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India's Quest for Population Stabilisation: Progress, Pitfalls and Policy Options*

INDIA set the goal of population stabilisation in the very first five year plan (1951-56) which was formulated soon after India attained independence in 1947. In spite of the completion of seven five year plans in March 1990, the goal of population stabilisation remains distant. The population continues to grow at a faster rate than anticipated by India's planners and policy-makers and every decennial census sends shock-waves to them.

The next decennial census will be held in February 1991 (with 1st March as the reference date) and it does seem likely that the actual census count will be higher than the projected population.† It should be obvious that the earlier goal of Net Reproduction Rate of unity (NRR = 1) by the year 2000 will not be realised. Will it be realised in 2011 or even later? NRR = 1 is only the first step to population stabilisation. When will the population stabilise then? By the year 2030 or 2040 or even later? Will India's population overtake China's as indicated in several projections?

What can the international community do to help India overcome the perpetual population problem? Can the West export its high tech contraceptive technology? Are there social constraints which nullify the impact of technology? Can India's Ministry of Health and Family Welfare deliver the goods? Has foreign (Western) aid and expertise muddled up the situation by advocating the wrong things? These are difficult questions to answer.

These questions cannot be answered by demographers alone. Without a deep understanding of Indian society and an intimate knowledge of the field situation at the grassroots level, demographers tend to give statistical answers, and in this process, perhaps the more important non-statistical aspects get left out. This distorts the understanding of the population phenomenon.

I have always pleaded for Demography beyond decimal points. I have argued that unless we go beyond the cold calculus of births and deaths and feel the heartbeat of the people,

* Lecture delivered by the author at a seminar organised by Deutsche Gesellschaft für die Vereinten Nationen : Kommission für Internationale Bevölkerungsfragen, Bonn, Germany 12 November, 1990.

† The 1991 Census was conducted according to schedule. The comments on the first results are given in Section II.

Demography will remain a dismal science of population, dominated by doomsday predictions based on mechanical projections of population which can now be done in a matter of minutes on the electronic computer. Statistical competence is not enough to understand the population problem. And to solve the population problem, it is not enough to have competence in reproductive biology and contraceptive technology. It is unfortunate that in most discussions on family planning, the *family* is never discussed : the obsession is with contraceptive technology. The poverty-stricken masses in India still rely on the solidarity of the family for their survival and are disillusioned by the Government's anti-poverty programmes and the growing leakages in the delivery of these programmes. In short, state intervention in curbing the birth rate has not inspired India's masses to take to the small family norm. Events during the short-lived Emergency in India (1975-77) have amply demonstrated the power of the people in a democracy: a mighty Government was humbled and the issue was family planning. I recall what a leading American demographer, Frank Notestein, had once said: coercion in family planning is likely to bring down the government faster than the birth rate.

The Planning Commission clearly recognised the need for population control right at the beginning of the planning exercise. To quote the First Plan (1951-56) :

The recent increase in the population of India and the pressure exercised on the limited resources of the country have brought to the forefront the urgency of the problem of family planning and population control... It is, therefore, apparent that population control can be achieved only by the reduction of the birth-rate to the extent necessary to *stabilize the population* at a level consistent with the requirements of national economy. This can be secured only by the realisation of the need for family limitation on a wide scale by the people.

The Planning Commission did not, however, spell out in statistical terms the implications of the goal of "stabilizing India's population". No doubt the plan made an impressive start by advocating family planning as a state policy and India proudly claims that she was the first country in the world to have advocated family planning as a state policy, but our record of the last forty years in the field of family planning is far from impressive.

Pandit Jawaharlal Nehru had the right perception of India's population problem when he described the problem not as one problem but 400 million problems ! He further spelt out that the problem was of providing food, clothing, shelter, education, medical aid and employment to every person. In other words, he perceived the problem essentially as a problem of development.

India's first Health Minister, Amnt Kaur was a Gandhian and a princess. She started family planning work very cautiously. The emphasis was on rhythm method and the family planning programme was a part of the health programme. In 1966, a new Department of Family Planning was created. The accent was on communication, financial incentives for the practice of family planning, particularly sterilisation, and high-powered advertising of new methods of family planning like the IUD (loop). A new methodology was evolved to monitor the family planning programme. Detailed targets were set for each family planning

method by the Department of Family Planning. There is no doubt that during this period there was a tremendous increase in the infrastructure of health and family planning and foreign aid played an important role. But the whole orientation was foreign and showed a colossal ignorance of the Indian social context. The advertising approach was not sensitive to Indian values and the great respect which the institution of marriage and family enjoyed in the eyes of millions of poor people.

The Janata Government which was ushered in 1977 changed 'family planning' into 'family welfare' but did precious little by way of introducing the welfare content and expanding the family planning programme either in qualitative or quantitative terms. The Janata Government fell in 1980 and Mrs. Indira Gandhi came back to power. The new Government did not change the Janata nomenclature of "family welfare". Mrs. Gandhi proclaimed in her new 20-point programme that family planning was to be promoted on a voluntary basis as a 'people's movement'. She also made a sincere effort to fill the family welfare basket with nutrition and maternal and child health programme which do have a high welfare content.

In this context, we would like to refer to two international conferences : The World Population Conference held at Bucharest in 1974 where the leader of the Indian delegation gave a famous slogan: "Development is the best contraceptive" — a slogan which is a part of the world literature on population today. The United Nations organised another international conference on Population in Mexico City in 1984. Interestingly enough, the U.S. delegation which had opposed the Indian viewpoint in 1974 took a somersault and made the following statement at the Mexico Conference:

First and most important, population growth is, of itself, a neutral phenomenon. It is not necessarily good or ill. It becomes an asset or a problem only in conjunction with other factors such as economic policy, social constraints, need for manpower and so forth... population control programmes alone cannot substitute for the economic reforms that put a society on the road towards growth, and, as an after effect, toward slower population increase as well... Our primary objective will be to encourage developing countries to adopt sound economic policies and, where appropriate, population policies consistent with respect for human dignity and family values.

Looking back at the turn of events, specially the somersault in the U.S. stand on population issues, one cannot but admire the foresight of Professor Nicholas J. Demerath, an American sociologist who worked as a family planning expert in India in the 60s, and wrote a critique in 1976 in a book which, thanks to" the powerful international birth control lobby, received hardly any attention in India or even in the U.S .A. Demerath devotes a whole chapter to discuss "Why family planning fails in poor countries". He observes that "the first reason why family planning fails in poor countries is the obsession of the experts with techniques of contraception. The belief that just about any problem can and will be fixed by some new tool or techniques is as Anglo-American as apple pie."

Demerath goes on to say : "Instead of employing proven psychological and social principles of motivation, family planning training courses typically exclude them. It is the

mechanics and forms of bureaucratic administration that are emphasized along with a little demographic and reproductive physiology. It is thought that the more advanced the management system, the better — meaning the more quantified, computerized, and routinized."

This is exactly what has happened in India. We have got into a rut of mechanically fulfilling family planning targets without paying adequate attention to the qualitative aspects of the family planning programme.

Dr. H.T.J. Chabot of Netherlands who worked in West Africa in the field of community health programmes since 1979 has commented on primary health care as follows : "As the year 2000 approaches, the policy of health for all will frustrate the donors and executors of primary health care, as it becomes clear that the objective is not likely to be attained. I think we should forget the slogan and concentrate more critically on what can be done now."⁶

Dr. Chabot comes down heavily on persons advocating increasing data collection in the name of monitoring and evaluation. To quote him at length:

The preoccupation with data collection in primary health care is another example of western influence. The preoccupation with data collection tends to distract attention from more important issues which are more difficult to measure, such as the quality of the services, people's satisfaction with the activities, changes in people's mentality and in disease conceptions, and the mental and structural problems encountered at the various levels. In short, there is a fixation on numerical data and little attention paid to the process of primary health care implementation. I do not deny the importance of data collection but it should not be an end in itself ; should be a means to understanding. The process of implementing primary health care is much more important than the statistics that can be produced to justify financial assistance.

One of the by-products of Western orientation of India's family planning programme is the craze for data collection. The health and family welfare workers at the Primary Health Centre and the Sub-Centre levels have been unduly burdened with the task of maintaining numerous registers in the name of monitoring of data at the State headquarters and at the Ministry of Health and Family Welfare in New Dehli. The impact of this has been two fold : (i) the health and family planning service at the grass root level suffers as considerable time is spent on maintaining registers and filling up different types of proforma, and (ii) there is a tendency to cook data, particularly towards the end of the financial year. The giving of Family Welfare cash awards to different villages, districts and states in India by the Government encourages over-reporting of such data at all levels.

The extent of involvement of foreign agencies in India's health and family planning programmes is not widely known. These agencies include international organisations like the World Bank, UNFPA, UNICEF, WHO, IDA as well as bilateral agencies like USAID SIDA, DANIDA, IDRC and similar agencies of U.K., Federal Republic of Germany, Norway, etc.

Under the innocuous title of 'Area Projects', foreign agencies launched programmes in 66 districts of 13 states in India. All these programmes are under the complete control of the

bureaucracy which works hand in glove with the representatives of the foreign agencies, both in India and abroad. In bureaucratic circles the extension of reciprocal facilities is quite common. In the absence of data, it is difficult to say how much such foreign aid has benefited the managers of the aid givers and aid receivers. In this process, we have also evolved a new breed of demographers, often quickly trained abroad through short term seminars and courses (and this breed includes high Government functionaries and University professors). Then there are fashionable management experts who compensate their ignorance of Indian rural life with innovative management jargon. This unholy combination of the managers of funding agencies, the go-getter bureaucrats and the softheaded demographers, all working for the welfare of India's poor masses, has created a dismal situation.

To complete the story, I must point out that the genuine academics are equally guilty for this sad state of affairs. There are very few Indian economists or sociologists of standing who have taken more than a marginal interest in Demography. On the other hand, we have produced a whole lot of technical demographers who cannot go beyond decimal points.

Where do we go from here? Mrs. Indira Gandhi had said that family planning should be a people's movement. Is it not a contradiction that the bureaucracy has been asked to generate a people's movement? Should bureaucrats in New Delhi, and for that matter, bureaucrats at any level, set targets for the reproductive behaviour of millions of couples in a free, democratic society? Is the target setting exercise by developed countries not exclusively confined to the developing countries, in the name of foreign aid? No wonder the Western countries are crazy about suggesting the Chinese model of one child family for other developing countries like India, Pakistan and Bangladesh. But what if the Chinese model ends in a fiasco?

Has the West been able to solve its own population problem reflected in aging population and migration of cheap labour, producing racial tension? Has the Western model of 1.8 children and mindless consumerism improved the quality of life? How does the West propose to contain the erosion in the solidarity of the family and preserve the institution of marriage? In short, should India adopt the western model of marriage and family? I am not arguing for the persistence of the large family pattern in India but stating a historical fact that the success of family planning in India is limited because the poor have abiding faith in the solidarity of the family network whereas the credibility of the Government functionaries administering various anti-poverty programmes is suspect. Coming back to China, it is worth noting that family planning targets are not set in Beijing but at the local level.

Under the Indian Constitution, health is on the State list while social and economic planning including family planning is on the Concurrent list. But in effect, family planning has been on the Union list as it has always been a 100 per cent Centrally-financed programme. This has created an anomaly. The family planning programme has emerged as a massive monolithic programme, Centrally financed, directed and monitored while the implementation of the programme is left to the states. Several states take interest in family planning only because the programme brings money from the Central Government. There is a feeling in the Planning Commission that if the states are asked to share financial responsibility the Family Planning Programme will collapse. In fact, when the Community Health Workers Scheme (currently called the Health Guide Scheme), launched in 1977 as

a Centrally sponsored programme, was subsequently modified by the National Development Council in terms of 50:50 sharing by the Central and State government, the scheme virtually collapsed in several states. Only when it was made a Centrally sponsored scheme again, the scheme revived but as the money was found from the family planning budget, the administration of the programme at the Central level was transferred from the Department of Health to the Department of Family Welfare. In spite of frequent recommendations in international and national seminars and conferences about the integration of health and family planning, our historical experience shows the continued lack of integration of health and family planning all along the line, right from the Central Government to the grass roots level. To make matters worse, there is quick money in family planning programme for motivational work but there are no such incentives for health work. A suggestion that the Government award for good family planning performance in the combined field of maternal and child health (MCH) and family planning was quickly shot down by the authorities. Yet, time and again, we are reminded about the inter-relationship between infant mortality, fertility and family planning.

A major drawback of our Centralised family planning programme has been the lack of adequate appreciation of the problems created by regional disparities in the demographic situation. For the bureaucrats in New Delhi, a uniform directive to all the states is most convenient. The worst part of the story is the setting of family planning targets by the bureaucracy in New Delhi (on the lines of cement and steel quotas) and the relaying of these targets to the State Governments who in turn relay the targets to the District Medical Officers who pass them on to the Block Medical Officers. Finally, the targets reach the helpless Auxiliary Nurse Midwives (ANMs) and Multi-purpose Workers (MPWs) at the Sub-centre level. In spite of the Government's stand that India's family planning programme has a 'cafeteria approach' and the people are free to choose whatever method they want, in effect, the programme is a sterilisation programme and at the grass roots level, the only concern is for getting more 'cases' for sterilisation, regardless of the impact of such sterilisation on the birth rate.

To sum up, the major weaknesses of India's family planning programme are: (1) undesirable foreign orientation, (2) monopoly of bureaucrats, (3) monopoly of the Central Government, and (4) sole concern for quantitative targets and their achievement irrespective of the impact on the birth rate.

One may ask, what are the achievements of India on the family planning front? It is difficult to answer this question without knowing how to assess our achievement. What is the yardstick? For the Department of Family Welfare in the Ministry of Health and Family Welfare, it is the *performance* against the *target* or what percentage of the targets for sterilisation, IUD, condoms and oral pills have been achieved month by month, year by year. According to the Ministry's own statistics, the performance has been excellent. Not only are the targets achieved in a large measure but these are even over-fulfilled. I have challenged these statistics for many years. I do not accept the exercise in target setting nor the performance figures. I challenge these statistics as exaggerated on the basis of my field work for over three decades throughout India.

Another yardstick for assessing the achievement of the family planning programme is to look at the birth rate, year after year. The source of data is Sample Registration System (SRS) under the office of the Registrar General in the Ministry of Home Affairs, Government of India. In my judgement, the SRS data are not as unreliable as the Family planning performance data. In any case, we are more interested in the *trend* rather than in the yearly figures as such. The SRS data on birth rate which is more or less stagnating, both in rural and urban areas, for over a decade do not support the Health Ministry's contention that the family planning programme has been a success.

The Health and Family Welfare Ministry has argued that success should be judged by the number of births averted and not merely by the trend of the birth rate. They argue that but for the Government programme, the birth rate of India would have been higher.

The Planning Commission is not impressed by this argument. As the Approach Paper (May 1990) to the Eighth Five Year Plan (1990-95) puts it: "The measure of the success of any family planning programme should be targeted reduction in the birth rate and not the number of births averted."

The 'births averted' exercise is questionable and much depends on the statistical assumptions. I can argue that if the Family Planning Programme was not put on the wrong track in 1966 by the powerful international lobby which advised our government to separate family planning from health, the number of births averted would have been much higher. I can also argue that if a powerful political upstart had not derailed the family planning programme during the Emergency (1975-77) the decline in the birth rate would have been much faster. But all these are hypothetical arguments.

Let us forget this decimal point demography which serves no purpose and go to the field and talk to the people. In my view, India's demographic predicament can be described as follows:

(1) The credibility of the family planning programme in large parts of India and especially in the states of Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh is near zero. The illiterate masses have still not fully recovered from the shock of the crude body-snatching sterilisation programme during the Emergency. In India, sex is sacred because marriage is sacred. The assault on the sex life of couples in the name of family planning is totally unacceptable to the masses. In particular, women (who are half the number of voters) are incensed by such a body-snatching programme in the name of their welfare.

(2) The politicians have burnt their fingers on the family planning issue. The mighty Government of Indira Gandhi was swept out of power in 1977. And to recall, the issue was family planning. In Uttar Pradesh, the most populous state of India, the ruling party could not win even *one* seat in Parliament out of the 85 seats in that state. Such was the fury of India's illiterate masses. Today the politicians tend to blame the bureaucracy (even Indira Gandhi blamed the over-zealous bureaucrats) for making a mess of the family planning programme. On the other hand, the bureaucracy blames the politicians for their singular lack of political will when it comes to family planning. No politician really gets involved in family planning motivational work which should be a priority concern for the elected representatives of the people. Some of our politicians and parliamentarians are more eager to visit China, Indonesia, Singapore, Thailand etc. to learn about family planning than visit Bihar or U.P. to study for themselves where we have gone wrong.

(3) To make matters worse, at the district level and Primary Health Centre and Sub-centre level, the medical bureaucracy resents the bossing over by the IAS (Indian Administrative Service) bureaucracy and the IAS bureaucracy has contempt for the medical bureaucracy. Then we have a gang of target chasers at the grass root level — in particular, revenue officials, school teachers, health workers including the poor and frightened ANMs. One has to do field work to realise the absurdity of the situation. The health personnel always complain that they have no powers and no leverage in getting sterilisation cases. On the other hand, the revenue officials have a clear advantage inasmuch as they make promises, though false at times, of land, loan, fertilisers and other goodies. The most ridiculous situation is in regard to some hapless creatures who are approached by as many as five motivators for obviously a single sterilisation operation. In such a situation, the victim (or acceptors if you want to use polite language) quotes his own price — very similar to an auction price, particularly in February and March. But alas, the Government will give Rs. 160 and no more, unless you are in special states like Gujarat and Haryana. So the poor health worker has often to shell out money from his or her pocket to get a 'case'. The tragic part of the story is that in this mammoth exercise, nobody is bothered about the eligibility of the person so that the national cause of reducing the birth rate is helped. All that one looks for is a *case* which goes in fulfilling the target. I have described this disease as *targetitis* in my writings.

It is not my contention that the only way to judge the achievements of India's family planning programme is to look at the birth rate. In my view, our major achievements in this field are non-statistical.

Perhaps the greatest achievement of our family planning programme is the assertion of people's power and the victory of democratic norms and human values. For the first time in the history of the world, a powerful and erstwhile popular Government was humbled and swept out of power by the masses of illiterate people in States like U.P., Bihar, Madhya Pradesh, Rajasthan and Haryana. The message should be clear: people cannot be bullied by the Government in the name of the family planning programme. Bodysnatching will not be tolerated. The only reason why the target chasers are still in business is the illiteracy of the masses. The masses do not understand demographic statistics on the couple protection rate, births averted and performance as a percentage of the targets. The moment they can read and understand these figures, they will chase away the target chasing bureaucracy.

Lest I am misunderstood, I must hasten to add that while extolling the virtues of people's power and the values of democratic norms in a civilised society, I am in no way justifying the present demographic anarchy and the most irresponsible proliferation of our population. It is most appalling to see poor, unemployed and underemployed people getting their minor sons and daughters married and people producing five or six children even though they are on the verge of destitution. This situation is totally unacceptable. Newspaper reports say that the Hon'ble Chief Minister of Bihar, whom I consider to be a young man belonging to the new generation has just produced his ninth child.

Let me briefly list the major problems facing India's family planning programme. These are as follows:

(1) No government programme can overcome what I call '*demographic fundamentalism*' which is a deep-rooted phenomenon in Indian society. By demographic fundamentalism, I

mean the craze for sons and the relentless efforts to try and get a son even when five or six daughters are born. On the basis of empirical data from primary health centres all over India, I have observed that two living sons is the cut-off point. Therefore, a family planning programme which is wanting a couple to have only two children, by definition, would imply that couples should have only sons and no daughters. Therefore, this introduces an element of contradiction in the policy as formulated by the government and the requirement of the masses in terms of their own perception. I have great doubt if a bureaucratic programme can dilute the force of demographic fundamentalism merely by putting posters and banners that "sons and daughters are the same". It calls for social transformation. This task can be entrusted only to enlightened social reformers.

(2) One of the reasons why our family planning programme has not succeeded is the obsession with technology and the neglect of the social context. For example, it was thought at one time that the Emakulam Experiment of mass vasectomy camps in Kerala will pave the way for a drastic reduction in the birth rate. Similar camps in Uttar Pradesh led to tetanus deaths and the camps were abandoned. Obviously, U.P. is not Kerala. Then came the much advertised Lippie's Loop. It was soon abandoned by our women. We have a new technology called copper T, Then came the laparoscopic method of female sterilisation. Here was a high tech method which saved time and money, and this was seen as a revolutionary step in Indian family planning programme. However, the most callous use of this technology by our medical doctors brought bad name to this technology. The failure rate is high, the pregnancy rate is high and there have even been deaths as a result of this operation. In the western world where this technology has originated, the people would have sued individual medical doctors as well as the government for medical malpractice. The latest in the field of technology is amniocentesis or sex determination before birth. Interestingly enough, this modern technology which was originally used for detecting genetic disorders, is being misused in India for a massive programme of foeticide. As soon as a couple is told that the pregnancy will result in the birth of a girl, abortion is resorted to. Amniocentesis raises legal, moral, medical and ethical issues which have to be sorted out. An ardent supporter of the family planning movement, Dr. Pai of Bombay, told me that if the government's objective is to encourage people to have only two children, legalisation of amniocentesis is the only solution for fulfilling the objective of our family planning programme. On the other hand, philosophers like Ramachandra Gandhi have argued that amniocentesis will generate hatred for the female sex and result in an atmosphere of genocide which is not healthy for a civilised society. It may be noted that the Government of Maharashtra has already banned amniocentesis and the Government of India is also considering a similar ban. Pragmatists have argued that ban or no ban, Indian masses will resort to this method, even if it is illegal. Such is the force of demographic fundamentalism.

(3) The third problem is that our family planning programme has got hooked to technology. The whole issue of population control centres round sterilisation, or the terminal method of family planning. To make matters worse, under misguided foreign advice, we started paying money as compensation to acceptors of sterilisation. This immediately put a premium on sterilisation. Now we have come to grief. It is clearly recognised that the use of money power has led to widespread corruption. Further, this has discounted the use of

non-tenninal methods. Worst of all, this has put the whole family planning programme upside down. Instead of starting with marriage and immediate practice of contraception after marriage, our focus is on the "exhausted generation" of women at the fag end of their reproductive life. This is the main reason why we have not made a dent on the birth rate. By and large, poor people have gone for sterilisation only after they have had two living sons; in short, only after their family building process was completed. They went for the operation to get some money. This is the state of their poverty. Rs.160 cannot buy even a good shirt or nutrition for children for a month. The money was therefore put to an interesting use: the husband of the sterilised woman bought alcoholic drinks and drank it all! This is the economics of the compensation money as understood by our people. I do not blame the people because it is manifestly foolish to try to entice people by giving Rs. 160. I am familiar with the standard argument that this money is not incentive money. But anybody who is familiar with the field situation will tell you that there is no difference between *compensation* and *incentive* in reality. I am amused at the suggestion made by some Indian experts, who in turn are inspired by foreign experts, that to reverse the son complex, we should give Rs. 50,000 as bonus to parents who have only two daughters, provided they stop having more children. This suggestion came for discussion at the highest level during Mr. Rajiv Gandhi's (1985-89) regime and I opposed it. In my view, only middle class government officials will benefit from such a scheme and not the masses of people who, first of all, would not equate a son with Rs. 50,000 and secondly, they would not have faith in this lower level officials in the villages who are expected to honour this commitment after 15 or 20 years. I am glad that Mr. Rajiv Gandhi's government saw my argument and abandoned the scheme. I have been fighting against another foolish innovation, namely giving cash awards (rupees twenty million) to states for "good" family planning work. This led to widespread cooking of data by states to compete for these awards. I am glad to note that the Ministry of Health and Family Welfare, in Rajiv Gandhi's Government decided to discontinue this scheme.

From time to time, suggestions are made at the national as well as international level that, to meet the challenge of population explosion, we should set up a Population Commission. I am opposed to this. One may recall that the idea of a Population Commission was mooted even in the first Five Year Plan formulated in 1951. My opposition to this idea is on practical grounds. What will another apex organisation do? The programme is not working because at the state level, district level, primary health centre and sub-centre level, there is a breakdown of the health and family planning programme and the credibility of the programme is near zero. One more apex organisation will only add to the loss of credibility.

Policy Options

As we have seen, in spite of the early lead India took in initiating state intervention to curb the birth rate, the progress towards population stabilisation has been slow and the goal remains still distant. The West had pinned its hope on contraceptive technology but it was soon realised that the social context is more important than technology. And it took a long time even for the big funding agencies in the West, including the international agencies, to realise what India's illiterate rural masses always knew, namely, given the extremely high

infant and child mortality rates, the motivation for family planning is bound to be weak. The UNICEF started talking about immunisation and child survival only in recent years. The World Bank's interest in the health sector is also recent. The international awareness of the nexus between health and development is even more recent. What the Indian masses do understand is the economics of survival and the vital role of family solidarity. In spite of seven five year plans, widespread poverty still persists. There have been numerous programmes for the rural poor but thanks to growing corruption, leakages have been numerous. As a result, the average landless worker has more faith in the family and kinship network than in the State to come to his rescue in his continuing economic crisis. He would rather have sons than seek salvation in sterilisation. It has not been demonstrated that a landless worker with only two children (the Government of India's norm) is better off in the long run than a landless worker with say, six sons. For such landless poor, salvation lies in getting land and sons and not getting sterilised.

Then there is the powerful "son complex" which we have termed as "demographic fundamentalism". For many Westerners, this phenomenon is basically religious. I disagree with this view. I am convinced on the basis of my field work that the son complex is a product of historical, social and economic forces, with the economic factors predominating. Basically, it is a strategy of survival in a hostile physical, social and economic environment. I have grave doubts if state intervention *alone* can overcome demographic fundamentalism in India. What are the policy options then?

Without being exhaustive, I shall list some of the options below:

P1: *Status quo*: Continue what we have been doing so far. Do more of the same thing. But this will involve higher financial allocation in each successive five year plan. This policy option must be rejected. Even the Department of Family Welfare is convinced that their efforts are not succeeding in making the expected dent on the birth rate.

P2 : *Appoint a Population Commission*, say, on the lines of the Family Planning Board in Indonesia. There are powerful national and international lobbies seeking this policy option. But this is really passing on the buck. Appointing a Commission gives the Government respite for three to five years. Such a Commission will be one more apex organisation in New Delhi and the programme may end up by being more vertical. A Population Commission may have some ornamental value and international recognition but it is doubtful if it will take us nearer the goal of population stabilisation. This is hardly a policy option.

P3 : *Make it a voluntary programme by involving the Non-Governmental Organisations (NGOs)*

This policy option is being increasingly advocated in recent years, especially in national and international seminars and conferences. There is no doubt that there are several shining examples of dedicated men and women who have set up voluntary agencies and worked with the people. But given the weak health infrastructure in states like U.P., Bihar, Madhya Pradesh and Rajasthan where the population problem is most acute, it is doubtful if the NGOs can play a leading

role. Besides, in these problem states, there are not many voluntary agencies. Critics have also pointed out that most of the voluntary agencies are city-based and elitist; the bureaucratic stanglehold of NGOs runs parallel to the Government's and their main funding comes from foreign sources so much so that if the foreign funds are withdrawn, most of the programmes would collapse. Given the tax structure, Indians and Indian organisations are generally reluctant to put money for family planning. Traditionally, health work (like starting a hospital or running a free eye camp) is regarded as pious but family planning is outside the ambit of such traditional values. P3 therefore is a limited option.

P4 : *Decentralise the family planning programme and hand over the programme to states, Zila Parishads (District Councils) and Panchayats (Village Councils)*
 Decentralisation is a worthy objective but as of now there are limits to what the *panchayats* can do. Towards the end of his regime (1984-89), when Mr. Rajiv Gandhi was the Prime Minister, there was a hasty move to pass the Panchayat bill but it fell through. Traditionally, *the panchayats* do not perceive family planning to be under their jurisdiction and one cannot be certain that decentralisation of the programme at the *panchayat* level will deliver the goods all over India. In certain states (e.g. Gujarat) the *panchayats* work much better than in other states (e.g. Bihar). Nevertheless, decentratlisation is a worthy objective.

P5 : *Introduce adequate financial incentives to motivate couples to take to the small family norm.*

This policy option is popular with foreign funding agencies. In India also, there are powerful advocates of this policy. Given the level of corruption, such a policy is bound to be counter-productive and wasteful. The introduction of even small financial incentives has yielded unfortunate results like the commercialisation of the family planning programme. While there is scope for some incentives like scholarships to female students to induce them to go to school or supply free food to improve the level of nutrition, or give additional insurance benefits for adopting a small family norm, we would rejectPS as a policy option as it introduces reliance on commercial norms rather than social norms and once the financial prop is removed the programme will collapse.

P6 : *If incentives will not work, introduce disincentives, and even compulsion in family planning*

This is a desperate solution smacking of fascism. While there is considerable scope for demographic discipline and responsible parenthood, compulsion must be ruled out because it is bound to be politically unacceptable and counter-productive in a democracy. Our experience during the Emergency should be an eyeopener even to China.

F7 : *Leave the programme to social reformers who can lead masses, galvanise society and inspire people.*

Such reformers may include even religious leaders. Even political leaders should not be ruled out though there is an inherent danger in politicising the programme which will be counter-productive. But where are the social reformers ? Can the State create social reformers ? Obviously not. This, therefore, is a limited policy

option. In this context, one can also plead for suitable social legislation. Here again, the real problem is one of *implementation and* not merely legislation (e.g., the Child Marriage Restraint Act).

P8 : Use *high tech modern communication methods* to make millions of people, even in remote rural areas, aware of the gravity of the population problem, give them the necessary knowledge about contraception and motivate people to take to the small family norm. Use radio, TV, films and all other forms of media in a big way. There is no doubt that this option has tremendous potentiality but there is also a lurking danger that it may end up with an advertising approach which may be wasteful and irrelevant to Indian society.

P9 : *Take the development route to population stabilisation* Change the priorities in our planning process. Put more money on education and health or in human resource development. Make the small family norm a part of the development process. In short, do not put family planning in one basket and development in another. Family planning should be a part of the development basket. Development measured merely in terms of the rate of economic growth may not include the small family norm unless the fruits of development are shared equitably. The basic needs of the poor must be met and social justice must take precedence over economic growth. P9 strategy will have near 100 per cent literacy rate among males and females as the target. It must not be forgotten that high fertility is the price Indian society has to pay for its high illiteracy.

Finally, our concern should be with the new generation and in particular, girls, in the age group 9 to 18 years and not with the exhausted generation of 35+ women towards the flag end of their reproductive life, who come for sterilisation to get some money, having completed their family building.

India's rural masses have outwitted the medical bureaucracy which pinned all its hopes on sterilisation but failed to make a significant impact on the birth rate, mainly because the average acceptor of sterilisation first ensures that he has two surviving sons and in that process has a family size of 5 or 6 children. For the Family Welfare Department, the number of sterilisation cases and the dubious calculation of births averted by the programme become an *end* in itself and not the *means* for the welfare of the masses. The Department of Family Welfare is a victim of a new virus which I have called 'Targetitis'. International funding agencies which insist on constant monitoring of the programme have encouraged the spread of this virus. This is not to deny the urgent need for evolving a suitable methodology for monitoring and evaluation of the family planning programme in the Indian environment.

To sum up, I do not advocate a single policy option but a series of realistic strategies which take due note of the geographical, demographic, economic and social diversity of India.

In his inaugural address to the 21st International Population Conference of IUSSP held in New Delhi in 1989, the then Prime Minister, Mr. Rajiv Gandhi had criticised the "blanket approach" to the solution of the population problem of India. He had rightly advocated a regional approach similar to the demarcation of agro-climatic zones in the field of agricultural development. Is it possible to carve out demographic zones in India ?

Some Implications of the 1991 Census: Provisional Results for Indian Planning¹

One cannot help being tentative while commenting on the provisional results of a census. One must await the results of the final count for any degree of confidence in making the comments. Invariably, the final figures are higher though marginally, than the provisional figures. The human errors in the headcount may be compounded by the electronic computers which sometimes go wrong.

While interpreting the results of a population census, one must observe certain ground rules. To my mind, the first such rule concerns comparability of data at two points of time. It may be recalled that there was no census enumeration in Assam in 1981 because of disturbed conditions whereas the 1991 census enumeration has yet to take place in Jammu & Kashmir. The 1981 census figure for India includes the projected population of Assam while the 1991 census figure for India included the projected population of Jammu & Kashmir. The statistical implications of the exclusion of some states from census enumeration and the inclusion of the projected figure for some other states while comparing the results of two censuses (say 1981 and 1991) have to be worked out before one can comment with confidence on the decadal growth rate of population.

Then there is the difficult question of measuring the extent of under-enumeration. Again, one must await the results of the Post Enumeration Check (PEC) conducted by the census organisation after the census enumeration is over. The PEC gives statistical estimates of over-enumeration and under-enumeration and the resulting net under-enumeration. For example, in 1981 the net under-enumeration was of the order of 1.8 per cent (that is to say, out of every 1000 persons counted 18 persons were missed). When one compares the population at two points of time (say 1981 and 1991) the usual assumption is that the extent of under-enumeration is more or less the same. This may not be a valid assumption.

I believe that the 1991 census enumeration was, on the whole, a fairly good enumeration. Nevertheless I would argue that the net undercount at the 1991 census would have been at least double that of the 1981 rate. There are at least two reasons for this: (1) during 1981-91 there has been rapid urbanisation and this tends to increase the coverage error of the census (i.e. the total count), and (2) the general boom in consumerism and the increasing dissatisfaction on the part of the vast army of 1.7 million enumerators with the paltry honorarium given to them.

In other words, if in 1981, we missed roughly 20 out of 1000 persons enumerated, in 1991, one would guess that we might have missed double the number per thousand persons (i.e. under-enumeration of roughly 4 per cent). This difference of 2 per cent itself means an addition of 17 million to the provisional figure of 1991 if the higher rate of under-enumeration is taken into account.

* Lecture delivered at the School of Social Sciences, Jawaharlal Nehru University, New Delhi, 25 April 1991

But the Indian census never adjusts the data for under-enumeration because it is not possible to give the characteristics of persons who have not been counted.

Interestingly enough, out of modesty, no census Commissioner would claim that his census work was better than his predecessor's, nor would he run down an earlier Census Commissioner by saying that the census enumeration was weak in the preceding decade.

Critics of the PEC say that this type of enumeration check should not be conducted by the census organisation but by some other agency like the National Sample Survey Organisation (NSSO) or the Central Statistical Organisation (CSO). Critics have also raised doubts about the sampling procedure of PEC. In short, PEC itself may be suspect.

Decadal Growth Rate

According to the provisional total population figure for India, the growth of population during 1981-91 was 23.5 per cent, compared to 24.7 per cent in the 1971-81 decade. Thus, the growth rate during the last decade has only marginally declined. This is certainly a reflection on our family planning programme. While interpreting statewide figures, one has to estimate the net migration (both legal and illegal) before pronouncing the final judgement. Migration plays an important role as will be evident from the figures for various states in India, (See Tables 1 and 2). In Madhya Pradesh, Maharashtra and West Bengal, the decadal growth rate has gone up during 1981-91: migration must have played an important role in contributing to the higher growth rate. In West Bengal, the continuing migration from Bangladesh adds to the miseries of West Bengal. We shall give a few figures for the major states of India.

TABLE 1 : MAJOR STATES WITH DECADAL GROWTH RATE (PER CENT) EXCEEDING THE NATIONAL AVERAGE DURING 1981-91

	1971-1981	1981-1991
Rajasthan	33.0	28.1
Madhya Pradesh	25.3	26.8
Haryana	28.8	26.3
Maharashtra	24.5	25.4
Uttar Pradesh	25.5	25.2
West Bengal	23.2	24.6
Andhra Pradesh	23.1	23.8
Assam	23.4	23.6
Bihar	24.1	23.5

TABLE 2 : MAJOR STATES WITH DECADAL GROWTH RATE (PER CENT) BELOW THE NATIONAL AVERAGE DURING 1981-91

	<i>1971-1981</i>	<i>1981-1991</i>
Kerala	19.2	14.0
Tamil Nadu	17.5	14.9
Himachal Pradesh	23.7	19.4
Orissa	20.2	19.5
Punjab	23.9	20.3
Karnataka	26.8	20.7
Gujarat	27.7	20.8

Declining Sex Ratio

Perhaps the most disquieting feature of the 1991 census is the unexpected decline in the sex ratio (number of females per 1000 males). In 1981, the government quickly claimed that the increase in the sex ratio from 930 in 1971 to 934 in 1981 was because of the impact of the MCH (mother and child health) programme. Now we are confronted with a figure of 929, indicating a five point decline in the last decade, a figure which is even lower than the figure in 1971. Has our MCH programme also failed along with the family planning programme? There is no doubt that women's organisations which have relentlessly campaigned for a better coverage of women's work in the 1991 census will be very disappointed by this dimension of census results. In Tables 3 and 4 we give figures for the major states. These figures have to be interpreted with caution in the absence of data on migration.

TABLE 3 SEX RATIO (FEMALES PER 1000 MALES) IN MAJOR STATES, RECORDING DECLINE BETWEEN 1981 AND 1991

	<i>1981</i>	<i>1991</i>
India	934	929
Uttar Pradesh	885	882
Bihar	946	912
Rajasthan	919	913
Madhya Pradesh	941	932
Maharashtra	937	936
Gujarat	942	936
Orissa	981	972
Tamil Nadu	977	972
Andhra Pradesh	975	972
Karnataka	963	960

TABLE 4 : SEX RATIO IN MAJOR STATES RECORDING INCREASE BETWEEN 1981 AND 1991

	1981	1991
Haryana	870	874
Punjab	879	888
West Bengal	911	917
Himachal Pradesh	973	996
Kerala	1032	1040

Literacy Rate

In spite of the rapid increase of literates during the last decade, the literacy rate continues to be low in several major states of India. It is a poor consolation that the number of female literates has increased rapidly during the last decade when one considers the end result; as of 1991, the female literacy rate in India as a whole is less than 40 per cent and in a state like Rajasthan it is less than 21 per cent. The rural/urban breakdown is not yet available but the literacy rates would certainly be lower in the rural area.

The six states of Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh which comprise 51 per cent of India's population account for 59 per cent of the illiterate population of India.

It is certainly encouraging to note the high rates of literacy (male and female) in Kerala which is on the way to attaining 100 per cent literacy. In Tables 5 and 6, we give the contrasting picture of progressive and backward states in terms of literacy. The overall literacy rate in India in 1991 is 52 per cent for the total population; it is 64 per cent for males and 39 per cent for females. While interpreting literacy data, it is important to remember that these rates do not necessarily imply that all the literate persons go to school or had some schooling. The 1991 Census asked separate questions on school attendance and educational level but the results are not yet known. One can be literate without having any worthwhile educational level. Then there is the problem of relapse into illiteracy of persons who were once literate. Literacy figures should, therefore, be interpreted with caution. One cannot help observing that in spite of the Literacy Missions, etc. the overall situation is appalling in India. There is no doubt that the country must give the highest priority to the eradication of illiteracy in the shortest possible time.

TABLE 5 : LITERACY RATES IN PROGRESSIVE STATES, 1991 (PER CENT)

<i>States</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>
Kerala	90.6	94.5	86.9
Tamil Nadu	63.7	74.9	51.3
Himachal Pradesh	63.5	74.6	52.5
Maharashtra	63.1	74.8	50.5
Gujarat	60.9	72.5	48.5
West Bengal	57.7	67.2	47.2
Punjab	57.1	63.7	49.7
Karnataka	56.0	67.3	44.3
Haryana	55.3	67.9	40.9
Assam	53.4	62.3	43.7
Delhi U.T	76.1	82.6	68.0

TABLE 6 : LITERACY RATES IN BACKWARD STATES, 1991

<i>States</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>
Orissa	48.6	62.4	34.4
Andhra Pradesh	45.1	56.2	33.7
Madhya Pradesh	43.5	57.4	28.4
Uttar Pradesh	41.7	55.4	26.0
Rajasthan	38.8	55.1	20.8
Bihar	38.5	52.6	23.1

Note. State and Union Territories with population below 5 million are not included here.

Total Population of India

According to the 1991 census headcount the total population of India (including the projected population of Jammu and Kashmir where the census enumeration has yet to take place) is 843.93 million or 844 million. This is certainly lower than what was generally expected. The projections ranged from 844 million to 865 million. Interestingly enough, the Planning Commission's Standing Committee of Experts on Population Projections had

* It may be noted that the original estimate of India's population in 1991 was 837 million (as projected by the Expert Committee in 1985). In 1989 this was revised upwards to 844 million.

revised the earlier estimate of 837 million to 843.6 million or roughly 844 million in 1991. In short, the census count almost exactly tallies with the projected figure, namely 844 million. There is no doubt that many eyebrows will be raised about this 'surprising coincidence'. Does it mean that Indian demographers are as good as Indian astrologers in making predictions though the science of Demography says that projections are not predictions? On a closer examination of the published data, we find that the projections quoted in Census Paper No 1 of 1991 were made as late as October 1989. In other words, the projection was a very short term projection and was based on the observed data on birth and death rates generated by the Vital Statistics Division of the Office of the Registrar General (SRS data) for the period 1981 to 1988. Therefore, due credit must be given to SRS data which, in the light of the census, seem to be fairly reliable.

An intriguing feature of the projection exercise concerns the state of Assam where no census could be conducted in 1981 because of disturbed conditions. The earlier projection for the population of Assam in 1991 was 25.0 million while the revised projection (as of 1989) put the figure as 24.8 million. The actual census count in 1991 revealed a figure of 22.3 million. Compared to the 1981 projected figure of 19.9 million for Assam, the rate of growth of Assam's population would have been only 12.1 percent. This would have implied a high degree of under-enumeration which would not have been surprising in view of the disturbed conditions there even in 1991. The Census Commission, however, chose to re-write demographic history by adjusting the 1981 population of Assam by interpolating the population of Assam in 1981 by taking the figures for 1971, 1991. By this process the growth rate of Assam was jacked up to 23.6 per cent. It does appear to us that in view of the high level of under-enumeration in Assam in 1991, the Census Commission reworked the total population of India in 1981, and the growth rate figure for the 1981-91 decade of India just to show a more acceptable growth rate for Assam. To our mind this problem could be avoided by adding a footnote to the Assam figure. It may be recalled that the 1981 census did not make any adjustment for the longer duration of the inter-censal period (between 1971 and 1981 because of the delay in conducting the Census of 1971 by one month on account of general elections).

I believe that the projected population of Assam for 1991 was a more realistic figure than the actual count. It is also not necessary to adjust the 1981 figure of Assam. According to our estimate, the 1991 population of India is roughly 846 million (adjusted for the under-enumeration in Assam). Generally speaking, the difference between the provisional figures and the final figures is of the order of 2 million. This will push up the total figure to 848 million. It may be recalled that in 1981, net under-enumeration was of the order of 1.8 per cent or roughly 2 per cent. If we assume the same degree of under-enumeration, we have to add another 17 million. This brings the total population to 865 million. As we have already pointed out, in view of the rapid urbanisation during the 1981 -91 decade, the underenumeration would be higher than 2 per cent. An additional factor was the lack of motivation on the part of the enumerators who grudged the paltry honorarium given to them. We believe that the extent of underenumeration at the 1991 census would be around 4 per cent. My estimate of the 'correct' population of India would be between 870 to 880 million as of 1991.

As noted earlier, the Indian census data do not adjust for under-enumeration for the simple reason that even if the total count is adjusted, it would not be possible to present the

characteristics of the under-enumerated population in regard to the tables which are prepared on the basis of the Census. Interestingly enough, the Post Enumeration Check (PEC) data in the Indian census do not give the statewise figures but the zonewise figures (based on grouping of several states). This is done in order not to expose the Directors of Census in different states. But on statistical grounds, there is a good case for presenting PEC data statewise. For example, we have reason to believe that in Bihar, there must have been considerable under-enumeration and in particular, under-enumeration of females. In Tamil Nadu and Bihar, the quality of the economic census conducted along with the houselisting operation in 1990 was so poor that the Director General of the Central Statistical Organisation (CSO) did not include these states when the provisional results of the Economic Census were announced.

Role of BIMARU States in Population Stabilisation

The 1991 Census data fully confirm our prognosis that the crux of India's population problem lies in the four problem states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh (in alphabetical order, the acronym is BIMARU) which account for 39 per cent of India's population and 42 per cent of the net addition to the population of India during the 1981 -91 decade. UP. and Bihar are the most populous states of India and M.P. and Rajasthan are the two largest states in terms of area. In South India, Andhra Pradesh is demographically the most backward state, Orissa's population growth rate is low but this state is certainly not comparable to demographically modernising states like Punjab. Orissa has high levels of mortality and infant mortality, the nutritional levels are appalling and the population below the poverty line high. Orissa deserves special attention.

Kerala, demographically our most modern State (if one leaves out the tiny state of Goa) has unfortunately a very high level of unemployment. One is reminded of George Bernard Shaw who said: "There are two tragedies in life: one is not to get your heart's desire, and the other is to get it." The demographic modernisation of Kerala has not been matched by economic growth which goes to show that harping on population growth alone is not enough. It was migration and gulf money which came to the rescue of Kerala to some extent.

Finally, it should be crystal clear that unless the BIMARU states progress socially, economically and demographically, India can never be on the path of population stabilisation. These states enjoy political power in abundance but is political power enough to improve the quality of life?

Demographic *status quo*?

It will be seen that the average annual (exponential) growth rate of population which was 2.22 per cent for the 1971-81 decade declined marginally to 2.11 per cent (a decline of only 0.11 per cent point). This is indicative of demographic *status quo* which in turn is the result of what I call 'demographic inertia'. In the largest state of Uttar Pradesh, for example,

* My term 'demographic inertia' should not be interpreted merely in terms of the birth rate, death rate and the resulting growth rate but in a wider sense of social stagnation in terms of age at marriage, institution of dowry, marked son-preference, neglect of the girl child, etc. as well as economic stagnation reflected in the low growth rate in per capita income, the perpetuation of economic inequalities etc.

the decadal growth rate was 25.5 per cent during 1971 -81 and 25.2 per cent during 1981-91. In Bihar, the decadal growth rates were 24.1 per cent and 23.5 per cent respectively. In Madhya Pradesh, the decadal growth rate increased from 25.3 per cent to 26.8 per cent but this must be largely due to inward migration. In Rajasthan, the decadal growth declined from 33 per cent to 28.1 per cent. Out migration must have been one of the contributory causes.

Orissa's growth rate declined from 20.2 per cent in 1971-81 to 19.5 per cent during 1981-91. The Department of Family Welfare should think twice before taking credit for 'good' family planning work in this state. A look at the latest SRS data (for 1989) will reveal that Orissa has the highest infant mortality rate in India (122). The death rate is also very high (12.6). Andhra Pradesh is a backward state from the point of view of literacy but has a moderate birth rate (25.6) and a moderate death rate (9.3).

Our planners and policy-makers should give the highest priority to these demographically, economically, and educationally backward-states, namely, Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh, accounting for 54 per cent of India's population in 1991. It may be noted that in all these states (except Assam), the sex ratio has gone down between 1981 and 1991. This makes the demographic scene even worse.

In India as a whole also, the sex ratio has gone down and this certainly needs some explanation. Once the sex ratios by age groups are known, one can comment with some confidence on the data. Migration has to be accounted for, and so also the possibility of a higher degree of female under enumeration. Nevertheless, the first results of the 1991 Census have shattered the hope raised in the earlier census that the trend towards declining sex ratio had perhaps been arrested. The only plausible explanation seems to lie in the differential improvement in mortality by sex and the continued neglect of females, and in particular, the girl child. It is also unfortunate that our family planning programme is largely centred around women, judging by the high proportion of female sterilisations to total sterilisations. Our planners and policy-makers must squarely face these issues. And our politicians should not forget that half the electorate comprises women and a day will come when male chauvinism will be wiped out by the fury of women.

Conclusion

It seems that one of the main reasons why the 1991 actual (provisional) census figures were very close to the projected figures (as of October 1989) was the reliance on SRS data on birth rates and death rates during the preceding years. The literacy figures presented in the provisional totals of 1991 are based on the projected population for the age group 0-7 which is excluded from the denominator while calculating the literacy rates. While interpreting 1991 census data, due note should be taken of the plus points and minus points of the SRS data and consequently, the revised population projections. One may ask: what is the extent of under-enumeration in the SRS and the census? The post-enumeration check (PEC) conducted by the Census Organisation itself relies on the sample frame of SRS and this has its own limitations. Perhaps the results could be different if another independent agency were to conduct the PEC and with a different sample frame. I am not convinced that the extent of underenumeration at the 1991 Census would be of the order of 1.5 per cent only as claimed by the Census Commissioner. My own estimate would be around 3 to 4 per cent; that is to say, we must have missed out between 25 to 35 million persons in the

headcount Even then, I would say that the 1991 Census has been a good census in i the total count. Regarding the content error, my hunch is that it would be quite large given the enormity of the task involved and the general indifference of the vast army of 1.7 million enumerators. In fact, I have serious doubts if in 2001 such an elaborate population census (with 23 questions) can be canvassed for over 1000 million persons through the individual slip. Either we will have to severely restrict the number of questions or adopt some other system of data collection like compulsory registration of households or take recourse to well-designed sample surveys.

III

Implications for the Family Planning Programme

I shall now repeat what I said at a recent conference of NGOs convened by the Family Planning Association of India, under the leadership of Mrs. Avabai Wadia.* Family planning today is *not* internationally fashionable any more; the in-thing is *environment*. My complaint against most of our NGOs is that they are hooked to foreign agencies, who in their innocence and benevolence tend to mislead our planners and policy-makers and end up by blaming the masses in India for not responding to their "brilliant" ideas. I am not against foreign agencies or foreign *funding per se* but against fancy ideas thrust on our people.

In the specific field of family planning, we are today confronted with three major gaps : first, the *communication gap* between our illiterate masses for whom the family planning programme is meant and our elitist intellectuals, bureaucrats and social workers. In spite of the early lead we got in family planning work (we are constantly reminded that India was the first country in the world to have put forward family planning as state policy and incorporated it in the very *First five Year Plan* in 1951), we are still not able to communicate with our masses except through our politicians who never talk about family planning to our masses.

This leads me to the second gap, namely, the *credibility gap*. Today the credibility of the family planning programme is extremely low. Almost everybody is convinced that the programme has failed. The politicians blame the bureaucrats, the bureaucrats blame the people, and the people blame the politicians as well as the bureaucrats. The IAS bureaucracy blames the medical bureaucracy for not doing their work, and the medical bureaucracy at the grassroot level blames the high handedness of the IAS bureaucracy setting family planning targets, sitting in New Delhi or Lucknow or Patna. And what is the people's perception ? *They want jobs, they want drinking water, they want primary health care* and why not? We have the Minimum Needs Programme. Mind you, *Minimum* needs. And we have not been able to fulfill this programme except on paper (and even there are shortfalls). On the other hand, the politicians have a *Maximum Needs Programme*. They all want tickets for becoming MLAs and MPs and once they are elected, all of them want to be Ministers. When the poor family planning worker goes to the villages and tells the people to have only

Held in New Delhi on 14 April 1991.

two children per family, retort: what has the government done for us? What will happen if we have only 2 children? The social worker cannot answer these embarrassing questions except to say that according to the United Nations, the world population has crossed the 5 billion mark. Enters the foreign expert, as he did in a big way in the 1960s. He says: "give money to the people ... start a new department" And we did so in 1966 with disastrous results. The health secretary and the family planning secretary in the states are not even on talking terms and this has been true at the centre also. Nobody wants his/Tier power to be diluted. The people are wiser. They accept the incentive and compensation money only after their *family building* is complete. This means in simple language, only after they have had at least *two living sons*. I call this 'Demographic Fundamentalism'. The first item on the agenda for family planning should be the fight against demographic fundamentalism. *Implicit in this concept is the neglect of the girl child, of the young women, of the aging widow.* To me this is the link between population and environment and by environment here I mean the *Social Environment* and not the pollution generated by cars and scooters (not that these are not important but I am talking of family planning). Our society is witnessing the impact of mindless consumerism of the West, without the money power of the West. The quickest way to get rich for a young man is to get married after taking a heavy dowry, burn his wife and get married again. The quickest way to ensure that you have two sons is to take the help of modern technology, namely *amniocentesis*, and abort the female foetus. Just as I have been saying that demographers must go beyond decimal points and family planners must go beyond targets, our social workers and NGOs must *paint on a wider canvas and make a frontal attack on the growing ills of Indian society*. Bureaucrats are not social reformers.

This leads me to the third gap which I shall call the 'Creativity Gap'. Under the onslaught of foreign funding agencies and foreign ideas, we have failed to generate new ideas, look for innovation, take bold initiatives even at the cost of failure. We want to play safe all the time. See which way the wind blows. Where the next international conference is? The Planning Commission is supposed to guide the planning process of the whole country and one would have expected that new ideas would be generated there. But alas, the Planning Commission today is devalued, diluted and demoralised. They have become a funding authority. Who will then generate new ideas? I am sad to say that of late the only 'new' idea which is floating is to urge the Government to appoint a Population Commission. This shows the bankruptcy of our ideas. What will a Commission sitting in New Delhi do except *dadagiri* and make the situation worse? I am reminded of what the philosopher Governor of Rajasthan, Professor D. P. Chattopadhyaya (who was once Minister of Health and Family Planning at the Centre) told me recently : "We are bound to fail because we are seeking *Non-Basic solutions* for Basic problem".

To sum up, the communication gap, the credibility gap and the creativity gap have combined to demoralise us. The result is a cynical view of things. Give any new idea you will be told: this is nothing new... it will not work in Bihar... it will not be cost-effective . . . "This leads to total frustration. It is more than clear to me that our *decimal point demographers and five star family planners cannot* make a dent on India's birth rate. *But the people can. Give the people a chance.* Wind up the Family Planning Department, *not*

family planning work. Release the lower level bureaucrats from the tyranny of targets which in any case, have not delivered the goods. Declare the family planning sector (which is 100 per cent centrally funded) a *sick sector* and start afresh. Unfortunately, in the Indian system, you cannot get rid of the staff even when they are not performing I am told that over 85 per cent of the family planning budget is spent on salaries. So there is very little one could do by way of experimentation or innovation. The situation is indeed difficult.

IV

Implications for Planning

Let me now turn to issues beyond family planning and consider some of the implications of the 1991 Census results for social and economic planning in the context of the five year plans. For the sake of brevity, let me list the issues:

(1) The growth rate of population during the last four decades of planning has been around 2 per cent per year. This is *not a sustainable* population growth rate. In spite of seven five year plans and the early lead we took in introducing state-sponsored family planning programme, we have never been able to achieve the targets set out by the Planning Commission in regard to the decline in the birth rate. Only the family planning targets are fulfilled by the Ministry of Health and Family Welfare by producing dubious statistics. The country has been misled to believe that the Family Planning programme has done a good job by preventing millions of births and but for the programme, India's birth rate would have been much higher. This is perverse logic and a misreading of history. It is possible to argue that even without the programme as formulated and implemented by the Government (and I maintain that our family planning programme is conceptually unsound and the implementation is poor), the birth rate would have come down, if the Planning Commission had tackled more basic problems of illiteracy and ill health. After four decades of planning, the rural infant mortality rate in Uttar Pradesh, the most populous state in India, is 126 per thousand, according to the latest Government statistics and in my view this is an underestimate. It is worth noting that since 1986, the SRS has stopped presenting data by sex for infant mortality rates. This is deliberate suppression of data. The female literacy rate in U.P. according to the jacked up literacy data of 1991 is 26 per cent. The rural literacy rates are not yet available but obviously the rate would be much lower in the rural areas. My conclusion is that the people of U.P. or Bihar or M.P. or Rajasthan cannot be blamed for the failure of family planning. Given the level of infant mortality and the level of female (and male) illiteracy, spending more money on family planning is waste of the resources of a poor country. I am not advocating a policy of giving up family planning but it is my contention that the 1991 census results confirm what field workers have been pointing out for the last several years, namely, the vertical, 100 per cent centrally financed, controlled and monitored family planning programme has failed. Should we go on putting more and more money in such a programme? Are there alternative strategies?

(2) Four decades of sustained population growth has brought to the forefront the issue of massive unemployment which today is the crux of the population problem. The economic tables of the 1991 census are not yet ready but undoubtedly, they will reveal a rate of growth

of the labour force much higher than the overall rate of population growth. To make matters worse, the voting age has been reduced to 18 years. The unemployed youth can create havoc for the Government. The Mandal Commission is looked upon by politicians as an escape valve to get out of an extremely difficult situation in regard to employment generation. But a policy of reservation does not by itself generate employment. In the present context, it will only generate frustration, conflict and violence. The Planning Commission's obsession with the rate of growth of GNP should yield place to the rate of growth of the work force. The political survival of the Government will depend to a large extent on our performance on the employment front. The right to work makes a catchy political slogan but can this be implemented? The question I would like to pose to the politicians is: Can you give to the people the right to work without curtailing their right to reproduce irresponsibly? Should not the State guarantee employment to all but restrict it to two children, regardless of their sex? Will such a proposition be politically counter-productive? If the answer is 'yes', my advice to the politicians would be to forget about the right to work. I do not see how we can have 'Sustainable' development, hand in hand with 'Unsustainable' population growth.

(3) The 1991 census data on urbanization are not yet available but there is enough indication in the State Census Paper No. 1 that the growth of urban population during the last decade has indeed been very rapid (as expected) and the growth rates are explosive in the case of big cities. The day is not far when we shall witness a total collapse of urban infrastructure. For example, can we take for granted that we will continue to have assured water supply in all our cities? City after city is facing a water famine. But when we talk of urban water supply, we are reminded of the lack of drinking water in our villages. Supplying potable water to all our villages has been a political slogan for a long time and remains so even at this election. We have failed miserably in fulfilling this promise to the people. But our villagers are scattered and the tolerance limit of the rural population is high. But what will happen if the city folks are denied water? There will be rioting and the Government will fall. Some politicians excel in harping on the theme of rural urban divide and the neglect of rural areas. When will it dawn on them that the cities are reception centres for the rural poor and if you fail to improve the urban areas, you hit the rural areas hard and add to the miseries of the increasing number of slum dwellers in all our cities. Whether the politicians like it or not, urbanisation is a top priority issue in India and to my mind, it will be the main demographic theme in the coming decade.

(4) The most surprising and perhaps the most shocking aspect of the 1991 Census provisional results has been the decline in the sex ratio (females per 1000 males). The sex ratio was 934 in India as a whole in 1981. It declined to 929 in 1991. And this in a decade marked by increasing feminist movement for the improvement of the status of women, greater concern for the girl child, new legal enactments and police intervention in the case of dowry deaths, etc. The first impulse was to blame the increasing use of sex determination tests (amniocentesis) and increasing female foeticide. Demographers have pointed out a multitude of factors like greater under-enumeration of females, the impact of return migration of males as well as out-migration of females, differential decline in mortality rates of males and females, the possibility of a change in the sex ratio at birth in favour of males, etc. Nevertheless, in my view, no demographer or medical scientist or sociologist has been

able to explain fully the phenomenon of a long-term decline in sex ratio, starting from 1901. I think there is a mysterious factor which we have not been able to explain. It is unfortunate that for no reason whatsoever, the SRS does not give data on sex ratio at birth. In fact, it is possible to have such data on a yearly basis. This would have thrown considerable light on this intriguing phenomenon. In my view, the statewise analysis tends to give a misleading picture. This census does provide data at the district level and the analysis must be conducted at the district level. If this is done, one can answer a question like why has the sex ratio increased in Haryana where amniocentesis is spreading and why is the sex ratio so low in Bihar where there are hardly any facilities for amniocentesis. My other observation on this point is that in our new found love for SRS data (in view of the remarkable match between the projected figure and the actual census count) we tend to forget that there is an element of underenumeration in the SRS data also and much more careful research has to be done before any firm conclusion is arrived at. I have examined the sex ratio projected both by the Expert Committee on Population Projections (1985) and also by the Standing Committee (1989) and I find the result very confusing. Both the Committees have assumed a steady increase in the sex ratio but the 1991 Census count shows a decline in the sex ratio. That is to say, the Standing Committee's projected *total* figure of population turned to be right in the light of the actual census count but the projected sex ratios have gone wrong. I have calculated the hypothetical difference between the projected sex ratio and the actual sex ratio in 1991. If this is done, the decline in the sex ratio is not just 5 points but 12 points and in some states the difference is substantial. The question that arises is: Are the SRS figures reliable? Is the gap between male and female mortality really decreasing? Since the Projection Committee relied on SRS data, the projections assumed a higher level of improvement in the expectation of life at birth of females compared to that of males. It is now clear that the anticipated level in the improvement in the expectation of life of females has not occurred. If this is so, this needs further investigation.

I am not quite convinced by the arguments of leading economic journalist who asks a question: "But while Indian males have long been beastly, are they really getting worse?" and then proceeds to say that they are really not getting worse. To me, it really does not matter if the females have been undercounted in Bihar and therefore the sex ratio has gone down. My more basic question would be: Why are they ignored and missed out? It is the attitude which matters. To me it is not important that amniocentesis facilities do not exist in Bihar as long as the attitude towards female children is hostile. If people take recourse to female foeticide, they can also take to female infanticide because it reflects the same mentality. It has been recently reported by the Manila Dakshata Samiti of Delhi that there is one dowry death every third day in Delhi. This is truly shocking. I have reason to believe that the Indian male as well as the female has become more *insensitive*, thanks to consumerism and so-called Westernisation but at heart they are intensely traditional. In my view, demographic inertia has engulfed Indian society. Think of the persistence of the low age at marriage, the dowry system, the domination of the mother-in-law, the craze for sons and the phenomenon of 'demographic fundamentalism'. Indian society has not become less traditional just because the birth rate has come down by a few points. This is an area which calls for considerable sociological expertise which I do not have. I learnt all my sociology while doing field work.

I shall end with a small field work experience in Rajasthan which I shall never forget. All the men and women whom I met expressed the view that a family must have at least two sons. I asked a young woman: "Why do you want two sons?" Quick came her counter-question: "Is that a question to ask? Why do you have two eyes?". This was the origin of my term 'demographic fundamentalism'.

References

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2. Planning Commission, 1952, *The First Five Year Plan*, New Delhi, p. 522.
3. Quoted in Ashish Bose, *Demography Beyond Decimal Points*, Presidential address to the Tenth Annual Conference of the Indian Association for the Study of Population (Bangalore, May 1985), p. 6
4. Nicholas J. Demerath, 1966, *Birth Control and Foreign Policy*, Harper and Row, New York, p. 90.
5. *Ibid.*, p. 90
6. *Future*, 1984, No.1 1-12, UNICEF, New Delhi.
1. Ibid.
8. For details, see Ashish Bose, 1991, *Population of India: 1991 Census Results and Methodology*, B.R. Publishing Corporation, Delhi.
9. For details, see Ashish Bose, 1988, *Op. cit.*

APPENDIX

TABLE A1 : PROJECTED SEX RATIO (FEMALES/1000 MALES) AND ACTUAL SEX RATIO

	1981 Actual	1991 Actual	Difference (1991-1981)	Revised Stand- ing Committies Projection (1989) for 1991	Deviation from projection figures of 1991
	(1)	(2)	(3)	(4)	(5)
INDIA	934	929	-5	941	-12
1. Andhra Pradesh	975	972	-3	988	-16
2. Bihar	946	912	-34	958	-16
3. Gujarat	942	936	-6	958	-22
4. Haiyana	870	874	+4	882	-8
5. Himachal Pradesh	973	996	+23	1006*	-10
6. Kamataka	963	960	-3	968	-8
7-Kerala	1032	1040	+8	1031	+9
8. Madhya Pradesh	941	932	-9	936	-4
9. Maharashtra	937	936	-1	940	-4
10. Orissa	981	972	-9	968	+4
11. Punjab	879	888	+9	902	-14
12. Rajasthan	919	913	-6	933	-20
13. Tamil Nadu	977	972	-5	973	-6
14. Uttar Pradesh	885	882	-3	897	-15
15. West Bengal	911	917	+6	916	-1

Note. For Himachal Pradesh original projected figure has been taken.

TABLE A2 : STRIKING CHANGE IN SEX RATIO (FEMALES/1000 MALES) FROM 1981 TO 1991

State/Districts	Sex Ratio		Change in Sex Ratio	Decadal Growth Rate (%)
	1981	1991		
<i>Madhya Pradesh</i>	941	932	(-9)	26.8
Gwalior	843	831	(-12)	27.4
Tikamgarh	883	871	(-12)	27.6
Dhar	966	952	(-14)	29.2
Panna	913	898	(-15)	26.8
Sagar	891	881	(-10)	24.4
Damoh	925	906	(-19)	24.4
Satna	936	920	(-16)	26.8
Riwa	969	936	(-33)	28.4
Sidhi	951	923	(-28)	38.5
Sahjapur	929	910	(-19)	22.9
Indore	898	908	(+10)	29.9
<i>Orissa</i>	981	972	(-9)	193
Kendujhar	983	969	(-14)	18.0
Balangir	992	981	(-11)	16.8
Kalahandi	1010	1000	(-10)	18.9
Ganjam	1031	1012	(-19)	17.7
Puri	960	940	(-20)	22.2
<i>Andhra Pradesh</i>	975	972	(-3)	23.8
Mehbubnagar	983	973	(-10)	25.7
Rangareddy	956	938	(-18)	58.8
Nizamabad	945	1019	(+74)	21.1

Note. Only districts with 10 point change or more have been taken into account.

TABLE A3 : CRUDE FEMALE LITERACY RATES - 1991 (provisional data)

<i>BIMARU STATES</i>	
<i>State / Districts</i>	<i>Crude Female literacy Rate (%)</i>
<i>Bihar</i>	18.6
Gopalganj	14.1
Paschim Champaran	12.0
Purvi Champaran	13.5
Sitamari	12.7
Madhubani	13.8
Saharsa	12.0
Madhupra	11.9
Purnia	13.2
Araria	11.0
Kishanganj	8.8
Katihar	13.2
Godda	14.6
Dumka	14.5
Sahibganj	13.3
Giridih	14.2
Palamau	12.5
<i>Madhya Pradesh</i>	23.2
Shivpuri	12.3
Guna	14.2
Sidhi	10.4
Jhabua	8.6
Rajgar	12.3
Surguja	13.9
Bastar	12.3
<i>Rajasthan</i>	16.6
Chum	13.7

Table A3 (continued on page 291)

Table A3 (continued from page 290)

<i>State 1 Districts</i>	<i>Crude Female literacy Rate (%)</i>
Dholpur	11.6
Sawai Madhopur	11.7
Tonk	12.3
Jaisalmer	9.0
Nagaur	10.7
Pali	14.3
Banner	6.2
Jalore	6.2
Sirohi	13.8
Bhilwara	13.3
Chittorgarh	14.2
Dungarpur	12.4
Banswara	10.6
Bundi	12.7
Jhalaw ar	12.9
<i>VitarPradesh</i>	<i>20.9</i>
Rampur	11.9
Badaun	10.1
Pilibhit	13.8
Lalitpur	13.1
Banda	13.5
Kheri	14.4
Sitapur	13.8
Baharaich	9.1
Gonda	10.8
Barabanki	14.5
Siddharthnagar	10.5
Maharajganj	8.8

Note. Districts where CLR (Female) are below 15% in 1991 have been taken.

TABLE A4 : INFANT MORTALITY RATES BY SEX - ALL INDIA

Year	Rural			Urban			Total		
	Males	Females	Persons	Males	Females	Person	Males	Females	Persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1972	141	161	150	85	85	85	132	148	139
1973	141	144	143	88	90	89	132	135	134
1976	133	146	139	78	82	80	124	134	129
1977	136	146	140	80	82	81	126	135	130
1978	132	143	137	74	75	74	123	131	127
1979	129	131	130	73	71	72	119	121	120
1980	123	125	124	65	65	65	113	115	114
1981	119	119	119	63	62	62	110	111	110
1982	114	114	114	70	60	65	106	104	105
1983	113	114	114	69	63	66	105	105	105
1984	113	114	113	68	64	66	104	104	104
1985	106	107	107	56	62	59	96	98	97
1986	*	*	105	*	*	62	*	*	96

*NOT available

SOURCE

TABLE A5 : SRS

DATA ON INFANT MORTALITY RATE.

States	Rural	Urban	Combined
Andhra Pradesh	87	53	81
Assam	93	63	91
Bihar-	93	63	91
Gujarat	92	70	86
Haryana	88	58	82
Himachal Pradesh	77	33	74
Jammu & Kashmir	72	55	69
Karnataka	89	53	80
Kerala	23	15	22

Table A5 (continued on page 293)

Table AS (continued from page 292)

States	Rural	Urban	Combined
Madhya Pradesh	124	78	117
Maharashtra	66	44	59
Orissa	126	76	122
Punjab	72	53	67
Rajasthan	103	59	96
Tamil Nadu	80	43	68
Uttar Pradesh	126	75	118
West Bengal	82	53	77
India	98	58	91

SOURCE : Office of the Registrar General, Vital Statistics Division.

TABLE A6 : SRS DATA ON BIRTH AND DEATH RATES, 1989 (provisional figures)

Sl. No.	States/Union Territories		(per thousand)	
			Birth Rate	Death Rate
1.	Andhra Pradesh	Combined	25.6	9.3
		Rural	26.0	10.0
		Urban	24.1	6.5
2.	Arunachal Pradesh	Combined	35.2	14.1
		Rural	35.8	15.0
		Urban	28.8	4.7
3.	Assam	Combined	29.1	10.3
		Rural	29.7	10.5
		Urban	21.6	7.5
4.	Bihar	Combined	34.4	11.1
		Rural	35.1	12.5
		Urban	27.6	7.9
5.	Goa	Combined	15.5	7.8
		Rural	15.1	8.2
		Urban	16.2	7.2
6.	Gujarat	Combined	28.7	9.6
		Rural	29.6	9.9
		Urban	26.5	8.8
7.	Haryana	Combined	34.8	8.4
		Rural	36.3	9.0
		Urban	29.9	6.5
8.	Himachal Pradesh	Combined	27.7	8.7
		Rural	28.3	8.9
		Urban	20.3	6.1

Table A6 (continued on page 294)

Table A6 (continued from page 293)

St. No.	States / Union Territories		Birth Rate	Death Rate
9.	Jammu & Kashmir	Combined	30.7	7.9
		Rural	32.6	8.3
		Urban	23.3	6.4
10.	Karnataka	Combined	27.9	8.7
		Rural	28.9	9.5
			25.0	6.5
11.	Kerala	Combined	19.8	5.9
			19.7	5.9
		Urban	20.2	6.0
12.	Madhya Pradesh	Combined	35.1	12.8
		Rural	36.4	13.8
		Urban	29.8	8.3
13.	Maharashtra	Combined	28.3	7.9
		Rural	30.4	8.9
		Urban	24.4	6.1
14.	Mainpur	Combined	22.4	6.7
		Rural	24.3	7.0
		Urban	16.0	6.0
15.	Meghalaya	Combined	31.1	11.3
		Rural	33.6	12.6
		Urban	19.0	4.8
16.	Nagaland	CombineH	19.8	4.1
		Rural	20.8	4.7
		Urban	14.9	1.3
17.	Orissa	Combined	30.2	12.6
		Rural	30.7	13.1
		Urban	24.9	8.0
18.	Punjab	Combined	28.4	8.3
		Rural	28.7	8.8
		Urban	27.5	6.8
19.	Rajasthan	Combined	33.9	10.6
		Rural	35.1	11.3
		Urban	28.5	7.7
20.	Sikkim	Combined	31.4	9.1
		Rural	32.8	10.1
		Urban	24.5	4.3
21.	Tamil Nadu	Combined	23.1	8.6
		Rural	23.5	9.7
		Urban	22.2	6.6
22.	Tripura	Combined	25.7	7.7
		Rural	26.6	7.9
		Urban	16.8	5.7
23.	Uttar Pradesh	Combined	37.0	12.6
		Rural	38.8	13.7
		Urban	29.2	8.2

Table A6 (continued on page 295)

Table A6 (continued from page 294)

Sl. No.	States / Union Territories		Birth Rate	Death Rate
24.	West Bengal	Combined	26.9	8.6
		Rural	30.4	9.3
		Urban	18.0	6.8
UNION TERRITORIES				
1.	A&NIslands	Combined	20.4	5.9
		Rural	21.6	6.6
		Urban	16.3	3.4
2.	Chandigarh	Combined	22.5	3.8
		Rural	29.4	6.6
		Urban	22.0	3.6
3.	D&NHaveli	Rural	35.3	8.5
4.	Daman & Diu	Combined	27.7	8.2
		Rural	36.5	7.7
		Urban	14.2	8.9
5.	Delhi	Combined	27.0	6.7
		Rural	33.1	7.7
		Urban	26.5	6.6
6.	Lakshadweep	Combined	28.9	6.0
		Rural	34.8	8.5
		Urban	22.3	3.1
7.	Pondicherry	Combined	21.0	7.8
		Rural	19.8	8.2
		Urban	22.1	7.5
India		Combined	30.5	10.2
		Rural	32.0	11.1
		Urban	25.0	7.1

SOURCE : Office of Registrar General, Vital Statistics Division.

TABLE A7 : DECADAL GROWTH RATE OF INDIA'S POPULATION (%)

Year	As per 1981 census	As per 1991 census (provisional results)	My estimate	Average Annual exponential growth rate
1951-61	21.5	21.5	21.5	1.96
1961-71	24.8	24.8	24.8	2.21
1971-81	25.0	24.7	25.0	2.23
1981-91	—	23.5	25.0* 26.1**	2.23* 2.32**

Assuming the total population of 856 million.

Assuming the total population of 864 million.

Estimation of the Growth Rate of Assam's Population

1981	19.9 million (As projected by Expert Committee in 1985)
1991	25.0 million (Projected population by Expert Committee)
	24.8 million (Revised Projection by Standing Committee 1989)
1991	22.3 million (1991 Census Provisional Results)

N.B. The actual census count of 1991 shows a growth rate of only 12% in Assam's projected population during 1981-91. Therefore, the Registrar General revised the estimate for Assam in 1981 by interpolating on the basis of the actual figures for 1971 and 1991. This meant a population of 18.04 million in 1981 indicating a growth rate of 23.6% as against 23.4% during the 1971-81 decade as per Registrar General's methodology. Since the Assam figure for 1981 was revised, the total population of India got reduced from 685.18 million to 683.33 million.

This methodology is not acceptable to me as it involves rewriting demographic history. Therefore in my calculations I stick to the figure of 685.2 million in 1981. My estimate of the extent of under-enumeration in Assam in 1991 is roughly 2.5 million (Taking the revised projected population of Assam as true). However, in my calculation, I made an estimate of 2 million for under-enumeration. That is to say, the "true" population of Assam in 1991 is 24.3 million and not 22.3 million. This will yield a growth rate of 22.1% (which is still an under-estimate in my opinion).