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Here's a Feast of Thought

NORMALLY, 'MANTHAN' is thematic. It consists of the papers and proceedings of a DRI Seminar on an important subject. And that makes for a valuable study of a vital issue.

For a change, this issue is a miscellany of articles/reports on half a dozen major issues. Each one of them could be developed into a full-fledged Seminar.

For long, India was reputed for its administrative "steel frame". Today, thanks to gross political interference, it has been reduced to a wooden frame, partly eaten up by white ants. Shri B.K. Nehru, the Grand Old Man of our Civil Services, gives us an inside view of the problem. He makes it clear that matters can be mended only by divesting the ministers of their arbitrary power to transfer, suspend or promote officers. Even the Viceroy had no such power, he says.

Shri N.S. Saksena throws the search-light particularly on Police Service. He tells us how politics have been criminalised and how criminals are deciding the posting and transfer of police officers.

Prof. Ashish Bose, President, Indian Association for the Study of Population, X-rays India's Census Report, 1981. He points out that our census reports are a complete refutation of our population policy. He also points out the foreign vested interest in forcing birth control on India. In any case, he says, family planning can have no meaning when massive infiltration is going on all the time.

Dr. Sahdev Kumar of University of Waterloo, Canada, shows how the Indian rural poor are soon going to face a grave energy crisis, for no fault of theirs. He also points out that the rich are a severe strain on natural resources—and that one American child taxes Mother Earth as much as thirty-five Indian children.

The Bhopal gas tragedy has shocked the world. But what is even more shocking is the effort of many Indian officers and scientists to defend and protect Union Carbide—and not the gas victims. Young scientist Jitendra Bajaj makes the valid point that Science, divorced from Indian Culture, will play havoc with the country.

Last and, probably, the most important, is Ecologist editor Goldsmith's long chat with Tenakoon, a typical Asian peasant. You are struck by the wisdom of the peasant—and the folly of much of western agricultural 'science'.

It is a feast of thought—for you to enjoy.

You will have more of it next time when we publish our issue on the Ganga. Here is a sacred river, more sinned against than any other river. To this end we are next month holding a high-level expert Seminar on the subject in DRI.

EDITORIAL

Bhakti Dham

YOU ARE ALLF AMILIAR with DRI's Gonda Project. Here we are trying to improve the lot of the rural poor by helping them with well irrigation and improved seeds, village industry and better cattle breeds, eye care and social forestry. And now we have taken up a new kind of project in Gonda. It is the construction of a first class temple—Bhakti Dham.

At first thought one may wonder what the temples have got to do with rural uplift. Well, a whole lot ! As Lord Tennyson put it :

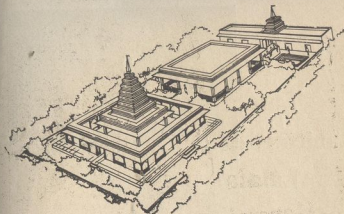
*"More things are wrought by prayer
Than this world dreams of."*

When you are engaged in only economic development, everybody expects only to *receive*. And much wants more. But rural uplift is *not* only *receiving*; it is also *giving*. It is a Yagna, which involves people's participation—both in giving and in receiving.

In the house of God, all men meet as equals. As they pray together, they uplift themselves together. The result is Faith, Hope and Charity. It is also Purity, Peace and a new Confidence in themselves and in the Future. No wonder Gandhiji began and ended his day with community prayers. All good men do.

Nor will Bhakti Dham be a run-of-the-mill mandir. It will be the epitome of India's higher life. Right in the centre of the sanctum there will be Shiva Linga, the symbol of all Life. And allround will be the idols of Lakshmi-Narayan, Ram-Janaki, Gopala Krishna, Ganesh, Durga, Saraswati, Hanuman and Surya.

On the walls of the Sanctum—both inside and outside—will be panels with portraits, in relief work, of our greatest religious centres like Badrinath, Puri, Dwarka, Rameshwaram, Amarnath, Shankaracharya Mandir, Srinagar, Tirupathi, Meenakshi Mandir, Madurai, Triveni Sangam, Prayag, Haridwar, Kamakshi Mandir, Guwahati, Har Mandir Sahib, Amritsar, Vaishnodevi, (Jammu), Palitana, Parasnath, Bodhi Gaya, Sarnath and Sanchi. And then there will be the great builders of India's spiritual life—Manu, Valmiki, Vyasa; Buddha, Mahavir, Shankaracharya; Guru Nanak, Chaitanya, Tiruvalluvar; Tulsi, Mira, Sur, Kabir; Raidas, Rahim, Raskhan; Ramakrishna, Dayanand, Vivekanand and Aurobindo. It will be like a pilgrimage to all the Tirthas—and a homage to the choicest spirits of India.



The Temple Complex with (L to R) Sanctum, Sabha Mandapam, holy tank and entrance block.

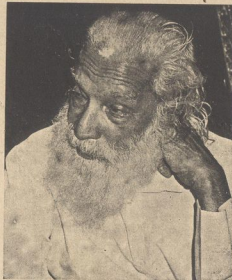
Facing the temple proper will be the Sabha Mandapam—for cultural and religious meets and programmes. Entrance to the temple complex will be through an office block looking like a mini-Gopuram. And on either side at the entrance will be temple tanks for holy bath—for men and women.

It will be a new kind of temple. And its construction has already started. The project has spread a wave of joy throughout Gonda district. Everybody feels it is his own, his very own, temple. They are contributing to its construction in cash and kind. At the Bhoomi Pujan ceremony on May 17, 1985, people belonging to all castes, classes and creeds thronged the venue at Jaiprabha Gram. Among those present were ruling party legislators. Gonda District Janata Party President, Dr. Abdul Rauf, not only attended the ceremony but donated Rs. 1001/—for the temple. It was a heart warming experience.

The sketch above shows the plan of the Temple Complex. Readers are welcome to make suggestions, if any. You are also welcome to contribute your mite. Says George Meredith :

*"Who rises from prayer a better man,
"His prayer is answered."*

The Late Lamented Lala Hansraj Gupta



The Deendayal Research Institute places on record its deep sense of sorrow over the passing of Lala Hansraj Gupta on July 3.

Lalaji, 80, was not only President, Deendayal Smarak Samiti, Delhi Prant Sanghachalak, and First Citizen of Delhi for long years, he was an ardent advocate of all Good Causes. Above all he was a Great Citizen.

On July 10, the Citizens of Delhi held a condolence meeting in Talkatora Indoor Stadium. Justice H.R. Khanna (Rtd.) presided. Rich tributes were paid to his memory by Sarva Shri Balasaheb Deoras, Sar Sanghachalak, RSS, A.B. Vajpayee, Moonis Raza, V.C. Delhi University, Yash Pal Jain, Om Prakash Tyagi, Prof. Jaspal Singh, Secretary, Delhi Akali Dal, V.H. Dalmia, P.D. Bhargava, Lajpatrai, K.G. Khosla, L.M. Singhvi and Ashok Singhal.

Shri Balasaheb said that Lalaji had been Friend, Philosopher and Guide in the RSS. Here was a Karmayogi who held high office and suffered detention, with the same sweet smile. Speaker after speaker said that Lalaji had supported all good causes. Whatever he touched, he had adorned. In his passing, Delhi had lost its most respected citizen.

Shri Braj Kumar Nehru, 75, Governor of Gujarat, needs no introduction.

The ICS has produced many distinguished men and B. K. Nehru is one of the more distinguished of them. He has held more offices than any other civilian; and he has done credit to all of them.

At a time when the services are going to the dogs, the views of a seasoned civilian like B. K. on the subject, acquire great relevance. According to him, Indian services will come into their own and, acquire the necessary ability and integrity only if, as and when they are freed from the minister's arbitrary powers of transfer, promotion and suspension. In his recent Govind Ballabh Pant Memorial Lecture, B. K. elaborated his ideas on the subject at some length. We reproduce below the text of his speech, which will be read with the greatest interest.



Shri B.K. Nehru

The 'Varna Sankara' of our Civil Service

By : B.K. Nehru

Governor of Gujarat

I BELONG to the diminishing band of those who had the good fortune of falling under the spell of Gobind Ballabh Pant. I remember him first, over fifty years ago, in the old Anand Bhavan, discussing with Pandit Motilal Nehru and other leaders of the day, the strategy and tactics of the struggle for independence. I remember him last giving his somewhat equivocal blessing to the task I was sent out in the late fifties to perform as Commissioner General for Economic Affairs. I remember him, in the intervening years, for the wise guidance he gave officially, and the kindly interest he took personally, in such affairs as I had occasion to trouble him with.

Both as Chief Minister of Uttar Pradesh and as Home Minister of India, he gave repeated proof of his full appreciation of the importance of sound administration in ensuring the welfare of the State. As guardian of the civil services in both capacities he took particular care to prevent the

Self-government is no substitute for good government

erosion of their impartiality and independence. It is, therefore, appropriate that I should speak tonight on "THE ROLE OF THE CIVIL SERVICES IN INDIA TODAY".

That good government is no substitute for self-government is axiomatic. But the converse is also true, self-government is no substitute for good government. Good government is not a product solely of good laws. No matter how sound these may be, they produce no results unless they are implemented in the field and with impartiality and justice. One of the problems of the institution of the State, since its inception, has been to devise a machinery of government which would ensure such implementation. Till the beginning of the present century, the field of state activity was every where very limited. Its main functions were to maintain internal law and order, to protect the country against external aggression and to collect sufficient revenue to enable it to discharge these two primary responsibilities. The machinery required for the performance of these simple tasks was itself fairly simple; they could be performed under the direct orders of the King by his favourites without too much difficulty, if not always with justice.

The twentieth century State is, however, a totally different kind of organism. It has taken upon itself the complicated task of ensuring the welfare of all its citizens. This enlargement of its responsibilities, taken together with the increasing complexity of modern life, required a continuous elaboration of the operative mechanism. The old haphazard amateurish methods of administration were found inadequate; in parliamentary democracies the modern civil service gradually took shape.

The term 'civil service' covers strictly all employees of the State paid for by the tax payer who perform other than military duties, irrespective of their rank or function. In discussions such as the present, however, it is best to restrict the term 'civil service' to the superior and administrative grades of the public services who operate at the levels at which decisions of policy are made and under whose direct supervision the administration is conducted.

The civil service system consists essentially of the administration of the State being entrusted to a body of officials in its permanent employment, who have, ideally, certain well-marked characteristics. These are that they are highly educated and are recruited not by patronage but by

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ute for self-government is axiomatic. Self-government is no substitute for a government which is not a product solely of good will; they produce no results unless they are based on impartiality and justice. One of the functions of the State, since its inception, has been to ensure that the government which would ensure such a present century, the field of state administration. The main functions were to maintain law and order, to protect the country against external aggression and to discharge these two primary functions. The functions of the State for the performance of these functions could be performed under the conditions without too much difficulty, if

ever, a totally different kind of government is required. The complicated task of ensuring the efficient performance of its responsibilities, taken into account the complexity of modern life, required a continuous mechanism. The old haphazard system of administration is found inadequate; in parliamentarism, the civil service gradually took shape.

ly all employees of the State paid salaries and allowances, irrespective of the nature of their duties, as such as the present, however, it is not the superior and administrative functions at the levels at which decisions are taken and the supervision of the administration

essentially of the administration of the civil service in its permanent employment. The marked characteristics. These are the characteristics not by patronage but by

an objective test of merit, being therefore beholden for their position to no man. They are non-partisan in internal politics, but carry out loyally the policies of whatever government happens to be in power; they are committed to the well-being of the people through the impartial and independent application of the laws. They are a professional body and, like all other professions, largely self-regulating; like them, too, they regard the performance of their professional duty with integrity as the highest good; self-advancement takes a very secondary place. And they observe a strict code of discipline and honour. Needless to say this ideal is by no means universally achieved but it is a striking fact that in countries which have nurtured the civil service mystique and where it is held in the highest public esteem—notably Germany, France, Britain, Japan and formerly India—approach to the ideal is quite remarkable.

The one democracy which, for a period, attempted to do without a civil service was the United States of America. That country started its life with the spoils system, all public functionaries changing with the party in power. The resulting partisanship, corruption and inefficiency were so great that the system was soon given up, but the experience has left behind some lasting scars. One is the deeprooted antipathy of the United States to any activity in the public sector for fear that politicisation will make it inefficient and corrupt. The other is that where the State is compelled to control economic and social activity, the regulation and licensing necessary is done right outside the governmental system through bi-partisan commissions whose proceedings are open to the public, are quasi-judicial in character, are subject virtually to no control and are accountable to nobody. The American experience with the spoils system has particular interest for us for there has been an unmistakable, if unavowed, tendency for India to move towards it.

The functions of the superior civil servant in a modern democracy are two fold. One is the "staff" function, performed in the secretariat, in which the civil servant helps the minister in formulating the details of policy. When a political party is elected to power it has only a general idea of the policies it wishes to follow without having worked out the details of those policies or the methodologies of their implementation. This is particularly true in India for, unlike many western countries, no Indian political party has any effective policy planning or research organisation; personal attitudes and even whims of individual leaders sometimes serve as substitutes for party policy. The expertise required to

The 'Staff' functions are very different from 'Line' functions.

The Spoils System will ruin the country

transform election pledges into practical Programmes embodied in laws, rules, regulations and directives can only be, and is, provided by the trained and permanent professionals of the civil services.

The second function is the 'line' function, which consists in the actual application of the law to individual cases. This is done by the various officers of the district administration in the states and in what used to be known as the 'attached' and 'subordinate' offices in the Central Government. Collectors of Customs and Commissioners of Income Tax are examples of officers performing this function at the Centre. The Deputy Commissioner and the Superintendent of Police perform similar functions in the States.

Staff function are quasi-legislative in nature. There is no essential difference between the writing of a law, which is the function of the legislature and the writing of rules or regulations, which is the function of the secretariat. Line functions on the other hand are quasi-judicial in nature. The Collector of Customs deciding the extent of the duty leviable or the Superintendent of Police deciding whether or not there is a prima facie case for prosecution is applying the law to the facts before him in exactly the same way as a judge. For the efficient performance of both sets of functions an essential precondition is the total independence of the civil servant from extraneous pressures. In a well ordered government, the staff functions, in which the minister's authority is supreme, and the line functions where it is strictly limited, must be kept totally separate, for the same reasons that the judiciary is kept separate from, and independent of, the legislature. A confusion between these separate functions leads to arbitrary and unjust actions and is as dangerous in its consequences as 'varna sankara' was supposed to be in ancient times and must be guarded against.

What I have said so far describes the role of the civil services in a properly run democracy. The important question is whether the role of the civil services in India should be the same as in other democracies or should be something different. The answer depends entirely on what political system we consider appropriate to our circumstances. If we feel that a totalitarian or one-party system is what we need, the civil services should be abolished and administration should be handed over to party cadres. This is what happens in Communist countries, which do not distinguish between the civil servant and the politician,

and in one-party States. But we have, for good or ill, opted for a multi-party democracy which envisages the possibility of the ruling party changing from time to time. If we are to continue with this system then my answer would be that the role of the civil services in India should be exactly what it is in other democracies. For any attempt to politicise them can only lead to a variety of the spoils system and, as in America, end in disaster.

It is urged by some that the role of the civil services in other democracies is essentially a passive one; in India they should play a more positive role. Considering the weakness of Indian political parties in the realm of policy planning, civil servants should themselves initiate policies. And, having regard to the need for rapid change, they should display more dynamism and initiative in the execution of policies.

I have much sympathy with this point of view but to ask the civil services to do this is like asking them to run when they are deliberately prevented even from walking. In a situation where civil servants are harassed for lawfully carrying out the lawful orders of lawful Government how can they be expected to step beyond the rules, regulations and executive orders which now circumscribe their actions? A civil servant will not do even his minimum duty if he has the prospect of incurring ministerial displeasure and facing judicial probes, commissions of enquiry and possibly criminal charges, if his political masters happen to change.

This is what is increasingly happening in the country as a whole and for the rest of the evening I propose to examine why, and what can be done to restore the civil services to a position where they can play at least their minimal role. My remarks deal primarily with the States rather than the Centre, for three reasons. Firstly, it is the State administration, rather than the Central, which directly affects the day to day life of the common man; secondly, the forces which erode the efficiency of the administration have been in operation in the States for a much longer time than at the Centre; and thirdly, the kaleidoscopic political changes that often take place in the States are as yet exceptional at the Centre.

The root of the maladministration from which, all are agreed, India is suffering, is the 'varna sankara' that has been caused by the in-

*The administration can hardly walk;
how then will it run ?*

What we get is what the minister wants; not what the Law says

creasing practice of ministers not to concern themselves so much with policy as with individual cases. Line functions are being performed by the staff. There are many reasons why ministers prefer to decide individual cases instead of formulating policy. Apart from it being easier to decide specific matters ad hoc than to make generalised policy, a fundamental reason is the absence from their minds, because it is absent from native Indian political thought, of the concept of the Rule of Law. The Indian tradition is that the ruler is all-powerful; his will is law and the exercise of his power absolute and direct. As a delayed consequence of universal suffrage the politician who is now increasingly getting elected is innocent of alien ideas.

Reinforcing this attitude is the totally exaggerated importance that is attached in India to being an elected representative of the people probably because we have had experience of elected rulers for so short a time. Ministers reject the idea that their role is limited to making policy and, in the words of Prof. Laski, of 'injecting a current of tendency into the stream of affairs' or that, in the sphere of administration they should limit themselves 'to give general directions to, and keep general control over, the administration in accordance with the Constitution and the laws.'

Another reason for ministers interfering in individual cases is to gain, or to keep, political support—something that is of prime importance in an era of chameleon-like changes in political loyalties. Furthermore, it is unfortunately true that the political environment today does not frown upon the use of power to do undeserved favours to one's caste fellows, relatives, friends and oneself; nor are instances of using it to harm one's opponents infrequent. Finally, the financial corruption prevalent among many of the several hundred ministers who are normally in office in this country has reached scandalous proportions. A minister who refrains from deciding individual cases is likely to remain a poor man.

The effect of the combination of all these factors is that the administration is progressively ceasing to be carried on according to the law. The civil servant, on whom the responsibility to do so still theoretically rests, is either by-passed or forced to substitute the minister's will for the law. The spate of legislation that flows out of our twenty-seven legislatures is rendered ineffective; what happens in actuality is

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what the politician wants, not what the law says. No law can be enforced against supporters of the Chief Ministers, who can, by the same token, break any laws they wish, including the most serious criminal ones. The result is an increasing lawlessness throughout the country with a virtual break-down in certain areas where political interference has been greatest and lasted longest.

What are the means adopted by the minister to bend the civil servant to his will? Under the Constitution a civil servant cannot be dismissed or demoted or have any disciplinary action taken against him except through due process of law and after consultation with the Public Service Commission. But there are three powers in the minister's hands which he freely uses arbitrarily. One is the power of transfer. If an officer is not willing to fall in line with the minister's wishes, no matter how illegitimate, he is peremptorily transferred and replaced by someone more pliable. Independent officers are harassed by continuous transfers utterly dislocating their lives.

The second misused power is that of suspension. By some strange logic the Supreme Court has held that suspension is not a punishment. Ministers are thus free to suspend any officer at any time without making, let alone justifying, any charge and keep him under suspension for any length of time. There are some well known cases where officers of the highest rank have been suspended for years without any charge even being brought against them. When it is felt that an officer has been harassed enough, has suffered enough financial loss and been damaged enough in his reputation, he can then be quietly reinstated.

The third power misused is the power to deny promotion or to grant accelerated promotion. Promotion is not a matter of right. But denial of promotion, apart from its other consequences, causes financial loss; with the extreme economic pressure resulting from our present ludicrous salary scales there are few officers who can afford to make a financial sacrifice.

The inducements offered for subordination to the minister's will are plum appointments well-located or carrying special allowances or perquisites, and accelerated promotion. Nor is it unknown for corrupt ministers to encourage corruption in their civil servants; they are then easier to control. Independence is very much discouraged and the fact that whole-sale transfers take place in very State upon a change in the

*The Supreme Court is wrong:
suspension is, in fact, punishment*

We must follow the British pattern in our services

Chief Ministership would indicate that each political chieftain has built up a service following of his own. The demoralisation caused by the civil services becoming a plaything of politics is such that large numbers of officers have virtually lost interest in work; many, instead of working, pay court to politicians as a surer way of promotion.

Before I go on to suggest remedies for the present situation it may be useful to examine the position of the civil service in the United Kingdom, on which country we have modelled our public institutions. All first appointments there are made by an independent non-political Civil Service Commission. The subsequent career of the civil servant does not depend on any minister, but on a group of civil servants themselves. All cases of appointment, postings, transfers, promotion and disciplinary action are decided by the head of the Civil Service Department, in consultation with a group of senior permanent secretaries. For the senior-most appointments the approval of the Prime Minister (but no other minister) is taken and, as a matter of convention, it is very seldom that this is not given. The civil services occupy a highly respected position in the life of the country; their prestige is increased by the honours that are heaped on them. It is not unusual for senior civil servants to out-rank junior ministers in precedence and certainly normal for them to have a higher rank than a private Member of Parliament. The four senior secretaries are invariably, on retirement, elevated to the House of Lords, so that they then sit in judgement on their former masters. Finally, the greatest safeguard of the independence and impartiality of the civil servant lies in the appreciation by Parliament of their importance. So zealously are these guarded that when a government changes the new ministers are never shown the noting by civil servants on the files of the previous government nor is a single officer ever transferred. The slightest evidence of political interference in the functioning of the civil service would create a furore in Parliament.

In France, too, the position is similar, except that much greater attention is paid to the training and education of the civil servant. The high esteem in which the senior permanent services—'Les Grands Corps' are held in that country can be judged from the fact that five of the last six prime ministers have been ex-civil servants; so is the present President of the Republic. And it is agreed by all that in the inter-war years, when France was politically wholly unstable, it was held together only by the civil service.

In India the reforms necessary for the restoration of the civil service to a position in which it can play its proper role and thereby ensure a modicum of good administration are in essence very simple. But even a start cannot be made unless public opinion begins to appreciate that an independent, impartial honest and competent civil service is a *sine qua non* of good government. Why this is not appreciated in India as it is in all well-run parliamentary democracies is partly because of our history and partly because of the need of the politician to find an alibi for his lack of achievement.

The position of the civil service in India has been vitiated to a considerable extent by the fact that before independence it served a government which was under the orders of an alien master. But the giants of the nationalist movement, of whom Pandit Pant was one, were wise enough to appreciate that the good government of this vast country required a finely honed machine and statesmen enough to disregard totally such bias as they may have had against civil servants who had served the previous government.

Popular mistrust however, continued and resulted in continuous sniping at, and denigration of the civil services which the smaller men who succeeded the earlier giants did nothing to prevent. Indeed, this was encouraged, for the services provide a readymade excuse for the failure of the politician to perform. That excuse is, however, beginning to wear thin. The present civil services are a creation of independent India, the last I.C.S. officer retired three years ago. The public is beginning to suspect that the fault lies more with the workman than with his tools.

The changes required to reconvert the civil service into a first class machine are threefold. Their objective is firstly to remove its economic position to such an extent that it becomes impervious to financial pressures and financial inducements and thirdly to restore to it once again its professional integrity, its sense of mission and its subordination of self-interest.

The first reform is to include suspension among the punishments which cannot be inflicted without due process of law and to ensure that the procedure prescribed (as a safeguard against arbitrary actions) for making appointments, postings, transfers and promotions is actually followed. Considering that we respect neither conventions nor codes of conduct this change will necessitate legislation.

*How the services have
been saving France*

Government employees get ridiculously low salaries

There is nothing very novel about this proposal. All the world's civil services function this way. So do the Indian Defence Services. They are efficient precisely because there is no political interference in the management of their internal affairs. Indeed, one of the benefits of our defeat in the 1962 war was that political interference, which had then started, and was already showing its effect, was stopped and no Defence Minister has thought it wise subsequently to resume that path.

The second reform is to increase very substantially the salaries of senior civil servants. The farcical nature of their present-day emoluments is not generally realised. In 1931, the Indian National Congress passed a resolution that the maximum salary of a public servant should be Rs. 500/- p.m. At that time the salary of a Secretary was Rs. 4,000/- p.m. and the resolution was more a protest at what was regarded as high salaries than a serious effort to prescribe a maximum; the figure was put in, almost tongue in, cheek. Having regard to the increase in the price level and the rates of taxation in the last 50 years the equivalent in real terms of Rs. 500/- then is Rs. 26,500/-now. Today a Secretary's total emoluments are Rs. 3,800/-, the equivalent of which in 1931 terms is Rs. 131/-. That our civil servants still in the main remain honest is a phenomenon which can only be explained by their immense attachment to the traditions of their profession. But the kind of economic pressure which such salaries reflect cannot go on being borne for ever, particularly in a system which gives the executives near-total control of the economy. So great are the stakes involved that one slight divergence from the path of rectitude in one single case would procure for a senior civil servant more than he can save in a life time. The financial cost of raising these salaries is very small.

It may legitimately be asked what safeguard there is, if the civil services are given the kind of quasi-independence, I am suggesting, against their abusing their power in the same manner as the politicians. Quis Custodiet ipsos custodes? (Who will guard the guards themselves) is a question to which there has never been a wholly satisfactory answer. The answer that I would give is that likelihood of abuse of power by members of a professional organisation, whose value system is based very much more on the performance of duty than on the furtherance of one's self-interest, is very much less than that of the common or garden politician whose devotion to himself is obvious, but whose devotion to the public good is not equally apparent.

And this brings me to the third reform, which is, to re-professionalize the services. The canker of careerism, sycophancy, indiscipline, factionalism, lack of integrity and pursuit of self-interest, which is attacking the system will automatically largely disappear when the political interference, from which it emanates, has been eliminated. But it will also be necessary to take positive action, on the lines of what is so notably done in France and is done very successfully in India among our Armed forces, to instil even more strongly into the new recruit, the sense of mission which is the public service, the code of conduct he must observe and the high standards by which he will be judged by his peers. In the last resort there is of course no safeguard against the abuse of power except the pressure of public opinion, and this also is easier to organise against the civil servant than against the politician.

India today has enormous problems which are going to get worse, no matter how good its governments may be. The pressures that are generated by the unchecked growth of population and the slow rate of economic growth, the increasing intensity of the competition for the means of livelihood and the breakdown of the traditional system of values, are already being translated into civil strife, disguised as communal, regional, or caste, conflict. This cannot be controlled merely by speech-making or slogan-mongering. The political leadership needs an instrument on which to rely to contain these discontents while their causes are being removed. The only instrument it has, other than the armed forces, is the civil services; these are weak and require to be strengthened. The reason why, in so much of Third World, democracies have been replaced by military governments is simply that there did not exist in those countries a civilian organisation capable of running the country under the aegis of the political leadership. We have been fortunate in having inherited one; if we wantonly destroy it we weaken the chances of survival of our present form of State.

To summarise what I have been trying to say in this somewhat rambling discourse: It is that experience has shown that the only way to ensure good administration in a multi-party democracy is to have highly qualified, impartial, independent, honest, totally a political civil services with a high sense of professional integrity. If India is to continue with its present Constitution it also must have this type of civil services which must play the same role as they do in other democracies. The structure of our political system rules out administration by party cadres; the alternative of a spoils system would only spell disaster.

Independence of services is essential for rebuilding the country

The civil services in India are not being allowed to play their proper role because of political interference in the discharge of their duties. Instead of administering the law they are being compelled to carry out the wishes of ever-changing ministers. The means used to bend civil servants to the ministers' will are the arbitrary use of the powers of transfer, suspension and promotion. To restore the independence of the civil services it is necessary to regulate the use of these powers by law and to raise substantially their emoluments. Their continuous retraining and re-education is also necessary to restore their damaged morale and their professional integrity. The destruction of the civil services can only lead to an increase in maladministration with dangers to the continuance of the system of civilian political rule. □

The Deputy Commissioners of Ashoka's days

The Mauryan counterpart of the modern DC was known as Rajuka. First, the Rajukas (or Lajukas) were placed in charge of a hundred thousand men (Lajuka me bahusu pana-sata-sahasesu janani ayata).

Second, they enjoyed sole control in awarding rewards and inflicting punishment upon the people (tesam ye abhi-hale va damde va atapatiye me kate). But they were not allowed to be prejudiced and partial in the dispensation of justice (vijyohala-samata ca siya damda-samata ca).

Third, like a nurse securing the welfare of the children placed in her charge, they were to look after, with material care, the well-being and happiness of the country people and grant favours to them (Atha hi paja viyataye dhatiye nisijitu-asvathe hoti viyata dhati cadhati me pajam sukhham palihetave'hevam mama Lajuka kata janapadasa hita-sukhaye).

They are further enjoined to work for the "sukhiyana" of the people. According to D.R. Bhandarkar, the expression "sukhiyana" should be taken in the context of Pillar Edict VII as denoting 'the works of public utility, the digging of wells on roads and such other charities' as he has specified in that edict.

Shri Nigamendra Sen Saksena, 65, is one of the more perceptive thinkers and writers on the basic subject of law and order. He joined the IPS in 1941 and rose to be IGP UP, 1970-71, DG CRPF, 1974-77, member UPSC 1977-1983 and Member National Police Commission, 1977-1981. He has authored the book 'How Russia's past shaped the USSR,' 1982. His comments on the law and order situation in the country, prepared earlier this year, will be read with profound interest.



Billas and Rangas are not produced over-night : Drift to Lawlessness

By : N.S. Saksena

THE WORD LAWLESSNESS has different connotations for different sections of the people :

(i) An average citizen cries in anguish over a state of lawlessness when he finds that physical assaults, murders, blackmailing by goondas, street brawls, thefts and burglaries go on increasing and the criminal justice system is unable to bring the culprits to book.

(ii) A still narrower and more literal meaning for those trained in law, is a situation in which a few acts of the executive are not governed by, or do not conform to, law. Stalin's regime in the Soviet Union was fair y crime-free but still a lawless society.

(iii) A still narrower connotation may be when a widespread state of lawlessness leads to the use of Article 356 of the Constitution on the ground that internal disturbances are of such a serious nature that the government of the state is not being carried on in accordance with the provisions of the Constitution. This happened in Kerala on July 31, 1959 when the Namboodripad ministry was dismissed. It also virtually happened in U.P. in the wake of the PAC mutiny of May 1973 although, technically speaking, the Kamlapati ministry resigned, and was not dismissed. It also happened in 1983 in the Punjab, although the Darbara Singh Ministry submitted its resignation.

(iv) A state government can be dismissed for lawlessness. But what an the people do when the Government of India fails to maintain

State Govts. can be dismissed for lawlessness; but not GOI

law and order in Assam, in Punjab and in Delhi (in the first 3 days of November 1984)?

When the average citizen talks of lawlessness he or she certainly does not even think of official crime statistics. If these are to be believed this piece would not be necessary. Several State Police Commissions and the National Police Commission of 1978-81 have commented on these false statistics. It should not be necessary to waste valuable time in disproving the apparently false nature of crime statistics except for the fact that non-registration and non-investigation of crime is one the most important causes of drift to lawlessness.

THIS NOTE need not have been written if crime statistics are to be believed. According to statistics, India is one of the most crime-free countries in the world. Leaving out statistics, the continuous drift to lawlessness has been apparent to any careful observer. The signs are many. The rate of murder per lakh of the population is continuously rising in India even according to official crime statistics. The reason is that very few murder cases can be concealed by showing them accidents or suicides.

Another sign of lawlessness is the unending wave of massacres. Since 1978 or so, there have been scores of cases in a few districts of U.P.—Etah, Mainpuri, Kanpur, Banda, Sitapur etc.—where 5 to 25 persons have been shot dead within a few minutes. This has happened in Bihar's rural areas. The worst tragedies occurred in Assam before, during and a few days after the State Assembly elections in early 1983. In 1983-84 the same pattern was seen in Punjab. It has to be added that the reasons for mass massacres in U.P., Bihar, Assam and Punjab are different.

A further sign of lawlessness is the increase in gang wars. There are generally only two reasons for gang warfare: first is the dispute over sharing of illicit gains. In areas where large-scale gambling or illicit distillation or illegal sale of liquor or smuggling is rife, the leaders of gangs divide territories among themselves. Encroachment by one gang over the territory of the other, leads to gang wars. The second reason is revenge for the murder of members of one gang. Both reasons imply a poor state of police control and failure of the police to bring the culprits to book. Gang wars are becoming more and more common in several cities of India. The brazen-facedness of these gang leaders is astonishing.

They give interviews to the press in which they make indirect admission that they got a large number of persons murdered; they boast that magistrates and police officers can do nothing to them as they have ministerial backing. The names of the two gang leaders of Gorakhpur in U.P. have appeared several times in newspapers and both of them were arrested under the National Security Act only in November 1984 and both fought elections to the Lok Sabha. Fortunately for the citizens of Gorakhpur, both of them lost. However, they had become so powerful that while one of the ring leaders would visit No. 1 in a state cabinet frequently to meet him over a cup of tea, the other gang leader had the similar patronage of the No. 2 man in the cabinet. The money earned by them played a very important role in not only gaining political patronage but also in bribing the custodians of law to be indifferent. One gang leader of Bombay openly gave out that it costs him Rs. 20,000/- to get someone murdered.

Organised gangs of criminals are now a phenomenon of practically all big cities as well as in several rural areas of Bihar, U.P., Madhya Pradesh, Rajasthan, etc. It is much more difficult for law enforcing agencies to deal with syndicates of crime than with individual criminals. Syndicates are organised on business lines and crime flourishes as long as it pays. The earnings are mainly from smuggling, illicit distillation, sale of liquor, gambling, blackmailing, financing from politicians in return for help in elections, etc. Expenditure is incurred on bribing politicians, police, magistrates, doctors, jail staff etc., looking after the families of members in jail, purchasing arms and ammunition. In Maharashtra the annual earnings from smuggling have been estimated at Rs. 8000 crores per year; in Gujarat and in Punjab, the earnings are estimated at over Rs. 2000 crores per year. This money is not only enough to practise bribery on a large scale but to get a few patrons of smuggling elected as legislators and to find berths for them in the State Cabinet.

THE CLOSE LINKS between the criminals and politicians need no further details. This has led to another clear manifestation of lawlessness in India, namely, a sharp rise in political murders. Even the newspaper world has displayed such a short memory that all attention is focussed on the state which happens to be politically disturbed at the moment. In 1983 the murder of Mr. A.S. Atwal, DIG of police, at the Golden Temple, should have highlighted—unfortunately it did

*A man can be murdered in
Bombay for Rs. 20,000 only*

Smugglers can bribe Ministers, Magistrates, Police, Jailors

not—the fact that the number of politically motivated crime cases has increased by leaps and bounds in several states—Punjab, Kerala, West Bengal, the North-East, Bihar and even Karnataka.

No separate statistics have been compiled on politically motivated murders. But there can be no doubt that the rate of detection and prosecution in such murders, as compared to other murder cases, is very low. The rate of conviction is even lower, and in the majority of these cases, sentences have been commuted, or remitted altogether.

Bombs and bullets have been used in many 'peaceful protests' for example the 'Bangla bandh' of April 3, 1981, in Calcutta led to the loss of 22 lives and damage to 142 buses and trams.

IN WEST BENGAL after 1967, first the Marxists and later the Congress (I), killed their opponents, not in tens but in hundreds. Similarly in Kerala, the murder of political opponents began during the first Marxist government in 1957-59. Both the Marxist governments in West Bengal and Kerala released political activists convicted of murder and dacoity. In 1980-81, Marxist and RSS cadres in Kerala retaliated with mutual killings in which each party kept count of the scores. The total crossed a century. When Mr E.K. Nayanar, the then chief minister of Kerala, was told that the state government might be dismissed on this count, his reaction was typical. He said that the problem of Naxalite violence and political murders was much more when Mr. Koya and Mr. Karunakaran had held the home portfolio. He added that more crimes of this nature were committed in one district of Bihar, in Andhra Pradesh (nine talukas) and in two districts of Tamil Nadu.

Terrorism as an instrument of politics cannot be eliminated merely by expressing a sense of shock when someone big is killed. Proper investigation, careful prosecution and non-interference with punishment inflicted by courts, are the only methods of dealing with the problem. We have failed on all three counts. In Assam, very little was done to investigate 83 explosion cases in 1980 and 1981 (upto April 6) till a senior IAS officer was killed in the 84th incident. In Bihar, the interest shown in bomb explosions was minimal until the murder of Mr. L.N. Mishra, the then Railway Minister. The same has been true in Kerala and Punjab. One murder has followed another and has been forgotten till a VIP has become the victim.

EVERY GROUP—political, linguistic, religious, caste-based, class-based etc.—has somehow acquired the freedom to raise private armies which are trained, financed and equipped with weapons, legal or illegal, to achieve the objectives of the group. If finances are sound there is no shortage of instructors—retired personnel from the army or para-military forces—and firearms. To avoid objections it is usually stated that they are being raised for self-defence. The latest addition to a long list of private armies is the Bhoomi Sena of Bihar, raised by the rich and feudal classes of Bihar, to meet the Communist-inspired awakening among the landless labour of Bihar. There is no doubt that the Communist and Naxalite elements have encouraged violence; but in their defence it must be said that the starting point was the total failure of the State administration to enforce the land reforms legislation on the ground. Expert studies have shown that the feudal elements among ministers, legislators and bureaucrats have made land legislation a farce. Unlike Punjab, Haryana and U.P., the ex-Zamindars are, perhaps, as strong today as before the abolition of Zamindari. If private armies are needed to safeguard various sections of the people, what for are police and other law enforcing agencies?

When lawlessness spread on a large scale, there was chaos in educational institutions, mounting indiscipline in industry and daily demonstrations and clashes in the streets. Certain political parties, whose backing in the electorate was quite small, appeared to be much stronger when it came to creating lawlessness in big cities. The harassed citizen was often in doubt as to whom to blame as he did not know who was finally responsible for law and order. Before independence there was never any doubt that the Viceroy and Governor-General of India was the final authority. There is no such clear authority visible in India. Even the constitutional position is often disputed. When hundreds of millions in the country saw the strange spectacle of a Chief Minister (Ajoy Mukherji) going on fast to restore law and order, they wondered whom to turn to for restoring peace? The rot travelled fast from the top downwards. People saw buses being hijacked and burnt in the presence of magistrates and policemen. The confusion has not yet been resolved.

Whenever one thinks of law and order, one is inclined to think only of the police agency for maintaining peace, yet it is only one of the several agencies. Many of the other agencies have a vital role to play. Here, too, I will take only a few important ones. These are :—

*Non-implimentation of land laws
has led to Naxalite violence*

The law recogniser party government, but not partisan government

- (i) The Government of India;
- (ii) The State Governments and the Union Territories;
- (iii) The District Magistrates;
- (iv) The Police Departments;
- (v) Intelligence;
- (vi) The Courts;
- (vii) The Jails;
- (viii) The Machinery for control of firearms.

UNDER THE CONSTITUTION, law and order is the responsibility of the States but the Government of India has the overall responsibility of ensuring that the constitutional machinery does not break down. If there are such widespread disturbances, in which lawful government is not possible, the Government of India has a duty to help the State Government.

The law recognises that Governments will be party Governments, but law does not recognise that Governments will be manifestly unfair to any section of society and fail to safeguard their lives and property.

All public servants in India—from the highest to the lowest—take an oath to be loyal to the country and to the Constitution. If this is implemented in practice several problems of law and order will disappear. The main law enforcement machinery has blatantly abandoned sound principles of law and order so as not to jeopardise votes. The unfortunate fact has to be faced that for a number of years a firm impression has been created that the law enforcement agencies need not always enforce the law of the land. In a large number of cases, involving organised violence, negotiations took place with law breakers, who, generally, insisted that all cases against them should be dropped. In this atmosphere lawlessness has steadily grown. When there is mob violence, pious appeals are issued not to violate the law, forgetting that the greatest act of lawlessness is for a government not to enforce its own laws. The worst example of this kind was on the first two days of November 1984 in Delhi, Kanpur, Ghaziabad, Bokaro etc., where mobs, led by Congressmen, were massacring the Sikhs and preparing to get votes on the basis of anti-Sikh sentiments.

SINCE 1947 there must have been over 200 different Governments in the 22 states in the Indian Union. The Government of India has not used its emergency powers even a dozen times to issue warnings or advice to State Governments, for not maintaining law and order. The weakness of the Government of India sprang from the fact that the opposition governments can always point to the worse record of the Congress-ruled States like Bihar and to States under President's rule. It is always the duty of the Government of India to coordinate and to guide. Therefore it may be taken as a rule that law and order is the sole discretion of State Governments. By and large this duty was discharged reasonably for the first 15-20 years after independence. When the first generation of national leaders, like Rajaji, Dr. B.C.Roy, Morarji Desai, Dr. Shri Krishna Sinha, G.B. Pant etc were succeeded by others, who owed their position to majority support of party MLAs, the fabric of law and order was shaken. The primacy of order was changed by the primacy of the support of party MLAs, all of whom demanded a price. Their price was usually the power to manipulate the postings of SHO's to suit their personal interests. This sapped the very foundations of honest police work.

There have, of course, been a few bad exceptions in which the State Governments went to the extent of issuing illegal instructions and otherwise undermining the rule of law. Most democratic Governments are reluctant to do anything, which may undermine their political support in the electorate. There is a serious erosion of faith not merely in the police but in the entire machinery of law and order, which includes the magistracy, the police and the courts. The people have repeatedly seen examples of the following in various states in India:

- (a) A paralysis of will in dealing with politically powerful groups;
- (b) Serious riots, destruction of property, arson and even large-scale assaults were sometimes ignored;
- (c) When agitations were called off there was generally an assurance that all legal action would be dropped. This is now a fore-knowledge amongst law-breakers and it encourages lawlessness;
- (d) There were illegal verbal hints to stop all investigations while cases gone to court were formally withdrawn.

*Even Police postings are being
decided by corrupt legislators*

Officers are punished for refusing arms licences to known criminals

THE POLICE ACT of 1861 laid down that the administration of the police in a district was to be vested in the District Superintendent of Police "under the general control and direction" of the District Magistrate.

Before 1946 over 95% of the District Magistrates were firm in the maintenance of law and order because they believed, rightly or wrongly, that there was no other way out for the maintenance of the British empire. After independence the attitude of District Magistrates towards maintenance of law and order slowly changed. They had to constantly weigh a number of other factors—some legitimate and others illegitimate—and thus a good many of them became weak and indecisive. It is also true that they have been constantly subjected to wrong advice, which they found it difficult to ignore. It was pathetic to see District Magistrates, especially in Punjab and Assam, forgetting their own legal powers and responsibilities and subordinating the law and order machinery to political interests. A minority stood up and were effortlessly eased out. There are examples of District Magistrates being transferred for not issuing firearms licences to known criminals.

AFTER THE GOVERNMENT and the District Magistrate, the main agency for maintaining law and order is the police. The effectiveness of this instrument depends on several factors, the important ones being :

- (i) It must be loyal to the country and the Constitution and should have no extraneous loyalties;
- (ii) It must have clear-cut directives from the State Government and the District Magistrate and their unstinted support in all bonafide actions;
- (iii) Its own general health must be good.
- (iv) It must have a good leadership;
- (v) Its technical efficiency should be as high as possible within the constraints of financial resources.

IT IS ABSOLUTELY essential that the force should have loyalty only to the country and the laws of the land. If they themselves are swayed by parochial considerations, they cannot maintain peace. There have been disturbing trends recently which threaten not only the correct legal functioning of the police but also the integrity and unity of

India. These are mostly due to the fact that the police has been influenced either at higher or at lower levels, by parochial considerations or by other extraneous reasons. For nearly a quarter of a century after 1947, the police force in India, taken as a whole, displayed an admirable spirit of loyalty in carrying out the orders of the senior officers, even if it meant lathi-charging and firing on their own kith and kin. This is no longer so; sections of the police have ceased to be impartial. It is wrong to single out the predominantly Sikh Police of Punjab for being communal. The police of Delhi, Kanpur, Ghaziabad, Indore and Bokaro etc, has been at least two shades worse. Who started tampering with the loyalty of the police?

In 1959 the first anti-Bengalee riots broke out in Assam. Any one who wants to know the truth may read pages 402 to 412 of Mr. B.N. Mullik's book "My years with Nehru 1948-1964". This is a first-hand account of how foolishly and ineptly the Governor and Chief Minister even failed to comprehend the situation till more than one lakh Bengalees became refugees. While the two highest executives failed so miserably, there is no mention in the whole chapter of a single occasion when the Assamese police refused to lathicharge or fire, when ordered to do so. When a Punjabi IPS officer of Assam cadre ordered the opening of fire on the mob the police implicitly obeyed orders, but the IPS officer was suspended. The IGP, who wanted strict action against riotous mobs, was later removed. The same story of inefficiency and callousness was displayed in February 1983 when about 5000 people lost their lives because police had clear instructions to give priority to a citizen's right to vote over his right to life. Masses of police protected ballot-boxes in which not even ten votes were cast, but paid no heed to the cries of the masses being massacred not very far off. However this served the political objective of getting a type of state government, which the Centre wanted.

Till a few years back whenever senior police officers were left free to maintain law and order, they have been able to deliver the goods. The majority of failures have been due to the fact that there have been open interference in operational responsibilities and often impossible orders are given to the police to avoid use of force. There are already instructions laid down in police Manuals that use of force should be avoided; that force, when necessary, should be absolutely minimum and firearms should not be used unless there is serious and imminent danger to life and property. The police force must faithfully comply with

B.N. Mullik's 'My years with Nehru, 1948-1964' makes revealing reading

Police, "the linchpin of our fabric, has been eroded"—HVR Iyengar

these instructions. But to go beyond these and reduce the police officers to a state where, in every situation, they await instructions from above, is to create a state of affairs where, in the words of Shri H.V.R. Iyengar, our first Indian Home Secretary after independence, "the linchpin of our fabric has been eroded and becomes useless". This is what has made several state police forces practically ineffective, leading to the large-scale induction of Central Reserve Police Force, the Border Security Force and even the Army. This is not a happy situation at all. In an article in the 'Indian Express' of 18-4-68, Shri H.V.R. Iyengar has quoted a Madras case. "We had a sad case in Madras the other day of a confrontation between students and transport workers. At one stage the Inspector General of Police and the Commissioner of Police were reported to be on the street the whole night, telephoning frequently to the Chief Minister who was sitting up the whole night with his Cabinet colleagues in his residence. I am sure the motives of the Ministers were unexceptionable."

On March 18, 1974 there was a state of chaos in Patna for about two hours. The students and certain other sections had given a call for preventing the Governor from addressing the State Assembly. With the help of a large force the Governor was escorted to the Assembly. This failure enraged the mob which went on a rampage of arson and destruction. There were strict instructions to the DM/SSP not to resort to firing without the permission of the Chief Minister. Attempts made to contact the Chief Minister failed as he was inside the State Assembly. Once the Chief Minister approved the use of firearms the district authorities brought the situation under control within an hour or so.

Unconsciously due to a very warped logic, both the Government of India and the State Governments have arrived at an understanding that crime control and law and order are in two watertight compartments, independent of each other. While crime is being concealed and not registered on a massive scale, every government is willing to increase paramilitary battalions to maintain law and order firmly. The relationship between the two duties of the police is direct and close. In order to understand this relationship, one can make a general observation that if there is a high rate of crime in any area, the law and order situation can go out of hand much more easily than it would be possible otherwise. The reason is that criminal elements in a region are always eager to meddle in a

situation which creates confusion and gives them an opportunity for loot and for settling old scores. It may be added that when crimes are neither registered nor investigated, real crime goes up. Rangas and Billas do not become big criminals overnight. Pickpocketing, cycle-lifting, minor assaults and robberies are overlooked. This emboldens criminals to embark on more heinous crimes.

It is a vain hope to maintain effective order without dealing firmly with all type of goondas. The word 'firmly' in legal sense means that all offences reported against the criminals should be promptly registered, investigated and prosecuted. Even if a small percentage of these offences ultimately result in a jail sentence, a large number of goondas will be permanently in jail and those outside will be afraid of the majesty of law.

WHENEVER a big failure in law and order occurs, often those very people who failed to see up, anticipate and act, unofficially brief the press and there are big headlines indicating that there was total failure of intelligence. This is done with impunity because an Intelligence Chief, by the very nature of his assignment, cannot meet the press.

Coming back to the field of law and order, perhaps one of the most massive failures was the PAC Mutiny of May 1973. Whose failure was it, why and to what extent? It was widely and repeatedly given out by official spokesmen of the U.P. Home Department that intelligence failed. On May 23, within 48 hours of the explosion, the failure of intelligence was highlighted. According to the 'Patriot' of 24th May 1973, Mr. K.C. Pant, the then Minister of State in the Home Ministry who reached Lucknow, "conceded that there was failure on the part of the State intelligence, probably because some of the intelligence men were also involved in the agitation launched by the unrecognised organisation, the Police Parishad". No Intelligence Branch was needed to report open incidents of mass indiscipline of the type, which started in U.P. Police several weeks before the final explosion on May 21. Several of these incidents took place in the presence of senior officers and reports even appeared in newspapers. No intelligence reports were needed when cases of widespread indiscipline were taking place in the very presence of SPs and DIGs of Police and that, too, in big cities like Allahabad and Kanpur. Quite rightly the Intelligence people were angry at being made scapegoats by the official spokesmen of the U.P. Government. A few of them secretly brief-

For every failure of the Government, they blame the Intelligence, which can't speak

Intelligence chiefs are told to watch the PM's or CMs' enemies, not national enemies

ed the press and one Hindi daily of Lucknow even carried reports, alleged to have been sent by the Intelligence Branch

The alleged part played by the Intelligence Branch in the February 1983 State Assembly elections in Karnataka was universally condemned and the Hegde Government placed the DIG Intelligence under suspension. However, several vital issues were not discussed and need to be considered objectively. First, what happened in Karnataka is the rule and not the exception in the working of the Intelligence Branches for the last three decades. Secondly, advice to the State Governments and the Central Government in matters, which are not its legitimate concern, occupies so much of the time and energy of the Intelligence Branches that they have not enough resources left for fighting the internal and external enemies of the country. This is especially deplorable at a time when security conditions deteriorated fast in the seventies and eighties both within India's borders and also outside. Thirdly as intelligence of interest to the party in power is regarded as more important, Intelligence Chiefs in the States are selected more for their loyalty than for their competence. Intelligence Chiefs have good intelligence about the party enemies of the Prime Minister/Chief Minister and poor intelligence about the nation's enemies. Thus they have forgotten their real job and are busy in doing personal service to the P.M. or C.M.

IN ANTICIPATED dangers to the fabric of law and order intelligence has to be ruthlessly objective in its analysis. The government has then two tasks left :

- (i) Evaluation of intelligence reports;
- (ii) Executive action.

The outside world knows little about who evaluates intelligence reports and how. The successive failures of law and order in Assam are not due to failure of intelligence but poor understanding combined with political motivation of those at the apex of the state administration. In 1983 the State administration in Assam had two simultaneous tasks—to hold elections and to prevent a civil war. About 4 months before the elections, the Congress (I) formed a 15-Member Election Committee on October 21, 1982. With this long warning, there was need for airlift—not a substitute for a lesser number of well-briefed officers, who should have reached much earlier for ground familiarisation. Anyone who visit-

ed Assam during the last months of 1982 could hear the apprehension that elections would lead to a bloodbath. Arrangements were massive but, being hasty, they lacked proper coordination and well-organised effectiveness. Above all there was an inadequate appreciation at the top of the scale of the problem.

SOMEONE MAY ASK the question as to what have the Courts got to do with the maintenance of law and order? Why have Courts of law been designated as one of the agencies of law and order along with the State Government, the District Magistrate and the Police? The answers to these questions are more than one.

First 'law and order' means that order has to be maintained in accordance with the laws of the land. It is very essential to psychologically recondition all policemen to use laws to maintain order. Law permits the use of lathis and bullets also, but only if there is no other way out. It has happened more than once that a strong poses of policemen found a small group of rowdy elements. There was no risk of policemen being overpowered. However the problem was sometimes handled by giving slaps and kicks to the rowdier. Order was restored on the streets, but by a wrong method. The correct method should have been to bring them to the Police Station, register a cognisable offence and then prosecute them. Our allegiance to the Constitution makes it obligatory on us to respect the Constitutional provision that punishment is an exclusive jurisdiction of the Courts. Apart from constitutional rectitude, such a practice makes policemen unsuitable psychological instruments of maintaining law and order. No police officer can master a mob unless he first masters his own nerves.

Secondly, serious problems of law and order can arise from judgements of courts. No blame attaches to courts as they have to perform their own duty of administering justice. Some examples may be quoted :

- (i) The long drawn out racial disturbances in USA broke out after the Supreme Court reversed in 1956 its own previous directive "Separate but equal" opportunities for whites and negroes. The negro boys and girls at once wanted admission in all-white schools and negroes insisted on riding all-white buses. The situation in many States in the South, especially in Alabama, was bad and it took a long time before tempers cooled down.

No police officer can master a mob unless he first masters his nerves

How a Supreme Court decision led to a costly Telengana agitation

(ii) In 1969 the Supreme Court in India declared the Public Employment Act, which guaranteed reservation for Telengana people, as *ultra vires*. As a result the State of Andhra Pradesh was disturbed from 1969 to 1972; there were riots first in Telengana area and then in Andhra area. On 17-1-73 the Ministry resigned and President's Rule was imposed.

A good deal depends upon the attitude of courts. A stern attitude dampens the spirit of rioters. Of course, courts have to be completely free of executive influences. The sentences imposed should have some relationship with the maximum laid down by law. The fact that an unlawful assembly, which indulged in rioting, was led by a big political leader should not give any mental constraints to the court to impose penalties laid down by the law. It has not yet been fully realised that criminal behaviour, like insurance, operates on what has been termed as the "risk model". If risks are low law-breaking becomes a fun; if the percentage of risk is high, very few dare. The percentage of probability depends on the following main factors:

- (i) The attitude of the administration;
- (ii) The efficiency of the police machinery and
- (iii) The disposal rate in courts.

There are serious weaknesses in all these spheres. The last one is not known to many. At present the courts are so clogged that a large percentage of accused can hope to be on bail and then see the cases against them linger to a slow death in years.

TO PUT IT BRIEFLY our jails suffer from the following handicaps from the point of view of maintaining law and order:

(i) First the accommodation in jails has not kept pace with the increase in population. Criminologists, all over the world, acknowledge, that a few hardened criminals have to be kept almost permanently in jail to save society;

(ii) Secondly as a result of over-crowding, under-trials—quite a few innocent—are herded with criminals and thus jails become training schools for future criminals;

(iii) Thirdly the frightful state of corruption in jails makes it much easier for members of crime syndicates to lead a fairly comfortable life;

(iv) Fourthly the convicts are not prepared for a post-release life and quite a few go back to crime.

IN THE WORLD of today one of the important factors which affects the handling of law and order situations is the availability of firearms with those who create law and order situations. In several countries in the past firearms have been exclusively in the possession of armed forces. When the American Constitution was framed the right to possess and carry firearms was made one of the fundamental rights of citizens. Till August 15, 1947, when India was under British rule, very few persons were granted licences to own firearms. Also the number of unlicensed firearms was very small as compared to the position in the eighties. The courts usually gave heavy jail sentences under the Arms Act. It was also exceedingly difficult to get ammunition for unlicensed weapons. Revolutionaries had to raid armouries to get weapons. All this has changed and this has led to repeated carnages in India.

The presence of this large number of firearms—both licensed and unlicensed—in the hands of bad characters poses serious threats to law and order. The leniency of the Arms Act of 1959, as compared to the Arms Act of 1878—and its still more lenient and corrupt implementation—has created an undesirable situation. For several years past the use of firearms has become frequent in Delhi, U.P., Bihar, West Bengal and elsewhere. The latest example of proliferation of firearms is being seen in the Punjab since 1982.

LAWLESSNESS is continuously growing since early 1970's. The pace of deterioration can be seen from year to year. The root cause is dirty politics, with the help of criminal elements. In the 1960's many police chiefs were worried about political help to criminals. Since early 1970s criminal elements are getting into politics and even attaining high ranks in the political executive. In U.P., Bihar and a few other states, criminals, directly or indirectly, issue posting orders of police officers and are responsible for their promotions.

*The Arms Act of 1878 was good;
the Arms Act of 1959 is bad.*

More criminals per square yard of PM's House & PM's Secretariat, than in Punjab, Kashmir, Assam put together

The main optimistic sign—which may turn the situation after a few years—is the roused consciousness of the people at large. The press has made the people aware of the nexus between politicians and criminals. A day is bound to come when people will try to put an end to this nexus. Once the people make it clear through the ballot-box that they will not tolerate lawlessness, things are bound to improve. At present, politicians feel that they can get more votes by encouraging lawlessness. The almost "tolerated" massacres and arson in several cities in India, especially Delhi in the first 3 days of November, was made use of for getting Hindu votes.

The immediate prospect is more crime, violence and lawlessness. It has been calculated that there were 31 cases of mass-murders in U.P. in the years 1980-84. The total number of persons killed in these was 306—from a minimum of 5 to a maximum of 25 in one incident. If a tally is made in Bihar the position would be much worse. January 1985 has made a worse start with repeated mass-murders both in U.P. and in Bihar. There is no chance of curbing this unless votes are delinked from the elementary duty of the state to maintain law and order. There is no sign of this even under the much advertised good intentions of the new government. The proof lies not in speeches but in action. The CBI has in mid-January submitted a charge-sheet against 379 extremists, who were found in the Golden Temple Amritsar on June 6, 1984. The declarations of the Government of India to give equal protection to all citizens will only be believed after three thousand and odd criminals in Delhi, Kanpur, Ghaziabad, Bokaro, Indore etc. are similarly put under trial under special laws applied to the extremists in Punjab.

For the last 3-4 years there has been massive propaganda about anti-national elements in Assam, J&K, Punjab and Manipur. It appears that per square yard the maximum number of these elements was in the PM's house and PM's Secretariat.

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Rural Development and the Developing Ecological Crisis

Sahdev Kumar

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IN THE MIDST of all the crises—political, economic, social—that seem to engulf India everyday, a more fundamental crisis—an Ecological Crisis—is seething in the country that is slowly corroding the very foundations of *Bharat bhumi*—of the motherland. And I mean that quite literally.

For instance, after every monsoon, more soil in India is washed away in rivers, lakes and oceans than has been used to build all the brick houses all across the country. And in the highly grazed Shivalik hills, Simla, six cms. of top soil, representing nearly 2,400 years of ecological history, disappears every year. In fact, it is estimated that India is losing as large a quantity of inorganic fertilizers each year as is being added to it artificially, at a very huge cost. This means grave loss of millions of hectares of good agricultural land each year. By the year 2000, at the present rate of erosion, as much as 140 million hectares—the entire cultivated area of India today—would be lost. It also means heavy siltation of reservoirs, built at enormous costs, reducing their holding capacity, irrigation potential and life expectancy. One consequence of all this is the disaster wrought by floods that strikes many Indian States annually. An average loss of Rs 1,000 crores due to floods has become a steady figure, but the total area subject to periodic floods has doubled in the last ten years, to well over 40 million hectares. From every nook and corner of the country, the government propaganda (directed largely against the poor) makes population explosion as the most severe problem of India. But a recent UN study, still unreported, categorically points out that India is in fact quite capable of feeding as many as 2,000-2,500 million people—3 to 4 times the present population of the country—as long as it does not destroy its environment.

However, massive ecological degradation that is currently going on in India, threatens to wreak devastation, the like of which the country has never seen before. Nor is India equipped—technologically and politically—to contain such a devastation, once (and that, alas, soon) it goes out of hand.

At this rate, our villagers will soon have no fuel to cook food

Let us consider the strange and devastating things that are happening in the Indian countryside.

Until about 1960, fuel-wood, as also cow-dung, could be had by the rural poor, for the picking. No doubt a lot of time was spent collecting and picking it, but they didn't have to pay for it. Today, because of numerous factors—rapid industrialisation, some of it very wasteful, population explosion and unchecked urbanisation—more and more of these fuels are now part of the market economy, and are now being transferred from the villages to nearby cities and towns. As a consequence, India's 5.67 lakh villages are facing a crisis the like of which they have never known before; nor can it be solved by common folk sense, by which ordinary people everywhere have fended disasters in the past. The country's planners think of energy crisis for India largely in terms of industries, or cars and trucks, or the gas cylinders for the well-off in the cities. They easily overlook millions of wood or coal stoves that are used for cooking food for the vast majority of the people. It is a most significant fact, and often unknown, that 50 per cent of all energy consumption in India is spent on cooking. This is nearly double the quantity of energy spent on agriculture and industry, put together. What is even more surprising is that 87 per cent of the country's cooking energy requirements are met with non-commercial sources of energy—firewood, cowdung and crop wastes. Coal and kerosene, two alternative sources of cooking energy, are thus utilised for barely 13 per cent of the requirements.

Thus it is obvious that no other form of energy is more crucial for human survival, more sensitive to environmental conditions, than the energy needed for cooking. Firewood and cowdung have been, and continue to be, the main fuel for cooking in the villages since time immemorial. Though it is not often so apparent, particularly to the well off, but 70 per cent of such energy in towns and cities also comes from this source.

The firewood resources in India have already reached a critical stage, and with the destruction of forests it is becoming desperate. Those who would suffer most from this would, inevitably, be the rural poor. The poor have to spend two to three hours daily trekking a distance of 4 to 6 km to gather firewood, cowdung and crop wastes for cooking. The situation is much worse in the hilly areas and the deserts. In mountainous Garhwal, for instance, women walk at least seven hours three out of four

days, to bring back 25 kg of wood each time. The rural children too become victims of this energy crunch; at the expense of going to school or developing in other ways, they become little automatons for merely gathering wood or cowdung.

Also contrary to general belief, energy gathering of the poor does not appear to be a significant cause of deforestation, since their hearths burn mainly little twigs, branches and other crop wastes.

So what is the way out?

India's energy resources are indeed phenomenal but very poorly organised, and very extravagantly used by a small urban elite. Here are some areas of urgent attention and research:

(a) Most wood stoves or *chulhas* in India are notoriously inefficient; 90-95% fuel in them is just wasted away. There is no reason to believe that, with some ingenuity, their efficiency can't be increased to 40-50%.

(b) India's Biogas potential is enormously high but extremely under utilised. According to a study of the Department of Science and Technology, India's 273 million cattle (1972 cattle census) can yield 575 million tonnes of usable dung per annum. This dung can produce about 22,424 million cubic meters of biogas, sufficient to provide cooking energy for 30-35% of the households in the country. But if the country's cattle population acquires a better health, and hence yields more dung, and more efficient system of collecting the dung generated, Planning Commission experts estimate the biogas potential to be sufficient for the cooking energy needs of the entire rural population.

(c) India must undertake to use solar energy on an affordable and grand scale, in the urban centres no less than in the villages. The country is blessed with such abundant sun light, and for such long hours, and yet no real attempts have been made to utilise the solar energy in a manner that would make sense to the people. Even those households in the towns and cities who can well afford to buy a solar cooker—and who otherwise consume large amounts of precious fuels at the expense of the rural poor—have not felt convinced of its viability or efficiency.

(d) A very major source of fuelwood can be on the Indian farm-

*The rich are much greater burden
on the earth than the poor*

We have revised our birth rate targets 25 times in 30 years !

lands. Trees can be grown on farm lands as wind breakers, shade trees, shelter belts, fodder trees and fruit trees, and all these will provide fuelwood. If such a scheme was introduced and promoted, cowdung would then be released for use as farm yard manure, boosting agriculture productivity and counter-balancing any reduction in area under crops that may take place. On rough estimate, some 96 million tonnes of fuelwood would be yield from such farm-belt plantations.

(e) Another comparable source for fuelwood are the vast and barren tracts of wastelands; even if only 15 per cent of these approximate 80 million hectares were utilised for fuelwood plantations, they could yield about 100 million tonnes per annum.

These are some of the more workable solutions to a major crisis; they are ecologically sound and socially and economically affordable.

ALL OVER the world population increase is seen as the most serious hindrance to development, and an unbearable burden on the earth and its various resources. Yet there is something amiss in the manner in which the statistics are presented. For instance, it has been estimated that every child born in America consumes 35 times the natural resources consumed by a child in India. For the earth taken as a whole, it means that if people all over the world were to live like the Americans—as educated urbanised people everywhere aspire to—Mother Earth will have to support not the present world population of 5 billion but in fact a population of some 170 billion. It is a nightmarish thought. And so naturally, the argument runs, in order to “develop” like the Americans, we must curtail the population. The argument is as simple as it is specious.

In the face of colossal neglect of the quality of life—water, environmental hygiene, nutrition, prevention and cure of disease, care of children and women—India's family planning programme is totally ill-conceived. From 15 lakhs in the First Five Year Plan, the budget for it has skyrocketed to Rs. 1,567 crores in the Sixth Plan. Yet all the investment has made no significant dent on the population increase. As in other parts of the world, it is now well-established in India that the Infant Mortality Rate (IMR) is crucially related to the rate of population growth: the more children are likely to die, the more will be produced. In U.P. I.M.R. is 177 compared to 42 in Kerala—and correspondingly the birth rates are 40.4 and 25.2, respectively, compared to the national average of 33.2. Similar correlations are to be found all over the world.

Now at present every third person who dies in the country is a child below the age of five. The I.M.R. of 127 for India is amongst the highest in the world, and has not decreased at all over the past one decade. This means that every ninth child born in the country dies before the age of one. According to the National Institute of Nutrition, 85% of Indian children between the age of one and five suffer from some malnutrition or the other. And every year, over 1.5 million pre-school children die from diarrhoeal diseases other than cholera, making it a permanent epidemic in the country.

By the year 2000, India is targeted to reduce its I.M.R. by 50% and its birth-rate to 21, from the present 33.2. But if India continues with its current policies of neglect of children and mothers, and of environmental sanitation, nutrition and prevention, then all its targets will be nothing more than a pie in the sky. Already in the past twenty years, India has fixed and refixed the target for its birth rate at 25 different times. Yet the goal set in 1963 for 1973 is still nowhere near achievement in 1985. For centuries all cultures have believed—and I think rightly so—that the people are part of the wealth of a nation and not a problem. Now we educated urbanised people have learned to look with certain disdain at someone who has four or five children. We regard that as an act of utmost ignorance and of national irresponsibility. Yet we look at others who live extravagantly, with some degree of envy, and are very loath to call them ignorant and nationally irresponsible !

Though such comparisons as exist between consumption of natural resources by a child in America and India are not quite available for the urban and rural Indian populations, as an estimate it may be suggested that every child born in the urban middle class family in India is equivalent to 12-15 children born to the rural poor. Thus a much greater burden on the nation's resources is placed by a relatively small increase in the affluent minority of urban population in the country than the increase in the rural areas.

In order to establish a more sensible assessment of the load-bearing capacity of Mother Earth, or Mother India, population increase must be linked with consumption patterns. Mahatma Gandhi used to remark: “There may be enough for everyone's needs, but there will never be enough for everyone's greeds.” This remark assumes a greater significance in our times when, in the name of ‘progress’, the greeds of a few

There is enough for the needs of all, not for the greeds of some

We in India must again make peace with Nature

are made to appear—through an unabashed glossy propaganda—as cherished goals for all. These goals, in turn, are supposed to fulfil, through 'trickle effect', the very basic requirements of existence for everyone. The dream of progress is slowly turning out to be a nightmare for Mother Earth. In imbibing the industrial culture of the West—based as it has been for centuries on the exploitation of nature and man, and on cheap raw materials, cheap labour and captive colonies—India has been made into a neo-colony by her own planners. Today 50% of the Indian population remains below the poverty line; this percentage is not likely to diminish even after 100 years of India's independence, or even until 'kingdom come.' By the year 2000, in actual numbers there will be more desperately poor people in the country than the total population of India was in 1947.

IN 1972, at the UN conference on the Environment at Stockholm, Indira Gandhi and other Third World leaders protested that environmental degradation is a problem principally of the industrialised nations. The obsessive concern for the environment, it was suggested, was a plot of the West to hinder development elsewhere. Today one can clearly see that such suggestions as 'we are too poor to damage our environment' were as short-sighted as they were untrue. In fact, the desecration of the environment—some of it irreversible—has been occurring as senselessly in India as elsewhere, though through a somewhat different set of factors.

Unlike some other cultures, in India Nature and its various manifestations have not been seen as an adversary, to be destroyed and conquered by Man. In fact imbued with the same spirit that permeates Man, Nature with all its forces has been worshipped and personified in Indian art and sculpture for ages. But it is only now, assaulted as we are by new ideas of 'progress' and mastery of the universe, that for the first time in human history, the inter-dependence of all Nature—plants, animals, soil, water, air, Man—is being seen, not as a mere philosophical idea, but as a crucial imperative for survival of the Mother Earth itself. To consider this pervasive ethos of wholeness as a living maxim in the ancient cultures of American Indians, the Chinese, the Egyptians, the Greeks and here in India, we need only recall some of the customs and rites in our own villages and towns, even amongst the poorest of the poor and the most unlettered people. At every meal, we left a few grains of rice or *daal* for the sparrow or the crow; a piece of bread for the dog,

Indian culture has always been Nature-centred

something for the cow; some flour for the ants; a glass of water for the *tulsi* plant, some for the *peepal* tree, and a cherished place for the unannounced guest. It was 'Mother Ganga', and '*gau mata*'; the Himalaya was the abode of the gods; the forests were imbued with the spirit of the 'rishis'. An Indian dancer asked Mother Earth for forgiveness for 'stomping' on her. A Hindu wedding was performed by invoking the elements the rituals for the dead celebrated the return of the Eternal to the Eternal. In short, all flora and fauna were part of an integral whole in which Man, the most evolved creature, became a natural keeper of this most wonderful creation of the organic and the inorganic world. *Vasudeva Kutumbakam*, the whole world is a family, is clearly the first and the foremost principle of ecology. How well it is expressed by sant Kabir in one of his *padas*:

*Just as one strand is attached to another,
So all life is inter-woven!
O Brother
He understands who does not stand aloof!
For he is one with the One, and he sees
Through the eyes of love!
There is no other way—
To see the Whole, one must be Whole
So Whole it remains!*

The development of Indian villages is vitally linked to the development of the entire country as a whole, of her people, other animate beings, land, forests, water, minerals, sky. All. It is not an easy lesson to learn. But if we recall that once we did remember this lesson, and shaped our lives in accordance with it, it may be easier to learn it again. Besides our choices for survival and prosperity crucially hinge on our realising our common brotherhood and sisterhood with all human beings, animals and all elements of nature.

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The Indian Census Report, 1981 and the International Birth Control Mafia

By : Ashish Bose
 President, IASP

THE MAIN THEME of this Paper is *Analysis of 1981 Census Results*. I think it is intellectual cowardice to shelter under the umbrella of scientific analysis and refrain from saying anything on policy matters. Very often, behind the eagerness to confine oneself strictly to statistical analysis is the fear of annoying authorities with unpleasant facts which run counter to the Government's stand on specific issues or policies in general, and also the desire to play safe and not get involved in controversial discussions on politically sensitive subjects. It is my firm view that the cause of the science of Demography will not be furthered by such a cautious and cowardly stand. In passing, I must also note that it is not always the Government (Central or State) which scares such conventional demographers but also the lure of money and foreign trips offered by international donor agencies in the field of population. Many Indian demographers constantly seek patronage from foreign universities and donor agencies, which in turn are under the thumb of vested interests. To dramatise this situation, I call this foreign lobby IBCM : International Birth Control Mafia. I have not the slightest intention of accusing Indian demographers of lack of courage or integrity but on an occasion like this, I think I would be failing in my duty as the President of the World's second largest Population Association, if I do not highlight at the outset the paramount need for scientific objectivity, intellectual honesty and above all dignity in our conduct.

Our Census Reports are a refutation of our Population Policy

Most of the Indian demographers belonging to the new generation are well trained in technical Demography both in India and abroad, and yet they have, by and large, failed to make their mark on the national scene. Why should this be so? Is it because of the deficiency in the intellectual ability of the demographers themselves or the lack of proper training or some other causes? I do not have a ready answer but I would venture to suggest that one of the reasons for this sad state of affairs is the inability of the demographers to look beyond decimal points and visualise the demographic scene in the broader national context of social and economic planning and development. I consider the emergence of Demography as an independent discipline as a calamity. Tools and techniques, no matter how sophisticated these are, do not make a new discipline. I welcome the recent developments in India and abroad to abandon Demography in favour of POPULATION STUDIES or POPULATION SCIENCES. However, things do not improve merely by changing the nomenclature. The orientation, quality and scope must also change to make it a meaningful science relevant to planning and policy making and not wasteful of the tax payers' money in a poor country. My only exhortation to my fellow demographers at this stage would be: LOOK BEYOND THE DECIMAL POINTS. Of course, one must begin by looking at the decimal points but one should not get stuck for ever in the decimal points.

Let me start with decimal points and give a brief historical backdrop of population growth and economic growth envisaged in our five year plans and enumerate briefly what I consider to be the important population issues at the turn of the century.

THE FIRST PLAN (1951-56) set out the goal of doubling per capita income in about 27 years (*i.e.* by 1977). The Second Plan was even more optimistic and projected the doubling of per capita income by 1973-74. After the shattering experience of the 1961 Census which revealed a population growth rate of 2.2 per cent for the 1951-61 decade, compared to the 1.25 per cent growth rate assumed by the Planning Commission, the talk of doubling per capita income vanished from subsequent five years plans. The 1971 Census gave another blow to the planners as the Census revealed an even higher growth rate for the 1961-71 decade compared to the earlier decade. But the most severe blow came from the 1981 Census which revealed the highest ever growth rate of population in the history of India in the 1971-81 decade, a growth rate which made

India's much publicised family planning programme suspect in the eyes of the common man.

The results of the 1981 Census created undiluted panic in government circles and international family planning lobbies. Some government demographers made quick calculations to console the Family Welfare Department by reeling out formidable figures for *births averted*, which was what the family planning programme was meant for. But what about the heads already counted? Some other demographers went on to adjust the census data for the undercount and came out with a higher figure for India's total population. The taxpayers asked what happened to the Rs. 1010 crore outlay on family welfare in the Sixth Five-Year Plan? It seems a similar question was asked by the World Bank to the then Prime Minister. Vested interests demanded an immediate appointment of a Population Commission to go into the matter. The Planning Commission appointed a *Working Group on Population Stabilisation and MCH*. In international circles, the Chinese model gained credibility and the Western advocacy of China gained momentum. In this atmosphere of confusion, the Seventh Five Year Plan is being formulated. Can history come to our rescue? What lessons have we learnt from India's experience? Are we on the right path?

These are difficult questions which I cannot answer. But I would venture to make some observations in order to provoke discussion.

We have perceived the population problem largely through western eyes. Right from the beginning, India's family planning programme has been heavily influenced by foreign funding agencies and foreign experts of doubtful calibre. This has been counter-productive.

India's first Health Minister, Amrit Kaur, was a Gandhian, a spinster and a princess, a formidable combination indeed. She started family planning work very cautiously. The emphasis was on the rhythm method and the family planning programme was a part of the health programme. But in 1960s, the powerful international birth control lobby took over, and went to the extent of almost capturing our bureaucracy, so much so that there was a time when no policy could be formulated without the blessings of foreign agencies. In 1966, a new Department of Family Planning was created and the foreign influence was at its height soon after. The accent was on communication (often degenerating into vulgar family

Western vested interest in curbing Indian Population

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planning posters) 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 bureaucracy in the Department of Family Welfare and all the information flowed to the foreign funding agencies in the name of monitoring and evaluation. 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 issue we have raised does not concern money but *ideas*. The whole orientation was foreign and showed colossal ignorance of the Indian social context. The vulgar advertising approach did not bother about Indian values and the great respect which the institution of marriage and family enjoyed in the eyes of millions of poor people. All this culminated in Sanjay Gandhi's aggressive advocacy of family planning during the Emergency, though family planning was not a part of Mrs. Indira Gandhi's 20-point programme formulated during the Emergency. The people started feeling that the programme meant forcible sterilisations. No doubt this general feeling was spread by rumours that people were being forcibly sterilised. This ultimately resulted in the downfall of Indira Gandhi's Government in 1977... It is necessary to recall this history because the international birth control lobby is active again, urging the new Prime Minister that he should take drastic steps to stabilise India's population.

To get back to history, the Janata Government which was ushered in 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. Gandhi came back to power. This time she adopted a very cautious approach to family planning. 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. Nevertheless, progress on the family planning front was far from spectacular. Bureaucracy continued to dominate the scene and sterilisation remained the quintessence of the family welfare programme.

Unlike in 1977 general elections, family planning was a non-issue in the 1980 and 1984 general elections and the 1985 (March) state elections.

*The foreign lobbies are now
working on the new PM*

Prof. Demerath on "Why Family Planning fails in poor countries."

The new Prime Minister, Mr. Rajiv Gandhi maintained a discreet silence on family planning issues in his first major policy pronouncement. He did endorse, however, the 20-Point Programme of Indira Gandhi.

In this context, we would like to refer briefly to two important international conferences: the World Population Conference held at Bucharest in 1974 where the leader of the Indian delegation (Dr. Karan Singh, the then Minister for Health and Family Planning) gave a famous slogan: "Development is the best contraceptive"—a slogan which is a part of the world literature on population today. Paradoxically enough, the Emergency in 1975 wiped out the impact of the slogan. The United Nations organised another international conference on Population in Mexico City in 1984. But at this conference, India had a low profile. 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: "The United States does not consider abortion as an acceptable element of family planning programmes and will no longer contribute to those of which it is a part."

This dramatic change in U.S. official point of view has brought about shock waves in international and U.S. funding agencies. The latest move on the part of the U.S. seems to deny U.S. aid to the family planning programme of China because of the coercive aspects of the programme.

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 technique 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 demography 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.

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 Delhi. The impact of this has been twofold: (i) the health and family planning service at the grass roots 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 awards to different villages, districts and States in India by the Government encourages the cooking of such data at all levels.

The extent of involvement of foreign agencies in India's health and family planning programme 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 and similar agencies of U.K., Federal Republic of Germany, Norway, etc. Of late there has been an upsurge of interest on the part of foreign agencies.

Under the innocuous title of 'Area Projects', foreign agencies have 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

Birth Control awards have led to cooking up of figures

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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 soft-headed demographers all working for the welfare of India's poor masses, has created a dismal situation.

WHERE DO WE GO from here ? Mrs Indira Gandhi had said that 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 or, for that matter, bureaucrats at any level, set targets for the reproductive behaviour of millions of couples in a free, democratic society ? Will President Reagan allow his Health Department to set family planning targets for the American population ? 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 tensions ? 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 in that country 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

The unholy combination of foreign agents, go-getter bureaucrats and...

'Maternal and Child Health' divorced from Family Welfare

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 Worker 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 governments, 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 between health and family planning, our historical experience shows the continued lack of integration between 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 given to States and districts should be given for good 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 up of family planning targets by the bureaucracy in Delhi (on the lines of cement and steel quotas) and the relaying of these targets to 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 ANMs and MPWs at the Sub-centre level. In spite of the Government's stand that India's family planning programme has a cafeteria ap-

proach 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.

THERE IS NO DOUBT that family planning deserves high priority and we must make relentless efforts to make family planning a success. How should we proceed in the remaining years of this century and prepare ourselves for a modern era in the 21st century?

First and foremost, the dimensions of the population problem should be clearly spelt out. So far we have been more or less preoccupied with the growth rate of population and fertility control measures. Such a narrow view of the population problem will not help us in any way. Our vision should extend at least to the following population issues :

1. Containing rapid urbanization and the threat to environment ;
2. Regulating internal and international migration, including illegal migration from Bangladesh and Pakistan ;
3. Generating full employment and containing social tensions and violence ;
4. Containing the growing regional and sub-regional demographic disparities ; and
5. Innovative management of health and family planning programmes.

All our cities are exploding and environmental degradation will bring unending misery to our people in the 21st century. It is not only Calcutta but almost all our cities are dying. Family planning cannot banish all our miseries, nor should rapid population growth be an alibi for our failure on the economic front. I would, therefore, give the highest priority to the problems of urbanization and environment.

*We must regulate internal
and international migration*

Foreign infiltration makes nonsense of any Population Policy

Next I come to migration, both internal and international. In our projections of population, we invariably assume that migration is zero. This assumption is no longer valid. Even for the 1971-81 decade, there is enough indirect evidence to suggest that there has been considerable immigration into India (mostly illegal) from Bangladesh and Pakistan (via Jammu & Kashmir and Rajasthan). The worsening political situation in Sri Lanka may result in an increasing flow of refugees from that country into India. We have an open border with Nepal and migration between Nepal and India has become a sensitive political issue. In matters of international migration, political issues dominate population numbers. The Assam problem began as a demographic problem and has reached a dead end of politics. It is our contention that given the weak political, economic and demographic condition of India's neighbouring countries, Pakistan, Bangladesh, Nepal and Sri Lanka, we should expect increasing migration from these countries into India in future. Containing illegal migration into India will thus emerge as one of the major population issues.

As far as internal migration is concerned, the new phenomenon of increasing rural to rural migration, particularly from Bihar and Eastern U.P. to the prosperous agricultural areas of Punjab, Haryana and Western U.P. has created serious social problems giving rise to considerable tension. In the Terai region of Uttar Pradesh, made prosperous through the hard labour of Punjabi and, in particular, Sikh settlers, the enforcement of land reforms would pose serious political problems. There is a reference in the Anandpur Sahib Resolution to the Terai region in U.P. The social tensions generated by migration should be the legitimate concern of students of population. Then there is the unending migration from the rural areas to the cities, posing an eternal question: how to contain migration to the cities? We have hardly any answers but we should not give up.

The next issue I have raised concerns employment. As a result of two decades of sustained high growth rate of population we have already produced the potential labour force for the next two decades. *Finding jobs for this new generation should be the first item on the agenda of population planning in the 21st century.* Whether one uses a depressing expression like 'unemployment problem' or accepts a modern terminology like 'human resource mobilisation', the problem remains the same. Here again, I would argue that much more than the quantitative dimensions of

the problem, the social and political aspects are important. For example, the recent violent agitations against the reservation policy for scheduled castes, scheduled tribes and backward classes in Gujarat and other parts of India have highlighted the social dimensions of the problem. To me this is a major *population issue* which has to be tackled with great acumen.

Then I come to regional demographic disparities. The distribution of population in the different states in India, ranging from 316 thousand persons in Sikkim to 111 million persons in Uttar Pradesh is symbolic of demographic anarchy. I believe that a state which has an area of over 200,000 sq. km. and a population of over 50 million is administratively unmanageable and should, therefore, be split. I would strongly recommend that the States of Uttar Pradesh, Madhya Pradesh, Maharashtra and Andhra Pradesh should be reorganised into several smaller states.

TABLE I
Area and Population of Large States

	Area in sq. km.	Population (1981) million
A. Large states with area of over 200,000 sq. km. and population over 50 million.		
1. Madhya Pradesh	443,446	52
2. Maharashtra	307,690	63
3. Uttar Pradesh	294,441	111
4. Andhra Pradesh	275,068	54
B. Large states in terms of area but not population		
1. Rajasthan	342,239	34
C. Large states in terms of population but not area		
1. Bihar	173,877	70
2. West Bengal	88,752	55

Tables 2 and 3 illustrate the demographic diversity in India. In Table 2, the States are arranged according to the crude birth rate based on SRS data. The birth rate ranges from 24.9 per thousand in Kerala to 40 per

*The four huge, populous states
need to be reorganised*

TABLE 2
Selected Demographic Indicators

S. No.	State	Birth Rate (1983) per 1000	Death Rate (1983) per 1000	Female Literacy Rate (1981) per cent	Mean age at marriage of females (1981) years	Per cent of Couples effectively protected by family planning methods (1983)	Decadal growth Rate of Population (1971-81)	Annual Average Exponential Growth Rate (1971-81)	Per cent of Urban Population (1981)	Growth Rate of Urban Population (1971-81) Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
India		33.6	11.9	24.8	18.3	25.9	25.0	2.25	23.3	46.4
1. Kerala		24.9	6.7	65.7	21.9	33.5	19.2	1.77	18.7	37.6
2. Tamil Nadu		27.8	11.6	35.0	20.2	28.4	17.5	1.63	33.0	28.0
3. Karnataka		28.7	9.2	27.7	19.2	26.7	26.8	2.39	28.9	50.7
4. Maharashtra		29.6	9.1	34.8	18.8	40.0	24.5	2.21	35.0	40.0
5. Punjab		30.2	9.5	33.7	21.0	34.5	23.9	2.16	27.7	44.5
6. Andhra Pradesh		30.7	10.3	20.4	17.3	28.4	23.1	2.10	23.3	48.6
7. West Bengal		31.9	10.2	30.3	19.3	25.7	23.2	2.10	26.5	31.7
8. Orissa		33.3	12.1	21.1	19.0	27.5	20.2	1.85	11.8	68.5
9. Gujarat		34.0	11.5	32.3	19.5	36.9	27.7	2.46	31.1	41.4
10. Haryana		35.9	9.0	22.3	17.9	31.5	28.8	2.55	21.9	59.5
11. Bihar		37.2	13.0	13.6	16.5	13.7	24.1	2.17	12.5	54.8
12. Uttar Pradesh		38.4	15.7	14.0	17.8	13.1	25.5	2.29	18.0	60.6
13. Madhya Pradesh		38.5	14.5	15.5	16.5	23.6	25.3	2.27	20.3	56.0
14. Rajasthan		40.0	13.5	11.4	16.1	15.7	33.0	2.87	21.1	58.7

Note : This table excludes Assam and smaller states and Union Territories.

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TABLE 3
Indicators of Hope

S. No.	State	Per cent of girls attending school 10-14 age group (1981)	Per cent of married girls in age group 15-19 (1981)	Average number of children born per woman by age group 20-24 (1981)	Infant mortality rate (per 1000) (1981)	Per capita net domestic product at current prices (1981-82) (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	
India		37.5	43.5	1.1	110	1758
1. Kerala		84.0	14.0	0.7	37	1447
2. Punjab		55.6	14.1	0.8	81	3164
3. Maharashtra		51.2	38.1	1.1	79	2496
4. Gujarat		49.7	26.9	1.0	116	2192
5. West Bengal		45.1	37.3	1.2	91	1595
6. Tamil Nadu		44.6	22.8	1.0	91	1373
7. Karnataka		37.8	36.2	1.2	69	1541
8. Haryana		36.2	47.4	1.2	101	2581
9. Orissa		30.4	30.9	1.2	135	1308
10. Andhra Pradesh		30.0	56.3	1.3	86	1536
11. Madhya Pradesh		25.3	62.7	1.4	142	1241
12. Uttar Pradesh		25.1	60.5	1.2	150	1313
13. Bihar		24.7	64.1	1.2	118	995
14. Rajasthan		18.7	64.3	1.3	108	1441

Note : The states are arranged in decending order as per Col. 2.

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thousand in Rajasthan. The rural birth rates are even higher. The death rate ranges from 6.7 in Kerala to 15.7 in Uttar Pradesh. The female literacy rate was the highest in Kerala (65.7 per cent) and the lowest in Rajasthan (11.4 per cent). The estimated mean age at marriage of females was the highest in Kerala (21.9 years) and the lowest in Rajasthan (16.1 years). Curiously enough, the practice of family planning is the highest in Maharashtra (40 per cent of couples effectively protected) and not in Kerala (33.5 per cent). It was the lowest in Uttar Pradesh (13.1 per cent). The birth rate, it may be noted, does not depend merely on family planning but also on the proportion of married, the age at marriage, the age distribution, etc. Interestingly enough, the decadal growth rate of population during 1971-81 was the lowest in Tamil Nadu (17.5 per cent); in Kerala it was 19.2 per cent. The growth rate was highest in Rajasthan (33 per cent). These growth rates cannot be understood properly unless the impact of migration is sorted out. The level of urbanization was the highest in Maharashtra (35 per cent) and the lowest in Orissa (11.8 per cent). To some extent, the low base figure of Orissa explains why the decadal rate of urban growth was the highest in Orissa (68.5 per cent). Tamil Nadu had the lowest rate of urban growth (28 per cent). The overall picture that emerges is clear: *Demographically, U.P., Bihar, Madhya Pradesh and Rajasthan are the most backward states in India and need special attention.*

Then I come to five indicators which I call *indicators of hope*. Three of these indicators refer to the younger generation and help us in understanding the future pattern. These are: (1) the proportion of girls in the age group 10-14 years going to school. The future belongs to them; (2) the proportion of girls married in the age group 15-16 years. If this figure comes down to zero, or near zero, there is hope for women; (3) the average number of children born per woman by the age group 20-24 years. If this group takes to family planning, there is hope for the future. The two other conventional indicators which I have considered are (1) the infant mortality rate which says a lot about the delivery of health services and (2) the per capita income which is the simplest (though not the best) indicator of economic growth.

Here again, the great regional diversity stands out. In Kerala 84 per cent of the girls in the group 1-14 years went to school in 1981. In Rajasthan the figure was 18.7 per cent. In Kerala only 14 per cent of the girls in the age group 15-19 years were married, compared to 64.3 per cent

*Kerala is at the top;
Rajasthan, at the bottom*

Given Peace, Punjab will be ahead of all other states

in Rajasthan. In Kerala, 10 women, on an average, produced 7 children by the time they completed 24 years, while in Madhya Pradesh, 10 women produced 14 children by the time they completed the same age group. The difference in the infant mortality rate is most striking: In Kerala it was 37 (deaths within one year of birth per thousand live births) while it was 150 in Uttar Pradesh. Finally, we come to per capita net domestic product: it was the highest in Punjab (Rs. 3164) and the lowest in Bihar (Rs. 995).

The conclusion that emerges is that from the demographic point of view, Kerala is the most modern state in India but I do not see much future for Kerala, considering the low level of per capita income. Punjab is catching up with Kerala with respect to all the four indicators of hope and it has by far the highest per capita income. Demographic modernisation without money power can only lead to frustration. It must be noted in passing, however, that there are limits to the increase in per capita income based on agriculture which in turn is heavily dependent on water resources. Punjab's potential water resources are rather low and this will act as a brake on rapid agricultural development in future. Nevertheless, Punjab has the best hope of emerging as the most modern State in India. This, of course, assumes that the law and order situation in Punjab will improve. *Bringing peace to Punjab is thus a high priority population issue.* Similarly, solving the Assam problem, which is basically demographic in origin, is a high priority population issue. Continuous migration from Bangladesh tends to make the family planning movement in North East India irrelevant.

Finally, there is need for innovative management of our health and family planning programmes. I had made a plea several years back that there should be a Ministry of Health, Family Planning and Social Security. I would also argue that in order to bring about a better integration of activities in the field of child care, the Integrated Child Development Services (ICDS) programme should be transferred from the Ministry of Women and Social Welfare to the Ministry of Health and Family Welfare. Further, I would suggest a restructuring of the Department of Family Welfare whose main activity should be the provision of family planning service. *The motivational part should be fully entrusted to non-governmental organisations, voluntary bodies and other private organisations.* In short, the family planning programme must be *debureaucratised*. What has happened to India's public sector undertakings has also happened to

India's public sector-oriented family planning programme. The present scheme of things assumes that the bureaucrat is the best social reformer and catalyst of social transformation. This assumption cannot stand scrutiny. At least as an experiment, motivational family planning work should be handed over to voluntary women's organisations and 50 per cent of the family planning budget should be earmarked for voluntary organisations whose own contribution should be mainly dedicated work. The present attitude of patronage on the part of bureaucrats must go. By the beginning of the 21st century, the family planning movement must be *self-generating* and the small family norm must have universal social acceptance. The Government's activity should be restricted to the provision of efficient health and family planning infrastructure and service at the grassroots level. Appointing a Population Commission will not help. We do not need any more apex organisations. We should abandon the numbers game and move from population to people.

In spite of the sinister predictions of doomsday experts in the West, India has not only survived the doubling of her population since Independence but has emerged as the leading country among all the developing countries of the world. India is morally sound, politically stable, economically viable, technologically vibrant, socially resilient, and militarily strong. There is no need to be demoralised by the savage demands of the sterilisation lobby and the drug pedlars of multi-national companies. □

China is no Example !

It is a fashion among some western lobbyists for birth control in India, to quote the example of China.

But how model is the Chinese example? While urban Chinese have small families—like urban Indians—rural Chinese have as large families as the rural Indians.

Indeed Chinese population figures do not come anywhere near Indian accuracy. Nobody knows for sure what is the Chinese population at any given point of time. Chinese economists count their national population as 80 crores for production purposes—and 100 crores for consumption purposes !

The Chinese have, what they call "patriotic statistics". Figures are given out not because they are true, but because they are supposedly in "national interest".

Statistics like these can be no guide to anybody for any purpose.

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The Bhopal tragedy : the Responsibility of the Scientific Community

By : Jatinder Bajaj

LESS THAN TWO WEEKS after the tragic night when the gases from the pesticides Plant at Bhopal had leaked to kill over two thousand people, journalists sitting in a club, close to the factory, found the place swarming with flies and mosquitoes. When asked the secret of their survival, while fresh cases of human poisoning were still being reported, the Chief Minister of Madhya Pradesh replied, "It might take months of scientific study to find an answer." The incident is symbolic of the prevalent faith in the science and technology of today. Consider the case : A high technology plant storing, utilising and producing extremely dangerous materials is set up in the heart of a populous old city, with the scientific promise that the products of the plant shall kill pests and insects to save men from disease and hunger. The technology fails. The toxic gases leak. And, ironically, men die, while mosquitoes and flies seem to be flourishing. Faced with this situation, the representative of the people who died, not only refers the matter back to the scientists and technologists, but also gives them unlimited time to find out why they failed so tragically. Not

When men died like flies, but mosquitoes thrived...

withstanding the much talked about lack of a scientific temper in the people of India, the faith of a nation in the modern science and technology could perhaps never be any stronger.

In fact, those who found themselves responsible for the building up of independent India chose science and technology as the medium through which to approach their task. Consequently, we have generated a large science and technology (S&T) community, the third largest in the world. This community and the huge scientific, technological and industrial establishment that comes with it, have been paid for from the scarce resources of India. They form India's investment in modernity. The builders of India have reposed faith in this community with the hope that the S&T community of India shall bring to us the best fruits of modern S & T and at the same time sufficiently domesticate this S&T to competently save us from all its inherent dangers.

It is true that the people of India do not understand much of what the modern scientists and technologists do, and how they do it. But that is not because of any special lack of the scientific temper in the Indian people. Not many people anywhere in the world understand the scientific jargon, much less the logic and intricacies of modern S&T. The people of India, of course, do not even understand the language of S&T. Like modern law, medicine, and modern education etc., modern S&T is also conducted in English, a language alien to most of us. That the builders of India should repose implicit faith in a community whose ways and methods, and even whose language, the people of India do not understand, may be very unwise. It may be especially unwise for those who represent a people like the Indians, a people who till recently did not even accept the gods unless they came and lived with them, spoke and behaved like them, and accepted all their norms and limitations. The representatives of such a people have perhaps unwisely put their faith in the S&T community. But that is a separate question.

Whether wisely or unwisely, modern India has put its faith in modern S&T. And this puts a great responsibility on the S&T community of India. The important question that arises in the context of the Bhopal tragedy is: has the S&T community become competent enough to fulfil its responsibility? Has it behaved honourably and responsibly in the face of the faith that has been reposed in it? Now that sufficient time has elapsed since the Bhopal tragedy, it is possible to take a judicious view of the role

and behaviour of the S&T community in this crisis. From the available information, it has to be sadly concluded that S&T community of India has failed in its responsibilities. Its failures have been multiple. In fact, it seems that both, the profession of science and the faith reposed in the Indian S&T community, have been betrayed.

The first thing that became obvious with the fatal leak was the total ignorance of the Indian scientists and technologists about what is happening in many of the high technology establishments of the country. Once the leak started, none of the highly trained Indian engineers and technicians in the plant seemed to know what to do about it; the gases simply exhausted themselves. The larger S & T community did not know how much of what was being produced in the plant. If what came out of the plant was only methyl-iso-cyanate (MIC), as the plant personnel insisted, the community did not know what was the chemistry of this substance, what were its toxic effects, what were the possible antidotes, and what were the ways to neutralize this toxic substance. All this ignorance was eventually admitted on behalf of the community. It is possible that some of those admissions of ignorance were made in order to minimise the responsibility for the tragedy, and to make it look like a natural disaster. However, it became obvious from the events that followed that the Indian scientists and technologists did not really know much about the ways to deal with the substances that were being used and produced in the Bhopal plant.

The essence of being scientific, as every school text teaches, is in being keenly observant of one's surroundings. A specialised scientific community, that is so totally unaware of even the major technological activities in its surroundings betrays both, the profession of science, and the nation that has given it the mandate to be scientific on its behalf. If Bhopal were an isolated instance of the ignorance of the S & T community, that may not have mattered much. But there is absolutely no reason to believe that there are not elsewhere in the country plants, with equally dangerous potential, about which the Indian S & T community is similarly ignorant.

While this ignorance of the community can be condoned as an act of omission, what happened next did not have even that saving grace. Immediately after the leak, various segments of the S & T community

*Here was a rudeshock to our faith
in scientists and technologists*

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openly engaged in suppressing information, spreading misinformation, and sometimes even telling deliberate lies. This game started with the engineers of the Union Carbide plant at Bhopal. On the fateful night of December 2/3, while people of Bhopal were running around for a breath of fresh air, and hordes of them were dying in their sleep, senior engineers of the plant were simply denying that anything at all had leaked from their plant. At 1.45 a. m. that night J. Mukund, the Works Manager, told the Additional District Magistrate, "The gas leak just can't be from my plant. Our technology just can't go wrong." In the morning Dr L. D. Lova of the plant was telling the doctors and journalists around that the gas leaked was only an irritant, which was neither fatal nor lethal.

As we now know, these statements by the technical and medical staff of the Company were deliberate lies. The Works Manager could not have been unaware of the possibility of a leak, because earlier his technology had indeed failed and his plant had leaked many times. Similarly, though the rest of the S & T community in India may have been ignorant of the toxic effects of MIC, the company personnel had access to the Company manuals that informed the employees of the hazards of the chemicals used in the plant. Therefore, Dr. Lova, the Company doctor, while passing MIC off as a benign material, could not have been unaware of its hazards. True that these lies were told by the employees of a multinational plant. But while justly blaming the multinationals for their greed and callousness towards life in the developing countries we must remember that Mukund and Lova, who were telling lies when the people in Bhopal were dying, were Indian scientists. They were part of the third largest scientific manpower in the world that we are proud of.

The Company personnel were not the only scientists and technologists who lied and suppressed information. Teams of independent government scientists and a CSIR (Council of Scientific and Industrial Research) team headed by the Director General of CSIR, Dr. Varadara-
jan, reached Bhopal in the immediate wake of the disaster. And immediately a campaign to suppress all information on the tragedy was begun. The veil of secrecy that the scientists, hand in hand with other bureaucrats, imposed, was so thick and so blatant that on December 5, the additional Director General of India Meteorological Department (IMD) Dr. S. Sircar, refused to give information on the wind speed, humidity and temperature conditions in Bhopal on the tragic night, because a judicial enquiry was on! When reminded that IMD was a service organisation, Dr. Sircar

*How they suppressed information
and spread misinformation*

While collecting funds for research on long-term effects, they denied any such effects

emphatically declared that IMD was NOT a service organisation, and the information would not be given. In fact, it seems the scientists actually started enjoying their new found sense of power. Thus on December 15, Prof. Varadarajan took some journalists around the plant after prior warning that anybody straying from the charted path in the plant shall be arrested and he personally grappled with a cameraman who tried to go near the tank that had leaked.

In addition to suppressing information there was continuous misinformation emanating from scientific and technical experts. Within a couple of days of the leak the experts started announcing that the air that the people were breathing was absolutely safe, that there was no trace of any toxic material anywhere. A little later Dr. Bhandari, Superintendent of the Hamidia Hospital, was asserting that there were no long-term effects of the gas, on the specious observation that the patients his hospital had treated were not returning with any new complications. By December 10, a WHO expert, sent on the request of Government of India, joined Indian medical experts in asserting that there would be no long-term effects of the gas on the kidneys and livers of the victims, that there would be no damage to pregnant women or the foetuses they were carrying, that survivors will suffer only minor eye and respiratory problems.

It is clear now that all these statements and many others emanating from eminent scientists, were all false. On the second day of the accident no tests could have shown the air of Bhopal to be free from all toxicity; and long-term effects of the gas could not have been predicated within a week of the exposure. In any case, fresh cases of poisoning were being reported till December 24, and previously treated cases with greater complications were returning to the Hamidia Hospital in large numbers.

Ironically, while scientists were telling the public about the absence of all long-term effects they were also cornering large amounts of public funds to undertake long-term projects to study the effects of the gas. The ICMR (Indian Council of Medical Research) on December 11 reported its plans of undertaking a major epidemiological survey to see the effect of the gas on kidneys and immunity systems of the victims. Food Toxicological Research Institute, Hyderabad, Institute of Occupational Health, Ahmedabad, Cancer Research Institute, Bombay, Institute of Genetics and Hospital for Genetics and Genetic Diseases, Hyderabad, all got various projects to study the phenomenon of MIC leak and its effect on human be-

ings. Even foreign scientists, specialists in chemical warfare, arrived on the scene to see whether the gas could be used to kill efficiently; and when their presence was brought to the notice of Mr. Arjun Singh, then Chief Minister of Madhya Pradesh, he declared that though no fishing around might be allowed, the Government could assist everyone in making enquiries into the subject. He wouldn't have liked to be seen as interfering with the 'scientific' investigation of a rare phenomenon. Yet at the same time he was so keen to keep all information away from the lay public, that his government went to the Jabalpur High Court repeatedly to seek permission to destroy samples of the gas, that the High Court had insisted must be kept, in order to make independent investigation possible.

This campaign of misinformation and suppression of information reached its peak on the question of the presence of phosgene in the leaking gases; and on the question of presence of cyanide in the systems of the poisoned victims. Answers to both questions were vital for the treatment of patients and right from the beginning there were reasonable doubts that both were present. Yet it was decided to outright deny their presence. The Union carbide insisted that what leaked was nothing but MIC. 'It was MIC', 'it was MIC', 'it was MIC', declared Dr Awashia of the parent Union Carbide corporation. And Indian scientists took up the refrain. On December 7 itself IARI (Indian Agricultural Research Institute) was making public, results of the tests carried out on plant samples, to assert that the gas that leaked was not phosgene; and Dr Varadarajan declared in Bhopal on December 10 that scientists from defence laboratories had found no trace of phosgene in Bhopal. Yet on December 21, under intense questioning, Prof Varadarajan admitted that there was a small quantity of phosgene in the MIC. Now it was revealed that its presence was essential for the safe-keeping of MIC, though Dr Varadarajan also hinted that the phosgene present in the MIC that leaked from Bhopal might have been more than what was absolutely essential. By January 4, in the Lucknow Science Congress, he was admitting that he and his team had no available chemical method for quantifying phosgene. This time this admission of lack of preparedness was an excuse for choosing to convert the remaining MIC to the commercially usable pesticide Sevin, as the Company had desired, rather than using some other non-commercial mode of neutralisation. All this is hardly an example of scientific honesty and commitment to truth.

The case of the possibility of formation of the Cyanide compounds in the gas victims' bodies was even more curious. It seems sodium-

*How the CM tried to get the
High Court to reverse itself*

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thiosulphate is a known antidote for Cyanide poisoning. Dr Awashia of Union Carbide, in his initial message on the line of treatment had suggested the use of this antidote, and at least some doctors in the Hamidia Hospital had used it in the early days of the tragedy, even on themselves, and had found it effective. But soon it was decided that any connection of MIC with cyanide was not to be suggested; doctors of the Union Carbide and their Indian counterparts in the Government started insisting that MIC could not cause cyanide poisoning, and in an unusually unscientific step, the Director of Madhya Pradesh Health Services issued an official letter on December 11 banning the use of sodium thiosulphate. The ban was lifted only on February 3 when overwhelming evidence of cyanide poisoning in the bodies of the victims could not be any more ignored. Between December 11 and February 3 many precious lives must have been lost. This made the flamboyant participation of the scientists and technologists in the activity of suppressing information, a diabolically cynical act.

It can be argued that this suppression of information and spreading of misinformation was not directly the responsibility of the scientific community; that it was done under pressure from, and on behalf of, the political/bureaucratic hierarchy. And it does seem that much of this was not a strictly scientific-technological but a public relations job in which scientists were rather prominently involved. Especially, the daily press briefings of Prof Varadarajan during the so-called 'Operation Faith' were nothing more than this: since as far as the technical aspects were involved he himself had admitted that the whole operation was carried out by the factory staff with the help of American experts. The job of Prof Varadarajan and his team was perhaps only to devise the faith-raising drama of helicopters spraying water, and wet tents covering the area; and to give authoritative ton-by-ton briefings to the press on the MIC neutralisation, and to repeatedly assert that the whole operation was a zero-risk affair, as if that term had any scientific meaning.

However, accepting the plea that the scientists indulged in this public relations exercise at the behest of their bosses, does not reduce their responsibility. It should be remembered that it is only the scientists who in the modern world claim the role of being the guarantors of truth. The politicians or the bureaucrats have never claimed any such role. In fact the near universal acceptance of science is partly based on the idea that

They all ran to directly and indirectly defend the Union Carbide

They acted as PR-men and not as Scientists

the only commitment of science, and of the scientists in their professional capacity, is to truth and to nothing else. This idea may not be entirely correct. Yet by selling blatant lies, the scientists of India have degraded the idea of science and have betrayed their profession. What is even more worrisome is the possibility that if they have told lies in this case, they may also be telling lies about much else in the S & T establishments which may be equally hazardous.

Finally, we come to the most intriguing aspect of the behaviour of the S & T community during the Bhopal crisis. What was so important about the presence of phosgene in the gases that leaked, and about the presence of cyanide compounds in the bodies of the victims, that the scientific community should try to suppress this information even at the cost of degrading itself? One possible explanation is that while a term like MIC was little known to people, phosgene, the dreaded war gas, and cyanides, the dreaded poisons, are better known terms, and people would have known how to react to these. Insistence that there were no cyanides and no phosgene involved in the tragedy, and that what did the killing was some totally unknown substance called MIC, then was an attempt by the S & T community to control the reactions of the people and to make them dependent on itself for all information. If this is what the attempt was about, then it was a perversion of the prevalent notion of science as the discipline that is devoted to enhancing the human pool of knowledge.

However, it seems that more was involved in this exercise than merely the engineering of the reactions and responses of the people. It seems that phosgene and cyanide compounds being better known, are better regulated in law. Presence of these substances enhanced the legal culpability of the Union Carbide, and suppression of information on these was an attempt to reduce the culpability of the company. If this is the case, then it seems that the Indian S & T personnel have colluded with the foreign company and thereby they have lowered the dignity of the S&T profession in India. Even otherwise, by their inability to handle the technical aspects of the situation themselves, by appealing to foreign doctors for help in the treatment of patients, by requesting the company officials to analyse the various samples (even for the sake of investigation into the company's responsibility), by leaving the process of neutralisation of the gases to the company management and American experts of the company, and in general by showing their complete inability to tackle the

crisis without foreign help and guidance, the Indian S & T community has dishonoured itself. It is only because the Indian scientists and technologists behaved so incompetently that the foreigners acquired the boldness to add insult to their injuries by suggesting that it was the involvement of the Indians with the plant that caused the disaster. 'Wall Street Journal' suggested it in mid-January, and later in the month, Dr. Brown, an American Nobel laureate in Chemistry, made the same insulting reference, while on a visit to India as a guest of the CSIR.

It is true that the scientists were not the only ones who behaved in a way that lowered the dignity of their profession. For instance, the Indian government itself panicked at the arrest of Mr. Warren Anderson, the Union Carbide Chairman, in Bhopal, sought his immediate release, flew him in a State aircraft to Delhi, and the Foreign Secretary of a great nation like India granted audience to the Chairman of a multi-national that, by its callousness, had just killed over 2000 Indians. That arrest may or may not have been decent or civilised, as a spokesman of the Government and many leading newspapers of the country suggested, but the later panicky behaviour was definitely below the dignity of a sovereign government. The legal profession also joined in this exhibition of general lack of dignity and self-respect by the various professional groups of India. While the local lawyers competed with each other in acting as agents of American legal firms, the Advocate General of India himself rushed to the USA to find ways of seeking justice from the American Courts, instead of attending the business of getting the culprits to the Courts in India.

Thus it seems that the S & T community of India was not the only professional community that during the Bhopal crisis proved itself to be incompetent of handling the crisis without foreign help, and that showed a singular lack of professional pride and honour. It seems that the failure is shared by all the professional groups that modern India has evolved. But the failure of the S & T community is the most glaring. This is not only because it was basically the responsibility of the S & T community to avert and to handle technological crisis of the type that occurred in Bhopal, but also because much more has been expected of the S & T community, compared to other professional groups. The Indian nation has sought to become a modern, powerful, independent nation through the medium of modern S & T. If after almost four decades of concerted development, the Indian S & T establishment finds, during a technological crisis let loose

*How some leading Indians dishonoured
themselves and the country*

Too many of our S&T Community are foreign-oriented

by a foreign company, that it does not have the know-how and the capability even to ascertain what exactly were the substances that came out of the plant to cause the disaster, that it does not have the confidence to deal with the aftermath of the crisis, and that it has to seek help from the foreign culprits to handle the situation, then some of the basic assumptions that have been made in modern India are wrong. In fact, the failure of the S & T community seems highly worrisome, because out of all the modern professional groups and structures that independent India sought to develop, the science and technology establishment seemed the most logical and essential because of the supposed universality of modern S & T.

Perhaps the problem is with this idea of the universality of modern S & T. Firmly believing in the universal truth of modern science and universal applicability of modern technology, the builders of modern India have generated an S & T community that find all its sources of inspiration and standards of competence placed outside the country. Forced to work in fields in which all the data and all the theories get generated abroad and in which the centre of activity always lies outside India, the Indian scientists and technologists fail to evolve the confidence to deal with Indian problems in India with Indian resources. Used to the idea of seeing the foreigners as the leaders of activity in their particular fields of endeavour, the Indian S & T personnel fail to evolve a proper professional pride in their own community. In fact given the role and behaviour of the Indian S & T community during the Bhopal crisis, it seems that the Indian scientists and technologists, working as they largely do with observations made elsewhere and theories proposed and judged by other groups, have even failed to evolve the usual scientific discipline of being keen observers of their surroundings, and of professional honesty. At the same time, with their foreign orientation, Indian S & T personnel seem to have developed a callousness towards life in India that is typical of the outsider. What else can explain the phenomenon, that during the discussion on Bhopal in the Lucknow Science Congress, held in the wake of the tragedy, even lay members of the community went about reading Indian papers on topics like the survival or otherwise of roses in Bhopal, copying the flamboyant style of their foreign peers.

Of course, there are many amongst Indian scientists and technologists who prove themselves to be extremely competent even by western standards. However, these bright ones, having found recognition in a community outside India, quickly get alienated, not only from the

The really good S & T men either migrate or vegetate

Indian people, but also from the Indian S & T community. Many of them go abroad, many others become recluses working on esoteric problems that have relevance to some group working abroad and to experiments being done elsewhere, others get frustrated. The leadership of the S & T community in India thus falls in the hands of those who are basically only good managers. In the case of a crisis, these leaders can, as in Bhopal, provide the necessary managerial skills, while the actual scientific and technological problems are left to the foreign experts.

How can the situation be remedied? How can India have an S & T community that is confident of itself and confident of handling technological problems of India on its own? How can there be an Indian S & T community that is imbued with a healthy pride in itself and is conscious of its professional dignity? This confidence, pride and dignity cannot perhaps be expected from a community that sees itself merely as an extension of the S & T endeavour of the West, a community that is perpetually conscious of being a poor relative of an external group. What is needed is perhaps a scientific and technological endeavour that seriously seeks to establish a genuinely Indian tradition of S & T, a tradition that solves the S & T problems of India through Indian resources, using the Indian genius for science and technology. Any such Indian tradition of S & T today will, of course, have to relate itself to the older Indian S & T traditions. In our obsession with the idea of the universality of modern S & T, we have often denied the existence of any meaningful and valid S & T traditions in the history of India. However, in Bhopal, having seen the impossibility of building a dignified and competent S & T community on the basis of alien traditions, we should now at least be willing to undertake a more serious search for our own traditions. That perhaps is the most important lesson that needs to be learnt from the Bhopal tragedy.

—Jatinder Bajaj, c/o Gandhi Peace Foundation, 221/3, Deendayal Upadhyaya Marg, NEW DELHI-110002.

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The havoc that the West has played with Eastern Agriculture

Some time back Edward Goldsmith, editor 'The Ecologist', the London-based bi-monthly "Journal of the Post-Industrial Age", visited Sri Lanka. He interviewed a peasant, Mudilyanse Tenakoon, and came to the conclusion : Traditional agriculture in the Third World is frequently dismissed as primitive and unproductive. In fact, it offers the best hope for the future.

Goldsmith went back and wrote in his great journal:

TENAKOON is a prophet, a prophet of traditional rural life in Sri Lanka. He is also a farmer and lives in a small village in the northern part of the island. In recent years he has become quite well known among those people who recognise the destructiveness and counter-productiveness of the modern system of intensive agriculture which the international institutions—FAO and the World Bank in particular—are imposing on Sri Lanka.

I was taken to see him by two people who fall into this category, both extremely interesting and knowledgeable men; Upalli Senanayake, a member of one of the most influential families of the land (his uncle was Dudley Senanayake the first prime minister); and Gunasekara, a civil servant who devotes his spare time to studying traditional life in Sri Lanka. I have reconstructed our conversations from my notes.

Goldsmith : *What is the size of the average farm in this area ?*

Tenakoon : The average family has less than two acres of land. The richest farmers have no more than five acres. I personally have an acre of paddy plus a garden.

Goldsmith : *Are you self-sufficient ?*

Tenakoon : I am afraid not. In my father's day we were very much more so. Today I must buy kerosene for our lamps as well as salt and also clothes.

Every farmer is also a practical researcher; or else he'd starve

Goldsmith : *Did you never produce these things yourself?*

Tenakoon : My grandmother used to make her own clothes and those of her family too. We grew cotton in the Chena—the wooded area behind the village used for slash and burn cultivation. We still do. Moreover, in the past there was no need for kerosene as we produced our own Mee oil, extracted from the nuts of the Mee tree (Kaly).

Goldsmith : *Did you use Mee oil for cooking as well?*

Tenakoon : Yes and also for medicinal purposes. We also used coconut oil.

Goldsmith : *Did you have traditional bartering arrangements with local artisans as they do in India?*

Tenakoon : Yes, ten years ago there was both a potter and a blacksmith in the village. We provided them with food in exchange for pots and tools; now we must buy these things from a store in the town. But we don't get the clay pots any more and they were very useful.

Goldsmith : *What use did you put them to in particular?*

Tenakoon : Among other things they were used for storing water. We used to fill them with the chaff from the paddy, burn it, leave the cinders there for a few hours, and then wash them out and fill the pot with water. This kept the water cool.

Goldsmith : *That is remarkable; was this sort of knowledge handed down to you from father to son?*

Tenakoon : Of course. Every farmer is a researcher and a teacher; otherwise he could not be a farmer.

Goldsmith : *How many varieties of rice did you use to grow here?*

Senanayake : At one time 280 varieties were cultivated in Sri Lanka. Only 15-20 are left. As a result of government policies the others have become extinct. (According to C. Driberg, superintendent of school gardens quoted in C. Wright, *Glimpses of Ceylon: 1974*, three to four hundred varieties of rice were once cultivated—Ed).

Tenakoon : I can remember 123 varieties of red rice; now only three or four remain.

Goldsmith : *In what way did these varieties differ from each other?*

Tenakoon : First of all, we needed different varieties for the two growing seasons—the Maha season associated with the North-East monsoon and the Yala season associated with the South-West monsoon.

During the Maha season we planted what we call the "four month" varieties. As their name indicates, they take four months to grow. During the Yala season we planted "three month" varieties. Among the Maha varieties, I can remember Murungakayam, which was brown and white, Wella illangaliya, Hondarawala, Gangala and Beruwee. Among the "three month" varieties I can remember, Heenati, Dahanala, Kokkali, Kanni Murunga, Pachha perumal, Kuru wee and Suvandel. We also grew Mawee, a "six to eight" month variety.

Goldsmith : *What was this for?*

Tenakoon : It was for the priests. Buddhist priests don't eat after noon so they need very nutritious food to sustain them until the next morning. Mawee is very nutritious; it has a high protein content and that is why we grew it.

Goldsmith : *How about the other varieties?*

Tenakoon : We grew Heenati for lactating mothers as it makes them produce more milk and also better milk with a high fat and sugar content. We tried to grow it during both seasons. Kanni murunga we grew for the men going out to work in the paddy fields. It gave them energy as it contained a lot of carbohydrates. It was also used for making milk rice for traditional ceremonies. Suvandel, we grew because of its extraordinary fragrance.

Some of these varieties were specially used when there was a lot of water in the paddy fields; others, when there was little water. The former we refer to as 'Goodel' (or 'Goda'), the latter as 'Madawee' (or 'Alwee'). Some varieties were grown when the fields were particularly muddy; some were more suitable to grow on high ground where there was less mud.

*We used to have 123 varieties
of Red Rice alone*

The discarded yellow robes of Buddhist priests were used as insecticide

Some of the varieties required very rich soil; others would do well in the poorest of soils. Some were more resistant than others to the paddy bug and we planted them, rather than other more desirable varieties, when traditional means of controlling the bugs failed.

Goldsmith: *What were the traditional methods of controlling the paddy bug and other pests?*

Tenakoon: Pests were very much less of a problem than they are today. For one thing, the traditional varieties of paddy had long stems, so they blew in the wind, which made it very difficult for the insects to land on them. The Hybrid varieties of today are short-stemmed and much more rigid—which makes it much easier for bugs in general. Also the traditional, as opposed to the new, varieties of rice had big droopy leaves which shaded the soil underneath and prevented weeds from growing through. The paddy particularly needs protection from insects during one short critical period in its growth, about two weeks. During this period, the whole family would be on the alert and ready to step in and deal with any emergency; this was essential for protecting our crops. One thing that we always did during this critical period was to pour cactus milk (daluku) into the inlet to the paddy field. This was very effective in keeping away certain insects.

If the paddy plants turned yellow, we would bury bamboo leaves in the inlets until the grain began to form; at this stage the grain would be fairly liquid. To protect it from insects we would obtain the discarded robes of the Buddhist priests, and make wicks out of them by soaking them in coconut oil. They would then be lit and placed in different parts of the paddy fields; because of the bright yellow vegetable dye that the robes contain—they burn with a bright light and at the same time emit a very strong smell which repels any insect pests. Another device that we used was to crush up leaves of a certain creeper that grows here, into a juice, which we then poured in the water at the inlet to the paddy field. The juice would float and settle around the plants. It had the effect of killing the godewella worms that eat the paddy during the two critical weeks.

We also used to put dried Makra leaves and stack them in the four corners of the field. We would plant the branches of the Kadura tree at the four corners of the field; they were used as supports for coconut lamps which would attract the bugs away from the paddy field. We would be

very careful to plant the seeds at the most auspicious time from the astrological point of view. I am sure that this also helped to reduce pest infestations.

Another thing we did was to collect sand from the river beds and sprinkle it over the paddy fields and irrigation channels; this I am sure was also effective. We would also make long ropes which we impregnated with a very sticky substance derived from the Jak fruit; the children would drag the ropes across the field and the bugs in the paddy would get stuck to them. Alternatively, we would tie a lot of rags on to a long bit of string and impregnate the rags with a resin called 'dummala'. Once more these would be dragged through the paddy fields. The children would also sweep the paddy field with a special tool (the pinovia) removing any bugs that might be on the surface of the water.

Senanayake: All this gives an idea of the cooperation required from all the members of the family for this highly sophisticated type of agriculture to be possible. Once the family unit breaks down under the impact of development, there is no way in which it can be practised—one can only then resort to the highly destructive modern agriculture practised in the West.

Tenakoon: That is right.

Goldsmith: *Do you use biological controls as we refer to them in the West?*

Tenakoon: Yes, indeed. One of the most effective ways of controlling the paddy bug was to crush coconut refuse and spread it in each corner of the paddy field. This would attract a grey brown bird called the Demalicheh or seven sisters. This bird would come to feed on the crushed coconut and at the same time would eat any paddy bugs that happened to be around. It would also eat the Godewella worms that feed on the paddy plant especially during the two week period.

Goldsmith: *Were there any traditional rituals for controlling pests?*

Tenakoon: There was a ritual that involved boiling milk and allowing it to overflow. It was called 'kiritutunewa' which literally means 'the milk flows over the pot'. It was considered very effective against the brown hopper—an important pest of the paddy plant. Another ritual consisted

Planting seeds at auspicious times also helped crops

There were small rice fields specially cultivated for birds

of planting a specially decorated stick in the middle of the paddy field which was considered very effective in repelling insect pests.

Goldsmith : *How about rodents ? Were they a problem in the old days ?*

Tenakoon : To control rats we would bury four pieces of root taken from the eastern side of the Mee tree and burn them in the four corners of the paddy field. The rats as a result rarely entered the field.

Goldsmith : *How about birds ?*

Tenakoon : These were very much under control for we would grow rice specially for them in small sections at the end of each paddy field which were called 'kurulu paluwa'.

Goldsmith : *But how did the birds know that this rice was theirs rather than the rice grown in the rest of the paddy fields ?*

Tenakoon : We have been doing this for thousands of years. The birds have had ample time to learn which was their paddy and which was ours; they rarely trespassed on to our part of the paddy fields unless of course they were invited to do so to eat the paddy bug of the godewella worm—and besides, if they did so, they would be chased away by the children.

Senanayake : There is no magical way of controlling pests. Our peasants are too wise to believe western scientists who try to sell them 'miracle' strains of rice and 'miracle' chemicals that are supposed to eliminate all pests. The pests of the paddy will be around long after western scientists have gone, long after industrial society has collapsed. The truth is that we must learn to live with them and reduce their depredations by a vast variety of different ways—each one of which by itself may make but a small contribution. This is only possible of course when the knowledge required for doing so is handed down from father to son, which it cannot be when children are sent to urban schools and imbued with all your western scientific superstitions. It is also only possible when there is the full cooperation from all the members of a family—cooperation which can never be achieved when employees have to be paid for every hour of work they do.

Goldsmith : *How did you assure the fertility of the paddy fields ?*

Tenakoon : Again we used a lot of different methods. One was to plant the Mee tree in the paddy fields. The Mee is a leguminous tree, which

means that the bacteria on its roots fixes nitrogen, and we used to grow about eight of them to the acre. Its leaves also contain a lot of nitrogen, as must the litter that accumulates under it. Also, and this you will find particularly interesting, the fruit of the Mee tree is much appreciated by fruit bats which used to congregate on the trees in vast numbers when the fruits were ripe; the bats' droppings (which are particularly rich in nitrogen) were thus an important source of fertilizer. We also obtained nitrogen by sowing the paddy before the first rains (Akwassa). As you know, these rains contain a lot of nitrogen.

We would also encourage the growth of many leguminous weeds on the paddy fields between harvests, in particular those we refer to as Thora, Andana, Hiriya, Nidikumba and Pila. They would grow wild on the 'pillawas'—the small areas of wilderness that lie above and on either side of the paddy field. We did not cultivate these areas because it was from there that the seeds of the leguminous weeds were derived. It was also there that the buffalos used for ploughing the paddy fields would rest, and the dung that they produced would be washed off by the rains into the paddy fields beneath. This too added to their fertility. It was also behind the bushes that grew on the 'pillawas' that we would defecate and urinate. This provided yet another contribution to the fertility of the soil. Today, of course, with modern development the 'pillawas' have been ploughed up so as to increase the area under paddy—the result is bound to be a reduction in soil fertility.

Also, as I have already mentioned, traditional varieties of paddy had long stems, so there is very much more straw to return to the fields than there is today with the short-stem varieties.

Equally important, behind each village there used to be considerable expanses of jungle. It is from there that there was derived the water that flowed into the 'tanks' and which was used for flooding the fields. It was not only water that the jungle provided but also jungle soil that was highly fertile and that flowed into our fields whenever they were flooded.

It was by using all these methods that we retained the fertility of our land. They must have worked—or we would no longer be cultivating this land.

*The traditional Mee tree had a
variety of excellent uses*

New rice varieties weigh more because there is more water in them

Goldsmith : Have you tried to use artificial fertilizer ?

Tenakoon : Yes, I have to, because for the last few years I have been growing the hybrid rice that requires fertilizer.

Goldsmith : What effect does it have on the rice ?

Tenakoon : It weakens the paddy-plants and the insects build up, so we must use more and more pesticides.

Goldsmith : In general did you produce more paddy than you do today ?

Tenakoon : I have one acre of paddy. In a very good year it produces one hundred bushels—which is a lot. My family needs seventy-five bushels a year so in a good year I have a surplus. The trouble is one needs a bigger and bigger surplus to live on because we are becoming ever less self-sufficient. Perhaps my father produced less paddy than I did, but he needed less. Also he could be sure of producing enough for his needs each year because he planted so many varieties; some always grew well, whatever the problems we encountered in a particular year. Each one of these varieties was less vulnerable to severe conditions than is the hybrid variety we use today. This simply dies when there is a drought and we are getting worse droughts every year, as everybody knows, because they have cut down the jungle. Another problem is that the hybrid paddy does not keep. If you try to store it, it gets mouldy in a couple of months.

Goldsmith : How long did the traditional varieties keep ?

Tenakoon : For at least three years.

Gunasekara : I remember my father cursing my mother for cooking new rice in the home when there was still three year old rice in the storage house. I think that the method of storage was also important. The rice was stored in large earthenware pots which were put on a stand so that the rats couldn't get into them. The earthenware is porous so that the rice remained aerated and cool. Also, the pot was lined with layers of lime leaves and also kara leaves, which would serve to repel possible insect pests.

Goldsmith : I am sure the reason why modern hybrids do not store well is that their water content is much higher. If you use artificial fertilizer, the

weight of your produce increases but this is largely due to its water content. If you dry the produce you find that the weight is very much the same as it was without the use of fertilizer. In Europe, two studies have shown that storage problems in the third world are largely due to this increased water content. One of these studies was done at Sussex University by the Institute of Development, the other by UNEP.

Tenakoon : In any case the hybrid wheat has no taste, the flour we make from it tastes like wheat flour. For all those reasons and many others, I am giving up hybrid rice and intend to cultivate the old varieties again. The trouble is finding the seed, but I am getting all the local farmers together so that we can help each other return to the traditional agricultural system.

There is another advantage of the old system; it is that we used to produce all sorts of foods that we cannot produce any more.

Goldsmith : Which ones ?

Tenakoon : To begin with we used to go into the jungle to get many foods such as the Baulu, Weera, Jak fruit, Himbutu, Wood Apple, Wild Pear and Avocado. Now the jungle has been cut down; we no longer have access to these foods. We must try to recreate the jungle.

We also used to obtain a vast variety of fish from the streams, the tanks and the paddy fields when they were flooded. Some of these fish such as the Lula, Kawaiya, the Hadaya and Ara could live in dried up ponds. In this area at least, they have nearly all disappeared, some of them eaten by the *Tillapia* that have been brought here from Africa and foisted upon us by the government. The Government insists that *Tillapia* only eats vegetable matter but this is not true. Others, especially those that live in the paddy fields, have been poisoned by pesticides. Since there are no longer any fish, the larvae of the mosquitoes that transmit malaria can now survive the dry period. As a result malaria has become a lot more serious problem than it was.

The Lula that used to thrive in the tanks was also of great value to us, because it favoured the formation of blood. That is why we always fed it to pregnant mothers. There were other fish that we obtained from the tank, the Loralé, the Petiya, the Hirikanaya, the Walaya, the Anda and

The African fish Tillapia has destroyed our Fish Economy

'Ganja' or Marijuana is "The Ruler of the Three Worlds"

the Ankutta. The Korale in particular was a very sweet fish. Now we only have the Tillapia; it is not bad but it does not replace all the traditional species, all of which had special uses. Also the Tillapia does not go into the paddy fields, it stays in the tanks. The change has unquestionably impoverished our diet and also our lives.

Goldsmith : *What other food did you obtain ?*

Tenakoon : We derived a lot of vegetable food from the tanks, for instance Olu rice—the seeds of the Olu plant, a sort of lotus. We also ate the green stems of the Olu. In addition, we grew lotus yams in the tanks and we also made flour from the Kaketi roots that we obtained from the tanks. Nor must we forget the gardens or the 'gevate' that we cultivated there. We grew pawpaw, mangoes, bananas, coconut, jak fruit, pepper vines and some vegetables such as bean grams and bean sprouts. These we still cultivate up to a point but they are not what they used to be.

Nor must we forget the Chena or slash and burn cultivation as it is referred to in the West. It was carried out in the hills behind the village which were not suitable for paddy cultivation. After we had cultivated them for a few years we would abandon them and only return 1-14 years later, by which time the jungle had regrown. Each family would cultivate about half to one acre which was not private property—cultivation there was in common with other villagers. The main crops we would grow there were millet, Kuruken and other dry grains. In recent years population growth reduced the cycle to 4-5 years which did not fully allow the jungle to recover. In any case today Chena cultivation is discouraged by the government and much of the land once used for this purpose has gone into permanent cultivation for which it is not suited.

Goldsmith : *It seems that practically all the traditional foodstuffs also had medicinal uses. Did you have any effective traditional cures for malaria ?*

Tenakoon : A very effective one. We use Banja or Ganja—marijuana as it is usually known. This was one of our most important medicines; it used to be called "the leaf that can win the entire world", so great were its medicinal uses. We used to reduce it to powder and boil it like tea and add jiggery (sugar from the Kittul palm) to it. It was not only effective against malaria but also against worms. We often took it with other foods for it reduced the time it took for them to be absorbed by the blood. Honey has the same effect.

Gunasekara : Robert Knox the Englishman who was shipwrecked in Sri Lanka in the 16th century and spent seventeen years here as a prisoner of the king, referred to Banja as the cure for malaria in his *Account of Ceylon*. The plant was called "the ruler of the three worlds".

Goldsmith : *Do you still use Banja for medicinal purposes ?*

Tenakoon : No, today it is banned by the government.

Goldsmith : *It is said that you can increase yields by transplanting the paddy plants when they have just sprouted; have you tried to do this ?*

Tenakoon : The government tries to force us to. They learnt this technique from the Japanese. In many areas of Japan where they grow paddy, there is an annual frost which often lasts as long as three weeks. The plants get damaged if left in the paddy fields. They get round this by broadcasting the seed inside green-houses where they are protected from the frost. They are then transplanted into the paddy fields. But here we find that the plant after being transplanted is sick, it takes as much as two weeks for it to recover. The only way to get round this is to use artificial fertilizers to give them a fillip, and pesticides to protect them in their weakened state against pests. Also the transplantation takes up a lot of time and this interferes with other activities such as Chena cultivation and tank fishing. The government is also very keen that we should have three harvests instead of two, which they claim is possible with modern agricultural methods, but this takes up a lot of time and interferes with most of the other activities—including our social life—besides which it will provide a permanent niche for the brown hopper.

Goldsmith : *Have you tried to use a tractor ?*

Tenakoon : I haven't, but many farmers have done so. It is not as good as the buffalo. A pair of buffaloes weigh about 2,000 pounds. Their feet are just the right shape for pressing down the soil in the paddy field, which as a result forms a gley or crust which holds the water in. They also stir up the soil above the gley and loosen it.

The buffalo also produces about 1,500 pounds of dung every year and a vast amount of urine, both of which contribute very significantly to the fertility of the soil. The tractor on the other hand is much too heavy

*Transplanting paddy plants
a la Japan is quite senseless*

Our buffaloes are much better than your tractor !

for the paddy field. Wherever it passes, it breaks through the gley, and water penetrates into the sub-soil. So if one uses a tractor one requires very much more water and this, especially today, is unlikely to be available. Also it stirs up the soil. The light organic matter comes to the surface and is lost to the flood water. So its use leads to reduced fertility. Needless to say of course the tractor neither defecates nor urinates, hence makes no contribution to soil fertility. Nor does it produce milk and hence *ghee* (clarified butter) nor curd, both of which play a very important part in our diet. Nor, for that matter, does it reproduce itself when it dies; one simply has to buy another tractor.

Of course it saves labour and that is what we are always told, but my profession is agriculture which means that I must be in the fields; that is my life. I don't want to sleep all day, nor to spend my time gossiping with my neighbours. In any case what is the point of saving labour in a country which has such high unemployment. In the old days, labour saving devices made still less sense, the family and the community were intact and there were always enough people for the ploughing, the sowing, the harvest and the maintenance of the tanks.

Senanayake : If they had not cooperated in this way the tanks would never have been maintained. The civilisations of Anuradhapura and Pollonnaruwa would never have existed. We would never have been able to sustain a population which was possibly as much as fifteen million people, equal to the present population.

Goldsmith : *Isn't the government trying to restore the old irrigation system ?*

Senanayake : They have restored a number of tanks with World Bank aid, but only the big tanks, and that is not enough. The big tanks are only of use if the small village tanks are also in use, and these have largely silted up. It is the job of the Department of Irrigation to maintain them but they cannot be maintained by a bureaucracy. Once the social structure of the village has collapsed they must inevitably silt up and remain that way. In fact if we wish to restore our traditional agriculture we must first restore the social life and the culture that gave rise to it and without which it cannot be conducted.

Tenakoon : I fully agree. It is not the tanks that must be restored but the whole system of tank cultivation—and this cannot be done by bureaucrats. We used to have five different types of tanks. First of all there was the

forest tank which was dug in the jungle above the village; it was not for irrigation but to provide drinking water for the wild animals that live in the jungle. They knew it was for them, they had thousands of years to learn this, so they do not come to the village in search of water and interfere with our agricultural activities.

The second sort of tank was the mountain tank. There were no canals running from it; its purpose was to provide water for Chena cultivation.

The third sort of tank was the erosion control tank known as the 'Pota Wetiye'. We used to have several of those and the silt would accumulate in them before it could build up in the storage tank. They were so designed as to be easily desilted.

The fourth was the storage tank. There were usually two of them. They were known as the twin-tanks. They were used in turn. One was in use while the other was being maintained. These were connected to a large number of village tanks which they fed and which fed them too with their overflow.

Senarayake : These tanks played an essential part in the traditional rural life. One could not imagine a village in the dry zone without a tank any more than one could imagine it without a temple or rice paddy. In fact the three basic constituents of the village were the temple (*dagoba*), the rice paddy (*cumbura*) and the tank (*wewa*). Of course there were other important constituents as Tenakoon has told you. The jungle above, the garden and the scrub where the Chena cultivation took place.

Tenakoon : Absolutely.

Goldsmith : *What did the old traditional village look like ?*

Tenakoon : The houses were built very close together. In this way they occupied the minimum amount of precious land. This arrangement favoured the essential cooperation among the villagers. For instance, one woman could look after the children of a number of neighbours at the same time which is important when the maximum number of people are required in the fields to harvest the crops or maintain the tanks.

Goldsmith : *How was the maintenance of the tanks organised ?*

Tenakoon : It was part of the Rajakari service that was owed to the king.

Every village had a tank even as it had a temple

Forty days' Rajakari labour a year took care of all public works

Everybody had to provide this service forty days of it a year. It was not for the purpose of serving his personal whims or caprices. It was work that had to be done in the interests of the whole community.

Gunesekera : Indeed one of our Kings tried to get the people to desilt the artificial lake in front of his palace in Kandy as part of their Rajakari work, they refused to do so saying that this was not community work. It was his personal responsibility and he had to arrange for it separately.

Senanayake : Of course the British misunderstood the whole principle of Rajakari, they thought it was abusive, a relic of Kandy's feudal past and they abolished it. This was one of the most destructive things the British ever did. It destroyed the very principle of cooperation in this country. Fortunately it did not destroy it completely; it lingered on in a somewhat rudimentary form. The villagers still worked fourteen days each year for the common good, a practice that was finally stopped in 1970 by the Irrigation Department. Bureaucrats will not tolerate any cooperative work by villagers. It reduces the demand for its services. If the Rajakari system were still functioning there would be no need for the bureaucrats of the irrigation department. Of course, now that it is their responsibility to maintain the tanks they do nothing about it.

Tenakoon : "What was everybody's business had become nobody's business..." (A comment made by British official at a Select Committee set up by the British Parliament in 1849 to consider these matters—Ed.)

Goldsmith : *I take it from all you have told me that you reject outright the whole package of western technological agriculture ?*

Tenakoon : I do.

Goldsmith : *You would prefer to be traditional farmer of the old school ?*

Tenakoon : I would, but everything is done to make this as difficult as possible. In the eyes of officialdom I am a pauper because I am a "subsistence agriculturalist". I am uneducated because I have not been subjected to western education. All my knowledge, in particular the traditions and culture of my people, counts for nought. I am even considered unemployed because I am not part of the formal economy. I make little contribution to the workings of the market. I have even been told that I am a beggar.

Senanayake : All this will change soon, you will be the model and our youth will flock here to learn our traditions from you. This must be so because current trends cannot be sustained. The problem has got out of hand. The jungle has been everywhere cut down to make way for plantations. As a result there has been vastly increased erosion and the tanks have silted up at an unprecedented rate. There is no longer anybody to maintain the anti-erosion tanks, the twin tanks or two village tanks. In some villages the tanks are completely silted up and where they are half silted up in the meantime everybody is moving to the towns and the cities. Colombo now has vast slums which did not exist a decade ago. If current trends continue Colombo will soon look like Calcutta. People are coming to depend more and more on the formal economy for their food and its price is going up by leaps and bounds. The government is not interested in feeding the people; if it were, it would not use half our land in the wet zone to produce cash crops for export. Nor would it be building the vast complex of dams that make up the Mahaweli scheme. It would restore, instead, the agricultural system of the past. This of course it cannot do without abandoning its present priorities—development in particular. The attempt to transform this country into a tropical version of a western industrial nation is suicidal—it can only lead to even greater malnutrition and indeed famine. And all this in Sri Lanka which should be, as it has been in the past a "land of milk and honey". □

Tenakoon Vs. Jayawardene

NO TWO MEN could hold more different visions of the future than Mudiyansene Tenakoon and Sri Lanka's President Jayawardene. And nothing could illustrate the difference better than their respective attitudes to building. Thus, Tenakoon refuses to live in a modern house because concrete blocks, unlike wattle and daub, do not benefit the soil when they collapse. Jayawardene, on the other hand, has commissioned a new capital city to be built on a site named (entirely by coincidence, of course) Jayawardanepur. Clearly the President believes the city—not the traditional village house—should be the symbol of the new Sri Lanka.

Behind Jayawardene's 'vision' lies the conviction that development will only come to Sri Lanka through an export-led economy where market forces can operate unfettered by financial and bureaucratic controls. The backbone of his policy is formed by two major Projects ; the setting up of a Free Trade Zone (FTZ) at Katunayake, just outside Colombo; and the Mahaweli Development Programme, a massive irrigation and hydro-electric scheme covering almost 40 per cent of the island and involving four major dams. Both projects are already financial, social and ecological disasters.

DRI, Nagpur, at Work

DRI, Nagpur, under the able leadership of Sumatibai Suklikar, has been long running Bal Jagat Centre for children in Major Khare Park, Ramdas Peth. During the last one year work has been extended to a number of slums.

The first to be taken up was the Futala slum near Nagpur University, under the leadership of Champatai Varhadpande. This slum has no latrine and no water tap within 2 km. The adults go to work, leaving children behind in utter neglect. DRI has started a Balak Mandir. Shrimati Sheela Panchabhai, who resides in this slum, acts as teacher-cum-manager. Shrimati Shubhangi and Shrimati Suhas Mandale, visit the slum regularly. Children here learn the three R's, hear stories, play games, go on excursions. They get regular physical check-up. We have also started an Adult Education Centre and a Sewing Class, both for women.

Another women's Centre has been started in Gopal Nagar. A special feature of this centre is "Bhish", a group savings scheme, which gives financial aid to the needy. Women here are also instructed in health, nutrition and child care. Shrimati Rajani Puranik and Shrimati Gadgil are looking after this centre. The Balwadi in Gopal Nagar is being looked after by Shrimati Usha Abhyankar. They also have a Yogasana class and a small library.

The Centre in Hansapuri is being run jointly by DRI and ABVP. A special feature of this centre is a Kala Vikas Kendra, to develop the artistic sensibilities of slum-dwellers. And Dr. Dhamankar runs an Ayurvedic dispensary here. This centre is being looked after by Sunil Deshpande, Prasad Ambekar, Medha Devpujari and Anjali Kavishar.

And then there is the Nandanvan Kendra for construction workers. Dr. Gautam, assisted by a dozen doctors, is taking care of this centre. The object is nothing less than 'Health For All'.

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