

# India's Population Policy: History and Future

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Abstract

The population policy of India has evolved over time, reflecting the country's demographic and economic changes. This paper examines the historical context of the policy, from the early years of independence to the present. It discusses the impact of population growth on economic development and the role of government intervention in controlling population growth. The paper also analyzes the current population policy and its implications for the future of India.

Keywords: India, Population Policy, History, Future, World Bank Staff Working Paper No. 265

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INDIA'S POPULATION POLICY: HISTORY AND FUTURE

The Indian birth-rate has started declining as a result of socio-economic progress and the family planning effort. About 19% of couples in the reproductive-age-group are practicing contraception. Recent statements on population policy have extended the existing framework but they tend to neglect several critical issues. Approximately, 52 million couples--half of all couples in the reproductive-age-group--remain desperately poor and the family planning delivery system is not geared to cater to their needs. To engineer a demographic transition for this large segment requires policy innovation of a very high order--(i) an overhaul of administrative practices, mandates, and budget norms, (ii) a combined rural development plus family planning programme and (iii) a recognition of regional diversity and the adoption of a sequential strategy.

Prepared by: Ravi Gulhati

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The World Bank  
1818 H Street, N.W.  
Washington, D.C. 20433 U.S.A.

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INDIA'S POPULATION POLICY : HISTORY AND FUTURE

Ravi Gulhati\*

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## INDIA'S POPULATION POLICY : HISTORY & FUTURE

India's brief flirtation with coercive family planning is over. The programme suffered a major setback during the Emergency, and it will be some time before new initiatives can be mounted. Meanwhile, it is important to analyse past experience with the aim of identifying major issues and options that confront the policy-maker in the population field. This is the major purpose of this paper which is mainly concerned with fertility and not with mortality, migration or other topics which might conceivably fall under the heading of population policy. Its object is not to add to the large volume of scholarly research on the analysis of past trends in the birth rate or to make future projections. It takes for granted the need to reduce Indian fertility in the interest of economic and social development; this point has been argued convincingly in many places. Given this objective, the present paper focuses on the policy instruments deployed in the past and proposed for the future.

The next section looks at the major demographic facts - the rise in marriage age and decline in marital fertility - that lie behind the decline in the birth rate during the last two decades. An attempt is made to analyse the contributions to declining fertility of the family planning (F.P.) programme and of socio-economic changes at national, state and household levels. The following section dissects recent population policy statements and evaluates their feasibility and effectiveness. Finally, Section III takes up a number of questions which appear to be important but which have been neglected in these policy pronouncements. Now that the Government and major political parties have re-asserted the voluntary principle, it is essential to examine all avenues of reform compatible with that principle which can help in rehabilitating India's F.P. programme.

## I. Fertility 1951-1971

Demographers agree that the crude birth rate fell from about 45 per 1000 in 1951-61 to about 40-42 in 1961-71 (Adlakha and Kirk 1974). This decline started a new trend in modern Indian history. There was reason to believe that much of the decline was concentrated in the second part of the 1960s and that it continued beyond the census year 1971. Unfortunately, data limitations do not allow a precise and up-to-date assessment of the situation. Two factors are important in comprehending the new trend - the rise in marriage and decline in marital fertility - i.e. number of births per 1000 married women per year. Taking the overall inter-censal decline in the birth rate to be 3 points, changes in age structure and marriage patterns accounted for 1 point and change in marital fertility for 2.

### Rising Marriage Age

In Europe, a sizeable part of the population remains single but in India marriage is nearly universal as there are hardly any social and institutional alternatives. The odd unwed person faces isolation and censure. This is particularly so for women who also depend on marriage for economic support. The proportion of the 'never married' population has risen somewhat in the metropolitan cities in recent decades but the change is quantitatively not significant.

Early marriage was the common practice in traditional India; in 1900 the estimate for average marriage age for females was 13. This was part of a demographic picture in which mortality levels were high and the reproduction process had to start early so that the family might survive. Also, early marriage was seen to provide protection against immorality. The marriage ceremony did not lead immediately to cohabitation. For marriages below the age of 15, the average interval between the formal ceremony and consummation was 38 months, according to estimates derived

from the National Sample Survey. (Jain 1975). The average age at 'effective marriage' in rural India in the 1920s was 15.6 years. Hindus and Muslims tended to marry much earlier than the two small minority communities - the Sikhs and the Christians.

Not much change took place till 1950. By 1961-62, the average 'effective marriage' age for females had inched up to 16.1 years in rural areas and 17.4 years in urban places. In Kerala and Madras the statewide (urban and rural) average exceeded 18 years while it lagged below 15.5 years in rural Bihar, Andhra Pradesh and W. Bengal as well as in the urban areas of Rajasthan. The pace of change accelerated in the 1960s and early 1970s. Data on 'effective marriage age' for recent years are not available, but census returns are suggestive; the percentage of girls married in the 15-19 age group dropped from 75% in 1951 to 70% in 1961 and further to 56% in 1971. There is no definite answer to the question: why is the Indian marriage age increasing? However, among the broad determining influences are educational advance and opening up of employment opportunities for females in cities. It has been suggested that even in the country-side, parents tend to delay marriage if there is the prospect of girls earning good wages or contributing to the family farm. For example, the average marriage age for females in the Khanna district of the Punjab rose from 16 years in 1945-49 to 20 years a decade later, in the context of intensive agricultural development (Mamdani 1973).

Not all these factors were important everywhere. The process of change could be illustrated in the microcosm of several villages in rural Varanasi in Eastern Uttar Pradesh, on the basis of a 1967 survey. (Chatterjee 1971). The mean age for recently married girls in this backward area was only 11.9 (see Table 1). There was little evidence of a time trend; in fact, the average age of males married recently was slightly lower than the corresponding figure for their fathers. The most accessible village -

Umraha - had a somewhat higher average but variations in communication facilities did not seem to exercise any large or consistent impact. Inter-caste differentials were substantial and they were not of recent origin. The mean marriage age of high caste girls was nearly 50% higher than for girls from the bottom of the caste hierarchy. Equally dramatic was the gap in marriage age between those who had received some formal education and those who had not. The difference between the landed households - those owning more than 5 acres - and the rest was not as large but it was far from trivial. The traditional fear of having an unmarried adolescent daughter was receding in the face of educational advance, especially among high caste and relatively affluent groups.

#### Declining Marital Fertility

Not only is marriage nearly universal in India, not only does it occur at a young age but the desired family size also tends to be large by contemporary Western standards. Over half of the sampled parents surveyed in the 1950s wished to have 4 or more children and of these about 25-33% desired 5 or more. There was substantial convergence between the results of these 'attitude' surveys and actual behaviour recorded in the 1961 census. More than a third of the married women had 4 or more living children and nearly one quarter had 5 or more children, although many of these women were far from the end of their reproductive period. Starting from this high level, marital fertility has declined, presumably as the combined result of socio-economic progress and the family planning (F.P.) programme. Although the underlying causes cannot be established precisely, analysis at the national, state and household levels helps to identify the relevant factors.

At the All-India level, the slight decline in marital fertility can be ascribed to limited improvements in health, education, per capita income and,

TABLE 1. RURAL VARANASI DISTRICT: MEAN AGE OF MARRIAGE

	<u>Male Respondent</u>	<u>Son of Respondent</u> a)	<u>Daughter of Respondent</u> a)
<u>A. Caste</u>			
Upper	18.7	17.1	14.9
Backward	14.6	14.9	10.8
Scheduled Castes & Tribes	13.4	12.5	10.0
<u>B. Education</u>			
Above Primary	17.4	18.6	15.1
Up to Primary	17.2	15.4	17.9
Illiterate & Just Literate	14.4	14.1	9.8
<u>C. Landholding</u>			
Above 15 acres	16.3	15.8	13.3
Between 5-15 acres	15.1	16.0	14.4
Up to 5 acres	14.8	13.9	10.3
Landless	13.4	14.3	11.5
<u>D. Villages Ranked by Accessibility</u> b)			
Umraha	15.3	16.1	12.6
Bicchia	16.0	14.8	12.4
Jagapur	13.6	13.4	10.9
Shamsherpur	15.2	15.0	11.9
<u>E. Total</u>			
	15.0	14.8	11.9

a) These figures relate to recent marriages close in time to the 1967 survey.

b) The source of modernisation is the district headquarter, Varanasi. Villages are listed in order of ease of communications via road, bus service etc. between them and Varanasi.

Source: Chatterjee 1971



of course, the progress of the F.P. programme started in 1951. Infant and child mortality declined dramatically with the control of communicable diseases. Life expectancy at birth rose from 27 years in the 1930s to 46 years in the 1960s. Given the higher chances of survival of the children, parents could be expected to reduce the number of births to some extent. A relevant measure of educational advance was female literacy; this rose from 3% of the total female population in 1921 to 18% in 1971. Education could be expected to reduce fertility by (i) changing values and attitudes, (ii) improving access to information including that provided by the F.P. programme, (iii) increasing the cost of child-rearing, (iv) raising the marriage age and (v) reducing the dependence of aged parents on their children for economic support. The expansion of health and education services took place in the context of a very slow improvement in the average standard of living of the Indian people. On a per capita basis, GDP in constant prices rose by 16% in the 1950s and 13% in the 1960s. Unfortunately, even this slow pace could not be sustained during the early 1970s. Nevertheless, looking at the last quarter century, some slight improvement in average living standards was noticeable, despite the pressure of population. It could be argued that this improvement was conducive to the fertility decline, although the point is moot considering the small magnitude of the income expansion over a very low initial level.

Superimposed on all these socio-economic changes was the impact of the F.P. effort which has grown enormously in concept and geographical scope since the early 1950s when it was modest, clinic-based and confined to urban centres. A major departure was made in 1963 with the adoption of the 'extension' approach and the beginning of the attempt to expand coverage in rural areas. By 1975, there were nearly 39,000 health sub-centres in rural India supplying F.P. information, materials and medical expertise to 83 million couples. (Government of India 1975/76). In addition, the Government

decided in 1968 to utilize the commercial distribution network of major private firms to retail condoms called Nirodh. By 1976 there were eight private and three public firms with 250,000 retail outlets participating in the scheme; Nirodh is also distributed through 7,400 post offices. The main result of the F.P. programme, according to official statistics, was that 19% of couples in the reproductive-age-group were protected against the risk of pregnancy by March 1976; sterilisation accounted for 14% , the intra-uterine device (IUD) for 1.5% and conventional contraceptives (condoms etc) for the remaining 3.4%. It is no easy matter to translate these figures into an estimate of the net impact of the F.P. programme on fertility. Many couples might simply have substituted contraceptives offered by the programme for traditional techniques ie. abstinence, rhythm method, withdrawal and abortion. Others might have adopted fertility control as they gained in socio-economic terms, even if there had been no official F.P. programme. Many of those counted in the 19% figure were very nearly at the end of their reproductive period and would not have produced additional children in any case. Notwithstanding all these reservations, it could be concluded with reasonable assurance that the F.P. programme had helped significantly in reducing marital fertility even though its precise contribution defied measurement.

An analysis of inter-state differentials in F.P. performance and fertility tended to confirm the inter-connected role of socio-economic variables and F.P. inputs. Table 2 lists 14 Indian states in descending order of the proportion of couples protected against the risk of pregnancy. This proportion varied from 25-32% in five 'leading' states to 9-11% in three 'lagging' states with the remaining six states in the middle. The numbers shown are indices with the all-India average of 19% (row 1) equal to 100. The fourth column showed F.P. programme expenditure per couple and could be taken as a proxy for the intensity of the delivery system in each state. The five 'leading' states seemed to have relatively strong F.P.

programmes; outlays per couple were 114-126% of the national average of Rs 7.80. F.P. centres catered to a population which was appreciably smaller than in the lagging states and presumably could provide more intensive coverage. Also the work of centres in the 'leading states' was much less hampered by staff vacancies than in other states.

Most of the 'leading' and 'middling' states had relatively lower fertility than the 'lagging' ones, although the correspondence was weak in a few cases. Column five showed the best available data on fertility variations by state, even though some of these figures are suspect and the estimated all India rural average fertility rate was distinctly on the low side. The 'leading' states are relatively further ahead in terms of socio-economic indices listed in columns 6-9. Their rural infant mortality rates were considerably lower than the national average except in Gujarat. Female literacy appeared to be much more widespread; Kerala's rate was 2.8 times the Indian average. Also, the 'leading' states were much more urbanised and their per capita incomes were substantially higher. The contrast with the 'lagging' states was quite compelling. Obstacles posed by socio-economic backwardness in these areas were compounded by very weak F.P. programmes. An unpublished study by Srikantan estimates that social and economic factors explain approximately one-half of inter-state differentials in F.P. performance, taking into account both the direct impact of these factors on household behaviour and their influence on the state government's capacity to mount and implement a large scale programme. The remaining differential is attributed to variations in F.P. programme inputs (Freedman & Berelson 1976).

When attention is focused on the household level, the elements of the picture remain largely unchanged; both socio-economic parameters and F.P. inputs play a part in determining variations in contraceptive use and family size. Reviews of studies on socio-economic variables by Jain (1975)

TABLE 2: SOCIO-ECONOMIC INDICATORS AND FAMILY PLANNING (F.P.)  
PERFORMANCE AT STATE LEVEL.

(1) States	(2) Number of couples at risk (million)	(3) Couples pro- tected as % of col. 2 March '76	(4) F.P. Expend- iture per couple at risk 1972/73	(5) Total Fertility rate rural 1971/72	(6) Rural Infant Mortality Rate	(7) Per Capita Income 1970/71	(8) Female Literacy Rate 1971	(9) Urban Population as % of total 1971
All India	104	19%	Rs. 7.80 <sup>b)</sup>	5.74 <sup>c)</sup>	131 <sup>d)</sup>	Rs. 352 <sup>a)</sup>	18%	20%

Index for Individual States: All India = 100

A. Leading

Maharashtra	10	169	122	85	82	118	137	155
Punjab	2	154	114	NA	84	134	137	120
Kerala	3	142	117	80	50	79	284	80
Gujarat	5	137	121	112	127	121	132	140
Tamilnadu	8	130	126	83	98	103	142	150

B. Middling

Andhra	9	106	105	83	99	86	84	95
Orissa	4	106	98	85	104	75	74	40
W. Bengal	8	94	52	NA	133	96	116	125
Karnataka	5	87	119	88	75	89	111	120
Assam	2	87	32	99	113	76	100	45
Madhya Pradesh	9	78	106	125	109	77	58	80

C. Lagging

Uttar Pradesh	17	58	76	130	138	78	58	70
Rajasthan	5	55	86	122	130	87	42	90
Bihar	11	46	44	104	NA	59	47	50

a) 1960-61 prices

b) 1972-73 prices

c) Average number of live births ever born per woman

d) Deaths under one year of age per 1000 live births during late Sixties and early Seventies

Source: Govt. of India: Family Welfare Programme in India Yearbook 1975-76

Govt. of India, Registrar General, Sample Registration Bulletin Vol.IX No.3, July 1975

and Pareek and Rao (1974) suggest the following conclusions:

- The lower the level of per capita household consumption expenditure the higher is the birth rate. For example, rural households at the very bottom of the income pyramid with per capita expenditures up to Rs. 11 per month had a birth-rate of 44.3, while households spending more than Rs. 44 per capita per month had a birth rate of 32.3.
- Urban residents had more information and more favourable attitudes to F.P. than those in the country-side. The small family norm had many more adherents in urban places than in villages. Birth rates were lower for urban households than rural ones at comparable levels of per capita expenditure but this was not always the case.
- Beyond a limited level of schooling, the fertility rate for urban women declined with every increase in the educational progression. Apparently the wife's education was more important than the husband's in this context. Education was of considerable importance in explaining variations in knowledge regarding F.P. It tended to make people receptive to new ideas such as small family norms and expanded the choice of contraceptive methods.
- There was not much difference in the fertility of Hindus and Muslims but fertility was lower for Christians and higher for Sikhs. Lower caste Hindus had a significantly higher fertility.
- Landless labourers tended to have a higher resistance to F.P. than other occupational groups.
- Young people show greater preference for small families than old people.
- Those living in joint families tended to be less inclined towards F.P. than members of nuclear families. This tentative conclusion was based on a limited set of studies.

The importance of socio-economic parameters can be illustrated also by analysing the variation in contraceptive use at the household level, on the

basis of a survey conducted by the Baroda Operations Research Group (see Table 3). The incidence of contraceptive use in 1970 was 2.4 times higher than the overall national average for the tiny minority in India which enjoyed high incomes, college education and city living. For the population who lived in grim poverty, the rate of contraceptive use was well below the national average. However, there was considerable variation in F.P. performance even within this category of poverty households, perhaps resulting from differences in the quality and quantity of the F.P. intervention. Suitably designed, the F.P. programme might be able to hasten the acceptance of contraceptives and thereby the process of fertility decline of even poor households.

TABLE 3

INDIA: Household characteristics and Contraceptive

Use 1970

	<u>Current Users as Percent of Couples at risk</u>		
	<u>All Methods</u> (a)	<u>Modern Methods</u> (b)	<u>Terminal Methods</u>
<u>A. Family Income Rs. per month</u>			
Below 100	10	6	5
101-200	12	8	5
201-500	20	15	9
501-1000	29	23	11
1001 and above	39	31	12
<u>B. Education Level of Wife</u>			
Illiterate	10	7	5
Primary School	21	15	10
Secondary School	34	25	12
College	56	38	9
<u>C. Location by Population Size of Settlement</u>			
Rural: Below 5000	10	7	5
Rural: 5001 and above	18	13	9
Urban: Below 100,000	24	18	10
Urban: 100,001 to 500,000	29	22	12
Urban: 500,001 and above	32	26	10
<u>D. All India Average</u>	14	10	6

(a) consists of modern methods and traditional ones, ie. withdrawal, rhythm and abstinence.

(b) consists of terminal methods and loop, pill, condoms, diaphragm, jelly plus foam tablets.

Source: Operations Research Group: Family Planning Practices in India

## II. CRITIQUE OF NEW POPULATION POLICY

Population policy received a new twist in April 1976 and then again in April 1977. These statements have to be read against the long controversial history of F.P. in India, marked by many experiments and failures. The April 1976 policy seemed to be a major departure in that it opened the door to a 'compulsory approach'. But this posture could not be sustained and had to be reversed, even before national elections in March 1977 led to the defeat of Mrs Gandhi's Congress party. The following month the Janata Gout issued a revised population policy which rejected compulsion in no uncertain terms. However, in other respects the 1977 policy endorsed many of the new features of the 1976 version. It is convenient, therefore, to discuss the two statements together, in the context of earlier history. Three features invite comment: the strong political commitment they convey; the prominent concern with the problem of demand for F.P.; and the attempt to incorporate the age at marriage as an instrument of population policy.

### National Commitment

Political support for F.P. has been lukewarm at best during the 25 years history of the programme. The Gandhian tradition supported F.P. based on sexual abstinence but disfavoured modern contraceptives. Jawaharlal Nehru felt that F.P. was a diversion and that the main commitment of government must be to raise the standard of living of the masses. Shastri's views on this topic are not generally known and during the first decade of her prime-ministership, Mrs Gandhi did not give much attention to F.P. It was therefore big news when the 1976 policy underscored the goal of reducing fertility as a major national commitment and associated the Prime Minister personally with this effort. For the very first time the Congress Party formally listed F.P. as a political objective at its Chandigarh session in 1975. The Youth Congress, under the leadership of Sanjay Gandhi, adopted F.P. as a major plank in the programme for national reconstruction. Chief



Ministers echoed this emphasis and vied with each other to raise targets for acceptors in their states and to mobilise the entire government machine to realise these goals.

The immediate quantitative result of this high powered campaign was astonishing but these had to be balanced against the protests, the resistance and the concern felt by many segments of the population. With the relaxation of the Emergency and announcement of elections, the volume and strength of opposition to the F.P. campaign became known. To cope with this outburst of public dissent, many of the F.P. measures were withdrawn. The electoral defeat suffered by Mrs Gandhi and her party reinforced the impression that coercive methods used by the F.P. programme had aroused the wrath of the people. Not surprisingly, the Janata Govt. quickly shut the door to compulsion, changed the name of the programme to 'family welfare' and expressed its total commitment to securing the underlying objectives. However, in practice it will not be easy to maintain the momentum on a voluntary basis. The crash programme of 1976 has left a tremendous void and the campaign is now running in low gear.

#### Demand Stimulation

For at least the first dozen years, the Indian F.P. programme was supply-oriented, ie it adopted as its major mission the expansion in the availability of contraceptive materials. The results of KAP (knowledge, attitude and practice) surveys and the widespread existence of abortion was taken to mean that there already existed a ready demand for F.P. Disappointment with the results prompted the government to initiate an extension effort, including household visits and face to face motivation. This was supplemented in 1966 by the use of mass-media to create awareness and mould public opinion. India became one of the first to use monetary payments for F.P. The practice started as early as 1958 in Tamilnadu and spread to

Maharashtra and elsewhere. In 1966 the Government of India allocated 20% of the F.P. budget for such payments which could be divided among acceptors and canvassers at the discretion of local managers. In principle, the payment to acceptors aimed at compensating them for loss of wages, incidental expenses and inconvenience. They were not intended to be incentives. By 1968, these payments for vasectomy varied from Rs.10-30 in different states (Visaria 1976). Later, mass vasectomy camps raised these amounts steeply to Rs.86 in the first Ernakulam camp and Rs.114 in the second one. Later still, payments of the order of Rs.100 became standard practice in states such as Tamilnadu and Maharashtra. These are big sums in relation to budgets of poor households and cannot be realistically described as compensation. They serve as monetary incentives and are viewed as such by persons contemplating sterilisation. How effective they have been in promoting behavioural change, is not easy to establish conclusively. They seem to have played a not insignificant role in the mass vasectomy camps, particularly in obtaining acceptors from very low income groups (IBRD 1974).

The concern with demand for F.P. dominated the 1976 policy and this emphasis was maintained in the 1977 version as well. The approach to the problem was many-sided. First, a new multi-media motivational strategy geared specially to rural areas was visualised. Secondly, monetary incentives were expanded and a measure of fine tuning was introduced; Rs.150 for those who have two or less living children and accept sterilisation, Rs.100 for acceptors with 3 children and Rs.70 for those with 4 or more. Thirdly, 'group incentives' pitched at the level of village, district and professional organizations were advocated to supplement incentives for individual acceptors. Fourthly, centre-state relations were tilted in a distinctly anti-natalist direction by freezing representation in legislatures and allocation of federal revenues to states on the basis of 1971 population figures. Furthermore, 8% of central aid to States was to be geared directly to their performance in F.P. The states would no longer get political or financial leverage

through population-growth; in fact reduced fertility would be rewarded financially. Fifthly, special measures were proposed to raise female education and organise child nutrition programmes in an attempt to stimulate demand for fertility reduction and F.P. These were imaginative initiatives which partly extended and elaborated the F.P. programme and partly broke fresh ground.

Together with these measures the 1976 policy opened the door to what may be described as the 'compulsory approach' to F.P. Without citing any evidence, the policy statement asserted that '... public opinion is now ready to accept much more stringent measures for family planning than before.'<sup>2</sup> It ruled out nation-wide compulsory sterilisation 'at least for the time being' only because the medical and administrative infrastructure was inadequate. However, it permitted state governments to go ahead if they felt they were ready to cope with the problems of implementation. State governments were also permitted to introduce rules making employee benefits (eg housing, loans, medical) conditional on sterilisation after having two children. Furthermore, the use of administrative pressure in securing adherence to the two or three family norm derived its sanction, albeit implicitly, from the spirit of the 1976 policy. Given the near-universality of the government presence in India as employer, creditor, landlord and also as the giver of licences, permits, ration cards, etc., the scope for the exercise of such pressure was very large. Also, the distinction between 'civilized pressure' or conditionality and 'coercion' tended to become academic, particularly when the citizen had little recourse to the courts in the case of executive arbitrariness.

The big expansion in the number of sterilisations during 1976, if it really took place, could only be understood in terms of the widespread application of administrative pressure or coercion. Official figures claimed that the 12 month sterilisation target for April 1976 to March 1977 was substantially exceeded in only 7 months up to October 1976. Nearly 5 million

were sterilised during these seven months compared to less than 1 million in the corresponding period of the previous year. The new measures for stimulating demand for F.P. could not have yielded such a quick pay-off. The results also could not be attributed to changes in legislation; the Maharashtra compulsory sterilisation Bill was passed by the state legislature in August 1976 but never received the assent of the President of India. Other states, such as Punjab and Haryana, who were contemplating similar legislation held back, awaiting the outcome in the case of the Maharashtra law. The emphasis on quick results through rough and ready administrative pressure and semi-compulsory tactics proved to be costly in terms of the injury caused to those directly-affected and the ill-will generated for the entire F.P. effort, including the regular programme based on the idea of voluntary acceptance and extension. The backlash against the 'compulsory approach' not only discredited F.P. but soured the basic relation between government and people making it difficult to implement other social or economic policies. Fortunately, this episode ended with the throwing out of Mrs Gandhi's government but the task of rehabilitating the integrity of population policies remains. In this context, the question of stimulating demand for F.P. is critical and we take it up again in the next section.

#### Minimum Marriage Age Law

An innovation in recent population policy statements is the proposed legislation to raise the minimum marriage age for girls to 18. Starting with the Sarda Act of 1929, there is a history of social legislation in India aiming at the removal of maladjustments (child widows, premature child births) and the modernisation of the system of marriage. The minimum age for girls was set at 14 in 1929 and raised to 15 in 1955. The objectives of the proposed law go further; they are to help safeguard the health of the mother and the child, to lead to a more responsible parenthood, to enable women to play their proper role in the country's socio-economic and cultural life and finally to 'have a demonstrable demographic impact.'

A measure of scepticism about this component of policy is in order for two reasons. First, if history is any guide, the proposed law is not likely to be effective. The average marriage age for females did increase slowly over the last half century or more but it is doubtful if legislation per se played any significant role, except perhaps in influencing attitudes of the urban avant garde. The previously cited survey of rural Varanasi in 1967 indicated that (i) two-thirds of recent marriages took place in violation of the law and about the same proportion applied to marriages of a generation ago; (ii) respondents who said they knew the legal minimum age varied from 6% of the total in the least accessible villages to 26% in the most accessible ones; (iii) respondents who had accurate knowledge of the law varied from zero to 3% of the total; (iv) 'general apathy or indifference regarding law and legal matters and their enforcement seem to characterize ... this group of villages'. Surveys conducted in Maharashtra also suggest that laws regarding the age of marriage had little impact (K Dandekar 1974). Recent policy statements recognize that 'the present law has not been effectively or uniformly enforced.' Nevertheless, new legislation is contemplated and the authorities are considering 'the question of making registration of marriages compulsory...'

Secondly, even if the proposed law is totally effective in raising the minimum marriage age to 18, the demographic consequences are not likely to be as large as they might appear prima facie. Instead of reducing the reproductive span, the increased age of marriage is likely under Indian conditions to shorten the gap between (i) marriage and 'effective marriage'; (ii) consummation and the first birth. Surveys confirm the well-known phenomenon of 'adolescent sterility'; many years pass before a girl who is married young conceives and this interval tends to diminish as age at 'effective marriage' rises (Jain 1975).

Nevertheless, some reduction in fertility will result if minimum marriage age rises to 18. The incidence of childlessness<sup>3</sup> tends to increase with marriage age and also that of secondary sterility (incapacity to conceive additional children after bearing some). Surveys show some reduction in total fertility rate as marriage age increases; of course the drop is much more impressive after the marriage age of 20 (Jain 1975). It is questionable whether these declines should be attributed to the pure effect of raising marriage age rather than to the combined differentials in women's education, socio-economic status and employment opportunities. But even if there is no fall in the total fertility rate, the postponement of a marriage will bring about a relatively large temporary decline and a smaller but perceptible permanent decline in the birth rate.

### III. ISSUES AND OPTIONS

Did the April 1976 population policy exhaust all relevant issues and explore all available options? The Maharashtra Health Minister was reported to have said, 'We have tried every trick in the book and now we have come to the last chapter', ie compulsory sterilisation.<sup>4</sup> Was this really so? Now that coercive measures have been rejected by the Janata Govt. and by major opposition parties it is important to examine once again the validity of the Minister's plaintive plea. Unfortunately, the 1977 policy paper does not do so. Three questions need to be raised. First, are resources presently available to the F.P. programme being used to the best advantage? This is the narrow issue of management. Secondly, is there a case for diverting more budgetary resources to F.P.? This is the wider issue of allocation. Finally, what policies and programmes, F.P. or others, can reduce the fertility of very poor households who constitute the bulk of the Indian population? This is the widest and most complicated strategic issue. Naturally, the three questions are closely interrelated. If present resources are badly mismanaged, one can scarcely make a case for pumping extra funds into F.P. till the existing inefficiency is eradicated. However, wasteful deployment may in part be the result of the fact that the volume of available resources fall short of the critical minimum necessary to do a reasonable job. Similarly, a positive answer to the second question may depend on how the third is resolved; additional allocation to F.P. may be justified only if it is determined that the F.P. delivery system has the capacity to cater to poor households and that their fertility can be reduced by some combination of F.P. and other policy instruments.

#### Better F.P. Management

Government expenditures on F.P. have risen steeply but they have never reached even 2% of total development outlays. However, these resources are not being used efficiently because there is (a) a lack of consensus on goals

(b) a leadership vacuum at the field level of administration and (c) a gnawing cultural gap between the village clientele and the programme's change-agents.

### Targets

Till 1966 the goal was to reduce the birth rate to 25 per 1000 as soon as possible but no date was specified. With the establishment of the Central Department of F.P. in April 1966, the target became time-bound to 1975-76. The terminal year was postponed later to 1978-79, and most recently to 1983-84. Based on such overall objectives and through a series of mechanical calculations, the Department assigns targets for each year and for each F.P. method to individual states. In turn, targets are allocated to districts, primary health centres (PHCs), health sub-centres (HSCs) and finally to individual F.P. workers. The flow of instructions is from the top of the administrative pyramid to the bottom with very little information or analysis flowing in the reverse direction. In fact, very little relevant information is kept up to date at the PHC or HSC. 'Target Couple Registers' were seen to be poorly maintained in many cases in a study of 8 PHCs in Karnataka and even the limited information available was not utilized (Gopal Krishnayya 1975). A similar conclusion emerges out of a detailed study of North Bihar; the author found the available record so hopelessly inaccurate that he devoted six months to building a reliable factual picture of the prevailing situation (Blaikie 1975).

Understandably, field staff felt little commitment to targets imposed on them and which were based on minimal information. These targets bore little relation to community demand for F.P. or the resources available to the PHC. The establishment of targets for acceptors and their allocation to F.P. workers has led to some demoralisation within the programme and the recruitment of 'demographically marginal' couples. F.P. staff were punished with non-payment of salary, threat of dismissal or actual firing



if assigned quotas were not met (Elder 1974). In turn, F.P. workers responded, it seems, by abandoning the principles underlying extension education. They passed on the bare minimum information to the client (how, when and where to obtain contraceptives) but did not explain the basic rationale of F.P. for the household or the side effects of contraceptive use. '... the image of the F.P. workers in rural areas is that of persons who use coercion and other kinds of pressure tactics and offer bribes to entice people to accept vasectomy or tubectomy' (Banerji 1973). As revenue officers and staff controlling credit and agricultural inputs could exercise greater leverage on villagers than F.P. workers, the former acquired prominence at the expense of the latter. Furthermore, couples actually recruited tended to be 'demographically marginal'. A survey of 7 U.P. districts conducted over 10 months in 1968-69 showed that 62% of those vasectomised had wives aged 38 or more, 5 or more children or both (Elder 1974). A previous survey relating to 1966 by Ranbir Singh in one U.P. district had shown equally disappointing results and revealed significant distortions in records; while official data indicated that 14% of those vasectomised were over 50 years, an on-the-spot verification suggested that the actual figure was 49%.

The past history of target setting was a dismal one and the anxiety to obtain quick results through administrative pressure during 1976 had further undermined the morale of F.P. workers and managers. It will take time to rehabilitate the voluntary principle and the integrity of 'extension' education. Once that is accomplished, the process of setting goals, monitoring their implementation and evaluating the results will need to be reconstructed on the basis of reliable information and the genuine involvement of front-line F.P. workers and their immediate supervisors. The hierarchical, bureaucratic principle of organization will have to be replaced by a much more participative style of operation consistent with the innovative mission of F.P. and its experimental nature.

### Field Leadership

The key field managers of the Indian programme are the heads of the PHC and the attached rural family welfare centres responsible for health and F.P. activities covering about 100,000 people. They supervise staff involved in curative and preventive medicine, epidemic disease control, basic health education, environmental sanitation and maternal and child care services, including F.P. A part of this staff is located at HSCs, each covering a population of about 10,000 people. These executive heads of the PHC are physicians with a Bachelor of Medicine degree and some practical experience. These doctors have an extremely difficult role to play, given the incompatibility between the large size of their task and the very limited staff and material resources at their command. Given also their professional training which emphasized curative medicine on the western model, it was scarcely surprising that these doctors did not prove to be effective managers. They tended to emphasize their functional role as healers and to ignore their administrative or supervisory duties (Gopal Krishnayya 1975). They had little patience with extension-education and some regarded F.P. as immoral (Blaikie 1975).

If this picture is a fair representation of the situation, then some very hard questions have to be asked. At the very least, a serious examination of the curriculum and training of doctors destined to be F.P. managers in rural settings is required. The issue may also be raised whether the search for executive leadership of the PHC should be confined to the ranks of physicians only; perhaps other professions with experience in rural areas can also be considered in this context. After all, F.P. is not simply a medical activity. It requires a multi-disciplinary approach and perhaps the most important attribute of a health and F.P. manager in a rural environment is knowledge of and work-experience in that environment. Officials who have exercised executive responsibilities in some field of rural development

can make successful F.P. managers. They would, of course, be able to draw on the expertise of the medical as well as other relevant professions.

### Cultural Gap

The Doctor-manager and most of his F.P. and health staff tend to have an urban orientation in terms of family ties, residence, education and value system. When introducing new ideas or at least new techniques in the village setting, they operate in an alien environment. This cultural distance can undermine the quality of the inter-action between the change-agent and the client population, unless the former is extremely well prepared and works with dedication under expert supervision. Under Indian conditions, the cultural gap has proved to be an important impediment to the spread of F.P., given the limitations of staff training and the absence of executive leadership at the PHC level.

In a survey of 120 villages in the Allahabad Division of Uttar Pradesh in 1971-72, very little contact between field workers and villagers was reported and the latter spoke negatively of such contact as did take place (Misra et al 1976). The low contact was attributed among other factors to (a) absenteeism, irregular attendance and malingering on the part of the workers; (b) disinterestedness of supervisory staff in field work; and (c) poor motivation and lack of training of workers. Two-thirds of the village wives were aware of F.P. methods, nearly half did not want additional children but only 14% were practising contraception. In another study, F.P. workers were said to be high-handed and unresponsive and the A.N.M. plus the Lady Health Visitor were described as inaccessible to ordinary villagers (Banerji 1973). Users of Nirodh complained that they could not get supplies from F.P. centres, which were said to be selling them illegally to commercial retailers.

The failure of urban-oriented front-line F.P. workers to be sensitive to the rhythm of peasant societies is after all not too surprising. The same

difficulty has been experienced in agricultural extension, education and rural development generally. The change-agent tends to be ethnocentric and his air of superiority is likely to be resented by villagers steeped in tradition and suspicious of outsiders trying to change things quickly without comprehending the totality of village life. What is perhaps more surprising is that even the architects of the F.P. and health programmes have approached the problem without much understanding of village resources, attitudes and beliefs. Instead of building on the prevalent, traditional system of health care, policy-makers in Delhi and state capitals seem determined to displace the village regime by modern, imported techniques and by personnel trained in cities on the basis of curricula designed abroad. This approach has generated a lot of friction and unnecessary tension.

For example, the F.P. programme throughout its history has experienced a severe shortage of expert staff - doctors, particularly female doctors and auxiliary nurse mid-wives (ANMs). The passage of time has not relieved this problem. Vacancy rates are higher in places far away from urban centres and short of basic infrastructure and recreational facilities. Meanwhile, large numbers of Indian doctors and nurses migrate to UK and USA after finishing their medical studies. Viewed from the standpoint of these individuals, the prospect of moving from the metropolitan cities of India to those of western countries appears to be much more attractive than filling vacancies in the alien cultural context of the remote village. Despite this chronic difficulty, policy-makers have not turned to the alternative pool of indigenous health manpower which has always provided the bulk of medical care available in villages - ie ayurvedic and unani doctors, 'shamans' and 'bhagats'. These people are in tune with the village environment, they are highly respected and they could play a valuable complementary role in the official health and F.P. programme (Mandelbaum 1974). However, the western-educated Indian doctor has tended to regard these medical men with considerable

contempt and described their approach as non-scientific and obsolete. Although government has recognized their existence by registering some of them and funds have been advanced for research in these schools of medicine, there has been no serious attempt to incorporate these indigenous doctors as part of the official health and F.P. network. The idea was put forward in an official paper in 1972 and was mentioned again in 1977 but the probability of effective implementation remains low (Qadeer, 1977). Several attempts have been made to train the village mid-wife or 'dai' but with disappointing results.<sup>5</sup>

Yet another manifestation of the cultural gap separating policy-makers from villagers is the fact that the former have shown little appreciation of traditional values which tend to limit fertility. Periodic sexual abstinence resulting from the observance of customary taboos, coitus interruptus and the rhythm method are used widely; the ORG survey reveals that these non-modern methods account for 29% of all current practitioners of F.P.: The rhythm method was a favourite of the F.P. authorities during the early 1950s but long ago ceased to receive their attention. Custom reinforced by peer group pressure against pregnancies in quick succession or after the woman has entered grandmotherhood are powerful forces which could have been exploited by the F.P. program but in fact have been ignored. Those using coitus interruptus have not found encouragement or counsel from F.P. workers who regard this practice as falling outside their purview. Abortion, another widespread practice in rural areas, remained outside the F.P. scheme till 1972 when it was legalised. Even today most F.P. centres are not equipped to perform abortions.

The sharp dualism that separates modern from traditional India has proved to be an obstacle in managing health and family planning activities. Those responsible for the basic strategy cannot afford to be doctrinaire

about particular schools of medicine or specific technologies. To obtain maximum results from very scarce available resources, a search must be made for all relevant solutions, taking account of the economics and the sociology of rural India.

#### Bigger Budget for F.P.?

A great deal of emphasis should be placed on improved management of the F.P. programme but there will come a point beyond which further progress will not be feasible without a relaxation of the resource constraint faced by field managers. The nature of this constraint can be illustrated by a variety of indices (availability of vehicles, drugs, audio-visual equipment, etc) but perhaps the most instructive story relates to the auxiliary-nurse-midwife (ANM). She is the front-line worker in rural areas and on her performance hinges the results of the overall programme. What is she expected to do and is her assigned work-load realistic?

According to the original design drawn up by the Mukherji Committee in 1966, the ANM is expected to serve a population of 10,000 living in 10 or more villages situated at varying distances from the HSC. In these villages, she was the sole worker usually for (i) immunization; (ii) anti-malarial and T.B. measures; (iii) health and nutrition education and child health services; (iv) F.P. information, contraceptives and follow-up; and (v) maintaining records. Clearly, this is an impossible work-load for any individual no matter how well-motivated and how well-managed. The ANM spends 25% of her working time travelling on foot from village to village, and 4-5 days each month are absorbed by registration and record keeping duties (U.N. 1969). There is general recognition that an ANM cannot perform adequately for a population larger than 3 to 5 thousand. Nevertheless, the administration of the programme has continued on the basis of a patently unrealistic norm, presumably because a revision would have implied a major expansion in the F.P. budget.<sup>6</sup>

The present norm of one ANM for 10,000 population provides for a sub-optimal level of intensity and is undoubtedly responsible for some of the lapses of the delivery system. The inadequacy of medical attention and motivational efforts have been among the factors constraining demand. This can be seen for example in the case of the IUD campaign. The number of new IUD acceptors peaked in 1966-67 very soon after this method was introduced into the Indian programme, and then declined. This was partly because of shortcomings in pre-insertion scrutiny and counselling, faulty insertion procedures and inadequate detection plus treatment of side-effects (Estimates Committee 1972). These supply lapses generated a 'whispering campaign' from dissatisfied users to potential acceptors. It is instructive to note that while this retreat was taking place at the all-India level, the IUD losses in Gandhigram - an experimental area in Tamilnadu - were relatively light and these were quickly made up (Hauser 1970). This contrast was related to the fact that the experimental delivery system in Gandhigram was much superior both in quality and intensity. Women were told in advance that there might be complications after the IUD insertion and what they should do to obtain relief.

Table 4 compares the performance of the delivery system based on the official model (1 ANM: 10,000 population) as it works in Reddiarchatram and Dindigul blocks of Gandhigram with that of the Athoor model (1 ANM: 5,000 population). What emerges from this very rough picture is the pitiful inadequacy of service provision under the official model. The vast bulk of pregnant mothers have no or little access to the programme either before, during or after child-birth. By contrast, there is a marked improvement in coverage under the Athoor model, although about half of the pregnant mothers remain out of reach. Nevertheless, frequent contact with at least half of the relevant women, enable the ANM to undertake concentrated F.P. activity during the period in which potential acceptors tend to be most receptive. This focus is reflected in higher levels of knowledge and acceptance of F.P.

Table 4Evaluation of Delivery Systems for Health & F.P.

		<u>Athoor</u>	<u>Official</u>	
		<u>Model (d)</u>	<u>Model (g)</u>	
			R(e)	D(f)
1.	Percentage of Ante-Natal Cases Registered	97	72	56
2.	Percentage of cases (a) obtaining 5 or more ante-natal visits	51	20	16
3.	Percentage of Deliveries (a) conducted by ANM	49	18	6
4.	Percentage of Cases (a) obtaining 3 or more post-natal visits (b)	47	8	1
5.	Percentage of F.P. Acceptors in Sample (c)	13	7	
6.	Percentage of Sample Women with knowledge of 1 or more F.P. methods	92	84	84
7.	Percentage of Cases in which Register is incomplete for Key Item (h)	7	44	55
8.	Percentage of Children administered 3 doses of DTP immunization	8	4	3

Notes

- (a) Including those not registered.  
 (b) Within 10 days after delivery.  
 (c) Sample was of women whose pregnancies were registered during 1970.  
 (d) One ANM for 5,000 population.  
 (e) Reddiarchatram Block.  
 (f) Dindigul Block.  
 (g) One ANM for 10,000 population.  
 (h) Key item was 'nature of termination of pregnancy'. Similar gaps between the blocks existed for other items of information.

Source: Table is adapted from D Narayanan Namboothiri and P Ramankutty; Evaluation Report (Interim) of the MCH and Family Planning Programme in Athoor - January 1972; Bulletin of the Gandhigram Institute of Rural Health of Family Planning.



The nation-wide delivery system in India today is much less intensive than in Egypt, Taiwan, Thailand or Tunisia (IBRD 1974). The contrast with Mainland China is also instructive, where a major effort has been made to expand the supply of medical personnel in rural areas. In 1966 the physician-population ratio in rural areas was 1 : 8,000 (Teh-wei Hu 1974). Since then urban doctors have been relocated in rural areas, Chinese traditional physicians have been tapped to complement the western trained doctor and a corps of one million 'barefoot doctors' and three million public health workers have been trained. The 'barefoot doctor' is a peasant trained for 3-6 months and capable of treating most common diseases in rural areas, administering immunization plus birth control and supervising public health workers. The average 'barefoot doctor' - population ration now is 1 : 1,520 allowing for the fact that the 'barefoot doctor' is a half-time peasant. His presence in the rural areas assures easy access to basic health care and F.P. facilities to the bulk of the Chinese population.

This paper is not the place to make a full case for allocating larger sums to health and F.P. in the Indian budget. Nevertheless, the issue is an important one, given that the present allocation is less than 2%, that the norms underlying the official model (eg 1 ANM : 10,000 population) are sub-optimal and that some relaxation in the resource constraint will give F.P. managers more confidence to carry out their mandate.

#### Poor Households & F.P.

A very large part of the F.P. programme's potential clientele consists of very poor households who are difficult to reach and who tend to have many children. So far the F.P. delivery system has ignored this segment of the population, except in the context of mass camps. To engineer a demographic transition for this group will require policy innovation of a very high order. Perhaps very intensive and re-designed F.P. components combined with substantial social and economic investments in selected regions are required. There

are no sure and tried solutions; no international experience to draw on. To pursue these ideas, there must be a willingness to experiment and to learn from the outcome.

Many attempts have been made to measure the extent of dire poverty in India, based on a government definition of a bare minimum standard of living.<sup>7</sup> According to Bardhan (1973), about half of the rural population was below such a poverty line in 1969. Using roughly equivalent norms, Dandekar and Rath (1970) estimated that the comparable proportion in urban areas was also about half. Assuming no trend change in proportions since 1969, the implication was that roughly 52 million couples out of a total of 104 million in the reproductive age-group in 1975-76 were desperately poor.

Approximately 41 million of these very poor target couples live in rural areas. Most of these families are dependent on agriculture. Perhaps half or more are cultivating holdings below 5 acres; in many cases demographic pressures and other factors have led to intense fragmentation and a holding may consist of 6-8 separate parcels situated in different parts of the village (Minhas, 1970). These households may not own all or any of the land they work on and their tenancy arrangements can be highly uncertain. Another third of these poor families are landless but work as agricultural labourers. The rest are artisans or sell labour in miscellaneous service activities.

These target groups are not only at the bottom of the income pyramid but many also belong to the lower castes who for long have been victims of discrimination. The legal rights of these people under the constitution of independent India could not be enforced in many instances. To enforce these rights against the high-caste-landed groups might have meant eviction, denial of work for wages and the sudden drying up of credit (Epstein 1973). Rather than face these risks, the poor opted for a continuation of traditional subservience and minimal security.

These power relations within the village are basic to an understanding of attitudes and values characteristic of the rural poor. The situation varies a great deal but, in general, the pattern of change in recent decades has accentuated the polarisation. Many progressive measures adorn the Indian statute book and the successive five-year plan documents. However, the history of implementation is a dismal one: '... regardless of intentions, the economic policies adopted have, in the Indian social and political context, by and large, benefitted the upper income groups. And those policies ... which could have benefitted the poor have been successfully evaded or neutralised.' (Srinivasan 1974). This record of stagnation or deterioration in socio-economic conditions plus a climate in which government has been unable to tip the balance in favour of the poor has become part and parcel of their psychology. They have seen prosperity come to the high-caste-landed groups while their own situation remained the same or became more desperate.

How do the poor cope with their poverty? They spend nearly all their earnings on the cheapest foods, yet many do not get a diet which sustains life processes at even moderate levels of activity. In some cases male adults from these families have had to turn down jobs involving earthwork because such occupations would be too demanding of energy (Dantwala and Visaria 1974). Malnutrition and lack of access to potable water makes these households specially vulnerable to infections. Their morbidity and mortality rates, particularly for infants and children, are much higher than the national average, justifying large numbers of births to assure survival of some. Just as these households cannot afford health investments (wells, latrines, medical care) so also their capacity to use schools is limited. Children perform valuable economic roles within these families and their enrolment in school implies a heavy opportunity cost for the parents who can ill afford to bear it. In addition, parents also have to pay for books, transport charges and other miscellaneous items even if tuition is free. Super-imposed

on these considerations which apply to all children, there are the special factors affecting girls; namely, the likelihood of girls finding a lucrative job which will compensate parents for investing in their education is lower than in the case of boys and the fact that the pay-off from investing in female education stops at marriage. A survey in West Bengal carried out in 1964-65 illustrates the phenomenon (Maitra et al 1974). School attendance as a proportion of the 6-14 male population in rural areas was 31% for the bottom income decile compared to 83% for the top decile. The corresponding figures for females was 12% and 67% respectively. These differentials are not peculiar to West Bengal; they are found in most parts of the country (Bhagwati 1973).

Given this rough profile of poor rural households, it was hardly surprising that the F.P. delivery system had ignored them. Super-imposed on the rural-urban cultural gap impeding programme implementation, there was the 'poverty curtain' separating F.P. workers from this population characterised by hunger, illiteracy, ill-health and physically segregated mud huts. Given that F.P. workers had been assigned targets for obtaining acceptors and no distinction was made between acceptors with different socio-economic characteristics, it was natural for them to concentrate on relatively affluent groups who were much more predisposed to birth control than the very poor households (Blaikie 1975). The process of persuading the impoverished small farmer or landless worker to limit his family was likely to be a protracted one at best and the chances of success at the end of it could not be rated very high. Meanwhile, intensive and repeated contact with these households could jeopardise the F.P. worker's relations with the rest of his or her clientele, if caste factors were at all important. For these and other reasons, the main contact of the F.P. programme with the poor was in the context of the mass sterilisation camps which took place for limited periods outside the village setting. There, the camp organisers set out to

obtain acceptance under the extraordinary festive atmosphere of the 'melaa' and through the use of incentive payments which were very large compared to the budget of poor households. These high-pressure tactics succeeded in raising the count of sterilisations performed but in many cases the acceptors regretted their decision afterwards (Blaikie 1975). However useful the mass vasectomy camp might be to obtain quick results, it does not seem like a good solution in the long-run.

A long-term strategy must be based on an understanding of why poor households tend to have large families. Is this simply the result of a time-lag in their perceptions of social change, such as the sharp decline in infant mortality? Alternatively, is there a real conflict between the private interest of the poor household and the unequivocal national interest in controlling population growth? Unfortunately, these questions cannot be answered easily, or convincingly, but an attempt must be made, however speculative it may be.

Robert Cassen (1976) has outlined a framework for assessing the economics of children viewed as investments: '... the child's asset value to parents is a negative function of rearing costs, opportunity cost in parental earnings, children's earning age, mortality and the discount rate; and a positive function of employment and earnings prospects and the share of earnings over and above consumption that parents are likely to receive.' It is instructive to pursue this line of reasoning in the context of very poor small farmer households in India. It is assumed that the household consists of parents, two sons and one daughter (all under 5 years of age); this size, according to the celebrated family planning slogan, should not be exceeded. What are the pros and cons of an extra child viewed from the standpoint of such parents?

On the artificial assumption that the small farmer and his wife wish to make a calculated decision, they will confront the following stylised facts and risks:

(i) One or more of their sons may not survive. This risk is much reduced in recent decades but it is still a significant one. The average probability of surviving beyond age 8 is 0.75 but it is much less for very poor households.

(ii) Childhood mortality may undermine the family's provision for social security against the risks to parents of sickness, accident, old age and widowhood. In the absence of institutional mechanisms, villagers must lean on their own private sources, ie children, for support in times of difficulty. The option of savings through financial instruments for use in future crises is also largely absent. In these circumstances, the poor parents may view their children as a form of savings (Chernichovsky 1976).

The cost of rearing an extra child consists basically of additional food; a much smaller quantity than consumed by adults. Very little will be spent on new clothing or shelter or anything else. Rearing costs will add somewhat to daily outlays; no lump-sum indivisible amount is required. This is a convenient form of saving for a very poor household.

Very little extra parental time will be diverted to the rearing of the new-born child. In the rural setting most child-feeding or caring duties can be combined easily with work on the family farm or wage employment. As the eldest child grows older he or she will take over an increasing number of motherly functions.

(v) At a very early age, perhaps 6 or 7, the extra child will begin to contribute to the household economy. He or she will look after animals, collect fuel material and join in fetching drinking water sometimes from long distances.

(vi) Later, the extra child will start working on the family farm and for wages. A 1974-75 survey of six villages in Aurangabad district recorded a labour force participation rate of 22% for the 6-18 age group among households owning up to 2.5 acres (Nadkarni 1976).

Another 35% of the males and 57% of the females in this age-group were retained for housework. Only the remainder, ie 44% males and 22% females from these poor households were attending school.

What value do parents attach to the extra child's labour services (items (v) and (vi) above), given that the parents themselves are far from fully employed? If there were not the very sharp seasonal fluctuations in the rural labour market, it might not be rational for parents to value very much the labour power embodied in their extra child; he or she could work only by reducing their work opportunities. However, the extra pair of hands prove very valuable in peak agricultural seasons characterised by over-employment and wage rates for hired labour which are a multiple of levels in the slack period. Workers may not be available even at peak rates during the busy season or they may be available only after a costly delay. The small farmer with his limited bargaining power is particularly vulnerable to this risk of not finding a hired hand at the right time. By contrast, the family worker's availability is assured, without the necessity of paying out peak wages. If the family plot is too small, some or all household members can obtain jobs at seasonal peak rates on other village lands and thereby augment family cash earnings. At least during the busy season, extra labour power is an

asset allowing the household to exploit the scarcity situation more than would otherwise be possible.

Basically, the parent-child relation in very poor households tends to be exploitative. This is implied in above statements (iii), (iv), (v) and (vi). Living on the desperate brink of survival, the household cannot afford to spend much on child nutrition, health or education. The father has authority by virtue not only of his economic superiority but also because the Indian tradition assigns respect for the head of household and for age. If the child makes a positive contribution to household income, it may be appropriated to a large extent by the family creditor or the father's outlay on liquor. In the case of a daughter, this phase comes to an end at her marriage when she leaves the parents and joins the husband's household. In the case of a son, the joint family relationship with parents is likely to continue beyond his marriage and procreation. In anticipation of finally receiving the family land, the son is likely to continue to accept the father's authority and to continue to tolerate a smaller share of family consumption than his contribution to household income.

This would be the rough perspective for the decision to have a fourth child, if it was made rationally by a very poor small farmer and his wife. In the nature of the case, no neat and precise calculations of an economic kind are feasible. There are many different motives and much uncertainty. Superimposed on all these factors are peer-group pressures, community norms and plain, old-fashioned sentiments about children. In the event, most poor households exhibit a strong preference for a large number of children, certainly many more than the official F.P. norm of 3. Given the list of considerations outlined above, it would be presumptuous to conclude that poor parents were not behaving rationally to promote their own interest.

Of course, the parents' interest can conflict with the longer-term welfare of their children. By having the fourth child, the poor small farmer



is probably reducing the future per capita earning potential of his progeny, compared to what it would be if he stopped at 3. The fourth child may mean that the already very small family plot will have to be split among 3 sons rather than 2. It also implies a very much larger number of job seekers 10 or 15 years ahead (assuming that all small farmers decide to have the extra child), which may be reflected in higher under-employment and/or lower wage rates. Even if poor parents are aware of these sharp inter-generational conflicts, they can hardly be expected to adopt such a long-run perspective. Their present misery compels them to live from hand to mouth and to ask not what they can do for their children but what the children can do to relieve their acute deprivation. Furthermore, it must be recognised that it is not inevitable that the potential benefits of lower fertility adopted by poor small farmers will actually accrue to their progeny. Many events can intervene to disturb this progression from cause to effect and in the real world of political economy, it is likely that some socio-economic group other than poor small farmers will appropriate the gain.

A strategy for reducing the high fertility of very poor households must deal with the implications of the above analysis. Even the best F.P. delivery system will not prove very effective, if it is in the private interest of poor parents to have large families. However, simply to wait for structural changes in the economy and society to bring about a reduction in the advantages of having many children is unrealistic. Development may be the best contraceptive but there may not be enough relevant development in the short or medium-run, given the resource and other constraints (including high population growth) facing India. The key question, therefore, is whether it is possible to identify selected aspects of economic development which have a special significance for fertility reduction and which deserve emphasis for that reason. The April 1976 policy on population suggested that high priority should be assigned to female education up to middle level and child nutrition.

Undoubtedly, these are relevant and important aspects of development, but it is difficult to maintain that they will reduce fertility on their own. As mentioned already, larger educational opportunities for girls may not be utilized if the household needs their services within the house or on the farm. The attractiveness of female education will be much reduced if there is massive under-employment. Similarly, the impact of special child nutrition programmes can easily be offset by diversion of household food allotments from the child to other family members. The search for the key element of development which will make the crucial difference to fertility is not likely to be very productive (Ridker 1976). The many close inter-connections between different aspects of household behaviour, including fertility behaviour, suggest that a holistic approach is necessary - ie an integrated and mutually reinforcing programme consisting of rural development and F.P.

The attempt to carry out such a programme all over India at once would be hopelessly unrealistic, but to visualise a sequential pattern in which resources are deployed first in some selected regions and then in others in succession may prove to be attractive and feasible. Of course, a basic minimum programme must go on everywhere; it would be politically unacceptable to neglect any region altogether. But a concentrated intensive effort can be superimposed sequentially on the minimum programme to generate the necessary critical mass in selected regions. Such a strategy implies a temporary widening in spatial inequalities but this is the price that must be paid to simultaneously eradicate absolute poverty and to lower fertility in one region after another all over India.

To spell out fully this regional-sequential strategy would be far outside the scope of this paper. For example, many important rural development issues would have to be resolved. There is great diversity in rural India not only at the state and district levels but even down to the block level. These differences in natural resources, social plus physical infrastructure

and cultural aspects would have to be recognized and regions defined accordingly.

As far as F.P. is concerned, a three-fold categorization might be useful:

- first, there would be regions in which (i) F.P. has already made substantial progress; (ii) the process of income expansion was already under way and the number of very poor families was diminishing rapidly; and (iii) the infrastructure endowment was favourable.
- second, there would be regions in which (i) F.P. had made very little progress; (ii) a large proportion of families were below the poverty line; (iii) the existing infrastructure was very limited; and (iv) no concentrated intensive effort to promote rural development was visualized in the near term.
- thirdly, there would be regions which had essentially the same characteristics as those in the second category, except that they were selected for the concentrated, intensive programme.

The first category does not present a major problem. There the F.P. programme will need to be continued and the management issues raised above will need to be resolved. If the demand for F.P. was really buoyant, there would be a strong case for budgetary allocations above present norms. Regions in the second category do not present a hopeful picture. No F.P. delivery system can be expected to produce results in such a context of widespread misery (Blaikie 1975). The minimum government programme should aim at providing health and F.P. services through mobile dispensaries and camps. The mechanical application of the usual norms (1 ANM: 10,000 population) to motivate couples and secure new F.P. acceptors in such regions is likely to be wasteful; it would be best to conserve resources till the time comes to transfer the region to the third category.

Regions in the third category present a challenge. Large investments in land development, transport and social services will be required together with institutional and organizational changes. A very large effort on the

F.P. front will also be necessary at levels far higher than the present norm. A precondition for success will be a willingness on the part of the powerful landed interests to share the benefits of massive public investments equally with the underprivileged. The latter must be mobilized as a group and they must participate actively in planning and monitoring the implementation of the integrated programme. Fertility reduction would have to be incorporated as an important part of this exercise. The scale of the public investment programme could be varied depending on fertility reduction objectives accepted by the community; to qualify for a larger public investment, the community would have to accept more ambitious targets for lowering the birth rate (Ridker 1976). The complexity of administering such schemes can pose major hurdles and a pragmatic approach is essential. These ideas deserve further exploration and experimental testing under field conditions.

#### IV. CONCLUSIONS

Towards the late 1960s the Indian birth rate started to decline, reflecting both socio-economic progress - falling infant mortality, female literacy, modernisation - and the growing momentum of the F.P. effort. This welcome, new trend is expected to continue but despite falling fertility, the prospect is for the population to rise from 557 million in 1971 to anywhere from 850-1,000 million by the end of the century. Given the existing pressure on land (reflected in very small plots, fragmentation of holdings, landlessness), and the massive incidence of under-employment, few will doubt the need to restrain future population size as much and as quickly as possible. The main question is HOW to do it. Population policy in India has a long, controversial history and many tricks have been tried. The Emergency even opened the door to coercive methods which produced great human tragedy and astonishing official statistics. Fortunately, this phase is over but the problem of population policy remains.

The F.P. programme has succeeded in many places. In five states - Maharashtra, Punjab, Kerala, Gujarat and Tamil Nadu - containing 27% of the couples at risk, the record was reassuring. The practice of contraception has spread, particularly among middle and upper-income groups. A quarter to a third of the population in these states was protected against the risk of pregnancy. The incidence of contraceptive use was 2.4 times higher than the national average for those enjoying high incomes, college education and city living.

However, roughly half of the population is desperately poor and a very large portion is dependent on agriculture. Many continue to be victims of social discrimination as well as poverty, malnutrition, mortality and illiteracy. These households tend to have many children partly to offset

the relatively low probability of their survival but partly also because villagers lean on children for support in times of difficulty, in the absence of institutional social security mechanisms. Poor parents may also be convinced that an extra child adds to their income, whatever the truth of the matter. Given these objective conditions and attitudes, it would not have been easy to influence fertility, even assuming an ideal delivery system. In fact, the Indian F.P. programme was ill-equipped to tackle the problems of this very big segment of society. A large cultural gap separated the urban-oriented doctor-manager and his badly trained staff from peasants steeped in tradition and particularly those at the bottom of the socio-economic pyramid. F.P. workers had been assigned arbitrary targets for obtaining acceptors and it was natural for them to concentrate on the relatively well-off households and to ignore the poor who also often belonged to the low castes. Given that the front-line worker of the system - the ANM - had a patently unrealistic job of serving the health and F.P. needs of 10,000 people, it was inevitable that the under-privileged segment would get little of her time and attention.

Population policy statements made in 1976 and 1977 have extended and elaborated the F.P. programme but they do not seem to recognize the key problem of poor households. To engineer a demographic transition for this large part of the society will require policy innovations of a very high order. Household behaviour concerning fertility is intimately tied up with questions of livelihood, education, health, women's status and employment. Given these interrelations, a partial approach may be much less rewarding than an integrated and mutually reinforcing programme consisting of rural development and a redesigned F.P. component. Such an effort would be too expensive (financially and in terms of human resources) to carry out simultaneously all over India but a sequential pattern is possible, based on a recognition of regional diversity. Essential pre-conditions for this strategy

are (i) willingness on the part of the rich to share the benefits of development with the rest, (ii) tolerance for temporary widening of spatial inequalities and (iii) openness in re-examining existing bureaucratic mandates, norms, budgets and administrative procedures. All of these are very demanding in political terms and perhaps that is why recent statements tend to skirt around a number of the critical issues of population policy.

NOTES

1. Many of these studies are based on National Sample Survey data for the early and mid-sixties.
2. A survey based on 1,000 interviews with literate people in Bombay, Calcutta, Delhi and Madras concluded that '... public opinion even in metropolitan cities has yet to acquire the kind of momentum which alone can make compulsion a viable proposition.' A very high proportion (94%) favoured F.P. but only 36% of those favouring F.P. agreed with a policy of statutory compulsory sterilisation. Another 11% favoured economic disincentives against large families. (Indian Institute of Public Opinion; Monthly Public Opinion Surveys, Vol XXI, No.5: Blue Supplement)
3. S. P. Jain (1975) reports the following findings, for example: for cohorts marrying below age 18 in rural Punjab, 2.9% of couples remained childless. The incidence of childlessness rose to 4% for cohorts marrying at 18-22 years and to 7.6% for those marrying at 23 or above.
4. Interview reported by William D Hartley, Wall Street Journal, July 7, 1976.
5. Rogers and Solomon (no date) cite the following reasons for the disappointing outcome: (i) the 'dai' has a low social status in the village, (ii) the incentive offered by Government to the 'dai' for F.P. work was too low to offset the loss of earnings resulting from recruitment of acceptors and fewer deliveries. A Government of India report (1976-77) stated that state governments had assigned a low priority to the 'dai' training scheme.
6. There is talk of a multi-purpose health worker's scheme under which malaria, smallpox, trachoma and F.P. workers will be retrained to deliver services in an integrated package. The ultimate plan is to have one male and one female multi-purpose health worker for a population of 5,000. However, it is recognized that these targets will not be fulfilled for a considerable period owing to shortages of training facilities. In 1975-76 Rs.300 lakhs were earmarked for this purpose but only 33% of this was spent. Meanwhile, new job specifications laid down recently for the ANM state that she '... is expected to cover a population of 10,000 of which 3,000 to 4,000 will be her intensive area and the remaining will be the twilight area. In the intensive area she will be responsible for all the activities and in the twilight area only on request'. (Brochure entitled 'Job Responsibilities of Health Workers and Supervisors' issued by Department of Family Planning. The brochure carries no date but is believed to have been issued in 1976) See also Government of India 1976/77.
7. The bare minimum standard of living was established in 1962 by a distinguished study group appointed by Government ie per capita consumption of Rs 20 per month at 1960-61 prices excluding outlays on health and education which are assumed to be provided free by the state. Bardhan uses a conservative estimate of Rs15 to allow for relatively lower rural prices and shows that it is consistent with a minimum diet of 2,100 calories and 55 grams of protein necessary to maintain life-processes of an average adult in moderate activity. (Srinivasan and Bardhan 1974.)



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