the country: from 875 in 1991 to 793 in 2001, the lowest being in Fatehgarh Sahib district (754), implying female foeticide on a considerable scale. This development has created an alarming situation. In Haryana which was a part of larger Punjab before 1966, the general sex ratio was 861 in 2001, as against 865 in 1991. It has been fluctuating around this figure since 1901. Here in the

districts of Panchkula, Panipat, Sonipat, Rohtak, Jhajjar and Faridabad, the sex ratio was well below 850 while in most of the remaining districts it ranged between 850 and 890. Only in Mahendragarh and Rewari did it cross 900 - it being 919 and 901 respectively. Among all the major states of India, Haryana state has the lowest sex ratio. The fact that in the state as a whole the sex ratio of children in 0-6 age group declined from 879 in 1991 to 820 in 2001 makes the incidence of female foeticide and female infanticide quite apparent. This decline is next only to what happened in Punjab during the decade. In Chandigarh which continues receiving male-selective in-migration from other states, the general sex ratio declined from 790 in 1991 to 773 in 2001. In Delhi the fall was from 827 to 821 during the decade.

In western and central Uttar Pradesh almost invariably the sex ratio ranges between 850 to 899. However, in Baghpat, Gautam Budha Nagar, Mathura, Etah, Budaun, Shahjahanpur, Hardoi and Jalaun districts it was below 850. In Uttar Pradesh as a whole sex ratio declined almost consistently from 938 in 1901 to 876 in 1991. During 1991-2001, however, it improved from 876 to 898. The sex ratio of children in 0-6 age group in U.P. was 916 in 2001 - far higher than in Punjab (793) and Haryana (820). But in the Yamuna-Ganga doab it was well below 900 everywhere. In fact, western Uttar Pradesh is quite akin to Haryana in the matter of sex composition and the factors associated with it. The agricultural frontier of the Terai zone which had attracted male-selective· in-migration from Punjab in the late 1940s and early 1950s and where the sex ratio was rather low in 1951 has since come up at par with western and central Uttar Pradesh in the proportion of females.

(ii) In Western Rajasthan patterns of sex ratio are alike those in Punjab, Haryana and western Uttar Pradesh. In Sriganganagar, Hanumangarh, Bikaner Jaisalmer, Barmer there are fewer than 900 females per 1000 males.

Jaisalmer, which is in the centre of the Thar desert, has the lowest sex ratio (821) in the whole of northwestern India. It was 813 in 1951. Sex ratio increases gradually with increasing distance from this district southeastward. The causal factors behind the unusual deficiency of females in northwestern India are complex and intricately intertwined. Nonetheless, there are two most important factors which need to be pursued to explain this abnormal phenomenon which has persisted for a long time in this region. One, larger excess of males over females at birth in northwestern India than in other parts of the country; two, higher rates of female mortality especially during infancy and childhood (Gosal, 1961, p. 129).

The information available on sex ratio at birth for major divisions of India in various census reports reveals a distinctly higher sex ratio at birth in northwestern India than in other regions of the country (Census of India, 1951, Report p.59). It is quite likely that the figures given in these reports are not wholly correct but they do reveal broad regional differences in sex ratio at birth. The data released by the 2001 census of India on sex ratio of children of 0-6 age group by districts bring out most demonstratively the great deficiency of females over males actually existing throughout northwestern India and this deficiency decreasing gradually to the south, southeast and east. These figures are also indicative of the fact that the rates of female mortality of children in this age group are far higher in northwestern India than in other regions. Although there is a bias against female children in most parts of the country, of course in varying degrees, it has been historically additionally strong in northwestern India which has been the focus of many invasions from outside, and where a patriarchal society has been entrenched with social conditions working against female children. The prevalence of female infanticide, female foeticide and higher female infant and child mortality in northwestern India has been

further emphasised by the 2001 census data. The steep fall in sex ratio of children in 0-6 age group during the last decade 1991-2001 in Punjab, Haryana, Chandigarh, and Delhi point to the strong probability of continuing of the nagative practices and biases against the girls in this region. A similar trend, though of lower intensity, seems to be developing in Himachal Pradesh and Uttaranchal also where considerable fall in child (0-6) sex-ratio took place during the last decade. But the male-selective out-migration of the young people from these states improves the sex-ratio in favour of females in later years of life.

Thus, the alarming deficiency of females in the northwestern region is at least partly the outcome of a working biological law in favour of a larger male excess at birth. The contrast between northwestern India and southern India in relation to sex ratio at birth also appears to be linked with the prevalence of Aryan and Dravidian social and cultural traits in these regions respectively. It will be in order to mention here that similar contrasts in sex ratio at birth have been recorded in New Zealand between the white and the native Maori communities, and in the U.S.A between the whites and the Negroes (Smith, 1948, pp.124-129). In southern India, where in parts a matriarchal system has worked for long and where several cultural and social traditions associated with it are still continuing, the females have enjoyed better status than in the northwest. This factor has impacted their various facets of life positively, in contrast to what is to be seen in the northwest, even now. In addition, higher rates of maternity deaths in the rural areas in the northwest further add to the deficiency of females in the region. A holistic and integrated health care system is still far from being effectively developed here. The females in particular, are yet to experience health security, especially in rural areas.

(ii) & (iii) Northeastern Rajasthan and adjoining northwestern and central Madhya Pradesh: In these areas the sex ratio generally varies between 850 and 900. But in districts

like Morena, Bhind and Gwalior it is below 850. Morena and Bhind, where there are only 822 and 829 females per 1000 males respectively, present a difficult problem to solve. It is comparable to 821 in Jaisalmer in Rajasthan, although they have very different backgrounds. The sex ratio of the 0-6 age group child population in these districts is also low: 829 and 849 respectively. It is quite likely that the menace of dacoits creates insecure conditons for the females. Datia, Shivpuri, Guna, Tikamgarh, Chattarpur, Sagar, Vidisha, Bhopal, Raisen and Hoshangabad, all have 850 to 899 females per 1000 males. The male-selective in-migration into the developing upland areas in these districts do contribute to the overall deficiency of females. The highly urbanised Bhopal district owes its relatively low sex ratio to the typically urban conditions which attract male-selective in-migration. Sagar is an old military cantonment and thus has male-dominated population.

(iv) Highly urbanised districts of Mumbai urban Agglomeration: In Mumbai and Mumbai Suburban districts, which together have a total population of nearly 12 million, there is high predominance of males over females. While in Mumbai ther e are only 774 females per 1000 males, in Mumbai Suburban the corresponding ratio is 826. This is characteristic of large cities in India. Due to high cost of living and inadequacy of infrastructural facilities and basic amenities, the migration to the cities is highly male-selective. Also the industrial structure of the cities is such as offers employment mainly to the males. In Mumbai urban areas the housing problems are so acute, that a large chunk of the population lives on pavements and slums.

It Thane district which is also highly urbanised, the sex ratio is 857. This is largely an extension of Mumbai urban development. Such low sex ratios are a characteristic feature of large cities in India.

In Surat and Ahmedabad districts of Gujarat, which have a high proportion of urban population, the sex ratios are 835 and 892 respectively. Both the cities of Surat and Ahmedabad draw a large part of their labour force from local areas, Uttar Pradesh, Madhya Pradesh and Rajasthan. Much of this in-migration is male-selective.

(v) Kolkata has a sex ratio of 828, much like other large metropolitan cities in India. Kolkata urban agglomeration seems to have reached its saturation level, not attracting any additional labour force. In its new urban areas, residential sector is expanding and thus having less imbalanced population. In Haora and South Twenty Four Parganas districts the sex ratios are 906 and 938, respectively.

(vi) In eastern parts of Arunachal Pradesh several districts have fewer than 900 females per 1000. The excess of males in these districts is largely attributable to male-selective immigration - armed forces and other organisations connected with the development of this region.

In Chennai there are 951 females per 1000 males. As part of the southern culture and demographic situation, Chennai's local population has a nearly balanced sex ratio. Over and above that the male-selective in-migrants do not change it too much. Chennai, as a result, bears the imprint of its regional sex ratio very clearly and it does not strictly fall in the category of other large cities or highly urbanised areas. Thus it is much unlike Mumbai, Kolkata and Delhi in this regard.

C. Areas with 900 to 999 females per 1000 males

Areas falling in this category are between the two extreme types of areas in terms of sex ratio discussed above. This category has a wide range of sex ratios. For a better understanding it may be sub-divided into two subcategories: (i) areas with 900 to 949 females per 1000 males, having conditions close to the national average, and having considerable deficiency of females, and (ii) those whose sex ratio falls between 950 and 999 and is close to being balanced. Interestingly, areas belonging to the first sub-category (900-949) adjoin the

regions of great deficiency of females (fewer than 900), while those of the second sub-category (950-999) are located next to those having excess of females over males.

Areas in the first sub-category (900 to 949) comprising 194 districts include:(i) The Assam Valley and large parts of the adjoining northeast states, (ii) eastern and east-central Ganga plain, (iii) eastern and southwestern Madhya Pradesh (iv) most of Maharashtra and Gujarat.

The Assam valley has a predominantly 900-949 sex ratio. In 1951 Assam's sex ratio was 868, it has since increased to 932 by 2001. Before 1951 streams of male migrants were moving into the valley to develop the potentially rich farm lands, and also meet the labour requirements of the growing tea plantations. In 1951, the Assam Valley had one of the lowest sex ratios. The in-migrants to Assam were from what is now Bangladesh, Nepal, Bihar, Orissa, Uttar Pradesh (eastern), West Bengal, Madhya Pradesh etc. As the Valley was in the process of filling up, the process of migration started slackening. Accordingly, the sex ratio started improving with full families settling down in the frontier areas. In recent decades the local population has been showing resentment against those who have come from outside. Now the valley is practically closed to any in-migration. The northeastern states like Meghalaya, Manipur and Mizoram which had excess of females over males (in consonace with the matriarchal system of their societies in most cases) in the beginning of the 20th century and which condition they consistently maintained for several decades thereafter, have in recent decades been receiving a lot of male-selective migration from Nepal and Indian areas in the pursuit of their developmental activities, apart from the armed forces. This has converted their female-surplus population into one dominated by males. The sex ratio in Manipur, Mizoram and Meghalaya, as recorded in 2001 census, is 978, 938 and 975 respectively. In Nagaland it has come down from 999 in 1951 to 909 in 2001.

In the east and east-central Ganga plain, sex ratio is generally below 950.) Only in northwest Bihar plain and parts of eastern Uttar Pradesh does it exceed 950; in fact in a few districts even beyond 1000. This is mainly due to male-selective out-migration from this region which is suffering from acute pressure of population and also from negative effects of the feudal system still prevailing in parts of this region.

In eastern and southwestern Madhya Pradesh also the sex ratio ranges between 900 and 949, hovering around 920 during the past three decades. These areas have been receiving male-selective in-migration from the neighouring areas to work in mining, forest based and other local small scale industries. The eastern areas have been getting migrants from parts of Chhatisgarh, while the southwest has been receiving part of its labour force from western Madhya Pradesh. As a result, sex ratio in the source areas is somewhat higher, generally between 950 and 999, while the recipient areas have fewer than 950 females per 1000 males.

In a large part of Maharashtra and Gujarat, the sex ratio is prevailingly between 900 and 949. Throughout these two states increasing industrialisation and other developmental activities have drawn considerable amount of inmigration almost on a continuing basis. As a result of male-selectivity in this inmigration, the emerging sex ratio in the two states has come down over the decades. In Gujarat it has slided down from 952 in 1951 to 921 in 2001; in Maharashtra the corresponding fall is from 941 to 922. These in-migrants have come not only from the adjoining states of Rajasthan and Madhya Pradesh but also from U.P. and Bihar.

There are isolated districts in Tamil Nadu (Dharmapuri and Salem), Karnataka (Bangalore, Bijapur, Bidar and Dharwar) and Andhra Pradesh (Hyderabad, Rangareddi) where the sex ratio is between 900 and 949. Bangalore has the lowest of all - 906 females per 1000 males, typical of growing industrial metropolises.

Areas n the second sub-category (comprising 161 districts) of this regional type have 950 to 999 females per 1000 males - much closer to a balanced sex ratio. They include southwestern West Bengal, southern Jharkhand, northern Orissa, northern Chhatisgarh, southern and western Madhya Pradesh, eastern peripheral Maharashtra, south-western Rajasthan, southern Saurashtra and Kachchh. From all these areas there has been some amount of male-selective out-migration to mining and industrial sites in the neighbouring areas, raising their sex ratio moderately.

But near-balance sex ratios are found in large tracts comprising almost whole of Andhra Pradesh, Karnataka and northern and western Tamil Nadu. In these large tracts, it is normal near - balance sex ratio which is so chararcteristic of southern India. It is the social status, autonomy and widespread education among women which have gone a long way in their longer survival and higher sex ratio. In fact, it is the real culture and demographic distinctiveness of the south which is reflected in the relatively high sex ratio of these states. In Andhra Pradesh the sex ratio has fluctuated around 960 and 980 throughout most of the 20th century. In Tamil Nadu for the first half of the 20th century there was excess of females over males, while in the second half it declined to 986 by 2001. The distinctiveness of the whole south in regard to its near-balance sex ratio, and even excess of females over males, is as pronounced, as the large deficiency of the females in the north-west. The two macro-regions stand in sharp contrast to each other in this regard.

Conclusion : It emerges from the above discussion that while India as a whole has a relatively large deficeiency of females as against males, almost in conformity with most Asian areas, it has marked regional contrasts in sex ratio deeply rooted in its history, economy and culture. The sharpest contrast is between north-western India and southern India. In addition, there are intrastate and inter state variations in sex ration which are caused by complex combinations of social, economic and demographic factors. The most important problem thrown up by the study is differences in sex ratio at birth in the two macro-regions - the northwest and the south. This warrants rigorous research by an inter-disciplinary team comprising scholars of geography, history, biology, anthropology and demography. Another issue that has emerged recently is the negative changes in sex ratio of children in the 0-6 age group which are alarming and have serious implications for the future of the country and its regions.

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INDIA
Sex Ratio 2001
(Data by Districts)

DNA

Females / 1000 males

1000
950
National average: 933
900
850

DNA – Data not available

0   500
Kms.

Fig. 1

INDIA
Child Sex Ratio in
Age Group 0-6
2001
(Data by Districts)

Females / 1000 males in
age group 0-6

1000
950
900
850

National average: 927

DNA - Data not available
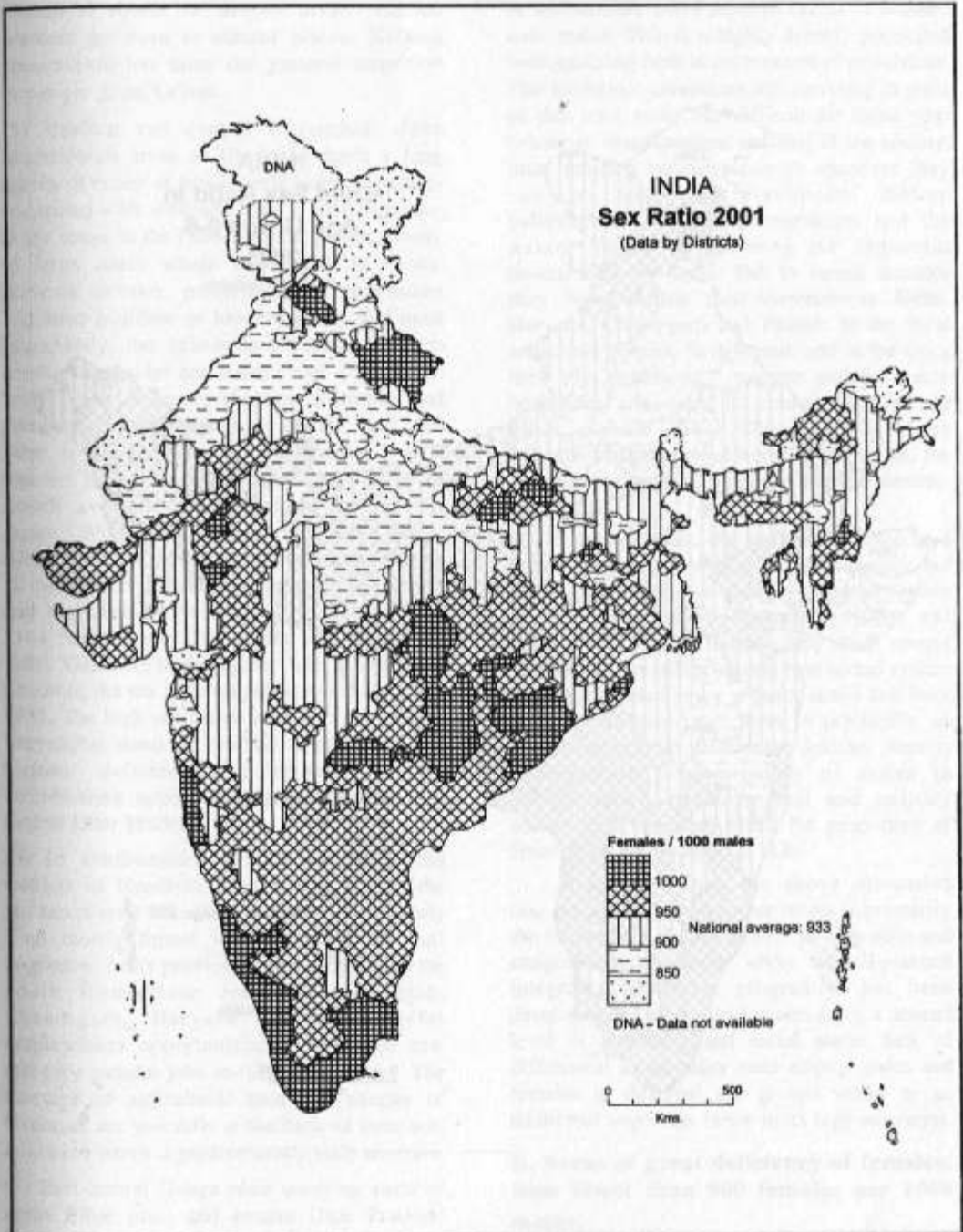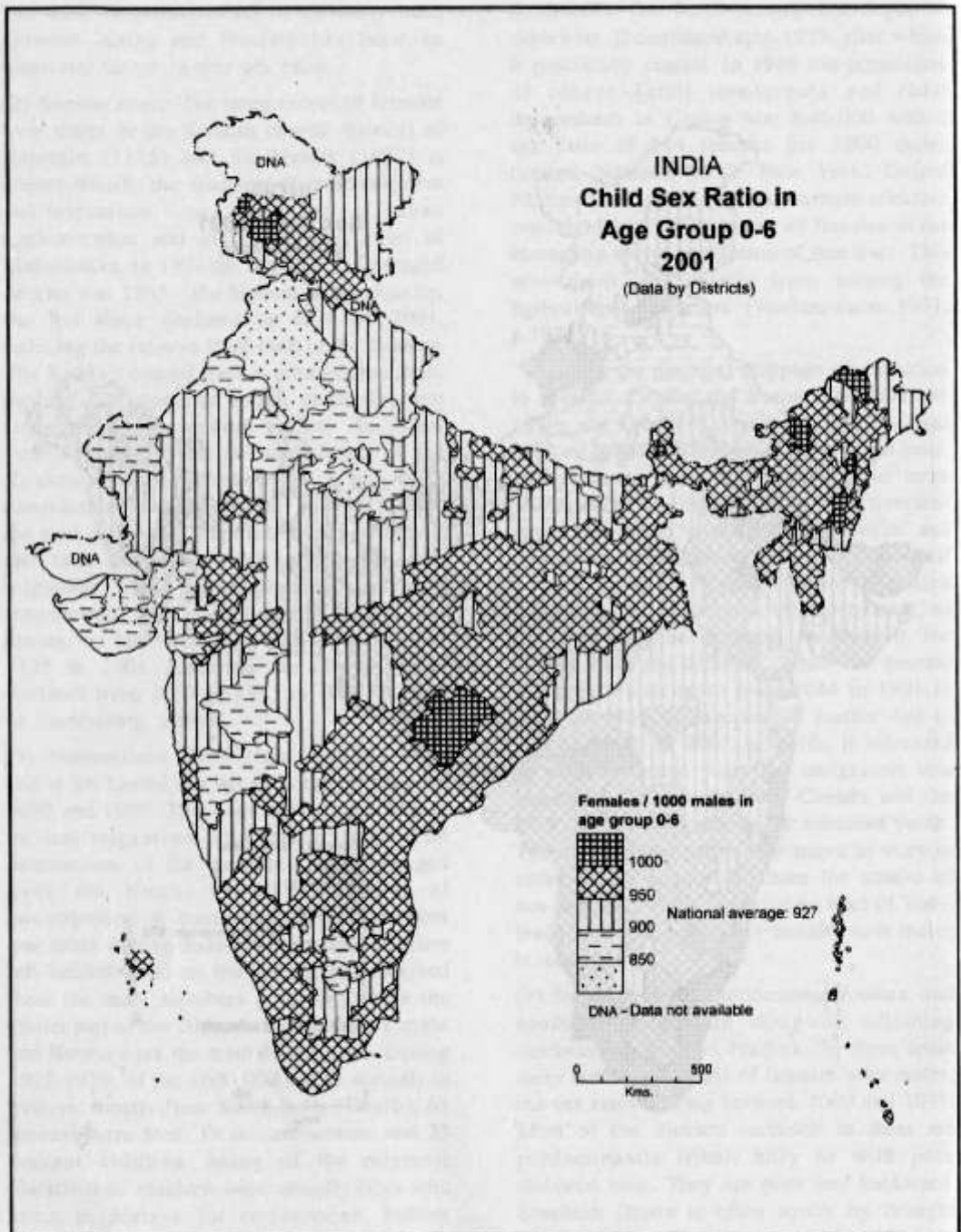
0 _____ 500
Kms.

Fig. 2

FIRST RESULTS OF THE DECENNIAL CENSUS
OF POPULATION : 2001

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Abstract

Employing data mainly from the census of India, the paper attempts to take a stock of main demographic changes in India in recent decades. It focuses particularly on: (i) growth of population; (ii) progress of literacy; (iii) Sex ratio; (iv) density of population; and (v) rise in proportion of urban population. Besides, it also takes into account the changing population-resource equation in the context to the emerging demographic scenario in the country.

Growth of Population

The total population of India was 1027 million in 2001. The rate of growth during 1991-2001 was 21.4%; 10 per cent lower than the rate of 23.9% during the previous decade. The average annual exponential growth rate is estimated at 1.93 per annum during 1991-2001. The growth rate has been falling for two successive decades; it had peaked at about 25% during 1961-81 (Table 1). The rate 13.3% during 1941-51, increased steadily during the next 4 decades. The increase was due to various measures taken by the government to reduce mortality: (i) assured supply of adequate and safe drinking water to an increasing number of villages and towns and providing facilities for preventive health and medical care to their residents; (ii) eradication of malaria, the giant

killer during the late 1950's; (iii) reduction of mortality from diseases of the digestive and respiratory tracts due to access to cleaner water supply and also to facilities for primary health and medical care to all the villages and towns in several progressive states; (iv) and better nutrition due to larger availability of cereals. Output of cereals has been increasing steadily thanks to use of dwarf, high yielding varieties of wheat and rice seed along with recommended dosages of chemical fertilizers and pesticides in areas irrigated by canals or by deep tube wells, or surface wells fitted with pumps operated by diesel oil or electricity. Output of cereals was 203 million tonnes in 1998/99 as against about 60 mt during the mid-1950's. In the past two decades itself it increased from 120 mt in 1980/81 to 203 mt. in 1988/99.

Table 1
India : Growth of Population, 1951-2001

Census Year	Population (Millions)	Decadal Change (in per cent)	Average annual growth rate (Per cent)
1951	361.1	13.3*	1.25
1961	439.2	21.6	1.96
1971	548.2	24.8	2.20
1981	683.3	24.7	2.22
1991	843.4	23.9	2.14
2001	1027.0	21.3	1.93

Source : Census of India 2001; Paper 1 of 2001 : *Provisional Population Totals*, p. 34, New Delhi, 2001.
*over 1941.

The decline in growth rate of population is accompanied by progressive decline in total fertilitiy rate of women in the reproductive age group. The rate in 2000-2001, 3.1 was one-third lower than the rate 4.6 in the previous decade. The Census Commissioner has projected a further decline to 2.5 by 2011-2016. Projecting continuation of the decline in growth rate for another 15 years the Census Commissioner has estimated that the population during 2015-2016 would be 1263 million. UNDP, New Delhi has projected a slightly lower population, 1235 million by 2015.

There was great variation among states in the annual exponential rates of growth of population during 1991-2001. The rate in Kerala (0.9%) and Tamil Nadu (1.0%) were lower than the rate needed to maintain a stationary population. The rate in Andhra Pradesh (1.3% p.a) was just enough to maintain a stationary population. The rates were lower than the national average also in Karnataka (1.6%), Orissa (1.5%), West Bengal (1.6%) and Assam (1.7%). Except, Orissa and Assam all these are relatively developed states.

There has been significant decline in infant mortality and increase in expectation of life at birth. The expectation of life at birth during 1996-2001 was 62.3 years for males and 65.3 years for females. The Census Commisioner has projected that the life span will continue to increase during the next 15 years and during 2011-2016, it will be 67.0 years for males and 69.2 years for females. These figures are close to those for many rapidly developing countries of South-East Asia at present.

Literacy Rate

The rate 65.4% in 2001 was nearly 25% higher than the 1991 rate of 52.2%. The literacy rate has increased steadily during the last half a century; it was only 18.3 per cent in 1951. The highest rates are in Kerala (90.9%) in the extreme south-west, and Mizoram (88.5%) a small state in the north-eastern Himalayan region. The rate is higher than the national average also in Goa (82.3%), Maharshtra (77.3%), Himachal Pradesh (77%), Tamil Nadu (73.5%) Gujarat, Punjab and Sikkim (70%). It is slightly lower in West Bengal and Haryana (69%). In most of these states, literacy rate among males is 80 per cent or higher. In several other large states, the average rates are 65% and above for females and 75% and above for males. In Madhya Pradesh and Rajasthan, states which had very low levels of literacy earlier, the rates in 2001

Table 2
India : Growth Rate of Population, 1981-91 and 1991-2001 and
Growth Rate of Per Capita Income, 1980-81 to 1996-97

Sl. No.	India & States	Population (in million)		Annual Growth (in per cent)		Female literacy	Per Capital Income (at 1980-81 Prices)		
		1991	2001	1981-91	1991-01		1981-81	1996-97	Chang(%)
1	2	3	4	5	6	7	8	9	10
1.	India	846.4	1027.5	2.01	1.93	54.16	1625	2814	70.5
2.	Punjab	20.3	24.3	1.89	1.80	63.5	2674	4171	56.0
3.	Haryana	16.5	21.0	2.42	2.47	56.3	2330	3996	71.5
4.	Uttar Pradesh	132.0	166.0	2.28	2.30	43.0	1278	1628	27.4
5.	Bihar	64.5	82.9	2.10	2.50	33.6	917	1010	10.1
6.	West Bengal	68.0	80.2	2.14	1.64	60.2	1773	2641	49.0
7.	Orissa	31.7	36.7	1.83	1.48	50.1	1314	1595	21.4
8.	Maharashtra	78.9	96.8	2.29	2.04	67.5	2425	4853	100.1
9.	Gujarat	41.3	50.6	1.92	2.03	58.6	1940	3717	91.6
10.	Kerala	29.1	31.8	1.34	0.90	87.9	1568	2274	45.0
11.	Tamil Nadu	55.9	62.1	1.43	1.06	64.5	1448	2876	98.6
12.	Andhra Pradesh	66.5	75.7	2.37	1.30	51.5	1380	2134	54.6
13.	Karnataka	45.0	52.7	1.92	1.59	57.5	1380	2518	64.5
14.	Goa	1.2	1.3	1.47	1.39	75.5	3145	6220	97.8
15.	Madhya Pradesh	48.6	60.4	2.41	2.18	50.3	1358	1877	38.0
16.	Rajasthan	44.0	56.5	2.50	2.49	44.0	1228	2247	83.0
17.	Assam	22.4	26.5	2.17	1.73	56.0			

The 1991 populations of Uttar Pradesh, Bihar and Madhya Pradesh have been reduced to take into account the separation of Uttranchal, Jharkhand and Chhattisgarh respectively from the three states.

Sources : (i) Census of India, *Paper No. 1 of 1991; and Paper 1 of 2001*, New Delhi, India.

(ii) E.P.W. Research Foundation 1998 : *National Accounts Statistics of India 1950-51 — 1996-97*, Mumbai, p. 84

were 76% for males; the rate for females was 50.3% in Madhya Pradesh and 44.3% in Rajasthan. In Madhya Pradesh, the female literacy rate has nearly doubled and in Rajasthan it has more than doubled during the decade (Table 3). The rate in Rajasthan in 1990/91 was only 20.4 per cent, the lowest in the country.

The lowest rates are in U.P. (57.3%) and Bihar (47.5%). Female literacy rates, 43% in

U.P. and 33.6% in Bihar are also low. The national literacy rate would be much higher if literacy rates in these two states, which together have about 25% of the population of the country, were higher.

One result of increase in literacy has been phenomenal growth of the print media-weekly and daily newspapers, magazines and books. The fastest growth of these has been in the regional languages because most of the

literates can read and write only in their regional language. The quality of books in regional languages has improved so much that in many years, the national award for the best book is given to a book in a regional language. Films and television serials in regional languages — Marathi, Bengali, Tamil, Telgu, Malayalam and Kannada produced in studios located in these states - have all together far larger audiences than those for Hindi movies produced in Mumbai.

India may have the dubious distinction of having a larger number of illiterates (296 million) than any other country in the world. However, as the figures presented in the foregoing paragraphs and below indicate progress in increasing literacy has been noteworthy. The number of literates has increased by 204 million between 1991 and 2001.

Sex Ratio

The ratio has been declining steadily through the last century from 972 in 1901 to 927 in 1991. There was a marginal increase to 933 in 2001. The cumulative decline during the 90 years 1901 to 1991 was about 5 per cent. Among states with populations above 20 million the high ratios are in Kerala (1071), Tamil Nadu (992); Andhra Pradesh (980), Chhatisgarh (992), Maharashtra (972), Karnataka (966), Orissa (976), West Bengal (927), Assam (926), Jharkhand (936) and Gujarat (927).

Relatively low ratios are in Punjab (886), Haryana (869), Bihar (916), U.P (895) and Rajasthan (925). Among the states dominated by cities Delhi (813) and Chandigarh (763) have very low sex ratios. The ratio in Maharashtra (922) is also relatively low.

Among the reasons for low sex ratio widespread prevalence of infanticide and also foeticide in recent years are considered to be the most important. Apparently these are prevalent more in a group of states extending from Punjab and Haryana to Bihar than in the

rest of the country. Very low ratios in Chandigarh and Delhi are due mainly to male-selective migration to these cities.

Density of Population

Data on density of population is of much interest to geographers, demographers, policy makers and administrators in various states. Average density of population has increased from 267 in 1991 to 324 in 2001 i.e by more than 20 per cent. It increased by about 4 times in the course of the last century; the density was only 77 in 1901. Among the states with population about 20 million, high densities are in West Bengal (904), Bihar (880), Kerala (819), and U.P. (689). A belt of states with high density (500 per sq.km. and above) extends from Delhi in the west to West Bengal in the east. The only southern state with a high density is Kerala (819).

A medium density belt (281-500 per sq.km.) extends from Gujarat on the west coast through Maharashtra, Andhra Pradesh and Karnataka to Tamil Nadu in the extreme south. Punjab, Haryana, Assam (340) and Jharkhand (335) also have densities (above 281). A low density (101-280 per sq.Km.) belt extends from Rajasthan in the west to Chhatisgarh and Orissa in the east. About a half of Rajasthan is arid or semi arid and the remaining 3 states, which include Madhya Pradesh, have large populations of tribals. Himachal Pradesh and Uttranchal in the western Himalayan region and Nagaland, Manipur and Meghalaya in the eastern Himalayan region also have low densities (101-280 per sq. Km.). The lowest densities (100 and below) are in Jammu and Kashmir, Arunachal Pradesh, Mizoram and Sikkim all of which consist of high mountains and narrow valleys.

Growth rate of population and of per capita income

Growth rate of population has declined during 1991-2001 while there has been a rapid increase in per capita income. The latter, which had been increasing by 3-4 per cent p.a. during

Table 3
India : Four Major Low Literacy Rate States, 1991 and 2001

(Figures in Percent)

Sl. No.	State	Literacy rate in 1991			Literacy rate in 2001		
		Total	Male	Female	Total	Male	Female
1.	Bihar	38.5	52.6	23.5	47.5	60.3	31.6
2.	U.P.	41.7	55.4	26.0	57.4	70.2	43.0
3.	Rajasthan	38.5	55.1	20.8	61.0	76.5	44.3
4.	M.P.	43.4	57.4	28.4	64.1	76.8	50.3

Source : Census of India, 2001 Paper No. 1 *Provisional Population Totals,* New Delhi, 2001.

the previous 3 decades (1960-90), increased by 5-6 per cent or higher during the 1990's. Per capita income, which had been increasing by ½ to 1 ½ per cent p.a. during the earlier 3 decades, increased by 3-4 per cent p.a. during the 1990's. It was estimated at Rs.2814 (at constant prices) in 1996-97 an increase of about 70 per cent over the per capita income of Rs. 1625 in 1980/81 (Table 2).

Despite the recession in the economies of the U.S.A, Western Europe and Japan during the last two years, per capita income increased by over 3-4 per cent per annum (Table 2) during the 1990's and maintained this during 2000-2001. If falling rate of growth of population and rising per capita income continue during the next two decades, India should have finally entered an era in which per capita income continues to increase despite fall in the rate of growth of population.

Number of Districts

The Census gives information also on the number of districts in every state and Union Territory. Provisional paper No.1 contains a large map showing boundaries of districts in every state and union territory. It does not mention, however, that the number of districts has increased greatly since independence. The increase has become necessary on account of (i) growth of population and (ii) the fact the some districts

in several states were too large and had to be divided into two or more districts for efficient administration. A large increase in the number of districts was effected after the Re-organisation of states in 1956. Thereafter, there has been slow but steady increase in the number in response to political pressure. The best example of this is found in two very small states of the north east. Sikkim with a population of 540,000 has 4 districts, while Manipur with a population of 2.4 million has nine districts. The map gives a list of 39 districts which are so small that their names could not be written on the map.

Rural-Urban Distribution of Population

Detailed data on the distribution could become available probably later during the current year. However, the Census Commissioner has through a press note dated July 20, 2001 published summary data for 2001. They are summarised below:

(i)   Total urban population increased from 217.5 million in 1991 to 285 million in 2001. The urban population in 2001 was 27.8 per cent of the total population; the corresponding figure in 1991 was 25.7 per cent. Total urban population increased by 68 million during the decade or by about 21 per cent. UNDP has projected that total urban population

in 2015 would be 434.5 million almost 36 per cent of the total population. The estimate of the Census Commissioner is not available so far.

(ii) The number of metropolitan cities i.e. cities with populations of 1 million and above had increased from 23 in 1991 to 35 in 2001 i.e by 50 per cent during the decade. The total population of the metropolitan cities was estimated at 108 million, just over 38 per cent of the total urban population. Population of the three largest cities — Greater Mumbai, Kolkata and Delhi-42 million in 2001 was about 15% of the total urban population. The total population of the 7 largest cities with populations above 4 million, about 64 million, was 22 per cent of the total urban population. Tamil Nadu with 43.9%

of its population living in urban areas is the most urbanised state. However, Maharashtra had the largest urban population (42.4 million); its urban population constituted 14 per cent of the country's total urban population (Table 4). It had also the largest number (4) of metropolitan cities. Gujarat, Tamil Nadu, Punjab and Karnataka are the other states with relatively high proportions of urban population (Table 4). Gujarat and Tamil Nadu have 3 million plus cities each. U.P. the most populous state has 6 such cities. Bihar, with 10.5% population in urban areas is followed by Assam (12.7%), Orissa (15.0%) and Uttar Pradesh (20.8%) are the least urbanised major states.

Table 4
India : Rural / Urban Distribution of Population in Selected States / Union Territories, 2001

Sl. No.	State/Uts	Total population (million)	Urban population (million)	Per cent urban/population
1.	Tamil Nadu	62.1	27.4	43.9
2.	Maharashtra	96.8	41.0	42.4
3.	Gujarat	50.6	18.8	37.4
4.	Karnataka	52.7	17.9	34.8
5.	Punjab	24.3	8.2	34.0
6.	Haryana	21.0	6.1	29.0
7.	West Bengal	80.2	22.5	28.0
8.	Andhra Pradesh	75.2	20.5	27.0
9.	Kerala	31.8	8.3	26.0
10.	Madhya Pradesh	60.4	16.1	26.6
11.	Jharkhand	26.9	6.0	22.3
12.	Rajasthan	56.5	13.2	23.4
13.	Uttar Pradesh	166.0	34.5	20.8
14.	Orissa	36.7	5.5	15.0
15.	Assam	26.6	3.4	12.7
16.	Bihar	82.9	8.7	10.5

Source : Rural / Urban distribution of Population - India States and Union Territories, 2001. Registrar General India : Press Note. New Delhi July 20, 2001.

Population: Resource or Liability

The Census Commissioner of 1951 had warned that the rate of growth of population was too high and must be reduced to 5 per cent per decade by 1969/70; otherwise Malthusian checks — widespread famine and pestilence — would prevail to bring population down to a sustainable level. The population in 1951 was 361 million; the Commissioner held the view that at this rate of growth total population would be 500 million by 1969/70. He stated that with all known means of increasing agricultural output including increase in the irrigated area, India could not feed more than 500 million people. The population has increased to more than 1 billion in 2001; at the same time output of foodgrains has increased from less than 60 million tonnes during the mid-1950s to over 200 million tonnes by the late 1990s, i.e., by more than 3 times. Output of other important foods- sugar, cooking oil, milk and vegetables has also increased so rapidly that an average villager can afford to buy them. As a result, the average Indian was better fed and healthier in 2001 than he/she were in 1950/51. As the data in Table (4) show he/she was also better clothed. The data for the housing census of 2001 could show that he/she was also better housed.

We cannot blame the Census Commissioner of 1951 for his gloomy forecast. The dwarf, high yielding varieties of wheat and rice, use of which by farmers in irrigated areas or in those having adequate and dependable rainfall which have led to such remarkable increases in cereal output, were unknown in the 1950s. Polyester fibre, use of which in textiles has resulted in similar increase in production of cloth was also unknown in the 1950s.

The Government of India did launch a programme which propagated limitation of families by couples in the reproductive age group. The programme was completely ineffective however; on the contrary use of coercive methods to induce such couples to limit the number of their children during 1975-77 i.e. years of the national emergency, gave a serious setback to the programme from which it recovered only during the late 1980s. The decline in the growth rate of population during 1991-2001 is due entirely to the voluntary decision of couples in the reproductive age group to reduce the number of children that they bear. This decision is the outcome of perception of a marked increase in the survival rate of children due to various measures taken by Governments of various states and mentioned in Section I above.

The National Population Policy aims now at reducing the total fertility rate. The Census Commissioner has forecast that the total fertility rate which has fallen from 4.6 in 1990-91 to 3.1 in 2000-2001 i.e. by 1/3rd during the last decade, will fall further to 2.5 or about 30 per cent during the next 15 years.

Thus, during the 50 years 1951-2001, a growing population has produced its own means of subsistence. The prospects for its continuing to do the same during the next 15 years are bright given the projected decline in growth rate of population and increase in agricultural and industrial output.

Conclusion

The conclusions of the foregoing discussion are summarised below :

Growth rate of population would continue to decline during the next 15 years and would average 1.3% p.a. during this period. Total population in 2015 would be between 1235 and 1263 million.

The growth rate in some large and comparatively developed states would be lower or just above the rate needed to maintain a stationary population. These states with some notable exception, have also high rates of literacy and per capita income.

U.P. and Bihar, two large and populous states which accommodate about 25 per cent

of the total population of the country, could continue to have comparatively high rates of growth of population during the next 15 years, low levels of literacy and low per capita income (Table 2). Some other states with the above characteristics would be those which have large populations of tribal people.

The proportion of urban population is expected to increase from 28 per cent in 2000/2001 to 35-36 per cent during 2015/2016. The proportion will continue to be high in most of the states which have relatively high rates of urbanisation at present. These states will have also higher levels of literacy and higher per capita income than states with low levels of urban population.

Maharashtra is expected to remain the state with the second highest level of urbanisation and to have the largest number of metropolitan cities (4), relatively high rate of literacy (77%) and high per capita income (Table 2). Its urban population (42.4 million) was just over 14 per cent of the country's total urban population in 2001. The per capita income of the state, Rs. 4853 in 1996-97, was double the figure for 1980/81 (Table 2), was the highest among states with population above 20 million. Other states with these characteristics are Tamil Nadu and Gujarat.

The high levels of these states were due to their leadership in industrial development. Relatively high levels of urbanisation, literacy and per capita income in Punjab are due mainly to its leadership in agriculture output. Haryana also has relatively high per capita income but relatively low level of urbanisation and literacy. Its high per capita income is due to high agricultural output. The highest per capita income (Rs. 6550 in 1996-97 at 1980-81 prices) was in Goa.

The sex ratio has been falling consistently during the last century. The cumulative fall in the course of the century was 42 per 1000 or just over 4 per cent. The reasons for the low sex ratio are believed to be widespread prevalence of infanticide and also of foeticide in recent decades in states with low sex ratio. The sex ratio is far higher in the southern states than in the rest of the country.

The prospect for the next 15 years (2001-2015) is for (i) significant decline in growth rate of population, progressive increase in literacy rate and in per capita income; (ii) As a result, the average Indian will be living longer, will be better fed, better clothed and probably better housed and much more informed than his/her predecessor of 15 years ago.

CHALLENGES OF INDIA'S POPULATION AND DEVELOPMENT

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Abstract

India entered the 20th century with a population of 238 million only and a little before the turn of the present century, the figure crossed one billion mark. The second half of the 20th century marked a distinct historic phase from a demographic perspective, as it recorded the fastest rate of growth in India's population in its known history, resulting from a faster rate of decline in mortality than fertility through improved health conditions. Spurt in India's population growth has considerably neutralised the gains of economic development. As the country's performance in the area of population control has been much less than targeted or expected, the government need to formulate a more rigorous and harsher policy to exercise restraint over ever-increasing population; otherwise, the country would not be able to cope with the consequent social, political and economic problems.

Humanity at large is fast moving towards, population explosion having far reaching adverse socio-economic consequences. Staggering achievements in science and technology have improved health conditions dramatically. This has resulted in the phenomenal growth in population through a faster rate of decline in mortality than fertility, more particularly in developing parts of the world. Gelbard and his associates (1999:4) have rightly observed, "For much of our history, humans have struggled to survive. By A.D. 1, perhaps 300 million people lived on the Earth, paltry total after millions of years of human existence. For most of the next 2000 years, population growth was exceedingly slow,. High birth rates were often offset by frightful mortality from wars, famines and epidemics". We entered the 20th century with a population of less than two billion, but this century, unfortunately enough, experienced the greatest revolution in human numbers the world had ever seen. By the end of this century this figure crossed over six billion. The global population, which grew by 13 million a year in early 1900 increased by about 90 million people a year by the turn of the 20th century. Over 90 per cent of this population increase took place in less fortunate developing countries. The world's total fertility in developing countries, now estimated at 2.8 children per women, could drop to 2.15 by

2050-close to the replacement level total fertility rate - according to the latest United Nations projections.

If the population growth occurs with the same momentum, we will reach the seven billion mark in the next 12 years and by the middle of 21st century the world population is likely to exceed 9 billion, which is really a sign of gloom and despair for the humanity (O'Neil and Balk 2002)[1]. All the projected growth will take place in today's developing countries, which by 2050 will account for over 85 per cent of the world population (UN 2001)[2]. The socio-political implications of demographic trends in the developing world are difficult to delineate, for they vary from country to country, but that would certainly be devastating for the most developing countries. It is quite clear from trends widely evident in the world that the rapid growth of a country's population, alongwith its maldistribution, will impose great strains on existing political, social and economic structures and on relations between nations. It is good to learn that in about 100 years the world population would decline.

Global Demographic Challenges

The increase in population beyond optimum levels trends to generate a whole range of other problems, including the need for more living space, more food and water, proliferation of greater wastes generated by urban population.[3] The population problem has already greatly altered the environment. It is estimated that the per capita consumption of natural resources by modern economies remains very high — between 45 and 85 tonnes annually. To meet the demands of an expanding population, there is a strong need for a rapid turnover in the agricultural, mining and industrial sectors. This is possible only at a tremendous environmental cost. Man has implicitly reached a stage where natural resources cannot be exploited further. Development has to be achieved without

further destruction of the environment. The massive consumption of natural resources by a rapidly escalating population amounts to changes in the natural ecosystem at a much larger scale than ever before.

It is estimated that if the current trend in resource use continues and the world population grows as projected (about 9 billion by 2050), then per capita availability of range-land will drop by 22 per cent and fish catch by 10 per cent by 2010. The per capita area of irrigated land, which now yields about one-third of the global food harvest, will drop by 12 per cent and crop land area and forest land cover per person will shrink by 21 per cent and 31 per cent respectively. The world's economy by the middle of this century is expected to increase five times from the current level of about US$16 trillion, causing depletion of the world's natural resources at a gigantic scale.

The saga of damage inflicted upon nature by humanity is not new. However, the environmental crises that the world now faces are qualitatively and quantitatively different from anything before. So many people have been contributing towards environmental degradation that the system as a whole is in danger. Because of the heavy concentration of population, most cities in the world have become highly polluted. Increase in the number of industry and motor vehicle has contaminated the air immensely. It is estimated that the suspended particulate matter (SPM) results in about 460,000 additional deaths every year. If the spiralling population is not checked, there would be colossal damage inflicted on the environment and the people living in it. Whether in an affluent developed country or in a developing nation like India, which has just ushered in its billionth citizen, serious efforts are required to stem the growing tide of humanity. "Today, more than half of the urban population in developing countries, where virtually all population growth occurs, subsist on the equivalent of less than $2 a

day" (Population Institute 2001 : 1).

The Indian Scenario

According to the provisional results of the 2001 census, India's population stood at 1,027 million on 1st of March 2001, comprising 531 million males and 496 million females (Census of India 2001). From 361 million at the time of independence, the population reached one billion in 2001, registering an increase by nearly three times. All this has happened when the country is not in a position to guarantee adequate nutrition, healthcare and education to the burgeoning population. At the same time, it is also true that all this has happened because of mass poverty in the country. Bad governance is also partly responsible for the current demographic and health scenario. Every year about 18 million people were added to India's population during 1991-2001 as against 16 million annually during 1981-91 (Table 1). In other words, each year India's population increases by the equivalents of the number of inhabitants of Ghana, Australia, Mozambique or Saudi Arabia.

The Indian population is now thrice that of the United States — world's third most populous country, while the US is three times larger in geographical area than India. If the present rate of population growth continues, we would soon overtake China as the most populous nation of the world. India's population nearly doubled between 1901 and 1961, from 238 million to 439 million. The pace of growth picked up momentum in the 1960's and the population nearly doubled again by the 1991 census. The Indian census has classified or charted the momentum of population growth during the twentieth century into four distinct phases in the following manner (Census of India, 2001:31) :

Table 1

Decadal Variations in Population Growth in India during 1901-2001

Census Year*	Total population in million	Average annual exponential growth rate	Progressive growth rate over 1901 in per cent
1901	238.4	—	—
1911	252.1	0.56	5.8
1921	251.3	-0.03	5.4
1931	279.0	1.04	17.0
1941	318.7	1.33	33.7
1951	361.1	1.25	51.5
1961	439.2	1.96	84.3
1971	548.2	2.20	129.9
1981	683.3	2.22	186.6
1991	846.3	2.14	255.0
2001	1027.0	1.93	330.8

* Including Assam and Jammu and Kashmir. The 1981 census was not held in Assam and the 1991 census was not held in Jammu and Kashmir due to disturbances. The 1981 and 1991 census data include estimated figures for these two states.

Sources : Census of India, 1971, *General Population Tables*, Series 1, India, Part II-A (i), Pp 35,50 536-37; Census of India 1991, *Final Population Totals / Brief Analysis of Primary Census Abstract*, Series 1, India, Part 2 of 1992, p.86; Census of India, 2001, *Provisional Population Totals*, Series-1, India, Paper 1 of 2001, p. 34

1901-1921   Stagnant population
1921-1951   Steady growth
1951-1981   Rapid growth
1981-2001   Dissipating high growth

One can readily have the idea about the momentum of population growth in India during the preceding century from Table 1. Because of the rapid rise in population the gap between China and India with respect to population size is gradually closing. At the present rate of growth India's population would double again within 36 years. The total fertility rate of Indian woman is currently 2.85 children, which is significantly higher than the replacement level fertility of 2.1 (NFHS-2 2000 : xviii). The problem becomes serious mainly because births considerably exceed deaths. It is growing at a rate of 1.9 per cent each year, while the world population grew at the rate of 1.4 per cent and China registered a much lower annual rate of growth, i.e. less than one per cent, during 1990-2000 (Census of India, 2001 : 34). Even if all young Indians choose to have no more than two children each, the population would continue to grow for the next 55 to 65 years. This awesome momentum for continued population growth is built into the young age distribution of India's population — more than one-third of Indians were below 15 years at the time of 1991 census (Visaria and Visaria 1998a : 1-63). Some of the main reasons for rapid rise in population such as the low age at marriage of females, low contraceptive use, high value for ideal number of children required, high infant and child mortality, high unmet need for family planning and birth spacing (Table 2).

Populatin stabilization holds the key to sustainable development. But, unfortunately, except for the states of South India and other regions of the western and eastern zones, country's performance in the area of population control has been dismal particularly with states like Jammu and Kashmir, Sikkim, Uttar Pradesh, Bihar, Haryana, Rajasthan and some union territories, aggravating the existing problems still further. Failure to provide adequate education, especially to females and inefficient management of department of health and family welfare have undermined efforts to slow down population growth since female access to education is key to smaller families.

Consequences of Rapid Rise in Population

India accounts for a meagre 2.4 per cent of the world surface area of about 136 million square kms., yet it has to support and sustain a whopping 16.7 per cent of the world population. Per capita availability of land in the country is about 0.4 ha as against 4.14 ha in USA, 8.43 ha in USSR. Man-land ratio in relation to the arable land is only 0.27 ha and it is likely to diminish still further in the coming years. Already India is twice as densely populated as China putting heavy pressure on the environment, infrastructure and basic services. Providing basic human needs for such a huge population will continue to remain a major task. In fact, much of what the country has accomplished by way of economic development since independence has been negated by population growth. The demands of India's population are outrunning its natural resource base, which is evident from its shrinking forests and falling water tables. The International Water Management Institute has estimated that withdrawals of underground water are double the rate of aquifer recharge, leading to decline in water table and thus it threatens food production in the long run. There is a chronic shortage of safe drinking water both in rural and urban areas, about 20 per cent of urban and 50 per cent of rural population is still to be provided with safe drinking water.

Although India's grain harvest has tripled over the last half a century, food production has barely kept up with the momentum of population growth. In 1960, each Indian had an average of 0.21 ha of cropland and by

Table - 2

Select Demographic Profiles of India

Fertility and Fertility Preferences

Total fertility rate (for the past 3 years)[1]	2.85
Mean number of children ever born to women 40-49	4.45
Median age at first birth among women age 20-49	19.60
Percent of births[1] of order 3 and above	45.20
Mean ideal number of children[2]	2.70
Percent of women with 2 living children wanting another child	23.0

Current Contraceptive Use[3]

Any method	48.20
Any modern method	42.80
Pill	2.10
IUD	1.60
Condom	3.10
Female Sterilization	34.20
Male Sterilization	1.90
Any traditional method	5.0
Rhythm/safe period	3.0
Withdrawal	2.0
Other traditional or modern method	0.4

Unmet Need for Family Planning[3]

Percent with unmet need for family planning	15.8
Percent with unmet need for spacing	8.3

Quality of Family Planning Services

Percent told about side effects of method	21.7
Percent who received follow-up services	69.1

Childhood Mortality

Infant mortality rate	67.6
Under-five mortality rate	94.9

Sources : Based on *National Family Health Survey-2, 1998-99, India* and *Bihar.* Mumbai : IIPS and ORC Macro, 2000.

[1]For birth in the past 3 years.

[2]Excluding women giving non-numeric responses.

1999, the average dropped to 0.1 ha per person or even less than half as much. It is estimated to shrink still further to a meagre 0.07 ha per person with the rise in population by 2050. Moreover, the rise in cropland productivity is dwindling in India same as elsewhere.

With a population of about one billion India has achieved many dubious distinctions. Now India is a country with the largest number of unemployed youth, handicapped people, beggars, slum dwellers and illiterates in the world. The population of illiterates in India is larger than the total population of any country in the world except for People's Republic of China. Every third illiterate in the world is an Indian (Singh 2002 : 471-482). It is irony that in all these areas India, come what may, will lead the world for many more years to come. It is pity indeed that in near future we may be destined to achieve a few more dubious demographic distinctions.

India's urban population is the second largest in the world despite the fact that a little less than three-quarters of our population live in rural areas. Until 1971, 19 per cent of the nation's population lived in urban areas. At the 2001 census, 28 per cent of the country's total population lives in 5161 urban centres. Out of 384 urban agglomerations, there are now 35 million plus urban agglomerations which alone account for about 11 per cent of the total population of India. In the US and Canada, people living in urban areas comprise 75 per cent of the total population. More and more people are gradually on move towards cities in search of employment and better life. Currently Class 1 towns (towns with a population of 1,00,000 or more) account for more than 60 per cent of the total urban population. Rapid urban growth on today's scale strains the capacity of local and national governments to provide even the most basic of services such as water, electricity and sewerage.

The environment, natural resources, social cohesion and individual rights are at risk.

In metropolitan cities like Mumbai, Kolkata and Delhi between one-third and half of the population live in slums and squatter settlements. Urban habitation has become jam-packed. An average of three to four persons live in one room in a metropolis. While in the American mega cities, on an average there are two rooms for every person. Because of rising air pollution, the Indian metropolises are posing very serious health hazards of entirely new order. The Chembur region of Mumbai, with a concentration of chemical industries, is described as a gas chamber. In Kolkata, about 50 per cent of people suffer from respiratory diseases. In Delhi, the noise level is 90 to 100 decibels against desired limit of 80.

The greatest threat that a rapidly growing population poses is the scarcity of resources. Because the land on which people subsist is in elastic, the increase in population has a very direct adverse impact on the land-man ratio. This, among others, leads to fragmentation and subdivision of land holdings, prompting to encroach on land under forest and pastures which ultimately enhances biotic pressure on existing range-land and forests. The deforestation that we see in India today is one of the major undesirable consequences of population explosion (Buch 1993: 90-105).

India's burgeoning population is imposing an increasing burden on the country's limited and continually degrading natural resource base. The natural resources are under increasing strain, even though the majority of people survive at subsistence level. It will be increasingly difficult to meet the basic needs of a growing population even at present levels of consumption, and the situation will deteriorate progressively as the per capita consumption of resources mounts.

It is, therefore, imperative to restraint population growth to halt the rising tide of environmental degradation.

Population growth is seriously threatening the delicate balance between humans and their environment. Deforestation, desertification and water scarcity are already having devastating effects. Much of the environmental degradation is the result of the desperate search of the poor and the landless for such basic needs as fuel, food and water. Economic problems and widespead poverty are major consequences of rapid population growth (Varshney, 1984). Our stakes in this game of human numbers are very high. The rapid growth of population neutralizes the gains of economic development. Many of the problems posed by expanding population are analogous to the problems involved in trying to accommodate a growing family in a one-room house or a small plot. The size of the earth is fixed and its resources are tapped rapidly while their per capita availability decreases proportionately.

The resource crunch exasperated by this population explosion has also widened the gap between the rich and the poor. Whether it is the inhabitant of a *jhuggi - jhopri* settlement in Delhi or a person living in Harlem in New York, the poor are the worst sufferers of the population boom. Because of rapid increase in population about 13 per cent of the total forest areas have been deforested during the last five decades following independence according to one of the UNFPA reports. Most of the environmental problems — including the recent water crisis faced by India - can be attributed to the burgeoning population.

For every one million increase, the country would need 9.6 lakh quintals of additional food-grains, 9,760 new schools, 28,690 new teachers, 1,93,000 units of new houses, 3.07 lakh new jobs and 146 lakh metres of extra cloth. These figures clearly indicate that unless population growth is checked, efforts to restore the health of society may remain a far cry. India at present has 1.9 per cent population growth rate. In order to sustain the increased population, the country's GNP growth rate ought to be 9.2 per cent. This under the prevailing condition in the country is an uphill task. Taking a practical view, the Planning Commission contemplates a mere five to six per cent increase in growth rate. This means that even if the contemplated target is achieved, the living standard of people will gradually crumble down beyond expectation, unless the growth rate of population is substantially reduced. But that is more easily said than done.

Population Control

India is one among those few countries that quite a long time back realised the need for controlling population with a view to raising the living standard of people. Measures were also taken to achieve what the official called 'zero population growth'. Income tax concession available to assessees having two children was withdrawn and incentives, in both cash and kind, were paid to persons opting for voluntary sterilisation. These measures, undoubtedly, paid some dividends. However, the gains were negligible and had little impact on the economic health of the nation. Therefore, what is urgently required is to bring down the birth rate of the level which may not affect the process of sustainable development adversely.

To decelerate India's population growth rate still further, some sort of social revolution is needed urgently. Controlling the family size through the use of contraceptives, improved literacy for women and a shift in the economic structure of the country from

agriculture to non-agriculture can substantially slow down the tempo of population growth. Population stabilisation requires all-round socio-economic development. Family welfare alone is not enough. It must be accompanied by economic and social welfare. The experience of the states which have successfully restrained their population growth draw attention to the importance of increased access to primary healthcare facilities and a wide variety of contraceptives, education (especially for the girl child) and greater autonomy for women.

The government sought to implement from 1st April, 1996 the family welfare programme based on 'target free approach' and did away with family planning targets. This implied that the centrally sponsored targets would no longer be the driving force behind the programme. The demand of the community for quality services would be expected to become the driving force behind the programme making it a peoples' programme. The progress made during last seven years, however, has not been very encouraging and there is now a move to re-introduce the system of 'target setting' once again as a tool to bring down the population growth.

In matters of population control India needs to exert a much firmer political and social will than has demonstrated so far. Population stabilisation has to have a fresh and concerted look; otherwise, the country would not be able to manage the ever-growing social, political and economic problems. The gigantic task is not to be left to the government alone. We can succeed in this national endeavour only if voluntary association, community-based organisations and, in fact, every concerned citizen join the campaign for a sustainable population that does not strain the limited resources available at the disposal of the nation.

The Chinese Case : A Lesson for India

India and China, the world's two most populous nations, have taken divergent paths to tackle the enormous problems posed by their growing populations. And as India officially broke through the one billion ceiling in May, 2000, comparisons with its giant neighbour are inevitable. Both countries entered new eras at roughly the same time, with India gaining independence in 1947 and China coming under Communist rule in 1949. Both also had fertility rates in excess of six births per woman of the childbearing age. In India, the total fertility rate is now about 2.85, while China's "One Child" policy has brought its official rate down to 1.5. Because of the continuing rapid increase in population, it is estimated that India would surpass China as the world's most populous nation by 2040. In the concerned demographers' circle China's success is often cited as evidence of India's failure to implement an effective population policy.

China would continue to maintain its strict one-child policy with a view to limiting its population to a peak of 1.6 billion by the middle of this century. China would keep the average population birth rate under 1.5 per cent per year, and that the country would move to zero growth by mid-century if the policy was enforced. Since the 1980s, China has enforced its policy with the fines, social penalties and even forced sterilisation for those who break the law.

But some Indian experts, on other hand, may argue that the comparison is fundamentally flawed, as it fails to take into account the fact that India's democratic

system, except during the short period of emergency rule in the late 1970s, prevented the pursuance of a coercive family planning policy as implemented in China. The main difference between the Indian and Chinese population policies is that the political system in India is very different from that in China. In a democratic set-up, a Chinese-style one-child policy may not be a viable alternative. Perhaps India's national goal of stabilising the population growth rate cannot be readily imposed by the government. Other approach may be resorted to make people aware of why a larger family size does not guarantee more security.

India's experiment with a coercive programme of forced vasectomies during the emergency rule led to widespread protests and set back the family planning programme by almost a decade. It was a complete disaster. It had very damaging consequences. Men, who had previously attended contraceptive-use programmes, disappeared from the scene because of the focus on vasectomies, and it took years for the fear psychosis to subside. A policy based on incentives or disincentives can only have a limited success in India, as the central government lacks the type of pervasive socio-economic control the Chinese counterpart once tended to exercise.

Alternative : Between Scylla and Charybdis

If India could demonstrate the same will, determination and commitment of the Chinese government in addressing population control, we could make a lot of progress. India has moved in recent years towards a target-free policy that treats family planning as the only one component of an overall reproductive health programme. A new programme approved by the Cabinet in 2000 includes a family welfare-linked health insurance scheme for couples who undergo sterilisation after having two children. However, the government rejected the suggestion that the incentives amount to a coercive policy. Strictly speaking, the government has to formulating a more rigorous and harsher policy to exercise restraint over India's ever-increasing population. But the real problem is that the ruling elites are scared of taking stronger measures because of lurking fear of being destablised from power. They are aware of the aftermath of coercive family planning programmes hotly pursued during the emergency rule, 1975-1977. The backlash against the alleged excesses of the emergency period plagued the family planning programme until at least 1980 (Visaria and Visaria 1998a:39). India made a major shift in the orientation of its family planning programme since the Cairo Conference in 1994 (Visaria and Visaria 1998b : 5).

On the other hand, there are some experts who argue that the population control cannot be achieved through legislation. They strongly believe in the notion of voluntary acceptance of the family planning by the masses. They argue that in most developed countries where births and deaths are nearly in equilibrium, population stabilisation was not an explicit national goal. Decline in fertility in these countries flowed from economic gains and social improvements. As incomes rose and as employment opportunities for women expanded, couples choose to have a smaller family size. The improved availability of family planning services and liberalization of abortion laws gave couples the means to achieve this. Population stabilisation in these countries has been the result, therefore, of individual choices, the product of converging economic, social and demographic force.

What has happened elsewhere can happen in India too provided there is a massive campaign to educate eligible couples,

particularly in villages, about the benefits of limiting the size of the family. This point has of course been emphasized times without number and at different places but it has never been sincerely implemented. Rural people, steeped in ignorance and absolete religious belief, still do not know the harm that big family size brings to them and consider every child as a gift of God. This notion must be altered if family planning is to succeed. However, the education campaign must always be backed by easy availability of modern contraceptive measures that can enable people to plan their families. One of the reasons why family planning measures have not yielded the desired results is that it has not been honestly implemented. The unmet need for family planning has been reported to be quite high. According to the National Family Health Survey-2, the current unmet need for family planning is 16 per cent and it is higher in rural areas than in urban areas (NFHS-2, 2000)[4].

The poor performance of campaign for family planning has been also due to the fact that the preference for son has always remained very high in India for various socio-cultural reasons. There is a core level of wanted fertility - every one wants at least one son. Couples might accept that having two children was better than four, but it is less obvious that they would do with only one. It is pertinent to record here that birth rates had fallen in the Western hemisphere because fewer women got married. In a country like India, however modern it becomes, that is unheard of. Marriage is the ultimate goal; non-marriage is seen as something unacceptable.

The policy makers, however, should not try to overlook the fact that the demographic transition contingent upon socio-economic development had been a very slow process in the developed world. On the average European countries took nearly 90 years to complete the process of demographic transition. In the entire known human history until the end of the nineteen-century no developed country ever experienced the kind of rapid decline in mortality through which India or other developing countries have been passing since the mid-twentieth century (Since 1998 : 67-86). It is, therefore, not practical to wait for socio-economic development to take place for the completion of 'natural demographic transition', for the natural process is beset with a whole range of problems threatning the processes of sustainable development. There is a strong vicious link between population growth and development. No single solution on its own is likely to produce the changes needed to slow population growth. It was recognised at the Cairo Conference that "policies to be pursued include sustainable development, education and empowerment of women, improved literacy, availability of contraceptives, and high-quality heathcare, especially reproductive healthcare (Ashford 1955 : 39).

If the country opts for a natural course of demographic transition, this country will have to pay a heavy price in the form of unmanageable unemployment, rampant poverty, political chaos leading to ethnic violence and even dismemberment of the country in the long run. In fact, the whole South Asia would have to encounter a similar experience and would take the shape of Africa or Europe in terms of number of independent nations fighting among themselves. Here the process has already set in, as the population bomb has already exploded. It is altogether a different matter that some of us at the helm of affairs deliberately tend to camouflage the reality or do not want to recognize it. Some of them even ignore the description of dismal demoraphic scenario of India by branding it a pure academic exercise. Even many Indian

social scientists seem blissfully unaware of how rising population of India threatens its future, while the population issues have already started dominating India's future. One simply wonders whether new advancements in science and technology will really do any magic to save India from the impending disaster following population explosion.

Notes :

1) For 2050, UN demographers cite three population projections - a 'low' of 7.9 billion; 'medium' 9.3 billion and 'high' 10.9 billion - each variant based on slightly different assumptions about future birth rates (see Brian and Balk 2002).

2) Figures here and elsewhere are from *World Population Prospects : The 2000 Revision*, UN Population Division/ DESIPA, 2001.

3) A detailed discussion on this subject can be seen in one of the World Bank publications : *Population Change and Economic Development*, New York: Oxford University Press, 1985.

4) For detailed information on this issue see the findings of the National Family Health Surveys I & II, *India : Introductory Report*, Mumbai : International Institute for Population Sciences, 1994 and 2000.

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POPULATION PROJECTIONS FOR A HILL
STATE : HIMACHAL PRADESH

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Chandigarh, India

Abstract

The future demographic scenario constitutes the hub of any planning exercise for which population projections become imperative. The present paper provides population projections for the State of Himachal Pradesh up to the year 2025. These are based on the assumptions of no territorial change in the existing boundaries of the State and continuation of the prevailing trends of its fertility, mortality and migration. Non-availability of all requisite data restricted the scope of the methods to ratio, growth differential, compound annual growth rate and extrapolation. The State's population is projected at 7.9 million in 2025 from 6.0 million in 2001. This calls for prior planning to achieve an optimal resource-population ratio in terms of food security, infrastructure development, health, educational facilities and employment generation, in particular.

Geographers at times have tried to project different kinds of future landscapes - physical as well as cultural. They are fairly equipped, with a firm grounding in quantitative and cartographic techniques to work out the evolving scenes. They try to visualize the kind of spatial organization which is desired for future. The population geographers, in general, have focused on the existing population-resource ratio but have mostly ignored the emerging scenario on this relationship. For that reason, one of the important goals to which they must devote their spatial expertise is to project the size of populations, their activities over space and the emerging population-resource ratio. Such projections provide a base for planning for the optimal population-resource ratio.

The emerging population scenario at the national, regional and state level determines the socio-economic conditions in the future. In the context of India or its any part the increasing population puts pressure on the existing social and economic infrastructure seeking bigger investments. Prior planning for food, health, education, employment and housing, in particular, becomes imperative. Toward that end, short-term and long-term population projections become necessary.

The international agencies such as the World Bank, United Nations Population

Division regularly work out the future estimates of population at the global and country level. In India the exercise of projecting future population at the country level as well as at the state level has been a continuous exercise since 1958. Such data are of immense importance to the Planning Commission of India. The expert review committees monitor and review population projections on a continuous basis.

Population projections based on the 2001 Census data have not so far been attempted. The Technical Group on Population Projection based its projection on the 1991 Census data. This deviates from the emerged reality. The group had projected the population of India at 1012 million in 2001, which turned out to be 1027 million on actual count. Similarly, the population of Himachal Pradesh was projected to reach 6.8 million whereas it actually turned out to be 6.0 million.

The estimates made for the population size at the state level is of course a difficult proposition as compared to that at the national level. In shaping the future population growth, the role of migration at the national level may be negligible, while at the state level or below, it can be a critical ingredient.

Himachal Pradesh, despite its commendable performance among the special category states, has not received due attention on future population-resource equation. This constrains planning for its future with necessary confidence. The present paper takes cognizance of this fact. It is geared to the task of projecting the future population of Himachal Pradesh, based on 2001 census data, for the first quarter of the century that is up to 2025 on yearly basis.

Assumptions

Projections are based on certain assumptions. The foremost assumption in this case is that there will be no change in the political status of the State, thereby changing its territorial boundaries up to the years for which the population projections are made. It is also visualized that the prevailing patterns of fertility, mortality and migration will remain the same in the State as well as in India as a whole.

Since the techniques used for projecting the population are based on a set of assumptions, it may not be possible to capture the future scenario by a single method. For obtaining dependable results more than one technique has to be employed and results compared. In the present exercise, different techniques with varying assumptions were used and ones which gave population projections close to each other, were averaged to work out confident figures as projections.

Techniques

Depending upon the data availability, the population of Himachal Pradesh has been projected through a combination of four techniques, namely ratio, growth differential, compound annual growth rate and extrapolation. Each technique is critically examined in terms of its assumptions, data requirements, properties and limitations. Inadequacy of firm data on migration and age structure, and to some extent on fertility and mortality, hampered the effort in going for more sophisticated techniques.

Ratio

The method assumes that the share of Himachal Pradesh's population in that of India will remain virtually the same in the short run, and any change in the degree (quantum) and direction (positive or negative) of this share will be sustained over a long period. The current growth behaviour of a part is seen as linked to that of the whole (Krishan, G., 1997). The availability of necessary data, ease in understanding and convenience to work out the estimations for future makes it a popular technique.

Two sets of data are required for the purpose. The first requirement is the total population of Himachal Pradesh and that of India over a number of previous years, and the

other is the future population size of the country for the years for which State's population projections are to be made. The data to meet the first requirement were collected from the Census of India and for the second requirement, the data was collected from the Planning Commission, Government of India up to the year 2020. Projected population of India in the year 2025 was taken as estimated by Bhat (2001).

Steps

(i) Calculated the share of Himachal Pradesh's population in India's total population in percent for 1971, 1981, 1991 and 2001:

Year	Share of Himachal Pradesh's population in India's total population (in percent).
1971	0.632
1981	0.626
1991	0.611
2001	0.592

(ii) Calculate the difference between the share of Himachal Pradesh's population to total population in India in 1991 and 2001 for projecting the population of 2011.

Share of Himachal Pradesh's population in India's total population in 1991 $(S_{1991}) = 0.611$

Share of Himachal Pradesh's population in India's total population in 2001 $(S_{2001}) = 0.592$

$$D = S_{1991} - S_{2001}$$

$$D = 0.611 - 0.592 = 0.019$$

This tendency, in degree and direction has been carried forward to project the population for, in 2011. The extent of decrease has been calculated as follows :

$$S_{2011} = (S_{2001} - D)$$

$$S_{2011} = 0.592 - 0.019 = 0.573$$

(iii) Himachal Pradesh's share of 0.573 percent to India's total population projected for 2011 has been worked out

in the following manner :

India's total population projected for 2011 $(T_{2011}) = 1191$ million

$$HP_{2011} = (T_{2011} \times S_{2011}) / 100$$

$$HP_{2011} = (1191 \times 0.573) / 100$$
$$= 6.82443 \text{ million}$$

(iv) The same style was carried forward for the years 2021 and 2031. The population figures for the intervening years were interpolated up to 2025 on a yearly basis.

The results of the estimated population by using this method on yearly basis up to 2025 are given in the Table 1.

Table 1: Projected Populations of Himachal Pradesh by the Ratio Method: 2001 to 2025

Year	Population
2001	6077248
2002	6148128
2003	6219835
2004	6292378
2005	6365767
2006	6440012
2007	6515123
2008	6591110
2009	6667983
2010	6745753
2011	6824430
2012	6889622
2013	6955437
2014	7021880
2015	7088958
2016	7156677
2017	7225043
2018	7294062
2019	7363740
2020	7434084
2021	7505100
2022	7574518
2023	7644579
2024	7715287
2025	7786650

This technique projects the population of Himachal Pradesh in 2025 at 7.79 million.

Growth Differential

The Urban-Rural Growth Differential (URGD) technique was developed by the United Nations Population Division to project and estimate urban populations. The technique used here is a variant of the URGD technique, which enjoys a high degree of respectability for projecting the population of a sub-system.

The method assumes that the growth behavior of the sub-system and that of the whole of which it forms a part are complimentary to each other. "If the former records a faster growth rate, this is construed as happening at the cost of the rest of the system, which is seen as losing in the process of migration. An opposite picture will prevail if the sub-national area/state is marking a slower rate of growth. In essence, the method takes into account the difference in growth rates of the sub-national area/state and rest of the system, and projects population for the former. This technique invokes a greater role for migration" (Krishan, G., 1994).

The growth differential technique calls for population figures for Himachal Pradesh for two census periods and the projected population of India, for the years for which projections are to be made. The projections for India as a whole given at a five years interval were obtained from Report of the Committee on India Vision 2020, Planning Commission, Government of India and a note by Bhat (2001). In addition to this, the Census data available at an interval of ten years was interpolated to get the figures at five years interval, which is the requirement of this method.

Steps

i)   Himachal Pradesh's 2000 population $(HP_{2000}) = 5.987$ million

Himachal Pradesh's 1995 population $(HP_{1995}) = 5.533$ million

India's 2000 population $(I_{2000}) = 1010.0$ million

India's 1995 population $(I_{1995}) = 919.0$ million

India's 2005 population $(I_{2005}) = 1093.0$ million

ii) Himachal Pradesh's compound annual growth rate (CAGR) during 1995-2000 in unit fraction has been calculated.

$CAGR(HP) = (HP_{2000}/HP_{1995})^{1/5} -1$

$CAGR(HP) = (5.98/5.53)^{1/5} -1$

$CAGR(HP) = 0.015868286$

iii) The CAGR of non-H.P. population has been worked out.

$CAGR(Non-HP) =$

$[(I_{2000}-H.P._{2000})/(I_{1995}-H.P._{1995})]^{1/5} -1$

$CAGR(Non-H. P.) =$

$[(1010-5.98)/(919-5.53)]^{1/5} -1$

$CAGR(Non-H. P.) = 0.019082559$

iv) The difference between the two growth rates (D) i. e. H. P. growth rate minus non-H. P. growth rate has been calculated.

$D = 0.015868286 - 0.019082559$

$D = - 0.00321427$

v)   Himachal Pradesh's 2005 population has been calculated by solving two equations.

$A = (HP_{2000}/Non- HP_{2000}) \times e[5 \times D]$
$e = 2.718$

$A = (5.98/1004) \times e [5 \times (-0.00321427)]$

$A = 0.00586762$ ....equation 1

$B = [A/(1+A)]$ ....equation 2

$B = [.00586762/(1.00586762)]$

$B = 0.0058339$

HP_{2005} projected population $= B \times I_{2005}$

HP_{2005} projected population $= 0.0058339 \times 1093$

HP_{2005} projected population $= 6.375895$ million

vi) Same procedure for projecting the population for the successive years of 2010, 2015, 2020 and 2025 has been adopted.

vi) In-between population figures were obtained through interpolations.

Using the URGD method the projected population of Himachal Pradesh till 2025 on yearly basis has been presented in Table 2.

Table 2

Projected Populations of Himachal Pradesh by the Growth Differential Method : 2001 to 2025

Year	Population
2001	6077248
2002	6139388
2003	6217232
2004	6296064
2005	6375895
2006	6447880
2007	6520679
2008	6594299
2009	6668750
2010	6744042
2011	6812155
2012	6880957
2013	6980453
2014	7020651
2015	7091558
2016	7150499
2017	7209930
2018	7269854
2019	7330277
2020	7391202
2021	7444464
2022	7498109
2023	7552142
2024	7606563
2025	7661377

The population of Himachal Pradesh has been projected to reach 7.6 million by 2025, an addition of 1.5 million persons to the existing population base of 6.1 million as per the 2001 census.

Compound Annual Growth Rate

This method is based on the assumption that in a given set up the population growth behaviour is likely to extend both in the direction (increase/decrease) and extent (quantum) in future also, at least in the short run. The underlying belief is that the basic determinants of population growth namely fertility, mortality and migration, do not change abruptly in their level and direction. This has been found true of large systems of population. The technique does not permit much confidence when applied to smaller systems of population (Krishan, G., 1997).

Data requirements of this technique include population figures of the sub-national area for the latest and as many preceding census years. In this technique, the projections of population for the sub-national area are independent of what is happening to the larger system.

Steps

(i) Calculation of the compound annual growth rate using the following formula was undertaken :

CAGR = $[(p_1/p_0)^{1/n} -1] \times 100$

It is likely that unusual population growth behaviour over a short span of time may distort the estimates made for future. To strike a balance, it was reckoned best to adopt the growth behaviour during the last three decades that is 1971-2001, in place of the preceding one only, for projecting the population of Himachal Pradesh for 2011 and so on.

ii) The CAGR of the three decades, during 1971 to 2001, 1981 to 2001 and 1991 to 2001 has been calculated as follows.

CAGR of 1971 to 2001 =

= $[(p_{2001}/p_{1971})^{1/n} - 1] \times 100$

= $[(6077248/3460434)^{1/30} - 1] \times 100$

= 1.89

CAGR of 1981 to 2001 =

= $[(p_{2001}/p_{1981})^{1/n} - 1] \times 100$

= $[(6077248/4280818)^{1/20} - 1] \times 100$

= 1.76

CAGR of 1991 to 2001 =

= $[(p_{2001}/p_{1991})^{1/n} - 1] \times 100$

$= [(6077248/5170877)^{1/10} - 1] \times 100$

$= 1.63$

Formula for obtaining the 2011 population for Himachal Pradesh using CAGR is as follows :

$P_{2011} = P_{2001} \times [(100+CAGR)/100]^{10}$

CAGR of 1971 to 2001 = 1.89

$P_{2011} = 6077248 \times [100+1.89)/100]^{10}$

$P_{2011} = 6077248 \times (101.89/100)^{10}$

$P_{2011} = 6077248 \times (1.205912)$

$P_{2011} = 7328626$ ....(a)

CAGR of 1981 to 2001 = 1.76

$P_{2011} = 6077248 \times [100+1.76)/100]^{10}$

$P_{2011} = 7235656$ .... (b)

CAGR of 1991 to 2001 = 1.63

$P_{2011} = 6077248 \times [100+1.63)/100]^{10}$

$P_{2011} = 7143749$ ....(c)

For projecting the population using this technique the average of a, b and c has been taken, which comes out to be 7236010.

Similar procedure was adopted for projecting the population for 2021 and 2031. To calculate the population on yearly basis the figures were interpolated. The results of the estimated population by using CAGR method on an yearly basis up to 2025 are given in Table 3.

The projected population for Himachal Pradesh for the year 2025, as per this technique, is 9206038. This looks like an inflated figure. As stated earlier not much reliance can be placed on the projections using this technique for smaller areas.

Extrapolation

This technique also assumes a consistency in growth behaviour of the sub-national area following the same line of reasoning as that of compound annual growth rate method. There is, however, a distinct departure in its working. Herein, the increase or decrease in population is computed in absolute numbers not in terms of rate.

Table 3

Projected Populations of Himachal Pradesh by Compound Annual Growth Rate Method: 2001 to 2025

Year	Population
2001	6077248
2002	6184238
2003	6293111
2004	6403901
2005	6516642
2006	6631367
2007	6748112
2008	6866912
2009	6987804
2010	7110824
2011	7236010
2012	7361679
2013	7489530
2014	7619602
2015	7751933
2016	7886562
2017	8023529
2018	8162874
2019	8304640
2020	8448868
2021	8595601
2022	8744307
2023	8895585
2024	9049480
2025	9206038

This change is seen not only in terms of amount but also its trend over the various computation points over time. The rationale offered for this method is that any numerical rise in the contribution made by natural increase, associated with a successively bigger base over the years, will be counter-balanced by a similar decrease in net in migration (Krishan, G., 1994).

Steps

$P_{2011} = (2 \times P_{2001}) - P1991$

$P_{2011} = (2 \times 6077248) - 5170877$

$P_{2011} = 6983619$

Same procedure has been adopted for

obtaining the population for 2021 and 2031. Interpolation was done for calculating the population on yearly basis. The results of the estimated population by using extrapolation method on a yearly basis up to 2025 are given in Table 4.

Table 4

Projected Populations of Himachal Pradesh by Extrapolation Method : 2001 to 2025

Year	Population
2001	6077248
2002	6162321
2003	6248585
2004	6336056
2005	6424752
2006	6514690
2007	6605886
2008	6698360
2009	6792177
2010	6887208
2011	6983619
2012	7069360
2013	7156155
2014	7244014
2015	7332953
2016	7422983
2017	7514119
2018	7606374
2019	7699761
2020	7794295
2021	7889990
2022	7976257
2023	8063466
2024	8151630
2025	8240757

Applying the extrapolation technique the projected population of Himachal Pradesh will be 8.2 million in 2025.

Projected Population

The population figures as projected by the ratio, growth differential, and extrapolation technique are quite close to each other. These were deemed for averaging to arrive at dependable projection figures.

Table 5

Projected Population of Himachal Pradesh by Averaging the Results of the Ratio, Growth Differential and Extrapolation Methods, 2001-25

Year	Population
2001	6077248
2002	6149946
2003	6228551
2004	6308166
2005	6388805
2006	6467527
2007	6547229
2008	6627923
2009	6709637
2010	6792334
2011	6873401
2012	6946646
2013	7030682
2014	7095515
2015	7171156
2016	7243386
2017	7316364
2018	7390097
2019	7464593
2020	7539860
2021	7613185
2022	7682961
2023	7753396
2024	7824493
2025	7896261

A marked deviation between the projected population by the Technical Group on Population Projections and results of the present exercise may be pointed. The Group had projected a population of 7.96 million for 2011 whereas our estimates project it to reach 6.87 million. Further, the group projected the population to reach 7.94 million by 2016 whereas our estimates put this figure as 7.24 million.

Concluding Remarks

The population of Himachal Pradesh is projected to as 7.9 million in 2025 as

Population Projections for Himachal Pradesh: 2001- 2025
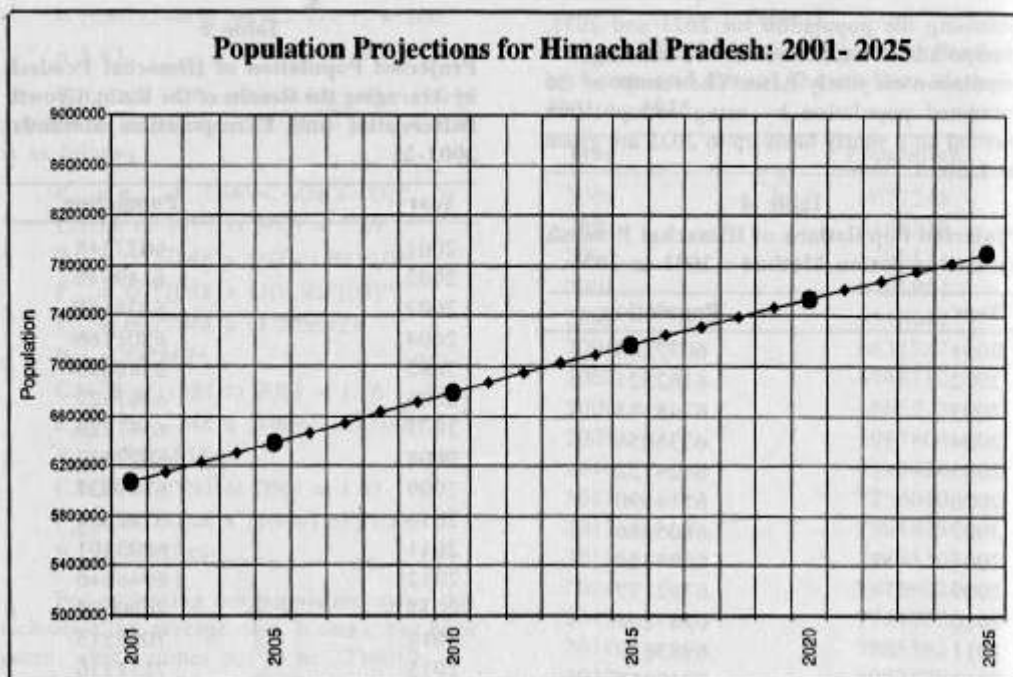
compared with 6.1 million in 2001. This addition of one-third of the existing base of population in the State will have a bearing on the food, health, education, housing infrastructure and employment scenarios. The state must generate additional resources not only to meet the requirements of the increasing population but also to upgrade the quality of life. The successive future plans of the State can take into account the size of population projected for successive years till 2025.

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MAP SERIES : 8

JOINT HOUSEHOLDS IN INDIA : 2001

GOPAL KRISHAN
Chandigarh, India

India is popularly perceived as a country where joint households (in virtual synonymity with joint families) predominate. Is it so? What do the data tell? How does the scene differ between rural and urban areas? And also among various regions?

Map Series 8 is in response to such queries. It displays the percentage of joint households in all, rural and urban areas by individual states and union territories. The requisite data have been obtained from the *Census of India 2001 : India, Table H.7, Households Amenities and Assets.*

Direct data on joint households is not provided, the term being subject to diverse interpretations. Data on the number of households comprising none, one, two, three, four and five plus married couples is made available. Such data can be made use of to arrive at the frequency of joint households.

A joint household, for the present purpose, is defined as the one which comprises at least two married couples. The proportion of such households was calculated by dividing their number by that of the total households minus the ones which were without any married couple. Notably, one out of every nine households in India is without a married couple, by that token non-familial.

Going by the definition enunciated above, it is learnt that only 20.9 per cent of the households in India are joint. The popular myth about the predominance of the joint families gets exploded. Even in rural areas, which tend to be more traditional, only 22.6 per cent of the households are joint. The figure for urban areas is 16.5 per cent.

In the Indian context, joint households acquire greater frequency under conditions which require pooling together of family resources in respect of land, capital and labour. For that matter, agricultural and business households are likely to have greater propensity toward remaining joint. This will be more true of those having larger landholdings or bigger business investments.
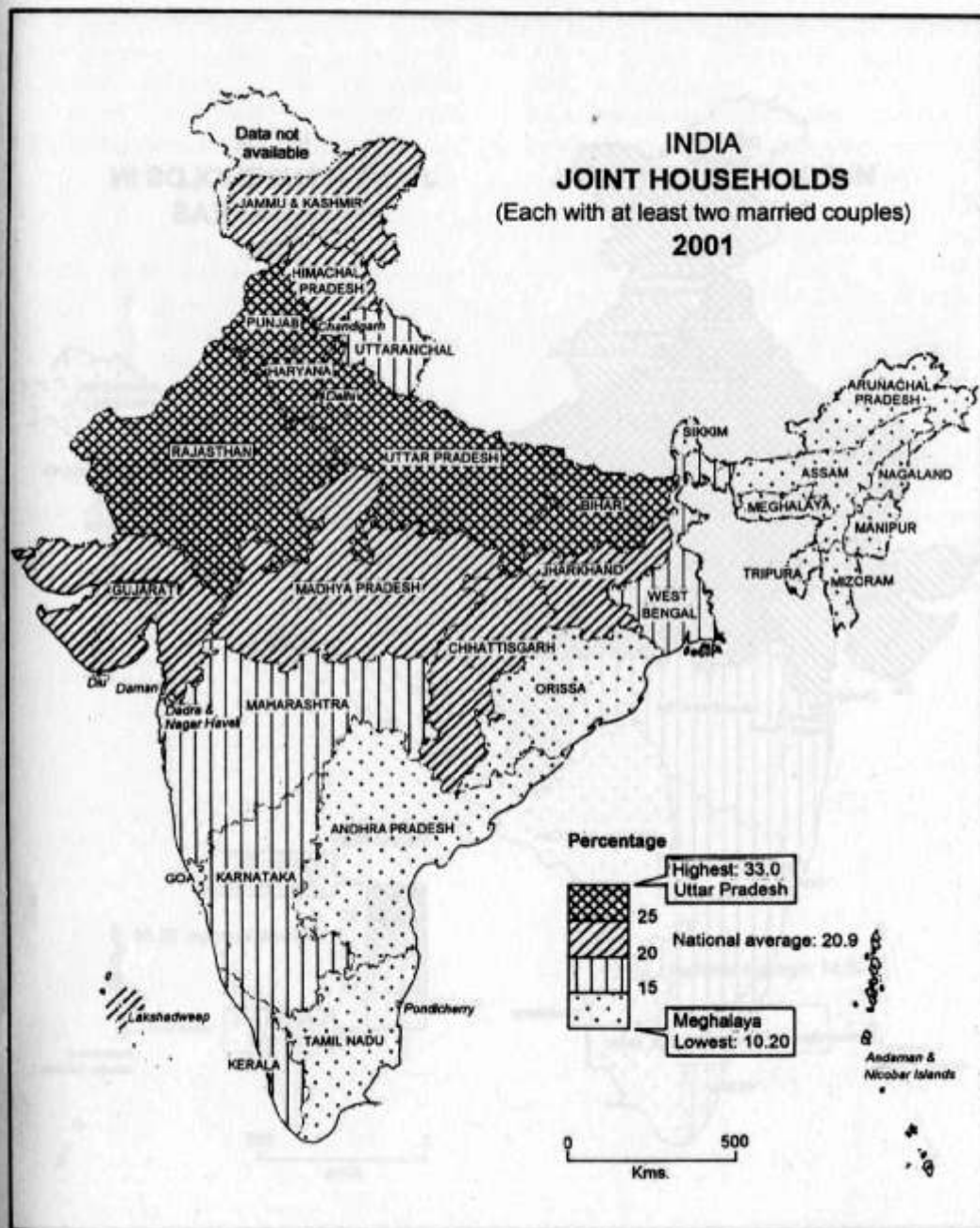
Table 1

India : Frequency of Joint Households, 2001

State/Union Territory/India	Percentage in households		
	All areas*	Rural areas	Urban areas
STATES			
Uttar Pradesh	33.0	35.1	24.6
Rajasthan	29.4	30.8	24.7
Bihar	27.7	27.6	28.3
Punjab	26.3	28.2	22.8
Haryana	26.2	28.6	20.4
Madhya Pradesh	24.1	25.1	20.9
Chhattisgarh	22.8	24.1	17.1
Himachal Pradesh	22.2	23.2	14.6
Jammu & Kashmir	21.9	22.5	20.1
Jharkhand	21.7	22.6	18.3
Gujarat	21.0	23.3	17.5
Uttaranchal	19.6	21.2	14.9
Kerala	18.7	18.4	19.8
Karnataka	17.2	19.3	14.2
Maharashtra	16.7	19.5	12.9
West Bengal	16.2	16.6	15.1
Manipur	14.6	13.8	16.9
Orissa	14.4	14.4	14.5
Andhra Pradesh	13.9	14.4	12.3
Assam	13.2	13.4	12.3
Goa	13.2	14.7	11.7
Mizoram	11.5	12.1	10.8
Sikkim	10.3	10.5	8.6
Arunachal Pradesh	9.4	10.7	4.6
Tamil Nadu	8.9	9.3	8.6
Tripura	8.7	8.5	9.7
Nagaland	8.6	4.4	5.0
Meghalaya	8.5	8.7	7.8
UNION TERRITORIES			
Lakshadweep	21.6	12.0	32.6
Delhi	17.5	19.3	17.3
Dadra & Nagar Haveli	14.7	15.6	11.9
Daman & Diu	12.8	11.4	14.8
Chandigarh	11.4	11.7	11.4
Andaman & Nicobar Islands	10.2	11.3	8.0
Pondicherry	9.7	9.7	9.7
INDIA	**20.9**	**22.6**	**16.5**

Sources : Census of India, 2001 : *Household Amenities and Assets,* Table H-7, Registrar General and Census
Commissioner, India, pp. 257-292.

* Listed in descending order of the percentage of joint households.

INDIA
JOINT HOUSEHOLDS
(Each with at least two married couples)
2001

Data not available

JAMMU & KASHMIR

HIMACHAL PRADESH

PUNJAB Chandigarh

UTTARANCHAL

HARYANA

Delhi

RAJASTHAN

UTTAR PRADESH

SIKKIM

ARUNACHAL PRADESH

ASSAM NAGALAND

MEGHALAYA

MANIPUR

BIHAR

JHARKHAND

TRIPURA MIZORAM

WEST BENGAL

GUJARAT

MADHYA PRADESH

Diu Daman

Dadra & Nagar Haveli

CHHATTISGARH

ORISSA

MAHARASHTRA

ANDHRA PRADESH

Percentage

Highest: 33.0 Uttar Pradesh

25

National average: 20.9

20

15

Meghalaya Lowest: 10.20

GOA KARNATAKA

Lakshadweep

Pondicherry

Andaman & Nicobar Islands

TAMIL NADU

KERALA

0   500

Kms.

Map 1

Map 2

INDIA
JOINT HOUSEHOLDS IN
URBAN AREAS
2001

Data not
available

JAMMU & KASHMIR

HIMACHAL
PRADESH

PUNJAB   Chandigarh
          UTTARANCHAL
HARYANA
    Delhi   ARUNACHAL
                                             PRADESH
RAJASTHAN   UTTAR PRADESH   SIKKIM
                                            ASSAM   NAGALAND
                              BIHAR   MEGHALAYA
                                                    MANIPUR
                        JHARKHAND   TRIPURA   MIZORAM
              MADHYA PRADESH   WEST
                                 BENGAL
GUJARAT

Diu Daman   CHHATTISGARH
    Dadra &   MAHARASHTRA   ORISSA
    Nagar Haveli

              ANDHRA PRADESH

GOA   KARNATAKA

Lakshadweep   Pondicherry   Andaman &
                                                  Nicobar Islands
         TAMIL NADU

KERALA

Percentage

	Highest: 28.2 Bihar
25	
20	National average: 16.50
15	
	Lowest: 4.6 Arunachal Pradesh

0   500
      Kms.

Map 3

Coversely, the scheduled castes and tribes, with meager property assets to hold together, would have lower poportion of joint households. Urbanisation, as generative of individual enterprise, would be associated with lower proportion of joint households. In metropolitan cities, the compulsions of high rents and considerations of baby care by the elders, may induce many a young working couple to remain a part of a joint family.

Map 1 displays a broad threefold division of the country : North India, with relatively high proportion of joint households; South India with a lower proportion; and North-East India, with the lowest proportion. Map 2, for the rural areas, displays somewhat bolder expression of this spatial framework whereas Map 3 for urban areas is a lighter manifestation of the same. Transitional areas between any of the two zones assume an intermediate disposition. A typical zone with comparatively high proportion of joint households is characterised by low status of women, early age-at-marriage of females, and higher birth rate.

More specifically, the percentage of joint households is below 15 in the North-East region; 25 to more than 30 in North India; 20 to 25 in North-West Himalayan region as also in Central India region; less than 15 in Eastern Coastal States and 15 to 20 in Western Coastal States. The comparable percentage in the case of union territories range from the lowest of 9.7 in Pondicherry to the highest of 21.6 in Lakshadweep. On the whole, the practice of joint households is relatively high in the Aryan north, lower in Dravidian south, and the lowest in the largely tribal North-East.