

INVESTMENT  
IN MAN

AMERICAN  
ECONOMY

Journal Published on behalf of The Planning Commission



গৰু হৈ আছিলো গৰু বৰিছিলো  
 ডাঙৰ হৈ লগালো তাঁত  
 উলোটাই ওভোটাই মাকো মাৰিছিলো  
 মোৰ ধৰে লগালে মাত ।



## THE MAIDEN FROM ASSAM

*"When I was a child, I tended the cattle ;  
 "Being young, I sit at the loom ;  
 "Right and left, I ply my shuttle ;  
 "Comes my love and gives the call."*

sings the young maiden of Assam as she sits and weaves at the loom. By tradition, she knows she cannot hope to win a husband till she acquires proficiency in weaving — a craft proudly sustained by the women of India.

*handlooms*



THE NATIONAL HERITAGE

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Khushwant Singh writes about a young man who wants to know what is happening in India and travels from the Siwalik in the North to Bangalore in the South.



Women workers at Chambal

LAST year my son came home from England to spend his summer vacations with us. In his letter before he left London he wrote that he would like to spend two to three weeks looking around the country to see how things were going. "My English friends are always asking me about our dams and factories and what the government is doing about poverty, illiteracy, population and things like that. They don't seem to be as interested in our princes, palaces and mausoleums as they used to be. Now it is the Five Year Plans they want to know about—and I know next to nothing about them. Please draw up a small itinerary for me."

A bird's-eye view of fifteen years of development in fifteen days! That's what the order really amounted to. After much thought, the tour that I organised for my son was as follows.

### A bird's-eye view

I HAVE a small cottage up in the Himalayas at Kasauli. It is exactly 6,000 feet above sea-level. One side faces a wall of snow; the other overlooks a vast infinity of plains with the Sutlej winding its course like a gilded serpent at one end and the rest lost in a dim haze which makes it appear like an ocean. My son had spent a summer in Kasauli over ten years ago and one of the things he used to enjoy was the sight of the plains on the night of Diwali because that was one night in the year that this enormous spread of what seemed to be a lifeless black sea teemed with life in the shape of myriads of oil lamps in villages which we could not see in the daytime and fireworks which burst in the sky like multicoloured meteors. Ten years ago the only lights we could see from the hilltop at Kasauli were of a cement works owned by the Maharaja of Patiala. And ten years ago the only sound which shattered the peace of our sylvan resort was the puff, puff, puff of a diesel engine which supplied us electric power—at virtually four times the rate which prevailed in the cities of the plains.

The first place I took my son to was Kasauli. After dinner we went for a stroll as was our habit. We turned round the hill and came to the site which overlooked the plains. The boy stopped dead in his tracks and gazed with stupefaction. "What on earth are all these lights?" he asked with amazement. "There usen't to be one here ten years ago. Now it looks almost like a Diwali."

I pointed out the various towns whose names I knew. Some like Chandigarh and Nangal had come up in the last decade; others like Rajpura, Rupar and Ambala which were not visible because of their dim lights showed more clearly. Some more like Anandpur had suddenly come into being on the night map because of being electrified. I explained to him that one of the things that I looked forward to seeing every time I came to Kasauli was the villages which were

EVERY  
NEW  
DAY  
A NEW  
LIGHT

newly electrified and could therefore be spotted at night. It was certainly an owl's eye view of what Bhakra had brought to a very small part of the Punjab.

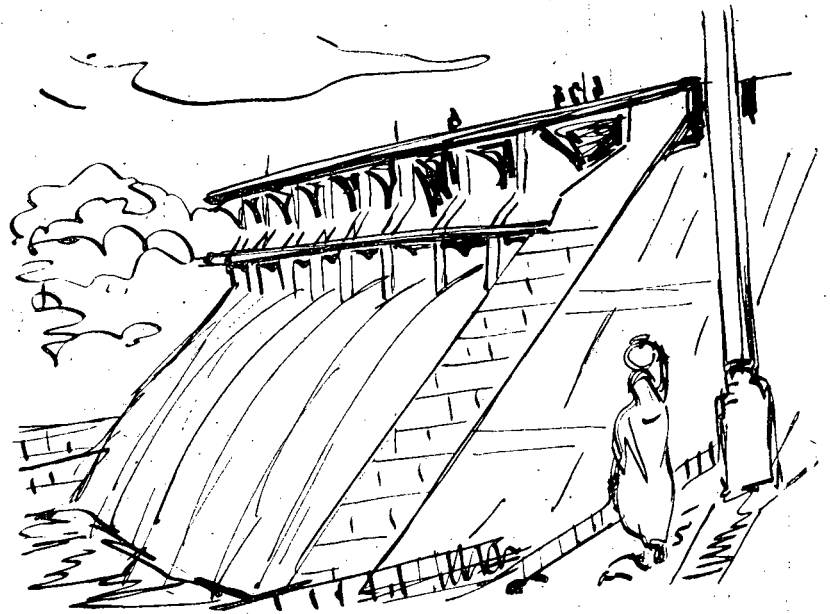
We slept more soundly in Kasauli because our nights were not disturbed by the puff, puff, puff of the diesel engine; Bhakra had taken on the neighbouring hill-stations. And we were woken up earlier than before by the shrill blasts koooh, koooh, koooh of the flour-mills which had been installed in the valley.

My boy had seen the beginnings of Bhakra and now read by the light produced by Bhakra. His first call was a sort of pilgrimage of thanksgiving to the dam. (Didn't the Prime Minister say, "These are the new temples of India where I worship!") He went across the Gobindsagar and was shown the spots where the old village which had given the dam its name and the town of Bilaspur slept under the waters. He also saw the Nangal fertiliser factory then fast approaching completion.

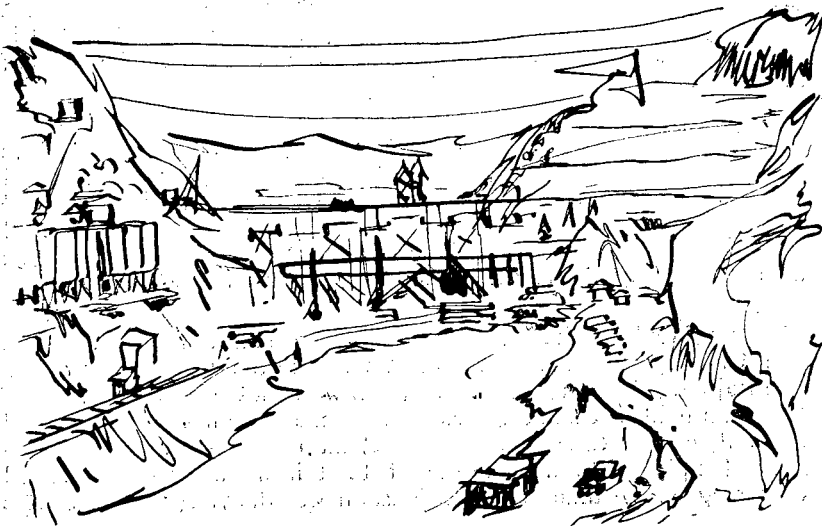
## Power and the Awakening

### One dam thing after another

"YOU'VE got too many dams in my itinerary," complained my son. "They all look alike and produce the same sort of thing—power for electricity, water for irrigation. I am bored with figures of kilowatts and acres to be cultivated." There is a sort of sameness about most dams and yet they have a personality of their own. To me Bhakra, Chambal and Koyna are as different from each other as a Scandinavian from a Chinese and a Chinese from a Zulu. However I did not persist and suggested that he might skip the others but see the series



Right : The Konar Dam of D.V.C.  
Below : The Bhakra Dam.



in the valley of the Damodar. There he would see other operations involved in the building of dams and see their innumerable benefits—in official jargon multipurpose. Afforestation, fisheries, tourist resorts on the artificial lakes. And of course Damodar was so close to the coal-mines and the steel works.

My son went to the Damodar and as I suspected his enthusiasm was for "superb fishing", "wizard place for water skiing and "wonderful tiger country". He did the thermal plants like a tourist:



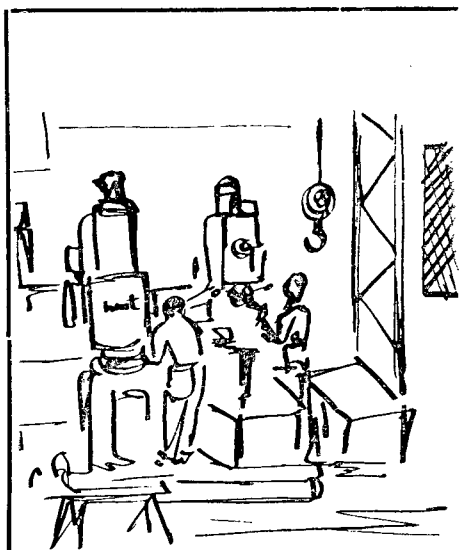
just ticked their names off in the typed sheet I had supplied. But the steel plants once more aroused fervent admiration.

### What's so piggy about pig iron?

"WHAT is so hoggish about pig-iron?" he asked me in his letter from Jamshedpur. He had obviously been told by his guide for he proceeded to explain to me in terms of scientific formula how ore was smelted, purified and what was mixed in what proportions to make steel. His firm conviction in the superiority of State enterprise was somewhat shaken with the efficiency he saw in the Tata Steel works, the Tata-Mercedes motor truck factory, and the locomotive works. That was all to the good. The private sector has much to teach the public sector in terms of business efficiency. But there were things the private sector in India couldn't or had not taken on: things like aircraft production, machine tools and telephones. Fortunately all these could be seen in one tour. So the boy took the train from Jamshedpur to Calcutta and took a plane which took him to Bangalore.

BANGALORE made a greater impression on my son than any other place. It wasn't only that it is perhaps the cleanest city of India and has the nicest climate in the world; it was also that at Bangalore he got the feeling that he was not in an underdeveloped country but a modern one. What did it were the Hindustan Aircraft Factory, the Telephone and the Machine Tools Factory. I wrote back to tell him that he shouldn't let these things get out of focus as we were yet a long way away from really manufacturing aircraft in their entirety, that although some telephones were being sold abroad, it was still difficult to get a telephone if you were not a government servant and the machine tools factory had only recently turned the corner under the management of Mathulla. The real test of whether or not India had made real progress was the state of our villages and agriculture—not showpieces like the atomic energy plant but things like compost pits, seed farms and rural co-operatives. "Where do I get to see them?" he asked in his next letter.

WHERE and how does one get to see the progress in the villages in a day or two? After the modernity of Bangalore, the best antidote would be a really backward area somewhere in the heart of India. So I suggested that he should go to see the Chambal project, its dam and canals and also the neighbouring villages in the poorest, the most arid areas of Madhya Pradesh and Rajasthan. I had been in this region before Independence and recalled the stark poverty and



### HMT—Laurels

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illiteracy (100 per cent in most cases) of the opium-growing and filaria-infested Bhil villagers.

Chambal was the last part of his tour of India. When he rejoined me in Kasauli I asked him about his impressions of the Chambal villages. "Still very backward," he said somewhat patronisingly. "Did you see any filaria? I asked him. "Filaria? Oh, the B.D.O. kept gassing about some disease of that name which they had wiped out."

"Any opium growing?"

"No! Did they grow opium?"

"Yes, at one time that's all they grew. What about schools? Did you see any in the villages?"

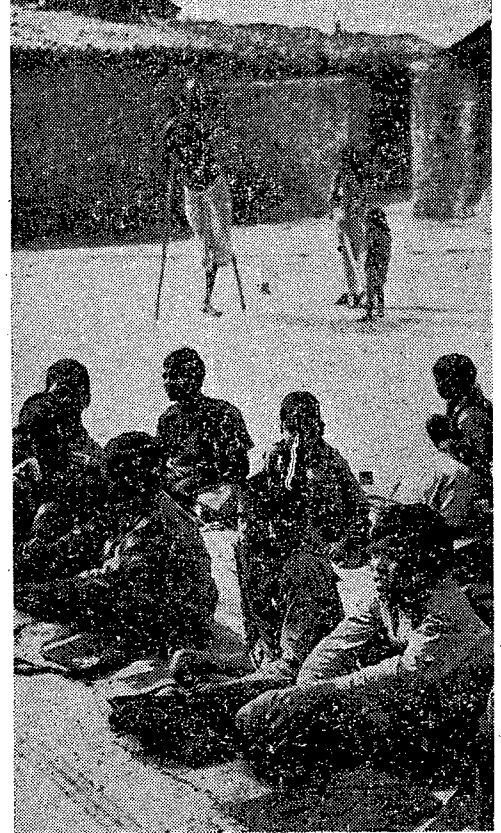
"Oh yeah—there was one in every village. Very tiny mind you. Just one teacher to the entire lot of 40-50 boys and girls. They told me every child was now going to school."

I told him that in 1945 when I had been round these very villages there wasn't a school nor a single literate person that I came across.

"How am I to tell the boys in England what's happening in India? They have bigger steel plants and planes and automobiles and things like that; the figures of production won't impress them.

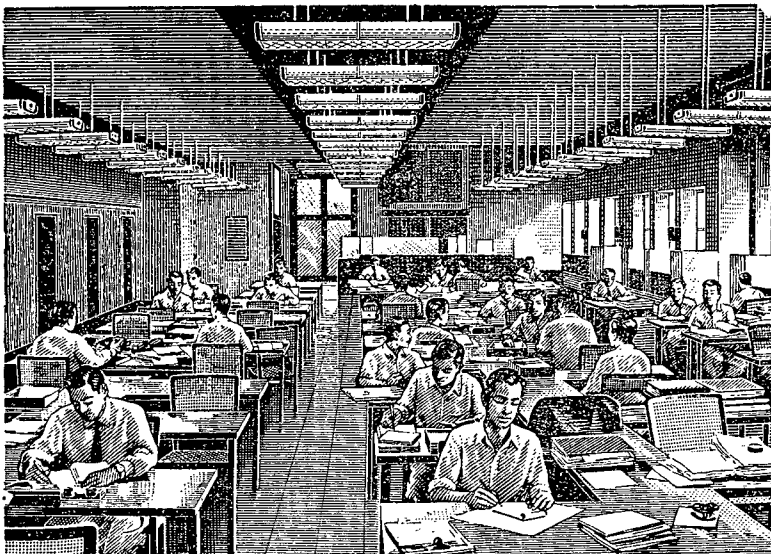
And our agricultural output per acre is so measly compared to theirs. Where does one begin?" he asked, somewhat bothered.

Once more I took him out for a walk after dinner. It was a moonlit night and the lights in the plains were not as distinct as they had been a fortnight before. But even in the haze of the moonlight he spotted two clusters of lights that had not been there before. "I suppose this is as dramatic an evidence of progress as I could find anywhere in the country," he said heaving a sigh of relief.



An open-air school in a village in eastern Uttar Pradesh

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# TECHNIQUES OF INDIAN PLANNING

## *Concept Of a 'Rolling Plan' Takes Shape*

SHRIMAN NARAYAN

THE Planning Commission is currently engaged in detailed discussions with various State Governments regarding their Annual Plans for 1962-63. Annual Plan deliberations this year have assumed special importance because the Planning Commission is utilising this opportunity for reviewing the progress of various sectors in different States during the current year as also for assessing the potentialities of economic growth during the following year. Contrary to earlier discussions, the Planning Commission is laying much greater stress on the achievement of various targets *in physical terms*, without giving undue importance to the expenditure incurred merely in financial terms. The Planning Commission has also decided to publish regularly an annual review of the progress of the Third Five-Year Plan both at the Centre and in the States. It is expected that these annual reviews of the Plan will be placed before Parliament every year during the winter sessions. This will give an opportunity to Parliament and the country in general to study and understand both the achievements as well as shortcomings in different sectors of economy from time to time. Annual assessment of this nature will be helpful in creating greater consciousness for the successful implementation of the Plan among both the Central Ministries and the State Governments.

Apart from these Annual Plans, the Planning Commission has already started the process of preparing a fairly detailed outline of a Fifteen-Year Plan of development covering the period up to the end of the Fifth Plan, that is, till 1976. The preparation of such a long-term plan of economic development has become absolutely necessary in order to utilise the latest techniques of advanced planning, particularly in underdeveloped countries. Various projects connected with power, transport, communications and mineral development take considerable time to fructify; training for technical personnel has also to be planned much in advance of its actual utilisation in such projects. The Planning Commission is, therefore, busy in the preparation of a Perspective Plan for 1961-76 so that various sectors of national economy may fit into one another harmoniously and at the proper time. Steps are being taken to improve the quality of statistical and technical information in official as well as non-official agencies. Continuous collaboration between the Central Ministries, the State Governments and important non-official institutions engaged in economic and social research is being maintained

for the preparation of this long-term plan of economic development. It is expected that this Fifteen-Year Plan for the country will be ready in the course of the next three years. According to preliminary estimates it is envisaged that net investment in the Fourth Five-Year Plan will be of the order of Rs. 17,000 crore; the investment in the Fifth Plan is expected to be about Rs. 25,000 crore.

The Planning Commission is trying to work out another modern technique of economic planning in such a manner that we shall be in a position to have the vision of a continuous Five-Year Plan from year to year. In other words, while implementing the first and second year of the Third Five-Year Plan, we shall also be able to have a fairly vivid glimpse of the first two years of the Fourth Five-Year Plan, an outline of the first half of the Fourth Five-Year Plan will also be ready. Such a process of continuous planning is called 'Rolling' planning. The advantage of this modern technique is that by the time one Plan period is over, the next Five-Year plan would also be finalised. It is hoped that this process of rolling planning in India would be of considerable benefit in planning our projects well in advance so that no time is wasted in preliminary work and different sectors of economy are properly dovetailed into one another.

### NEXT ISSUE

#### ASSESSING NATURAL RESOURCES

—Yojana Feature



#### THE ECONOMICS OF PROHIBITION

V. V. Borkar



#### ASSESSING COUNTRY'S DEVELOPMENT

Kusum Nair



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## Planning for Better Citizens

**I**n the words of the *Third Five-Year Plan*, it is moral, human and spiritual values which give meaning to economic progress. Later, in one of its incandescent passages, the Plan Report declares: "Ultimately it is the development of the human being and the human personality that counts. Although planning involves material investment, even more important is the investment in man."

A mesmeric phrase, this 'investment in man'. How is it to be understood? To get an insight into what it means, it would be useful to go back to the more matter-of-fact opening of the *Second Five-Year Plan* report of five years ago. "Development," we read there, "is a continuous process; it touches all aspects of community life and has to be viewed comprehensively. Economic planning thus extends itself into extra-economic spheres, educational, social and cultural."

Investment in man means much more than the better use of human resources. Development, in fact, is not only a process; at every successive stage, it is a product in itself. When a people are educated, for example, we get technicians and teachers, doctors and executives; what is even more important, we get citizens who are wide-awake, sensitive, self-restrained and responsible. There are, thus, two separate but related results from 'investment in man'—first, a more productive man is produced; and secondly, a better

man is developed. All the social programmes of our Plans have both these ends in view. The opening sentence of the chapter on education, in the *Third Five Year Plan*, for example, reads: "Education is the most important single factor in achieving rapid economic development and technological progress and in creating a social order founded on the values of freedom, social justice and equal opportunity." The chapter on health begins: "The broad objective of the health and family planning programmes in the Third Plan is to expand the health services, to bring about progressive improvement in the health of the people by ensuring a certain minimum of physical wellbeing and to create conditions favourable to greater efficiency and productivity." Both sentences are evidence of how, in the development process, both being and becoming go hand in hand. A healthier man, an educated man, is a more efficient man; he is also the better person. To build a modern society, we need machinery and money; even more we need men with modern minds. The remarkable flowering of small industries in our country is a case in point. Malaria control is another instance of the effect of social programmes on production. One of the important factors contributing to the big rise in our food production is that, thanks to the malaria eradication programme, more men are at work in their field instead of lying shivering in bed.

Thus, good sense, good economics and good morality all require that we spend as much as possible on education, on health, on family planning, on welfare of women, children and industrial workers and on programmes for bringing the 'backward classes' and backward regions to a level with the rest. Social welfare is not lace woven round the cloth, not something that can be dispensed with when money tends to be scarce. Social and economic programmes are the warp and woof of the fabric of national progress. Indeed, among the theoreticians of development there are many who firmly believe that universal secondary education is even more important than, say, the building up of steel mills for a nation wishing to develop. The debate is by no means over. For our part, the country is wedded both to a steady expansion of education and other social services and to a speedy build-up of basic industries. The social programmes are not organised charity by any means, but an indispensable part of our development strategy. Also to be remembered is that investment in man does not consist of the social programmes alone. Rural electrification, aid to small industries, community development, the works programme—all these form part of it. This investment has important economic returns—greater efficiency, more goods and better comforts. Even more pertinent are the moral returns.

In this issue we present the views of a number of scholars on different aspects of 'investment in man' especially as the term applies to education and the transformation of social outlook. Self-criticism is marked in a few of the articles; but it arises from the authors' keen desire that the people should not lose themselves in the material rat-race but learn to place social good above personal gain. Only by developing this virtue can we hope to become a better nation. The true justification of development in man is that it creates something more worth-while than an acquisitive or affluent society.

Everything that gives the people a new area to work in or widens the mental horizon of the people forms part of investment in man. It would not be wrong to view the whole of the Plan as constituting such investment.

*On Certain Aspects of*

# INVESTMENT IN MAN

K. S. KRISHNASWAMY

IN the Third Plan, as in the earlier Plans, a distinction is drawn between 'development outlay' on the one hand and what is called 'investment' on the other. While this distinction is necessary for certain reasons, it has the somewhat unfortunate effect of making the Plan seem more concerned with material rather than human resources. It creates the impression that investment, in the sense of outlay for the creation of physical assets like steel plants, power stations, irrigation canals and so forth, is all that there is in the development programme. In actual fact, the Plans embody a great deal of what may be called investment in the human element. If this is not treated explicitly in the Plans, it is not for any lack of appreciation of its importance but because of certain conceptual difficulties that arise in this context.

TO begin with, when we talk of investment in man, we cannot think in terms of certain quantitative additions to stocks. The focus has to be on improvement in the quality of individuals constituting the national community. Because of this, it is virtually impossible to work out in this context any precise relationship between what might be called investment in terms of financial and other resources and the product resulting from it. True enough, the Plan envisages outlays on education, public health and so forth, all of which will contribute to an improvement in the physical and mental prowess of the people. But the extent of development in these directions cannot be adequately measured by additions to the number of school-going population or to the medical facilities available in different areas. It is what the people in fact get out of these facilities that matters; and it is here that we find ourselves dealing with elements that are incommensurable.

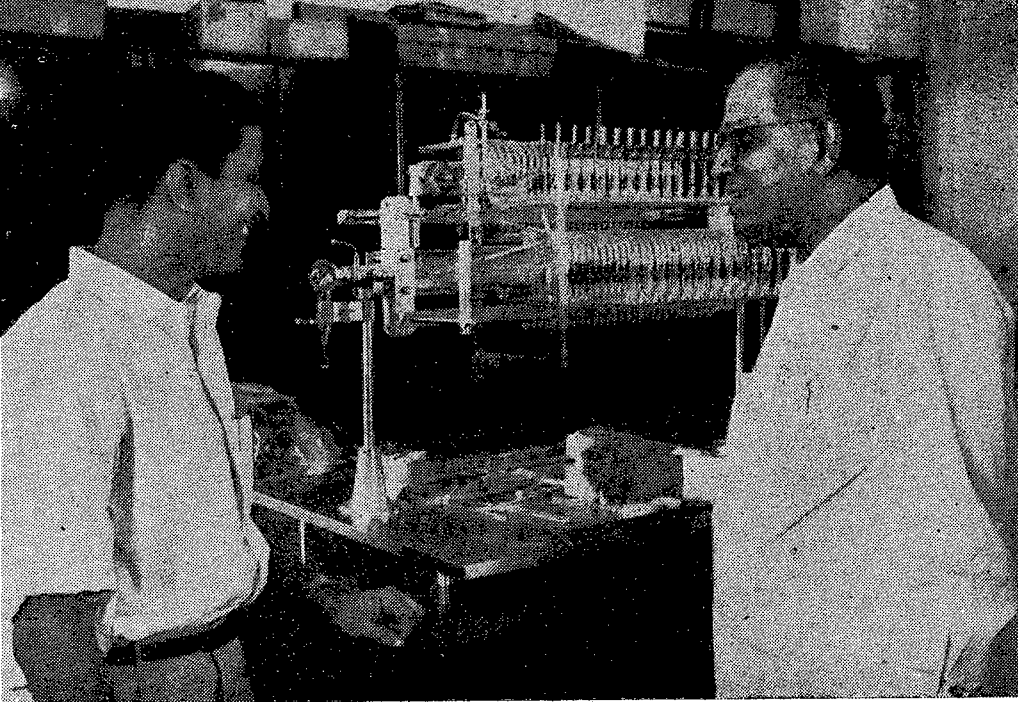
There is a further difficulty. When we talk of investment in man, we are apt to confine its scope to the provision of such obvious social services as education and public health. But this is not the whole story. Nearly everything that is part of a development programme does something to the social environment and the interrelations between different sections of the population. All of these influence the attitudes of



## FIRST ARTICLE OF SERIES

individuals in society and the objectives which that society seeks to attain. They also affect the institutional structure governing human relations in all their aspects. In elucidating these ramifications, we have therefore to give as much attention to the qualitative changes brought about by, say, industrialisation or community development programmes as to the schemes of education and technical training incorporated in the Plan. We have, in other words, a matter in respect of which assessment is difficult for two reasons: in the first place, we are never sure of what really constitutes investment in man comparable with investment in industrial equipment or construction; and, secondly, on the side of product, there are no yardsticks or standards with which to evaluate the resultant benefit to society.

AND yet, despite all these complications, it is inescapable in any development programme that one should take a view on the relative position of investment in man in the scheme of policies or priorities. That this is not an idle or eccentric preoccupation becomes clear when we consider the contribution to national economic well-being imputed to this intangible element by close students of economic progress elsewhere. For



Scientific research is a field where the concept of 'investment in man' finds its full significance. Applied as well as pure research is a prerequisite of economic progress. Research also trains the men who are required to advise on, if not determine, national policies in a highly industrial world. The photograph from the Chemistry Faculty of Delhi University shows Dr. T.R. Seshadri, F.R.S., one of the country's foremost scientists, with a young research scholar.

instance, some of the studies made in the United States reveal that over a period of years the gross national product has increased proportionately more than the increase in what may strictly be called capital or labour inputs. This is taken by some as a measure of the benefit derived by the American economy from such elements as technological progress, improvements in economic organisation, development of social institutions conducive to larger production, increase in social mobility and so forth. All of these are basically facets of a qualitative change in society, arising from qualitative changes in the individuals in it. Similar elements of social change have played a part in enlarging economic benefits in other countries also, despite differences in social arrangements or political ideologies. The point that needs emphasis here is that in all patterns of action undertaken by a country to develop its economic status, a major operative factor has been an increase in the productivity of its people, attributable to something other than an increase in per capita availability of capital resources.

WHILE there is no gainsaying the importance of qualitative social change for economic progress in any country, the means by which such change is brought about are not necessarily the same in every country or in every period. They depend partly on the heritage of the community concerned and partly on the vision of the future that community develops on its own or as a result of influences and ideas impinging on it from outside. At this stage in India's history, it is inevitable that the main ingredients of investment in man should be the expansion of education and an increase in the purely physical capabilities of the people. It is possible to argue that in the Five Year Plans these have not received as much attention as they deserve. It is also possible to argue that there is no sense in building schools and colleges to produce more educated unemployed. These debates apart, there is a point

which, despite its seeming a caustic one, is of very considerable importance. In the Plans, the emphasis on the requirements in terms of social or qualitative change is not explicit because they have been written into the *objectives* of the programme.

To elaborate the point a little further. One of this major objectives of the Five Year Plans in India is the matching of political equality enjoyed by the people under the democratic constitution with equality in economic status and opportunities. The rationale of this derives from the argument that social inequalities are both demoralising and devitalising; that they generate a climate in which the productive talents of the working population fail to grow *pari passu* with the need; and that they inhibit the utilisation of science and technology for the common good on account of vested interests and ossification of human institutions. In other words, the egalitarian objectives informing the Five Year Plan are not something apart from the purely economic objectives of increasing national output and investment; they are part and parcel of the structure of incentives on which the economic programme is to be sustained. In making these incentives effective, however, education has necessarily to have a major role in a community such as ours—where the mass of the people have for long been illiterate and general or technical education has been the privilege of a few. Clearly, in such a structure, there can be no equality of opportunity without the elimination of impediments to the acquisition of knowledge by every member of society, in a manner and measure appropriate to the development of his or her talent. But, alongside of this, opportunities for the exercise of such talent have to be deliberately created. Hence the measures envisaged in the Plan for creating special facilities for small industries, rural works programmes and so forth. They

(Continued on Page 38)



decade or two of public education may see the end of this phase and the return of leadership in different lines of social and political activity to the natural leaders in these lines. Surely a nation's life has a richer content and wider meaning than its politics or a public administration.

### The Dark and the Bright

**T**HERE have been other vast social changes in attempting to do in a decade and a half what other countries have taken a century or more to get through. The human mind being what it is, the compressive process is by itself productive of uncertainty and instability. The uncomfortable interval between the destruction of the old cultural anchorages and the building up of the new is unpleasant and unavoidable. Communities with widely differing senses of values have been suddenly brought together in the scramble for quick economic advance and political privileges. Physical communications have far outstripped mental communication and the general trend has been more of jealousy and competition than of understanding and co-operation. The economic motives have outrun traditional checks and forces disruptive of the nation based on religion, caste, tribe, professions, regions and States have arisen. Such mutually hostile development is at the cost of the nation. Lately the need for positive emotional integration of the nation has been realised. The independence of the individual and the unity of the nation enshrined in the ideal of fraternity have become somewhat temporarily dim. The constitutional goals of justice, equality, liberty and fraternity have been laid once for all and all national effort should be to achieve these goals.

While fourteen years may constitute a small period in the life of a nation, it is long enough to take stock, to diagnose dangerous trends and set them right. The darker aspects have been stressed in this brief review to provoke thinking on how to arrest them. The brighter points are many. The miracle of freedom through non-violence and the survival of the nation; the external security and

internal peace that prevail and render possible complete devotion to economic and social development; the freedoms that exist, particularly the freedom of speech and expression; these are rare achievements too often taken for granted and forgotten. The economic development has been incredible. But a country is as good as its citizens. Outstanding leadership may procure a higher status for some time, but in the long run the quality of its citizens will tell. If there is disunity, the national standard could be a good deal lower than the quality of its citizens. How far has the individual Indian progressed? What are the danger signals? A thousand years of economic and political subjection to foreigners and unbelievable poverty were our heritage and the sudden transition to an independent nation set on high goals of social, political and economic standards in the shortest possible time is stupendous. "Muddling through" or "learning by doing" is a natural educative process in life but has its serious limitations particularly when speed is essential. Knowledge, however imperfect, of the social objectives and the methods of change that the nation is adopting and a sense of participation in such change are essential. Persistent and positive social education is a fundamental need.

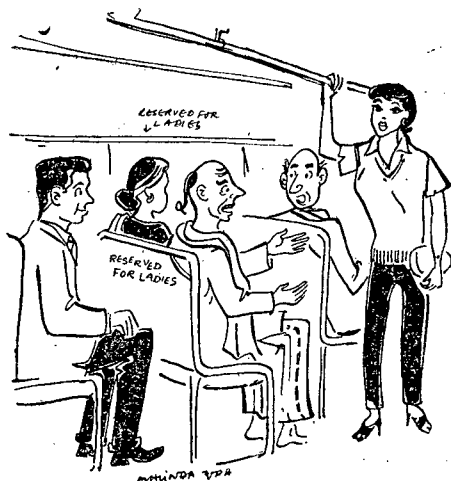
### Educating the Rural People

**E**ARLY in our free life the State conceived of a national movement to develop community feeling in the rural citizen with the aid of the National Extension Service and largely through the methods of participation by the people. It was and is essentially an educative process of self-help. Extended now almost throughout the country, and committed to a progressive transfer of powers of self-government to the people and covering all aspects of rural life, the Community Development programme is a larger movement in public education than has been tried in any other country. It has had its ups and downs and its precipitate extension to large areas has led to loss in quality. It has suffered from some faults that are systematic in the country. Quick changes and speed reduce the quality. Patient hard work alone pays in the long run but the sneaking desire for short cuts persists. Uneducated leadership at the lower echelons has undervalued the importance of steady and systematic social education. The less desirable aspects of the party system of parliamentary democracy have infiltrated to the lowest level. But by and large the Community Development movement has awakened the rural public to its rightful position in society, brought the people and their leaders and the Government machinery closer together and resulted in the firm establishment of a uniform pattern of rural administration throughout this vast country. It is the most significant step taken so far in educating the rural Indian in the arts of citizenship.

### Pulls of Separation

**W**HILE the individual searcher after truth continues on his own to extend the bounds of knowledge, social education is largely achieved through communication between people of different outlooks and the exchange of senses of values, knowledge and experience between them. Physical communications make this possible but the sudden mixing in the absence of effective mental communication may result at the outset in more

### SHAMBU by Malinda Topa



...er...er. Could you please tell me whether I have to offer you the seat?

misunderstanding than understanding. While political education on current events has spread, some of our newspapers and journals have shown a trend to communicate news that will sell or will be acceptable rather than news and views that proclaim uncompromising truth. But the written word has limited appeal in a country still largely illiterate and where most of the literate have not the reading habit. The cinema has great potential and contains in itself the visual picture, the spoken word, music and drama and has greatly expanded in quantity rather than quality. By and large films are made to sell, offering a kind of Freudian escapism and not often a view that is sincerely felt or faithfully portrayed. The spoken word has greatly extended its scope through the radio, limited though it is to the not too many private and community receiving sets. Its impact has been considerable particularly in news, music and sports. Talks and discussions are slowly developing but the stamp of the Government monopoly is often apparent in the timidity of its approach on current controversies.

But apart from such ad-mass communication, the bulk of public education should come from contact between people and between people and their leaders. As a rule the Indian is not club-minded. Pilgrimages, religious meets, *melas* and fairs serve as important cross-fertilising agencies but the traditions of public philosophical discussions has died down. Exposure to new thoughts and apparently strange ways are necessary and youth and women's movements have so far been feeble. The political parties and their hierarchy of leaders and workers should educate the people and constantly place before them the sense of values which their party inculcates for understanding and acceptance. This implies study, accurate thinking and hard work which are becoming noticeably scarce. To get at the vote somehow, once in five years, by strategy at the last minute is no substitute. The chase for political power as an end in itself or, even worse, often as a means of economic gain is getting widespread. The Constituent Assembly decided by a majority of one that Hindi, spoken by the largest single community, should become the country's official language. The precipitate methods adopted by some in ensuring this objective resulted in resistance in the people who spoke other languages. The seed of separation had been sown before in the adoption of linguistic provinces. The result has been unusual emphasis on the development of regional languages, not only as official languages but their extension even to educational institutions, cutting off communication between different universities of India and vivisectioning national thinking. Separation or attempts to separate, through methods of political pressure or bloodshed, smaller and smaller areas into political units based on linguistic motivations has been a very disturbing feature. This is not the first occasion in this country, or elsewhere, that smaller groups based on common hatreds have displaced larger groups based on common duties. Much has been said publicly and privately but public education, dispassionate thinking and firm early decisions at the risk of personal unpopularity have not been conspicuous.

Religious differences have always plagued people not wholly absorbed in the pursuit of affluence. Our own past history does not help us either. The pains of Partition led to a negative attitude which attempted to solve the problem by ignoring it. By the time the effect of the

martyrdom of Gandhiji had waned, many Muslim families had several of their members in Pakistan and the Hindus suspected them of more sympathy for that country than India. Special preferences and reservation of seats for Muslims disappeared and the community has to some extent lost its share of rewards and privileges and feel themselves second-class citizens. Pakistan is progressively assuming the air of guardian for Indian Muslims and news of every communal encounter seems to reach them and is seized upon and exaggerated. All Indian Muslims obviously have full rights of Indian citizenship and must be made to feel that way. Political affiliation to or weakness for a foreign country inimical to India is an act of treason and should be treated as such. The clear distinction between devotion to Islam and loyalty to Pakistan must be understood all round. Exactly similar is the difference between belief in Communism and weakness for China which has occupied parts of our country. Separation of religion from politics must be complete. It can be achieved only when judgements are purged of the emotional background of the past and clear thinking takes the field.

### Changes Too Many, Too Sudden

THE background of poverty, lack of private enterprise and the educational system originally designed for producing useful servants for the foreign Government have built up high social prestige and economic value for the security of service under Government. Institutional education in the primary and secondary school stages and university had been harnessed for these purposes. Our present educational system has been condemned by all and in fact has proved, along with the civil services, a most useful whipping boy. The main troubles have been too many rather than too few ideas and the spread to these institutions of the general infections prevalent in the society and of which they are a part. The length of the courses, their content, the methods of teaching, media of instruction and the educational objective in each of these stages of institutional education have undergone more than one change within the last ten years and there has never been enough time to evaluate the effect of one change before launching another. A distinguished foreigner considered our First Five Year Plan all wrong and felt that for the first two Plans at least development should be confined to education only. On the contrary no sector has been quite so neglected in India. Widespread desire for education of children and youth in institutions has greatly increased because of the opportunities of employment. In no other sector has quality been sacrificed more for quantity. Frequent monkeying with the processes that are designed to help the child go through the difficult stages of boyhood and adolescence on to manhood in a competitive and complicated society is disastrous. Infiltration of political and social evils into educational institutions has been another disaster. In the rush for money and power the prestige of the teacher has been nearly destroyed. It is a tribute to the vitality of our educational institutions that they survive at all and still render the services that they do. The quick turn-out of thousands of graduates is not the end of a university. Besides shaping young men to fit into the

(Continued on page 50)

*Most important single factor in bringing about  
social change and preparing people for it*

# EDUCATIONAL POLICY in the PLAN

D. P. NAYAR

EDUCATION is central to planned development. It has to provide personnel for specific tasks, whose number is very large and the type extremely varied in comprehensive planning in a vast country like India. It has also to build up a social climate favourable to planned progress so that the people at large not only help the Plan consciously and intelligently in various ways but also assist in the proper utilisation of the gains of the Plan so that progress is effected towards accepted social goals. Democratic planning requires not only public participation in the execution of the plan but in the formulation of the plan itself and it succeeds to the extent that the people themselves realise their needs and are prepared to put in effort to meet them. Rapid economic development and technological progress, which it involves, release forces which have their impact on—and require changes and adjustments in—every aspect of life of the people, and unless they are properly educated to meet the challenge of this rapid change in which they get involved, there would be serious dislocations and tensions created in society.

## On the Eve of the First Plan

Before Independence, education naturally received scant attention. The position had not changed very much until the launching of the First Five Year Plan. In April, 1951, only 42.6 per cent of children in the age-group 6-11 attended schools. This percentage was 12.7 for the age-group 11-14 and 5.3 in the age-group 14-17. The total enrolment of children of the age-group 6-17 was only 25.4 per cent of their population. The overall literacy percentage was a mere 16.6. Facilities for technical and vocational education were very inadequate. There were only 49 degree colleges with an admission capacity of about 4,000 and 86 polytechnics with an intake capacity of nearly 6,000.

The educational system, apart from quantitative deficiencies, suffered from varied qualitative defects: poor standards, poorly-paid and dissatisfied teachers, a highly unsatisfactory examination system and a system of education which gave no training for new opportunities and responsibilities to the citizens of an independent country.

Besides this overall unsatisfactory position, there were serious internal imbalances in the system of education. While the large majority of the population lived in villages, educational facilities, especially for secondary and



## INVESTMENT IN MAN-3

higher education, were largely concentrated in the towns. Expenditure on recognised educational institutions in rural areas was only 37.5 per cent of the total expenditure on education in 1950-51. Women's education considerably lagged behind. Only 24.6 per cent of girls of the age-group 6-11, 4.5 per cent of the age-group 11-14 and 1.8 per cent of the age-group 14-17 attended schools. About 22 per cent of the population consists of scheduled castes and scheduled tribes. Their education had been almost completely neglected. There were also grave disparities (in regard to the available educational facilities) between different States and even between areas in the same State.

## Expansion of Facilities

*School Education:* It will take a long time to overhaul the system of education completely and expand it on an adequate scale, especially in the face of a rapidly increasing population and various competing demands of a developing country on its limited resources in the early stages of its development. Yet significant things have happened during the decade of planning that we have completed and the process would be carried further during the Third Plan.

In the first place, one is struck by the vast expansion of educational facilities that has taken place. The number of children of the age-group 6-11 increased from 19 million in 1950-51 to 34 million in 1960-61 and will increase to 50 million by the end of 1965-66. The percentage of children of this age-group attending schools increased from 42.6 in 1950-51 to 61.1 in 1960-61 and is estimated to increase to 76.4 in 1965-66. The number of

children of the age-group 11-14 attending schools will more than treble itself by the end of the Third Five Year Plan, from 3 million in 1950-51 to nearly 9.7 million in 1965-66. The percentage increase was from 12.7 in 1950-51 to 22.8 in 1960-61 and will be 28.6 in 1965-66. In the case of children of the age-group 14-17, enrolment will increase from 1.2 million in 1950-51 to 4.6 million 1965-66. Taking school-going children as a whole (age-group 6-17) their number will increase from 23 million in 1950-51 to about 64 million in 1965-66 and the percentage of children attending schools of this age-group will double itself, from 25.4 per cent to 50.1 per cent.

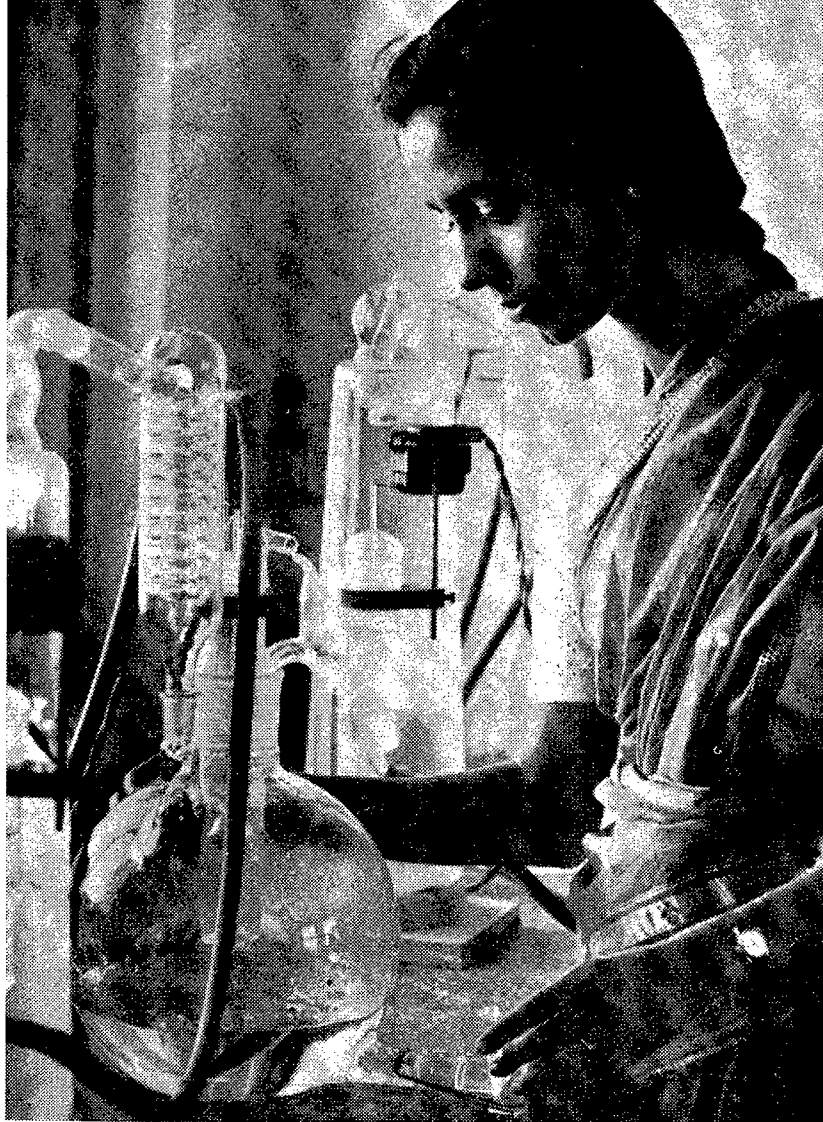
*University Education:* The number of universities increased from 27 in 1950-51 to 46 in 1960-61 and will increase to 58 by the end of the Third Five Year Plan. The total enrolment at the university stage increased from 360 thousand in 1950-51 to 900,000 in 1960-61 and will increase to 1,300,000 by the end of the Third Plan.

*Technical Education:* There was a steep rise in the facilities for technical education. The number of degree colleges increased from 49 in 1950-51 to 100 in 1960-61 and will increase to 117 by the end of 1965-66. This will represent an increase in admission capacity from 4,000 in 1950-51 to nearly 14,000 in 1960-61 and nearly 19,000 in 1965-66. The number of diploma institutions increased from 86 in 1950-51 to 196 in 1960-61 and will increase to 263 by the end of the Third Five Year Plan, representing an increase in admission capacity from 5,900 in 1950-51 to 37,390 in 1965-66. Institutions for training of craftsmen increased from 59 in 1955-56 to 167 in 1960-61 and will increase to 318 by the end of the Third Plan. Training facilities, thereby, will increase from 10,500 in 1950-51 to 100 thousand by the end of the Third Plan.

### Qualitative Improvement

*Training of Teachers:* To improve the quality of education, considerable emphasis has been laid on the training of teachers. The number of training schools, which train teachers for elementary schools, increased from 782 in 1950-51 to 1,307 in 1960-61 and will increase further to 1,424 in 1965-66. The number of trained teachers in primary schools will increase from 3 lakh in 1950-51 to more than 9 lakh in 1965-66 and their percentage will increase from 58.8 in 1950-51 to 75 in 1965-66. In middle schools, trained teachers will increase from 46,000 in 1950-51 to 270,000 in 1965-66—an almost sixfold increase. The percentage of trained teachers will increase from 53 in 1950-51 to 75 in 1965-66. About 70 per cent of the training schools had been converted to the basic pattern by the end of 1960-61.

In high and higher secondary schools, the number of trained teachers will increase from a little over 68,000 in 1950-51 to 217,500 in 1965-66 and the percentage of trained teachers will increase from 53.8 in 1950-51 to



One of the features of our social change is that increasingly larger number of women are being trained for a variety of professions—to be teachers and doctors, engineers and research scientists.

75 in 1965-66. At the secondary stage, new subjects are being introduced in the training colleges to prepare the teachers for the diversified pattern of higher secondary education which is being progressively introduced. To tone up the system of training and to give leadership in the training for new subjects, the Ministry of Education is proposing to set up four regional training colleges.

The large increase in training facilities, however, both at the elementary and secondary stages has seriously strained the resources of personnel and physical facilities which in turn has affected the quality of training provided. Serious efforts will need to be made in the Third and subsequent Plans to ensure that the quality of training does not suffer in the process of expansion.

The University Grants Commission has schemes of seminars, summer courses, etc. to improve the quality of teachers. A scheme for training technical teachers has also been drawn up.

*Improvement of Salary Scales and Conditions of Service:* The salary scales of teachers have always been very unsatisfactory. Towards the end of the First Plan, the Central Advisory Board of Education drew attention to this problem in a pointed manner and the Board laid



The education of girls is receiving special emphasis at all levels—primary, secondary and university. More than 23 million girls will be in school by 1965-66 and a fifth of all university students will be women.

down a minimum basic salary of Rs. 40 for untrained and Rs. 50 for trained primary teachers and the Central Government formulated a scheme of assisting, on a 50 per cent basis, those State Governments who would implement this recommendation. During the Second Plan Rs. 21 crore were spent on improving the salary scales of elementary school teachers and about Rs. 9 crore on improving the salary scales of secondary school teachers. As a result, the minimum basic salary had come into force in almost all the States by the end of the Second Plan. The dearness allowance of teachers in private schools, however, continued to be different from that of government servants with comparable basic salaries in the States of Assam, West Bengal, Bihar, Orissa and U.P. But Assam and Orissa made provision in their Plans for removing this disparity. West Bengal has partly done so. The problem, however, remains in Uttar Pradesh and Bihar. The total amount provided in the Third Plan for increasing the emoluments of teachers would be more than Rs. 17 crore.

In regard to university teachers, the University Grants Commission started assisting the raising of teachers' salaries in various universities during the First Plan itself and by now the improved scales have been introduced in most of the universities.

In technical institutions, the rapid expansion of facilities has led to a considerable shortage of staff. Industry, which is a competing market, draws away capable men from educational institutions. Increasing the salary scales of technical teachers has, therefore, become of paramount importance. Many of the States have already revised the salary scales to bring them into

some sort of reasonable relationship with scales prevailing in industry and other government departments employing men of comparable qualifications. In the Third Plan Rs. 5 crore have been provided for assisting the State Governments for a period of five years to improve the salary scales on a cent per cent basis.

It cannot, however, be said that the problem of teachers' salaries has been solved. By its very nature it is a problem which will get solved only over a number of Plan periods in a phased manner.

*Libraries, Laboratories etc.* Steps have also been taken to improve physical facilities—libraries, laboratories, hostel facilities, staff quarters, etc.—especially in the universities and technical colleges.

*Text-books, Examination Reform, A System of National Libraries, etc.:* To improve text-books and cheapen their costs various steps are under way.

Work on examination reform was started during the Second Plan and is proposed to be carried further during the Third Plan.

During the Third Plan steps will be taken to develop all the four National Libraries at Calcutta, Delhi, Bombay and Madras. There are provisions for strengthening libraries at the State headquarters and at the district and *taluka* levels. These are only the beginnings of setting up a national system of libraries recommended by the Library Committee which reported in 1959.

The growing system of education has to be supported by a vigorous programme of educational research. For that purpose, a National Council for Educational Research and Training has been set up which will guide, co-ordinate and expand the research work going on in the country and train key personnel.

#### Orientation of the System

*Elementary Education:* To link education effectively with our economic, political and social goals, it has been decided to convert all elementary education towards the basic pattern. Community resources are being increasingly mobilised for providing equipment and additional built space. During the Third Plan, it is proposed to introduce into all schools such activities of basic schools as can be introduced without much additional outlay. These include: manual work, improving school-community relationships and introduction of students' self-government. With a properly reorganised elementary education, the quality of our manpower should improve considerably which should lead to increased agricultural production, more effective implementation of the programme of cottage industries and strengthening of our basic institutions like Panchayats and co-operatives.

*Secondary Education:* At the secondary stage, the system has to be diversified so as to cater for the varying aptitudes of pupils and to enable them to make a choice of their future vocations, keeping in view the available and developing employment pattern. The course has also to be broad-based so that the education of the large majority of the students, who do not need to enter the universities and who would enter life at the end of the secondary stage, could be rounded off. This has meant the prolongation of the secondary course and the introduction of the higher secondary school instead of the present high school. The reorganised secondary

(Continued on page 24)

*Through development of skills and technical education, young persons are fitted for the increasing opportunities in New India*

# Enhancing Value Through TRAINING

B. N. DATAR

THE Plan has recognised that the most important instrument of development is trained manpower. The rapid advances in science and technology and the growing complexity of organization in a developing economy demand larger numbers of skilled technicians at different levels drawn from various disciplines, but working together as a composite group. Investment in the development of skills, therefore, is an investment in an important factor of production. Programmes of technical education thus have features similar to the production of physical capital equipment. Both require buildings, equipment and labour with different levels of skills for their creation. Both remain unproductive in the initial stages but later contribute to the national income. While these conditions are somewhat similar, and there may be many other points of similarity, it is also possible to point out contrasts between the 'investment in man' and other forms of investment.

One of the features of development in India over the last ten years has been the existence of a fair amount of unemployment side by side with shortages of trained and experienced manpower in a wide variety of technical categories. These shortages are undesirable in themselves, and, in so far as certain projects cannot be undertaken or have to be deferred for want of technical personnel, they check the growth of general employment opportunities and also act as a brake on improvement in the growth rate. At the same time, if one looks at the volume of public funds utilised for education in relation to the developmental effort in the country, the amount involved in the budgetary outlays cannot be considered insignificant. The question, therefore, is one of better utilisation of the contemplated 'investment in man'. As it is, it is difficult to separate the general investment from that in developing human skills because each interacts with the other. For the purpose of this discussion, however, 'investment in man' is interpreted as one which is directly responsible for the development of his skills i.e., through education.

IT must be recognised that a plan for 'investment in man' necessarily has to be long-term. The uncertainties associated with long-term planning in terms



## INVESTMENT IN MAN—4

of precision will thus be inherent in such a situation. It is possible, however, for planners at this stage of development to devise manpower patterns for different production combinations, drawing upon the experience of countries who have already passed through this very phase. The basing of 'norms' on this experience and applying them with some modifications to the Indian situation will cover an important area of 'investment in man'.

It is useful to discuss the volume of effort needed for training in agricultural and non-agricultural occupations separately. Taking the employment perspectives of development, it may be mentioned that if over the next 15 years we propose to reduce our dependence on agriculture as a means of livelihood from the present 70 per cent to 60 per cent, it will still require a substantial addition to the labour force in agriculture. In terms of numbers this would mean perhaps a much larger number than the present total working force in all activities in the United Kingdom to be added only in the development of Indian agriculture in the next three Plans. The magnitude of training programmes for agricultural personnel can be visualised if this factor is kept in mind. For every one person to be absorbed in this manner, we require two persons in non-agricultural occupations for the same time span. The vastness of 'investment in man', assuming that for all development, agricultural and non-agricultural, sufficient

trained manpower will be required, can, therefore, be imagined. At this stage, however, it is not the intention to assess in monetary terms the extent of this task. It would be enough if the approach to such an assessment can be broadly visualised.

At the base, it is necessary to formulate in as clear terms as possible, the occupational descriptions for different tasks to be undertaken in the economy on the lines of the work done by international agencies. The Directorate General of Employment and Training has completed the description of job requirements in terms of education and experience for over 4,000 occupational categories. Similar work in regard to an equal number of occupations is now in progress. With the help of these job descriptions it will be possible to specify



numbers against different categories required for running an economic activity when the manning pattern of that activity is known. Investigations have, therefore, to be undertaken to understand these both in relation to the present level of technology and the possible changes in technology over the next 15 years. The studies recently undertaken in a number of manufacturing industries including textiles, petroleum refining, iron and steel, heavy engineering, etc., for assessing the existing levels of skills used in running them, it is expected, will provide the basic 'norms' for projecting the needs of technical personnel for that industry in relation to its future expansion programmes. The actual numbers, of course, have to be adjusted, taking into account the change in manning patterns on the introduction of improved machinery.

**A**NOTHER aspect of 'investment in man' will be a study as to whether and to what extent the expenditure incurred so far in this area has been fruitful in the process of development. This is required particularly because the present educational system is, with small changes, an adaptation of the past system, which had no direct relation to producing the personnel required for developmental tasks. A survey of how the education

imparted in universities so far has helped their alumni to associate actively in the process of the development of the country was, therefore, necessary. The recent investigation undertaken with the help of the University of Delhi and the current sample investigation in most of our universities on similar lines assume importance. The conclusions of the former have clearly shown that there is some resilience in the present system of graduate and post-graduate instruction which, though initially infructuous in preparing the alumni for the responsibilities which they have to undertake, equips in the long run the products of the universities, after some experience, to answer the specifications set out by the planners. The task to be undertaken by those who have in their hands the destinies of our educational system will be to see how the "long-run" could be shortened.

It is often said that the expansion of technical education at present has been faster than the economy can absorb. The evidence for such an argument is the number of technically qualified persons on the registers of employment exchanges. A careful analysis of these registers has, however, shown that because of the heavy demand on technical personnel, there is a tendency among the registrants to report to the authorities higher level of technical achievements than what their certificates warrant. Also persons with university qualifications in technical subjects remain unemployed for very short periods for want of experience. Therefore, though we do not have a situation where persons receiving training in technical institutions are booked in advance of the completion of their courses, the employment opportunities generated in the economy are sufficient to meet the needs of trained personnel.

**I**T is also important that at a time when one has to make maximum use of the available capital and this is a situation which will remain with us for a long time to come, the opportunities for development of man and indeed the utilisation of persons who have had the benefit of such development have to eschew regional considerations. At the same time, for a variety of skills at the intermediate and lower levels, a regional approach will be the most appropriate. This means that for the higher levels of technical competence, considerations for employment can be different from those for other levels. Local prejudices beyond a certain limit are, therefore, bound to come in the way of progress. It is in this context that the distribution of technical training institutes in particular has to be viewed. The current approach, which appears to be sound, is that as far as the polytechnics and institutes for craftsmen's training are concerned, each region will be allowed to work towards self-sufficiency. In the higher seats of learning, however, the admissions will be on a competitive basis for the country as a whole.

Finally, the merit of technical training rests in the fact that it offers new employment avenues at higher rates of remuneration, sufficient to overcome social prejudices against accepting manual work and such jobs that were formerly considered taboo. Training can thus help to open the minds of young persons to the many opportunities that exist on the challenging frontiers of the new world that they are building.

*The economic basis for the good life is a sound argument as far as it goes. But a too close canvassing of it can taint the cultural idealism which we call Indian.*

# What Kind of India Are We Building?

V. SITARAMIAH

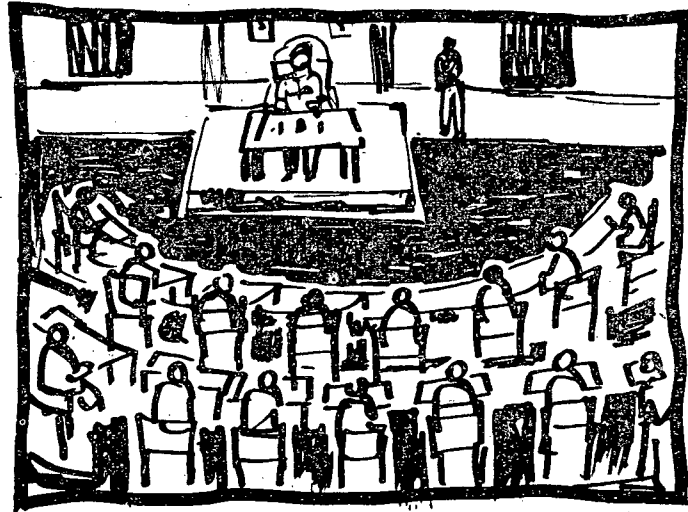
*In our letter to Mr. Sitaramiah we had asked: Do you think anything effective is being done to see that India does not go the way of all industrial countries but will retain some at least of our old values of detachment? Where is India likely to stand as between culture and acquisition, between acceptance and striving? Is our education preparing students to distinguish between speed and direction? In reply the author said:*

*Your questions are earnest and I notice anxiety in them. They deal with values mainly and ask for assessment. The terms you employ can yield different meanings. What meaning I take may seem capricious; but it claims to be true of the current scene and is at least one tenable point of view. I telescope one or two terms. This is a short-time view and should not prejudice a long one.*

I AM a believer in education. Given affection and effort and a helpful atmosphere, there is no situation that cannot be redeemed. Religion includes a promise to the '*Apavitrah pavitrova Sarvavastham gatopiva.*' In its humbler way education could do as much.

'The kind of India we are trying to build' contains at least three terms and I shall restrict myself to the We and to the scene. We, for the nonce, are the Government and the people. One set of people wants us to go back; the other, quickly forward. One party does not accept the National Flag and will not sing the National Anthem. Another almost flaunts a foreign flag. Others get in between. Many are prone to direct action at the slightest provocation. The Government works on and with Plans which have a socialistic bias. And this frightens some who could be expected to have read their classics in *kavya* and the *smritis*. Efforts are made to torpedo the plans, not conceding the point that in a democratic set-up where the party system exists it must always be the majority party that can exercise power and project any schemes of development.

Meanwhile a new group of leaders is coming up which exploits the political situation. Theirs is the power in the rural and the urban areas, in the assemblies and in the ministries. The impulse to their conduct is mostly to gain and keep in power. It would be a jungle but for the presence of a few good men with vision and purpose.



## INVESTMENT IN MAN—5

Someone asked Mr. Nehru a question eight or nine years ago as to why we could not go faster for progress. His answer was immediate: 'It is a human limitation', the meaning of that is: (1) You cannot go faster than your people will follow you; (2) You have to work with and through men; others may not all see your way or have the same urgencies and warmth; (3) By the time the idea or scheme gets down to the work stage all the vision and feeling may have gone out of it. This is the essence of the situation. Make the men and make it possible for the men. Their head, their heart and their fingers trained to thought affection and the skills are a capital of revolutionary potency. None greater than them. This is at once the task of education and the enablement by the politicians.

Most people will cease to grumble if food, clothing, fuel and opportunity for a few amusements are made cheap and available. They are not cheap, thanks to the Government and the vested interests. When life is hard to many there is resentment and underground disaffection. Ignorant men listen to any voice which promises milk and honey now, not twenty years later. The parties exploit this situation, naturally. I say this to indicate that the scene is unstable and, at points, vicious. The top leaders, I am sure, know it. But the biggest man has to work with men. There are always different kettles and fries of fish. The withdrawal of one hand and mind, for example, will throw out at least a lakh of the most brilliant young men and a thousand institutions will be dissolved. 'India cannot afford them', will be the

reason given. Is that a prospect or atmosphere making for stability? The social sections of the Plan plod on slower than the economic. The new political class is getting entrenched. It is raw, secular, godless, lacking the impulse to culture. No value, direction and detachment can stem from its domains or enclosures.

### Old Bearing and New Environment

Institutions, modalities and procedures of a full democracy came to a nation based on a caste system gone rigid and thriving on maintaining disparities and exclusions. Universal adult franchise and equality between men and women may take the next 100 years to be assimilated even as the money-economy and contract and competition took all these 60 years and more. And so much of the Hindu society will have eroded in the process. The Hindu is certainly not the only community in India; but it is the major one, and its is the problem. The others are smaller and more compact. It is more disorganised. It has lost its moorings; for, the Vedas and the *smritis* are no longer operative values. The bearings are also lost in a new economic and social environment which has to thrive on liberty and equality for all, on social justice and with the international complications bred by new thought and contacts. These disintegrate the Hindu way of life further. Religion dominated all aspects of that life; and religion is being asked to retire from public life. The joint family has almost disappeared; faith in religion is little or is formal. I have felt that the old arguments for the good and clean life and the old sanctions don't wash. Not that I want them to return; but functionally their substitutes have not arrived. There is a void painful and menacing. Meanwhile the success of the career men, the unscrupulous and the opportunist with money and party machinery manoeuvring for position and power saps the springs of moral energy. Even in the midst of wealth and power one could have appealed to Dharma, to what four good men would say, to the fear or favour of God, to promise of heaven or threat of hell. These are not persuasions or sanctions today. The *Sishtas* and the *Alukshya dharmakamasyuh* are not there to enlighten and influence.

The western industrial nations grew for a hundred and fifty to two hundred years and through slow travail fought for and gained, earned every item of check and balance and every measure of welfare. Here the employing class is unconvinced and unreconciled to the Plans though it gains on the swings what it may lose on the roundabouts. The labour class has the benefit of legislation far ahead of its deserving calculated on its contribution in goods and service. While it demoralises the class it makes the employer angry. Between them the community is desperate and helpless. And there are inherent contradictions in policy which make progress slow, difficult and inharmonious. If conditions were smoother and more homogeneous and men were patriotic a half of what has been spent in the two five-year plans could have produced three to four times more than has happened. Every Chinese works with grim purpose to make China great, soon. Every Englishman felt that he was the custodian of the honour and effectiveness of the British Raj in India. Such purpose needs commitment, character and love for a cause. Would that we could develop such qualities in the freedom of our open society.

When the individual had his obligations to society and religion his duties were definite. Dedication and service were easier. For example even *Krishnarpanamastu*—which today is a travesty meaning all is damned lost—could have true value; for, work was oriented that way. The best gift and work were offered with a sense of fulfilment. In both the earning and the rendering detachment was possible.

The old values in India flourished because it was a simple civilisation and essentially conservative. It was based on the family life and valued renunciation: with virtues of *tripti*, *shanti*, *kshama* and *dama* and, striving for *para*; asking every will to *artha* and *kama* to be subject to *dharma*. All gradually qualified for release from the earthly bondage. Life today is more complex, more sophisticated. It has become brash and pagan. That the earthly is a positive field of striving for fulfilment here and now and is not bondage to be shaken off is an idea which has to aspire and inform conduct. What is the place of detachment here except as grounded in individual attitude whatever the impulsion? Study of problems objectively without even a national bias should be the mark of the free man. That would be true detachment.

### Technology, Karma and Humanism

The technological advances of the industrial nations have whetted our appetite for them here for making our life more affluent, happier and safer. The economic basis for the good life is a sound argument so far as it goes. It was there in the older dispensation before disintegration and case-hardening began. But a too close canvassing of it can taint, if not even tarnish, the cultural strain and idealism which we call Indian.

The spiritual conflicts of the present day—whatever that may mean—are bound to affect us. The East and the West cannot go on so differently in such matters hereafter. There must be synthesis of attitudes and processes in thought and inquiry. Religions like Islam and Christianity have an advantage in cohesion and for competitive vigour. One is passionate in its unity; the other's zeal is backed by money and organisation. As against this, I remember how Pandit Malaviya appealed to the best Pandits of Mysore about 1920 to aid in a reform and renovation of Hinduism. The cleanest and the greatest Pandit present almost rebuked him for thinking that mere men could think of improving the Hindu religion! When such need arose God will incarnate and set things right. Poor Malaviya was sad and saw how hopeless it was to look to such quarters for help.

As long as the problems of social and secular life were few, men devoted themselves to experiments in thought, to refine or stress special attitudes and to organise religious life. But they all neglected the here and now and stressed the hereafter. The details of daily life were deemed valueless set against the demands of the eternal and the Spirit. Today the whole of this matrix is exposed to the blasts of current demand and secular duty: to Rationalism, anthropology, the discoveries of comparative religion and ethics, to the Theory of Evolution and to the critical estimates of all claims to Truth, to the impact of Dialectical Materialism and the endless anarchy let loose by the semantics and

existential approaches, and so on. No system of thought claiming supreme validity can steer clear of them. Any indubitable certainty of the truths of Indian Religion and Philosophy has to be established against such a challenge. Both will have suffered a sea change in the process. Solutions by occult sensing, the Yoga and the Maharshis are more a symptom of a need for some sort of asylum, a sort of life-boat service to the drowning than cure or a manly accepting and understanding of the world spiritual context. Stone by stone the new edifice of culture and the spiritual has to be built by earnest men in an inclusive frame of mind. If it still retains an essential Indianness it is good; if it cannot or does not why *kripanata* or *bhrama*? Mere eclecticism would be weak and loose. It must be a fundamental new sensing grounded in the modern nexus with basic and final clarities open to access of new light ever, 'self-fulfilling and self-fulfilled'. In between, 'building bridges', as Tagore said, and abolishing frontiers between men and men and nations and nations will have to be accomplished with no arrogance and no feeling of monopoly in the possession of spiritual truths.

Our preference has been for culture basically, though the eye to acquisition has been there also. Not alone of the physical things. In intellectual matters also acquisition of knowledge is a compelling process; and it has become hard to keep pace with the progress of any study. Assimilation and shaping of views are difficult. Our predilection has been one of acceptance and adaptation for a long time and the impulse to independent striving and adventure has never been much. That seems to be the cause of at least some of the sterility in India. We do not seem to be contributing anything positively even in the fields in which we used to lead.

A nation given so much to the idea of status, fate and *karma* accepting strictly the duties of a station in life is being called for striving and fulfilment in a current, secular and democratic environment. 'Take good care of the here and now, the other will take care of itself' ought to be the guiding principle.

### The Basis of Hope

Your last question is about the educational effort—the most heart breaking of all. There is too much and too frequent tampering of with the system. Crankery, fad, slogan bedevil the scene. Morality cannot be taught directly. Large notions and attitudes have to be imbibed. Education is as much in the taking as in the giving. Christ, the Buddha and the *Gita* have all taught morality. "Two thousand years after the death of Christ we have advanced—as far as the poison-gas," said Thomas Hardy. This is no cynicism, but blistering fact, and poignant. Morality is not fashionable, it has no kick, it does not pay, nor does it lead to position and power. And are men bad because they do not know the difference between right and wrong? Men on top, the leaders, the elders ought to set examples of conduct. Uniforms, daily prayers, singing the national anthem will not do the trick. Teachers with a sense of vocation for teaching and research, with a love of their subjects, for children and the land, must found or trained, be kept above want and free from harassment. And this again: precious talent should not be kept out, denied opportunity to

learn or get employed. Without bothering about the quality of the teacher and the taught no atmosphere can be made wholesome for true educational efforts.

Enthusiasm and earnestness are there and they are not contradictory. But they are not tending in the direction of culture, ennoblement and great living. Able scholars and scientists get lost in the administrative jobs. There is too much denigration of the arts, the humanities and the mental and moral disciplines. When the instrumentalities are the only ones to be attended to, the soul of a people is in peril. The barbarians will storm the heart-centres of culture.

We speak of the love of the land. At no time do young men, teachers and writers get a chance of going round and looking at this great land of ours and at the work of ages for culture and at the great work now being done under the plans. They have no knowledge of the land for which they are asked to live and work. Taking them round means money; but money for it cannot be priority in any plan. Yet it must be found. How can one love anything which one can't see or has not seen or felt at first hand?

The leaders are speaking with many voices. Perhaps it can't be helped. Has not Sri Krishna himself told Arjuna first "*Vimrisyaitadaseshena yathecchasi tatha kuru*" and almost immediately after given him his *Paramam vacah*: "*Sarvadharmam parityajya mam ekam saramam vraja*"? Yet the two attitudes make for two different kinds of men and approach. One makes for reason, freedom and daring; the other for acceptance, conformity and loyalty. India has, I fear, to choose between freedom and surrender.

Without a knowledge of and a full look at this cast of the situation one cannot build firmly the India of the future for culture. This view of it should not be deemed negative. With a history of 5,000 years and diverse vicissitudes of fortune this land will surely pull itself up. Our men and women are intelligent and adaptable. Their heart is sound. Only politics and power should cease to be such engrossing occupation for so many. They should infest less the larger fields of cultural endeavour where freedom and untrammelled development ought to be the breath of being. The lures of luxury and the dazzlements of the western modes of "free" behaviour and entertainment are making for laxity. They must be watched. Yet we need not rush events, or be unsympathetic. Nor need we be too impatient; for speed can hurt quality in development.

A great experiment is being made in enfranchising six crore human beings; and this with the spread of education among crores and crores of others who come out of families which did not touch a book, or own a picture or a musical instrument or have a window, is the miracle of the century. In political matters the land is developing fairly healthy conventions and, granting an independent judiciary, the best traditions of individual freedom can be safeguarded. A little more affection and joy, a little more give than take, a little more love of the country could go into all the work that is now being undertaken. The wheels of culture will then move again healthfully. And we will not only be building a better India for ourselves but be again in the van of progress contributing our special accent and orientation to the weal of the world.

*A greater variety of talent is to be found in schools now. To get the best out of our pupils is a challenge to educators. Readjustment of systems and more stress on quality are called for.*

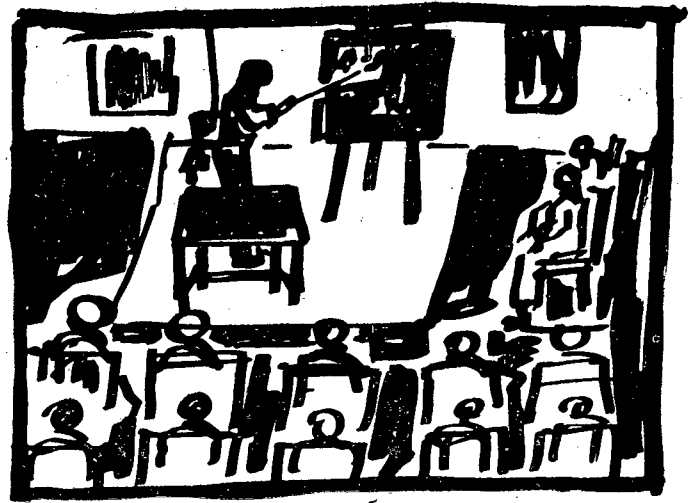
# Our Secondary Education

KURUVILA JACOB

**D**URING the last ten years, secondary education in India has expanded rapidly. This rapid expansion in education is the result of the awakening in the people of the desire for education and the recognition by the Government of their responsibility for providing wide educational facilities. This great development has brought with it the necessity for very careful planning with definite objectives and clear understanding of the problems and needs which become evident.

One of the significant changes that may be observed as a result of the expansion in education is that secondary schools now have a highly heterogeneous group of pupils with very wide range and variety of abilities and background and destined to enter all walks of life, compared to a roughly homogeneous group in secondary schools, say, twenty years ago. This change should be a matter for satisfaction, not only because children from all levels of society can now get secondary education, but also because of the much wider variety of human talent now present in the schools. Human talent is justly distributed among all communities and when children from all communities come to the schools, the schools naturally become richer in the available human talent. Human talent properly developed in the service of society is the most valuable asset for any country. For India, which has enormous human and natural resources, the proper development of human talent for utilising the natural resources offers great prospects for the prosperity and happiness of the country. Hence it is that money and effort spent on making the educational system purposeful and efficient is perhaps the best investment the country can choose.

**S**ECUNDARY education, in the past, has been mainly of the 'academic' type preparing for college education. With the change that has come in the population of secondary schools, education has to be planned to suit the aptitudes and abilities of the pupils, keeping in mind also the needs of society. The Secondary Education Commission was aware of this, but the pattern of education which the Commission recommended was mainly 'college preparatory'. The Multipurpose School, on which the Commission lay special emphasis, sounds well, but the courses in the multipurpose schools are for general education with a little practical 'bias' in some. The 'bias' courses are good, but they do not meet the



## INVESTMENT IN MAN-6

needs of the wide range of aptitudes and abilities now found in secondary schools.

Another unfortunate recommendation of the Secondary Education Commission was that all those who wanted secondary education beyond the middle school should do a four-year higher secondary course. This also does not meet the needs of the wide variety of aptitudes and abilities of pupils in the secondary schools today. There are many among them who do not need and may not benefit from a four-year Higher Secondary course. The Ministry of Education accepted the recommendation of the Commission but implemented a three-year higher secondary course. This did not improve the situation; it on the other hand added difficulties for the States which already had three-year high school courses.

One of the reasons for the confusion in the pattern of secondary education would appear to be the fact that there has been no clear definition of what Secondary Education is. One convenient way of defining it is to regard it as "education of all types for the Secondary School age, that is, say, between the ages of 11 to 17" or up to the stage when a pupil enters a college or any other institution of higher learning. Such a definition will enable people to realise that secondary education can be of many types other than the 'college preparatory' courses now provided in secondary schools. This may

also help to co-ordinate the various types of courses now available for the 'secondary school age' pupils, under the ministries of education, industries and labour. Co-operation of the different ministries is essential for an efficient programme of secondary education, but it is also necessary that the entire programme should be co-ordinated and comprehensive.

As the secondary school population includes a wide variety of abilities and aptitudes and as the pupils are to enter all walks of life, the High School and Higher Secondary courses should be planned to include a variety of courses of different durations. These should include, in addition to the 'academic courses', pre-vocational and vocational courses and also apprentice courses and 'continuation' classes. In other words, secondary education should be planned to be 'comprehensive' though individual schools may not all provide a comprehensive programme.

In providing for the aptitudes and abilities of pupils, it should be recognised that the specially gifted as well as the educationally backward pupils require special attention. The talents of the specially gifted are precious for the country and the school should not only discover them but also give them proper facilities for their development. Equally important is the need for special attention for the backward, because for many of them, the backwardness may be due to the disadvantages of their physical and social environment and it may be possible to correct their deficiencies. Corrective work in education is an aspect which needs special attention in our country.

AMONG the problems arising from the rapid expansion in education with limited financial resources is the overcrowding of classes which has become common throughout the country. In most of these classes, the effectiveness of teaching and learning is very low. There has also been a general fall in the quality of teachers and the professional training of teachers. The result of all this is a noticeable lowering of the efficiency in secondary schools.

It is an unfortunate fact that the country is getting reconciled to low standards of efficiency. In the schools and in the public examinations 35 per cent of the total marks is accepted as the minimum for a pass. Even with this low minimum the percentage of passes in the public examinations is only about 50. In many of the advanced countries 60 per cent is the minimum for a pass. The difference in the percentage is not because of the differences in the methods of evaluation. In one State where objective tests were tried in a public examination, it was found that the minimum for pass had to be kept at 35 per cent in order to enable a fair number of pupils to pass. This low efficiency results in great national loss in potential talent, money and time. The children of this country are not inferior in their natural gifts compared to those in other countries, and the apparent causes of the low level of efficiency are:

- (a) absence of adequate provision for education according to the aptitudes and abilities of pupils;
- (b) absence of adequate provision for corrective work for the backward and special facilities for the gifted;

- (c) Overcrowded classes where effective teaching is not easy;
- (d) inefficient methods of teaching because of the generally low quality of the teaching personnel and professional training; and
- (e) absence of competent machinery for the preparation of syllabuses and text-books.

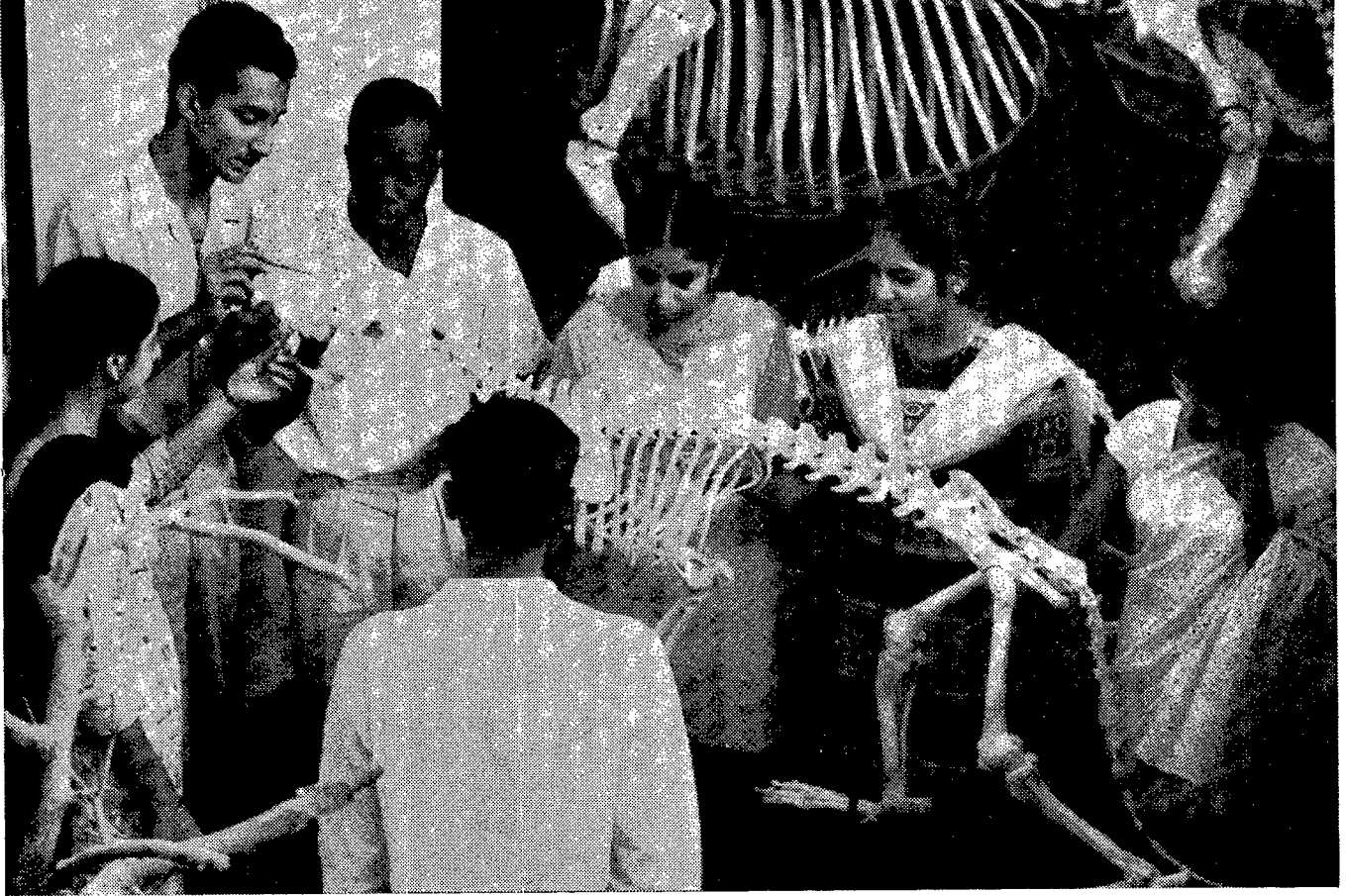
These few reflections on some of the aspects of secondary education in India would show how very important it is that careful thinking and planning and bold action is necessary at the present time so that the educational system may be made efficient and the human resources of the country are given proper facilities to develop and to be used for the prosperity and happiness of the country.

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The conversation with cartoonist Shankar, the book reviews, the article on Bhakra-Nangal and other features are by *Yojana* staffers.



As a result of the scientific bias in our education policy, at the end of the Third Plan 42 p.c. of the 13 lakh college students will be taking science courses. Photograph above of science students is from the Zoology department of the Delhi University

## Education Policy in Plan

(Continued from page 16)

course includes general science, crafts and social studies among the compulsory subjects.

To cope with the demands of science teachers for elementary schools and to provide sufficient science students at the university stage, science courses at the secondary stage are being strengthened. General Science will be introduced in all schools by the end of the Third Plan. Schools having science of a higher or elective standard, which numbered 4,625 by the end of the Second Plan, will increase to 9,600 by the end of the Third Plan.

When fully implemented, the reorganised system of secondary education should be able to give us effective middle level leadership in various walks of life, with proper social attitudes, conscious of the dignity of labour and impregnated with the spirit of science. It should also assist in diverting people to various occupations instead of leading them only to knock at the doors of offices for 'white collar' jobs which, by their very nature, can be extremely limited.

This reorganisation of secondary education started towards the end of the First Plan and by the end of the Second Plan, 3,121 higher secondary schools had been established. Their number is expected to rise to 6,390 by the end of the Third Five Year Plan out of the total number of 21,800 secondary schools. The total number of multipurpose schools, providing diversified courses, set up during the first two Plans, was 2,115.

These will be, by and large, strengthened during the Third Five Year Plan.

**University Education:** At the university stage, apart from increased provision of facilities for technical education, the first degree course has been reorganised on a three-year basis. Through study, uninterrupted by frequent examinations and the introduction of an integrated course, it is hoped to improve teaching at the university stage. This is a reform which had been recommended by the Sadler Commission and later by the University Education Commission and involves, besides the addition of a year to the degree course, improvements in the salary scales of teachers, increased provision of library and laboratory facilities and increased provision of hostels and other facilities. By the end of the Third Five Year Plan most of the universities, except those in Uttar Pradesh and Bombay, will have introduced the three-year degree course. New lines of study have also been started in Rural Institutes to cater for the needs of higher education in the rural areas.

### Removal of Imbalances

**Rural and Urban Areas:** The Plans have also sought to remove the imbalances in the availability of facilities for different areas and different sections of the population. Though complete data are not available, a trend is clearly noticeable that the rural areas are

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The revolution of expectations has worsened the scramble for a place in the sun. The cult of 'get-on-ism' is winning new followers.

# The Faltering Class

Despite Expanding Opportunities,  
Frustration Increases

G. N. ACHARYA

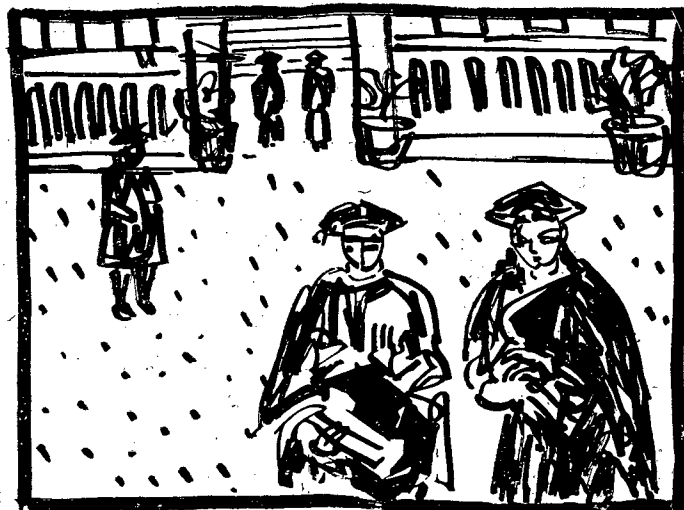
**B**OMBAY was once hailed as the Gateway to India; that was before the air age rendered gateways obsolete. But Bombay still serves as a good junction. That is how I am enabled to meet a number of young people on their way from one distant part of the country to another, and learn their stories. Here are some.

"A" had worked on the Tungabhadra project; then on Manimthar. The States having these projects wanted him only for a while; but had no place for him on their permanent cadres. So he had drifted to Chambal, where the story was ditto. He came to Bombay in search of a job in a big concern. At the interview he resisted the attempt to offer him a scale lower than the one advertised. As Chambal is getting to its end, he was talking of trying to see if he could get on to the Aswan dam project in Egypt.

The story of "B" was similar. Served on Koyna, switched to Bhilai. He would lose both wages and service in the transfer from the construction to the operation cadre. When I last saw him, he was trying to get a place at Ranchi. "C", a non-technical man, was finding himself uncomfortable at Durgapur and was hoping to get to Bhakra or to Bhopal. "S", a journalist from Madras, had found the going hard because he was once foolish enough to dabble in trade unionism. He could, he had found, get a break, only if he agreed to spend a couple of years at least in Nigeria.

"THE people of India today", run the closing words of the first chapter of the Third Five-Year Plan, "with all their burdens and problems, live on the frontier of a new world which they are helping to build. In order to cross this frontier they have to possess courage and enterprise, the spirit of endurance and capacity of hard work, and the vision of the future".

From all I have seen of "A", "B", "C" and "S" and many more like them; it is quite clear they have a capacity for endurance and possibly for hard work.



## INVESTMENT IN MAN—7

They have enterprise of sorts; but their courage is of a quality far different from what the authors of the Plan had in mind when they wrote those eloquent words. So is their vision of the future.

A few lines earlier the Plan speaks of "willingness to bear the burdens of development and a greater understanding by different sections of the community of what is due from them", as a necessary condition of success. In terms of realities, only one preposition is wrong in that statement. The different sections of the community want to know what is due "to" them as much as, if not more than what is due "from" them.

**T**HIS is more especially so of what is called the Middle Classes: an elusive concept. An all-India urban middle class family living survey sponsored by the Central Statistical Organisation, Cabinet Secretariat, we are told, defined "Middle Class" families as those of "non-manual employees in the non-agricultural sector". The survey provides statistics, as such surveys always do, of persons whose monthly income is less than Rs. 60, to those whose income is above Rs. 1,500; which means that income is no index of the class. The minimum wage of a textile worker in Bombay is around Rs. 130 a month, not counting the bonuses; but the survey shows that there are middle class families in the city with an income of less than Rs. 60. (I do not want to load this article with too much statistical ballast. A brief analysis is printed in *India 1961*, page 181.)

As it happens, even the test of work with one's hands (which is all that manual work can mean) is not final. The surgeon works with his hands; so does the architect and the painter. But they are positively Middle Class; not so the potter or the cobbler; nor even the smith or carpenter. "The rapid pace of industrialisation during the last ten years", the Third Plan tells us, "has been accompanied by significant changes in the occupational structure of industrial employment. Industry now recruits persons who would formerly have been absorbed in 'white collar' employment". (Page 165.)

This means only that the scope of the Middle Class is being enlarged. It is a bigger hamper with more eggs in it. But the quality of the eggs is the same. The test of the Middle Class then is neither financial, nor occupational. The thread that unites them is really social—a subtle almost invisible thread, as difficult to grasp as a lot of sub-caste distinctions.

The middle class employees are not mere machine-minders. They like to think of themselves as being in control of the process. They like to earn salaries, fees, commission; not wages. They are allergic to the time-punching clock. They do not like to clock in and clock out through the Assistant Time-Keeper's wicket gate. They prefer to sign their names on muster rolls. They claim the right to walk around the block and buy cigarettes or stamps without asking for permission from the head jobber; their non-pecuniary status privileges include receiving visitors and drinking tea at the work spot. They have to keep up a standard, not merely of appearances, but of integrity, conduct and behaviour. Harold Laski has defined professional standards as "rules intended to prevent the victory of self-interest over service in the vocation".

**T**HE Middle Class, therefore, was and is an envied class. It is the class to which entry is continuously sought. The plans themselves have opened wide the doors of entry. There is talk of "Investment in Man", and statements and statistics showing that groups and regions which had so far no entry into education and technology are no longer outsiders. Scholarships and job opportunities both for those already considering themselves the Middle Classes and for those aspiring to belong there are more than ever before. The report of the Ministry of Education for 1960-61 takes up 11 pages of print merely to enumerate the varieties of scholarships that are offered by our government, other governments and foreign agencies. Besides, each of the States is doing its bit.

I am averse to loading my arguments with statistics, but a bare outline may well be kept in mind. In 1950-51 there were 27 universities with 498 arts and science colleges and 18 research institutions. These employed 24,453 teachers, catered for 4,03,519 students and accounted for an expenditure of Rs. 17.68 crore. Eight years later there were 40 universities with 873 arts and science colleges, 528 professional colleges, 152 special education colleges and 44 research institutions. These covered 45,531 teachers and 8,65,696 students, and involved direct expenditure of Rs. 42.85 crore.

What colleges! Those who were students a generation ago, can no more conceive of a college without

corridors, without a quadrangle, without playing fields and perhaps without a students' union, than students of the contemporary scene can envisage a Madras hotel without coffee. One ex-Minister of the Union Government compared some new universities to "displaced persons". One has only to take a flying glance at some Bombay colleges. Hurrying groups of students flock in to technically attend lectures from teachers who have to compete with other, more efficiently equipped noise-making machines like trams, buses and lorries, and at the end of the agonising hour, are spewn out directly on the crowded city footpath.

The years spent in college were regarded as a formative period, significant as much for the cultivation of the mind as of friends; their cloistered feeling being recalled with nostalgia for the rest of one's life. Today ex-students find no more scope for sentiment about colleges, than railway freight finds about its temporary detention in the shunting yards. Those years are just a prelude for the job hunting to follow.

**H**ERE are two extracts from the Five-Year Plan to carry forward my purpose. (No apologies should be needed, really; the thing is so comprehensive and packed with almost everything one needs, like a dear, old, battered hold-all.) "...there is a general belief, which is strengthened by the limited number of employment opportunities reported to the employment exchanges and the pressure of employment seekers on them, that in terms of employment the economy suffered significant deterioration in the last five years". (Pages 154-55). "The problem of the educated unemployed may be considered in two parts—the backlog and the new entrants. The precise magnitude of the backlog is difficult to ascertain, but on the assumption that a constant proportion of the educated unemployed would have registered at employment exchanges, their total number might be estimated at nearly a million". (page 166).

The substance of it is that jobs are not to be had for the picking. Here caste and kinship play an important part. So do the States' laws of domicile backed by prejudice and even mere apathy. Hence the peregrinations from south to north and east to west noted earlier.

This peregrination also means that the family unit is broken up; the social bonds formed in early life are snapped. People going to new and far-flung centres of industrial development are not easily assimilated into the environment. The Middle Classes being naturally conservative, their alliances and interests are all in the home base. A great part of their time and income is spent in travelling up and down for ritual and social occasions.

The conditions of work and living in the big, urban centres like Bombay which lure the educated because of the employment opportunities available, are incredible. The daily waiting in queues, the travel in conditions of overcrowded discomfort, the enormous time wasted merely in going to and coming from work each day, the horrible housing conditions, and the ever present noise, do not make for contentment.

(Continued on page 60)

*Selective presentation of history would be dangerous. We must build up in our people the capacity to face unpleasant truths and also renew efforts to root out caste.*

# EMOTIONAL INTEGRATION

## *How Ready Are We To Go The Whole Way?*

S. K. MURANJAN

THE phrase "emotional integration" has now attained the status of a useful slogan. But it is doubtful whether it conveys accurately what it ought to convey. It is quite true that, presented with a social situation, most persons react emotionally rather than thoughtfully. It is also true that presence of feeling moves men to action much more strongly than presence of thought. The "pale cast of thought" is a meaningful phrase from the mouth of Hamlet. Yet, the strongest feelings of men have foundations of rational thought which they cannot and need not stir up at every critical moment in life. Perhaps what we are in need of at the present juncture is better expressed as a faith in a common destiny which according to circumstances reveals itself in feeling, thought or behaviour particularly in times of stress and danger.

The problem of emotional integration covers a much larger area of our social existence than is evident in most discussions on the subject. As a rule attention is concentrated on the relations between the two major communities—Hindus and Muslims. It is overlooked that because of their caste structure, the Hindus are themselves a source of weakness to the nation and are more sorely in need of integration than other communities. It would be even true to say that it is the social structure of the Hindus which is the main obstacle to the assimilation of other communities in the nation. For even if other communities wish to take a place within their social fold, the caste of the Hindus is an effective bar against their infiltration. Even untouchability cannot be eliminated because whether untouchables are declared touchables or become Nava-Bauddhas they still remain a separate group.

The Assam-Bengal explosion which was smouldering for a decade if not more merely highlighted the deep-seated evil of the Hindu social structure and the social apathy which is its result.

For countless centuries, the Hindus who form the major community have been conditioned mentally and emotionally to live as members of a caste, sect and rather in a very remote manner religion which is more a name than a well-defined content. In actual life, caste



### INVESTMENT IN MAN—8

and sect were realities much more while religion was ghostlike and insubstantial. These ties and attachments ruled out the growth of "patriotism"—the territorial bond as members of a particular habitation and country. The bond of patriotism is a recent emergence in India—the outgrowth of administrative unification imposed by the British on India. Its strength was negative and took the form of resistance to British occupation and monopoly of power.

It may be asked—it has been actually asked—why the territorial bond should have any moral or social priority over bonds based on language, religion, etc. It would be easy to prove that all these bonds are essentially irrational or arbitrary and that the bond of a common humanity is the only sustainable attitude in this matter. The issue must be judged in the light of the particular historical phase in which we are living. The historical tendency has been to form larger and larger groups. At this particular stage of history, we are everywhere surrounded by groups who are moved powerfully by the patriotic, that is the territorial, bond. While mindful of our ultimate loyalty, we are, therefore, compelled to seek scope for achievement on a more limited plane, the country.

It has been urged that beneath all our diversities, there are certain basic unities of culture which must prevail in due course. This is a gross and dangerous delusion. There are far more basic unities of culture in the communities of Europe than there are or ever were among the Indian peoples. But these basic unities have

not prevented these communities from falling out and engaging in mutual slaughter at short intervals of twenty and thirty years. The history of India was not much different before the arrival of the British and even Muslim kings. The existence of basic unities is a ground for hope but not an assurance that they will predominate over divisive forces.

**E**MOTIONAL integration is the outcome of several forces among which the more important may be listed as follows: (i) history and memories of common struggles and achievements, (ii) absence of barriers and separateness in ordinary social relationships, (iii) growth and establishment of certain conventions that in certain well-understood areas of individual life one must not obtrude one's differences on the attention of others and others must not betray curiosity about such areas, and (iv) existence of a common language at least for purposes of public dealings.

Taking the first of these forces, in regard to emotional integration, our history by and large is a dismal record. It would be well to invite the younger generation to face this fact candidly instead of putting into their heads wrong notions by selective presentation of history. The capacity to face unpleasant truths is an important quality of strong minds. In any case, we cannot recreate history. We can only learn from it. I have little doubt in my mind that what passes as history and sociology in this country is mostly propaganda cunningly conceived in the interests of certain sections of society.

Secondly, so far as Hindus are concerned, nothing short of liquidation of caste will create the normal relations which should subsist between countrymen and countrymen. The struggle, howsoever disguised, is always for material advancement or for position and power which lead to material advancement. The fear is all but universal that anyone placed in a position of vantage or authority is sure to make use of that vantage or authority for the advancement of the members of his caste, language or religious community. The evil is operative at all levels and in all sectors—universities, government offices, literary and scientific bodies, and social and political activities. The evil afflicts the educated, non-business castes most acutely because they depend on service for employment and what one caste or community gains is regarded as a loss to themselves by all others. The Assam-Bengal explosion was a culminating example of accumulated wrath of this type.

As between religious communities and particularly as between Hindus and Muslims, nothing short of a reorientation of attitude towards religion will expel the poison which British policy and Partition have instilled into men's minds. Fear of numbers and therefore loss of opportunities for material advancement may be operative in a subconscious manner. But it is also true that the past has bequeathed to us a dislike of Hindus as Hindus and dislike of Muslims as Muslims. When even universities are invaded by irrational waves of this kind, one can judge how deep-seated the evil is. The maladroit manner in which our political parties have behaved on this subject has aggravated the evil a hundredfold.

Coming to the third factor, namely, the growth of well-understood conventions, there is no reason why,

in a sanely ordered society, differences of caste, sect, religion or politics should be made visible to the naked eye when men meet for ordinary interchanges of life which have nothing to do with these loyalties. These differences may be relevant within the walls of the home or when men meet specifically for purposes related to them. Unfortunately, the past has bequeathed to us an attitude to life which makes us obtrude, sometimes in an aggressive manner, our differences from each other rather than our common citizenship. Marks on foreheads, peculiarities of dress, disposal of hair, every possible device is employed to advertise, in insane irrelevance, our differences in the most private and intimate concerns of life. This would not matter in a society of philosophers. But it would be ridiculous to claim that Indians live on a higher philosophic plane than other societies. The casualties of our communal and other riots would not be so high if the work of *goondas* were not facilitated by this parade of differences. It would be a happy day for India when all these symbols are liquidated and private and intimate concerns are by strict conventions allowed to be private and intimate.

And, fourthly, language. A common language is equated with emotional integration only in communities like ours in which emotional integration is still to be built up. The existence of multiple languages in Switzerland is not a relevant argument in this context because other historical forces created that territorial entity before nationalism became a force to be reckoned with in Europe. If we are prepared to wait until other forces combine to build us into an integrated nation, then it is a different matter. But the risk of such a course is obvious. I place language last in the list of conditions because the other divisive forces are so strong that language by itself is not likely to hasten our integration very much.

**I**N discussing causes of our present malady, certain remedies have been necessarily indicated in an incidental manner. But there are other remedies which are of a specific nature and must be set out separately.

**Education:** Education of the new generations has to be given the pride of place in any scheme of emotional integration. But it should be made very clear that education should not be degraded to the level of propaganda. There is already a disturbing tendency under the inspiration of politicians and governments to create not impartial history and sociology but "patriotic" history and sociology. What we have to aim at is not indoctrination of the young. Such indoctrination will ruin the country in the long run. What we must seek is their release from the indoctrination of the past which is the cause of the fall of this country.

Text-books for primary and secondary schools must be planned more carefully than we have done till now. They should be informed more indirectly than directly by certain moral values on which all progressive elements are agreed. Looking back on our evil past, the moral values which naturally suggest themselves are primacy of knowledge, equality i.e. equal moral worth of all individuals, and humanity i.e. expulsion of all forms of cruelty from little discriminations to untouchability.

Negatively, care has to be taken to avoid any tinge of particular religions or "religious" doctrines which are basically non-rational. This is not an easy task particularly from the stand-point of the Hindus. It is difficult to find any Hindu literature, whether epics like the *Ramayana* and the *Mahabharata* or poetry-composed by ordinary bards, which is not heavily overloaded with religious overtones, and which do not suggest by implication or directly peculiar Hindu beliefs like rebirth, Kali-yuga, *karma-vipak*, human incarnations of gods and so on. It is not suggested that these subjects should not be studied—these ideas have a great role indeed in the proper interpretation of our history and tangled past. But the study of these and other subjects like philosophy and sociology should come at the university stage when minds are mature enough for impartial and objective presentation of facts and thoughts. The difficulty and delicacy of the situation will be better appreciated when it is remembered that there are groups and sections of our society which have deep-rooted interests, real or merely historical, in the perpetuation of non-rational outlooks on life.

This situation makes larger demands and places heavier responsibilities on the school-teacher. It would be idle to claim that teachers live by and large on a higher plane than politicians and others. It is a sad fact of post-Independence developments that the teacher has declined in his status, self-respect and independence. In the eyes of our political leadership, the teacher worthy of honour and advancement is not the one who devotes himself to scholarship and research, but the teacher who leaves scholarship and research for something else. Whether those in authority are guilty of encouraging, by their acts, the instinct of material advancement in the teacher or not, we have to depend on the teacher, as the custodian of the growing generation, for the implementation of our new moral and social values. We have to face the enormous and expensive task of endowing the teacher with the necessary background of history, sociology and philosophy. Our teachers' training colleges have to be equipped with the necessary means.

*Social Environment:* It would be futile to educate children in certain moral and social values if the environment outside the school walls is contrary and hostile to them. This environment is composed of parents, society and particularly educational agencies like universities, literary and scientific agencies, the press, radio and so on. It is not possible nor indeed desirable for the Government or public authorities to seek to control this environment. But it can—as indeed it does—exercise some selective influence.

Judged by any standards, the sociological, historical, scientific or philosophical output in regional languages is very poor. Most States have taken steps to encourage such work. But it is to be feared that this encouragement is fast degenerating into ministerial or political patronage.

There is much need for All India Radio to inquire into the general trend of its broadcasts from this stand-point. The task is difficult because it is not easy in this country to distinguish between what is social and what is religious. But, broadly speaking, it would be difficult to say that each one of these broadcasts is secular. As

the men in charge of these programmes must belong to one of the many communities, and as they and their authors and artists have to draw on the "cultural heritage" they know best, it is hardly surprising that myths and legends of their community are very prominent in these broadcasts. It would not be easy to avoid these and yet give content to these programmes. The *Ramayana* and the *Mahabharata* are not to our people what the *Iliad* and the *Odyssey* are to the Europeans. Yet circumstances do not allow us to wait till our epics appeal to us only as epics and nothing more. Radio must be secular to the utmost extent feasible.

It is a happy augury that political parties are attempting to establish a code of behaviour for themselves. There is nothing which others can achieve in this field which politicians cannot frustrate. In a country of marked unemployment particularly among the educated and semi-educated, politics will always have a dangerous attraction.

*Universities:* University students have become undoubtedly a source of great anxiety. Nobody who knows our universities has any cause to be surprised. Our methods and standards of education make serious study unnecessary. Authority is vested in persons who are not distinguished for scholarship, devotion to education or even character; it is a reward more often than not for friends political or other.

The hall-mark of university education is said to be the corporate life of students and teachers. The following is the picture of corporate life I found in the dining-clubs of a college which has expanded into a university.

One dining-club was separate because the meat which members were agreeable to included both beef and pork. In another club, the members insisted on separate tables because they would eat beef but not pork. A third separate club was established because though the members were non-vegetarians, they would not bear the sight either of beef or pork. The membership of a fourth club was distinguished by the fact that they would eat only fish. Even among vegetarians, district or community bars were not unusual. When I was principal of the Sydenham College Bombay, I had once to find shelter for a Jain student at 10 p.m. because he had been expelled from his hostel at that odd hour. His inexcusable offence was that he was caught with an onion in his mouth.

This secular picture of dining arrangements is not qualified by their activities in college hours; these activities also run into communal or language channels.

*A Permanent Tribunal of Inquiry:* It would be well if we established a permanent tribunal of inquiry of outstanding men above suspicion authorised to inquire into every accusation of caste or communal bias. Its jurisdiction should cover all persons, whether ministers, government officers or election candidates. The existence of such a tribunal will itself be a check on social discrimination. It is possible that in a country in which everybody complains of discrimination against everybody else, the volume of complaints might be astonishingly large. Many complaints might be frivolous. But when the disease is desperate, the remedy has also to be of the same kind.

# BETTER BOOKS FOR C



“WHAT is the use of a book without pictures?” Shankar quoted the famous sentence from a famous children’s book and, pausing for a couple of seconds, added: “But isn’t a book with bad pictures worse than a book without pictures?”

“Take a look at this book,” he said and turned over the pages of a beginner’s text-book in Malayalam.

I looked at it. It was no worse than books which little boys and girls in other parts of India are condemned to read. Although a stranger to the Malayalam script, I could see it was the first primer. The letters of the alphabet and the compound letters were printed in blue and a few in red. Above the words were some squiggles and blotches in purple.

“These,” said Shankar, pressing them with his sturdy forefinger, as he presses the nonsense out of a public man with his brush, “are p-i-c-t-u-r-e-s.”

Yes, they were pictures, meant by the dispensers of instruction to make mothers’ darlings inquisitive. They were there to bear out the educational axiom: From the known to the unknown.

The known were there—a cat, a rat, a head, a net, a flower and so on—but they could hardly be made out. The cat and the rat were of the same size—if anything, the rat was a little larger. Cat’s whiskers looked like the hazy thumb impression of a woodcutter. On another page were printed a man’s head and a net, no smaller and no larger than the head. But the registration of the red and blue inks was so bad that the threads couldn’t be distinguished from the spaces, robbing the net of the claim that it is holes sown together. Another lesson was about flowers. The drawing showed a face, about half a square inch in area, with something like a little banana bunch sticking out of its rear. Evidently the flowers the lesson talked about!

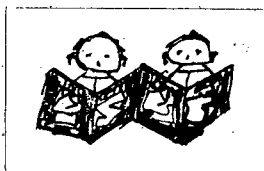
Then Shankar spoke of the offer he had made to reprint the book in a way children deserved, and he showed the “dummy” he had prepared: larger size, better paper, and beautiful drawings, drawings which children would love, and drawings which did not violate the laws of perspective.

“But the offer of the Children’s Book Trust was not accepted. It would have cost 90 naye Paise to bring out the book the way I would. The primer now is priced 40 naye Paise. It may be drab and dismal but it is cheap. That is the only virtue which seems to count.”

## A Conversation With The Other SHANKAR



# CHILDREN



HE took his left palm and mopped his furrowed forehead—a fetching mannerism of his, and the pencil in his right hand beat tattoo on the table. He then levered himself from the chair and took me to the shelves lining the wall on which were ranged thousands and thousands of children's books in all languages and from all countries. He took out books from Poland and Japan, Denmark and Britain. The themes and styles differed, but they were a work of love. "When can we have books like that for our children?"

"I am told that the Saraswaty Press of Calcutta has brought out books which are good," I said.

"Bengal children are luckier than those in other regions. But what we want are children's

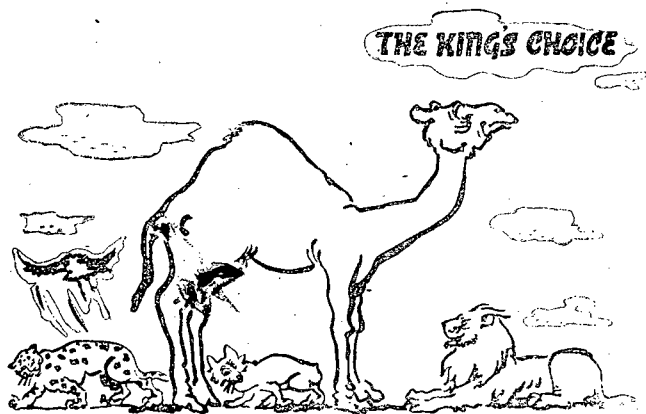
books brought out in large numbers, the best possible quality and the lowest possible price. That can be done only if we have a non-profit-making approach.

"Here are the first publications of our Trust," he said, settling back in a chair and giving me a copy of *The King's Choice* and its Hindi rendering. I liked its bold, blue-and-tawny cover showing a camel and a lion. A Panchatantra story retold in 24 pages of large print and exciting pictures. "Our own press is not yet ready, and we had to print only a few thousand copies. You see, we have to study the nature of the market, and so on. With a larger print order, we could have brought down the price to perhaps half the present 2.50. And you wouldn't mind paying a rupee and a quarter for a book like that?"

I said congratulations were in order and asked Shankar to tell me how and when he first came to think of the Children's Book Trust.

"I CONFESS to a weakness for children. I have always dreamed of a chance to draw books for them. This, I tell the politicians, is the *prayaschit* the other half of me does for attacking them day in and day out!

"The actual thought came to me when I organised a children's number of *Shankar's Weekly*. It combined children's own writing with that of adults writing for children. Out of this experiment have arisen the annual competition, the dolls' exhibition, the art festival that we organised and then the Trust.



"I thought of a trust because, as I told you, if we had to make a difference for the child we had to publish books in really large numbers without looking for profits. It is no use starting a shoe-string operation and hoping to expand in course of time. There is not much time to lose. We have lost so much time, and such a thing was unthinkable before Independence!

"Luckily for us the Prime Minister liked the idea. I have been able to interest a number of people who will serve us as trustees and advisers. Ours is a 30-lakh project, of which the Government has given some eight lakhs. As you might have seen, our building is already coming up on Mathura Road. We have bought machinery including offset equipment which can print several colours. We shall also be printing in many languages—changing the text but keeping the pictures."

"But did you have to go in for such a huge building and all that?" I interrupted.

"Don't forget what I said about our pricing policy. A private publisher prices a book at three times its cost of production. We are not going to do that. Our books will be priced at cost plus a small fraction for handling charges. But the Trust must have assets, if it has to be self-financing. A large building will see to it."

"Is it desirable to expect the State to subsidise children's books?"

"Of course it is desirable. The State wastes so much money on committees, delegations and so on.... All this money is better spent on our children. They are a much better investment."

"Your Trust's books, which, I suppose, will be general reading material, will go to only the middle-

class homes. What about the large numbers of homes where the school-reader is the only book?"

"The Trust isn't planning to bring out text-books, it is true, but we might offer to print them on our machines. The first thing about text-books, in my view, is that we must give up the idea that they should be cheap, which means shoddiness. I don't mean we must make the poorer people pay more. Let them be produced neatly and let the State bear a share of the costs.... All this talk of emotional integration... what is it worth if we don't make the child's life richer?"

"Has the Trust any other books in hand?"

"We have nearly a dozen books in various stages of production."

"Are they all fables and stories?"

"Some of them. To begin with, you see, we must create interest, and we must persuade parents that if they can spend money on cinema shows and restaurant-eating they can also buy books. And the children will *make* them buy books, even if the parents don't have the habit!"

"Aren't you thinking of other kinds of books—science books, for example?"

"Of course we are. But where are the writers to write them? Those who have a good command of their mother-tongue, and write fluently and well, unfortunately are poor in ideas. Those who are masters of their subject do not deign to write for children. We must take in hand the writers of talent and give them ideas, and we must coax or compel the professor-types to come down to the child's level. It takes time and effort. But that is the only way to have better books for children. It can't be done by committees (—tell me, can a committee produce a child?) And it can't be done by offering prizes."

"The Education Ministry does give annual prizes to children's books, doesn't it?"

"Yes, but where are we at the end of seven years of these prizes? These prizes haven't led the publishers to improve standards. And I don't think they have attracted new writers either."

SHANKAR rose with the impatience of a man who had been forced to be too long in one room and at one subject. "Come and see how our books are coming along," he said. I followed him along the shadowy, stuffy corridors of the barracks where he works. We were in the room where he chats away when he is not drawing his cartoons. A cosy room in happy disorder with a few old books at ease in steel shelves.

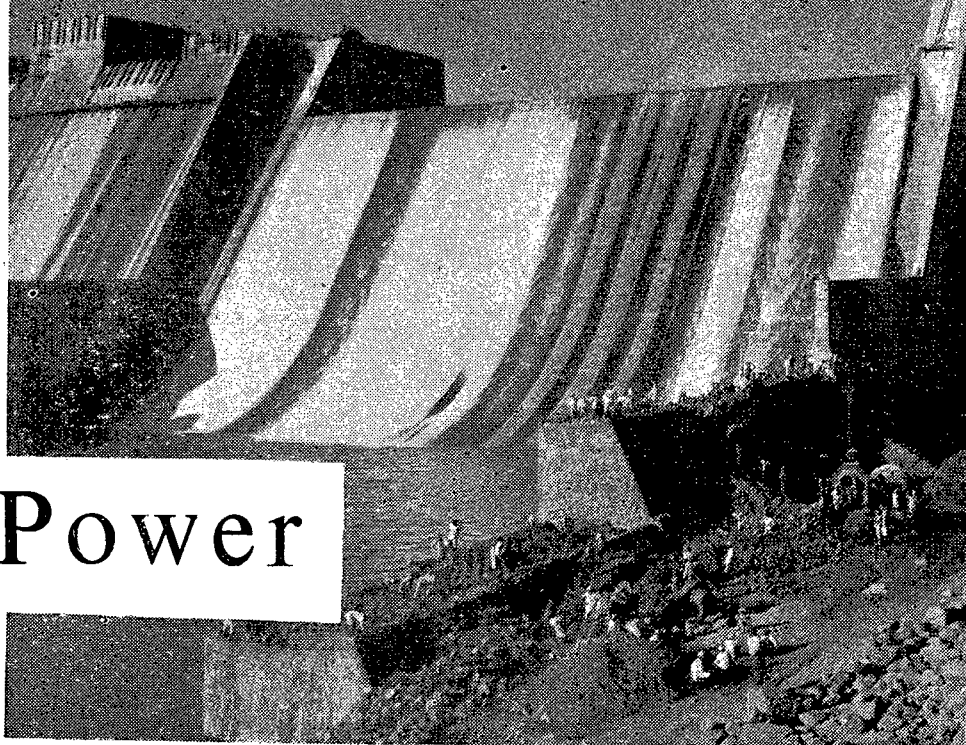
"Listen to a story," he said, and narrated the story of a lone elephant and a little girl who made friends with him. As he narrated it I became a wide-eyed child again. He was no longer Shankar but a voice—the voice of the minstrel who used to come round and sing ballads, the voice of my grandmother and of an uncle who told stories. When the spell ended I realised

(Continued on page 57)

# The Hidden Power of Koyna

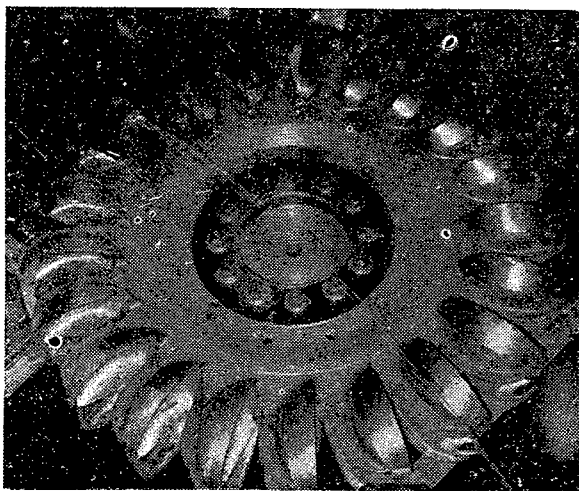
S. SRINIVASACHAR

*The entire generating station is scooped out of the solid Ghats—like another Ellora. This and the way a river is turned around make the project not 'another of those'.*



AMONG the cliches of Plan writing is the legend of Bhagirath—the epic king and sage who, by personal effort, changed the course of the river Ganga. Used perhaps a little too often, the symbolic value of the story has worn thin and cynics are prone to grin happily when anyone happens to make a mention of it. But that is the fate of all cliches, and for once we shall not be victims of prejudice. The Rs. 42-crore hydro-electric project, now approaching the first stage of completion at Koynanagar, is a Bhagirathan effort by all standards because our engineers have literally changed the course and destination of the Koyna river. Most of its water is now being trained to empty into the Arabian Sea instead of the Bay of Bengal, after yielding eventually 480,000 kilowatts of electricity. How this happens is a thrilling story.

For most of us in India anything



The Koyna Project is primarily meant to produce electricity. By end of 1963, 120,000 kW will be generated, the target on completion being 480,000 kW.

less lofty than the Himalayas is not a mountain. And the British who ruled this country (and to whom, in their own land a hillock is a mountain) secretly agreed with us when they called Mahabaleshwar a 'hill station'. To the British administrator, who thought of life as hardly worth living on the plains in our

tropical summer, the flanks of the lower Himalayan ranges and the Western Ghats offered an escape from the sizzling heat of the plains. Mahabaleshwar, situated about 77 miles from Poona in the Sahyadri ranges of the Western Ghats, became the hill resort for the officers serving the Bombay Government.

Mahabaleshwar continues to be a hill station and a tourist resort although the officers have abandoned, quite sensibly, their summer exodus to this place. One of the tourist attractions of Mahabaleshwar is the temple of Krishnabai known for its famous Cow's Mouth from which the waters of five rivers—the Krishna, the Koyna, the Yenna, the Gayatri and the Savitri—are believed to emerge. In the cisterns directly below the Cow's Mouth pious Hindus seek to wash off their sins.

The modern story of Koyna is a different one. It is the story of man seeking to wash off his most pernicious sin of poverty by compelling one of these rivers to yield power and prosperity to the country. Way back in 1925 the Tatas had conceived of a generating station below the Koyna river, but the power station they had in mind was the conventional type with a dam, penstocks and a generating plant situated at the foot of the river. They had done a good deal of

preliminary survey of the entire area which proved very helpful in 1950 when our planners salvaged the old idea and put it in a new perspective.

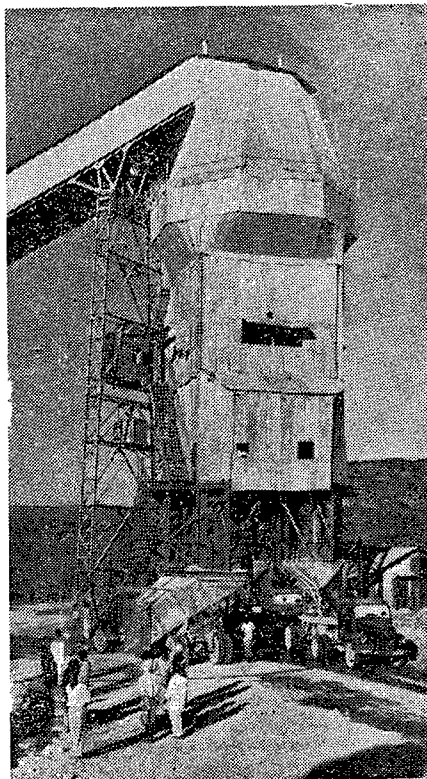
The Koyna is one of the major tributaries of the Krishna joining the latter near the town of Karad, about 35 miles away from the place where the dam is now built. Koyna is a river of abundance and carries plenty of monsoon water, for the rain in the higher ranges of the catchment area is as heavy as 250 inches in a season. The situation of the Koyna basin on top of the Ghats at a height of nearly 2,000 feet above sea level is of special advantage, because the dammed waters of the river can be brought down to the place in a steep drop. After detailed survey and investigation in the river valley, preliminary works were undertaken in 1954-55.

The most outstanding characteristic of the Koyna Power Project is that the entire thing, except the dam itself, has been built underground. So far as dams go, the Koyna Dam which plugs the narrow neck of the valley at Deshmukhwadi is not very extraordinary. Still under construction, the dam has risen about 150 feet above the riverbed, and has some 50 feet more to go. The reservoir in its final form, which will look more like a river in flood than an expansive lake, will be 21 square miles, impounding over 36,000 million cubic feet of water.

While the usual practice is to take water from the reservoir through huge pipes running down the hill (called penstocks), the engineers here have adopted a more interesting and efficient but less expensive course. They have bored a head race tunnel, 12,050 feet long (over two miles) from the bottom of the reservoir through the body of the adjoining hill maintaining a slope of 60 feet. Starting with a diameter of 21 feet, this tunnel tapers to 17 feet in order to add pressure to the water. A good part of the tunnel is lined with concrete and the rest with steel.

The head race tunnel terminates in what is known as a 'surge shaft', 300 feet high. This is a protective device and acts as a safety valve when one of the power units down below is shut off, releasing thereby

a back-kick of water which must be provided an automatic opening. From this point, namely the surge shaft, the water is diverted in four different tunnels called the take-off channels, each one of which runs to a length of about 400 feet before it joins another tunnel, called the pressure shaft. This pressure shaft runs through the body of the hill and terminates at a depth of nearly 1,600 feet emptying the water into the power house where giant generators start churning. Each power shaft forks itself into two, each fork being connected to a generator. Eventually, when the Project is complete, there will be four of these pressure shafts each working two generators with a combined capacity



Conveyor hoist at Koyna

of 120,000 kilowatts. The used-up waters are then collected through a tail race tunnel, 7,200 feet long and 21 feet in diameter, and emptied into the river Vasishthi.

The underground Power Station, which consists of the Valve House, the Machine Hall and the Transformer House, is an enormous chamber. The Machine Hall, 90 feet high and 50 feet wide, has been scooped

out 800 feet below the hilland resembles a fantastic palace that could belong to any fairytale world. Besides there are several auxiliary tunnels like the semi-circular approach tunnel to the Power House, 3,300 feet long and 21 feet high. Three jeeps can go abreast on the fine concrete road that constitutes the bottom of this tunnel. There are, besides, the ventilation and cable tunnels which together are about 2,000 feet long.

The tunnels are, from the layman's point of view, the most impressive aspect of the Koyna Power Project, running as they do to a total of seven miles.

The first stage of the work which is now approaching completion envisages the installation of four generators producing, by about the end of 1963, 120,000 kilowatts of electricity which the region around Bombay so badly needs for further industrialisation. The second stage of the Power House, which is expected to be completed by 1965, involves the commissioning of four more generators. In its third and final stage, which is practically the extension of the second stage, the engineers will add an additional power-house at the foot of the Dam utilising the discharge passing down for irrigation. This is expected to generate 30,000 kW of power. There is another proposal to make use of the river slope from the Koyna Station to the Arabian Sea along the Vasishthi by building a second underground power-house which will utilise the tail race water of the main Power Station to produce 60,000 kW more of electricity.

Many who have seen a river valley project or a hydro-electric station are likely to dismiss the Koyna project as being 'one of those.' What is really most impressive for the layman is not the enormous quantity of rock that has been blasted out of the mountain. These in themselves are enough to make the hill about 320 feet high. More than being an investment in money (Rs. 42 crore is not a small sum), it is a tremendous investment of skill and imagination. The task of boring the tunnels was a highly specialised job because it meant simul-

(Continued on page 41)

THE industrial development programmes of the Third Five Year Plan lay emphasis on the expansion of capital and producer goods industries in which the public sector is expected to play a prominent part. The private sector is also expected to play an important part within the framework of the Plan. The share of public sector in the net output of organised manufacturing industries is expected to increase from less than one-tenth in 1960-61 to about one-fourth in 1965-66 and the bulk of this will comprise capital and producer goods.

The estimated cost of development programmes for industries in the public sector is estimated at Rs. 1,882 crore but a financial provision of Rs. 1,520 crore is made for the time being. The cost of private sector projects is estimated at Rs. 1,050 crore. In addition to this, the private sector is expected to provide Rs. 150 crore to meet the arrears of replacement and modernisation in certain industries.

The minor industrial projects in the public sector are in the fields of metallurgy, industrial machinery, machine tools, fertilisers, basic chemicals and intermediates, essential drugs and petroleum refining. The production of consumer goods is also to be expanded mainly in the private sector. It is expected that as a result of all these developments, industrial production will rise by nearly 70 per cent. Important industrial targets set in the Third Plan for achievement by 1965-66 are given below (with the 1960-61 figures in brackets):

*Steel ingots* 9.2 million tons (3.5 million tons)  
*Petroleum products* 9.9 million tons (5.7 million tons)  
*Cement* 13 million tons (8.5 million tons)  
*Cotton textiles (mill made)* 5,800 million yards (5,127 million yards)  
*Diesel engines* 66,000 (40,000)  
*Tractors* 10,000 (2,000)  
*Electric cables* 44,000 tons (22,000 tons)  
*Nitrogenous fertilizers* 800,000 tons

# Role of PRIVATE FOREIGN INVESTMENT In Our Development

R. G. NAYAK

of N (110,000 tons of N)  
*Phosphatic fertilisers* 400,000 tons of  $P_2O_5$  (55,000 tons)  
*Sulphuric acid* 1,500,000 tons (363,000 tons)  
*Caustic soda* 340,000 tons (100,000 tons)  
*Machine tools (graded)* Rs. 300 million in value (Rs. 55 million in value)  
*Paper and paper board* 700,000 tons (350,000 tons)  
*Automobiles* 100,000 (53,500)  
*Bicycles (in the organised sector only)* 2 million (1.05 million).

## Industrial Policy Resolution

The industrial programmes included in the Third Plan provide a wide scope for private sector investment—both local and foreign. Broadly, the policy of the Government of India towards foreign private capital is to attract it in those fields in which it is considered necessary according to priorities laid down in development Plans. Foreign capital is ordinarily not allowed in banking, insurance, trading and commercial activities and plantations. Foreign capital as a rule is also not allowed in industries listed in schedule "A" of the Industrial Policy Resolution of 1956. In special circumstances, however, exception may be made where, after full consideration, this is found to be in the public interest. This means that foreign private investment is encouraged on a selective basis. If a project is approved for development in the private sector and if imported plant and machinery are required, foreign private investment is normally welcome to finance the project.

The Government of India welcome technical know-how from abroad in industrial undertakings in the public as well as the private sector. In general, in a joint enterprise Indian majority shareholding is preferred, but there is no hard and fast rule. The ratio of foreign capital to Indian capital in a joint venture is determined after evaluating the technical skills offered for the purchase of equipment from abroad and the desire of Indian collaborators to play an effective part in the company's management. Arrangement for the training of Indian technicians and executives in all aspects of production and management are insisted upon wherever feasible. Where a phased programme of manufacture is proposed, emphasis is placed on the rapid building up of indigenous production. Special encouragement is given to schemes which involve expansion of exports on an economic basis with or without the assistance of the foreign collaborators' overseas marketing organisations.

## No discrimination

Once a foreign investor is permitted to invest in India all the facilities which are available to indigenous producers are also made available to him without discrimination of any sort. Existing regulations do not impose any restrictions on the repatriation of foreign capital invested in India. Nor is there any restriction on transferring current or accumulated profits and appreciated value of assets, if all the taxes due on such incomes are paid. Recently a special officer has been appointed

in the Ministry of Commerce and Industry to undertake co-ordinated consideration of all activities concerning foreign private investment. The officer will primarily be responsible for speedily processing important collaboration projects, involving larger foreign investment or technical know-how and skills of special significance.

To encourage private foreign investment, an Indian Investment Centre was opened in April, 1961. The function of the Investment Centre is to promote wider knowledge and understanding among capital exporting countries of the conditions, laws, policies and procedures pertaining to investment in India and to assist Indian and foreign industrialists on matters necessary to attract foreign private capital techniques.

An illustrative list of industries in which foreign capital is normally welcome is given below :—

Iron and steel structurals ;  
 Iron and steel castings and forgings ;  
 Iron and steel pipes ;  
 Special steels ;  
 Non-ferrous metals and alloys ;  
 Boilers and steam generating plants ;  
 Equipment for transmission and distribution of electricity ;  
 Furnaces ;  
 Marine diesel engines ;  
 Industrial machinery, including major items of specialised equipment used in specific industries, and general items of machinery used in several industries such as equipment required for various unit processes ;  
 Ball, roller and taper bearings ;  
 Speed reduction units ;  
 Machine tools ;  
 Tractors, earth-moving and construction machinery ;  
 Plastics ;  
 Industrial and scientific instruments ;  
 Fertilisers ;  
 Organic chemicals ;  
 Fine chemicals and intermediates ;  
 Industrial explosives ;  
 Industrial gases ;  
 Agricultural chemicals such as insecticides ;

Dyestuffs and drugs, including the production of basic intermediates;  
 Newsprint ;  
 Pulp.

Various countries and international institutions have given technical and financial assistance to a large number of industrial projects in the public and the private sectors. For example, the public sector has had the benefit of collaboration in the three steel plants from the U.K., the U.S.S.R. and the Federal Republic of Germany. Similarly, in the Heavy Electricals Plant of Bhopal, Messrs. Associated Electrical Industries of the U.K. have given technical collaboration. A few other public sector industries where foreign collaboration has played an important part are the Indian Telephone Industries, Nangal Fertiliser and Chemicals and the Hindustan Antibiotics.

#### Increasing Contribution

In the private sector also a large number of industries have received foreign technical and financial participation from firms in the U.K., the U.S.A., West Germany, Italy, Switzerland, Japan, France, Canada, Austria, Holland and Sweden, which have resulted in the setting up of joint ventures. The number of approved schemes of foreign technical collaboration and financial participation have considerably increased since 1957. Twenty-four such schemes were approved in 1957. Their

number increased to 109 in 1958, 162 in 1959 and 388 in 1960. About two-thirds of the agreements concluded in 1960 related to the engineering industry including manufacture of industrial machinery, machine tools, precision and industrial instruments, electrical equipment and accessories and transport equipment. A broad idea of the contribution of private foreign investment towards economic development in India can be had from the table below which indicates the inflow of private foreign investment in India from 1948 to 1959.

This account of progressive increase in the instances of foreign collaboration and the inflow of private foreign capital shows that foreign investors have found their investment and collaboration arrangements of considerable economic value from the point of view of sound, long-term investment. The faith of the foreign investors in the political and economic stability and the profitability of investment in India is amply proved by the fact that foreign investors have found it advantageous to retain their investments in India and even to plough back a considerable part of their profits in their ventures. Retained earnings amounted to 58.9 per cent of gross inflow of private foreign capital in 1959.

*Inflow of Private Foreign Investment in India  
 (excluding IBRD investment)*

	(Rs. crore)					
	1948-53* (annual) average)	1954-55 (annual) average)	1956	1957	1958	1959
1. Gross inflow of private foreign capital	31.8	19.9	31.2	26.9	26.8	25.6
(i) Retained earnings	10.9	12.0	19.5	9.5	9.8	15.1
(ii) Cash inflow	5.4	1.5	3.1	5.9	4.8	3.3
(iii) Non-cash inflow	15.5	6.4	8.5	11.4	12.3	7.2
2. Outflow	8.2	5.0	6.3	9.1	24.4	14.8
3. Inflow of private foreign capital (net)	23.6	14.9	24.9	17.9	2.4	10.8

\* 5½ years, June 30, 1948 to 1953

Source : *Survey of Liabilities and Assets of Government of India, RBI Bulletins, September 1958, June 1959 and May 1961.*

# A BAG OF BOOKS

## Slender But Readable

AN American publisher looking for the work of Indian novelists once remarked that it was sad the way Asians had neglected their own story-telling traditions for the structural lure of the western novel. This is very true of all our novelists, whether they write in the mother-tongue or in English. Only *Kanthapura* is different; it is something of a modern ballad in prose. M. Anantanarayanan's *The Silver Pilgrimage* takes the novel back to the "katha" tradition. And it is a book of great gusto and wizard beauty. Prince Jayasurya of Lanka has everything except a heart, and a sage advises his father that only a pilgrimage on foot to Banaras will give the prince the virtue called sympathy. And so the prince sets out, accompanied by Tilaka. And the adventures and amours of this sixteenth-century journey are narrated by a twentieth-century man of great learning and wit. Everything is done tongue-in-the-cheek. Anything goes, even the clever-clever version of *Hamlet* as narrated by an Indian merchant who had gone to the damp isles. Even the philosophic discourses have a friskiness and when the last line of the book is reached, with the Purohit saying "But I must hasten to more important duties than the exploration of significance. The palace going has struck the hour for lunch, and you no doubt recollect that we are to have aviyal and pappadams," you ask yourself why the book could not have been longer.



NEXT on the list in this odd bag of books on India or by Indians is Santha Rama Rau's *Gifts of Passage*. A happy title for a book that records the passage from east to west and from home around the world, from childhood to maturity, from parental good fortune to personal distinction, and from the eye to the mind. Although large parts of

it have appeared before as essays in the *New Yorker* and other magazines, the happy linking commentary gives it a setting which makes the book new. And the author is one of those who can stand a second and another reading. She creates mood and character so surely and engagingly that reporter's art and novelist's gift merge in her. Read the passage about her grandfather. Take the aunt who found that Santha received a book from America

### Books mentioned in this chat :

*Gifts of Passage* : Santha Rama Rau (Victor Gollancz).

*The Silver Pilgrimage* : M. Anantanarayanan (Criterion Books), 160 pages, \$3.95.

*Tagore : A Life* : Krishna Kripalani (Malancha, Delhi), Rs. 12.50.

*Jungle and Backyard* : M. Krishnan (The Publications Division for the National Book Trust), 142 pages, Rs. 3.

*When The World Was Young* : Verrier Elwin (The Publications Division for The National Book Trust) 82 pages. Rs. 1.50

*Roots of Change* : Text by Willard J. Hertz (The Ford Foundation) 52 pages Unpriced. Copies obtainable from the Foundation.

the title of which was "Natural Child Birth" and asked : "Are things different there?" Hear the words of the three middle-aged sisters of Leningrad, who wanted to know what was special in Dostoevsky. Consider the confidence of Janaki, the girl chosen to marry an American-returned business man. You get to feel the strength of simplicity.



AFTER the year of Tagore there is a reason to wonder whether we, who are so dutiful in our observance of *Jayantis* and *Shraadh*s know how to convert the ritual into an occasion for renewal of acquaintance with a great man's mind. Indeed, can a planned, formal centenary mark a

revival of interest in a sage's or author's thought and work? It would be more logical to think of revivals—like those of Donne or Blake—as being the outcome of an organic historical process, although a brilliant biography now and then touches it off. Frankly, has the Tagore centenary led to a rediscovery of the core of Tagore's thought—especially of his bold pointing up of the limitations of nationalism or his views about education? Aldous Huxley seemed to despair of getting Indians seriously to discuss the Poet's educational philosophy.

It is wise to measure the intellectual harvest of the Tagore Year so that we can answer quipsters who say it was a minor industry, like the Civil War Centenary industry in the United States. There are of course some concrete benefits—a stage for each State, new chairs in some universities. And some book-lovers have had the chance to buy excellent works by and on Tagore. A positive gain this. The most notable of these books is the West Bengal Government's edition—too few to meet the demand. The three Akademies have also done quiet and commendable work. Of the several biographies and assessments, the most readable is Krishna Kripalani's *Tagore: A Life*. Although the work of a revert-disciple—it is not in the warts-and-all-style, and some questions are in abeyance—it is objective enough not to lose the man in the seer. It is written with lucid compactness and the reference to the young women who influenced the Poet and the portion where the physical strain the Poet underwent in his old age for the sake of Visva Bharati are instinct with feeling. Mr Kripalani succeeds in bringing out the tremendous vitality of Tagore's spirit—with its sense of continuing quest, experimentation and discovery. The exquisite sense of proportion and control of the narrative make one look forward to the larger biography by Mr Kripalani of which, we are told, this is an advance condensation.

Less successful is a little booklet brought out by the Sahitya Akademi for children. *Our Poet* is a missed opportunity. We hope some publisher somewhere has brought out—or is planning—a picture-book of Tagore's life for children on the lines of what Norway has done for Nansen.

I remember reading a passage by Thoreau on the sufficient joy of being alive in a world where one can have cobs of corn, boiled in brine, to eat ... I am sure Thoreau could have achieved a more ecstatic passage had he known tender boiled groundnut. You choose pods almost fully formed (but not quite), wash them well and boil them in salt and water, and then eat the creamy richness within them, pod by pod.

THAT, as one can guess, is M. Krishnan writing. It is a happy quotation too, with mention of Thoreau and of the sufficient joy of being alive. This is what Krishnan conveys in everything he writes, and discriminating readers in our country have long taken his byline to be a guarantee of an unusual experience. Without setting out to be literary he achieves some of the most genuine prose in our country—clear, compassionate, instinct with delight, beauty and humour. Whatever he writes about—whether of Addi the elephant which had ‘that which is more impressive than mere bulk or looks; he had character’, or of the castor tree (which holds its own against agave, lantana, prickly pear and the Mexican poppy, ‘not by disputing the soil with them from the first, but by the peculiarly Indian method of drawing on its own strength till it has gained a start on them) or of roadside tamarind trees or of cheetahs which, alas, have become extinct in the last 15 years, or of the grey-necked crow (‘how little we know about it!’) or of Chocki the Swadeshi dog which lived with him, he tells us something others have not seen and opens our ear to some very

Indian sounds missed before.

The National Book Trust deserves congratulation on having brought out Krishnan’s studies in a volume. *Jungle and Backyard* is a book that should be in every home.

With this and with Dr. Verrier Elwin’s *When the World Was Young* the National Book Trust should be able to rub off some of the disappointment that had been expressed at its early performance. These two are much brighter than the first lot put out by the Trust. Let us hope they are a pointer to better things to come. What the nation expects from the Trust is formative literature—seminal books which are well got up and fill a need.

Those who recently heard his Patel Lectures, even if they had not read his books, would become acquainted with the mind of Elwin. This British-born Indian is one of the great friends of our tribal people. It is they who made him an anthropologist. *When the World Was Young* is a selection of stories taken from his earlier books of tribal myths and legends. It is an excellent selection—some throwing light on the secret workings of the human mind, like *Tobacco*; others are folk tales, simple and fascinating like *The Snake-Husband*. Some are sheer poetry, like *The Dancers in The Sky*, which goes as follows :

The seven virgin daughters of Jogi Jhoria were gay and beautiful. One day, at the year’s greatest festival, they danced with the other village maidens. Dancing, dancing, they were drunk with pleasure.

Dancing, dancing, the girls, with boys at the drums, were carried into the sky, swept up as if a hawk had snatched them away. Dancing, dancing in the sky they went away. Dancing, dancing in the sky they went to the Cloud God who was so delighted when he saw their dance that he would not let them return to earth. He said to the girls. ‘When I send down rain upon the earth, you must dance across the sky and the boys must beat their drums. He called the girls Lightning and the boys Thunder.



THE Third Plan, in the words of Sir Theodore Gregory, is “a great State paper.” And *Roots of Change* refers to the ‘sheer volume of research data’ found in the document. But statistics, while satisfying the experts and the administrators, scare the ordinary citizen.

*Roots of Change* tells briefly the story of the basic change occurring in India which raw statistics cannot tell, but which can be seen in people like Mohindar Singh of Shamgarh or Suraj Mal of Banskho in Rajasthan, in places like Ludhiana and Poona-mallee. It concerns itself with an aspect of India’s development which is “one less dramatic than new steel mills but no less essential”—the development of India’s human resources.

In this task of changing people’s attitudes India has been helped by the Ford Foundation at several vital points. *Roots of Change* sets out to describe the why and how of some of the programmes; it succeeds in being more than a report.

## INVESTMENT IN MAN

(Continued from page 10)

are, in other words as much a part of investment in man as are schools and hospitals.

RETURNING to the debate over education, it might seem, from certain points of view, that education in the most general or broad sense is not the main desideratum in a country seeking to bring about a major transformation in its economic structure. But in a free society the main object in providing general education is that every individual in it should be so equipped as to be able to react rationally to his environment. It is only thus that the abilities innate in each of them can be brought out to subserve the interests of all. The provision of this groundwork constitutes the function of general education. Once this is made available to the bulk of the people, the manner in which their talents become manifest is not something that can be prognosticated or controlled. Indeed, there is no reason why the difficulties of prognostication or control

should be looked upon as a matter for concern. If general education does nothing more than cause a ferment in society, it will have served its purpose in as much as the shackles of custom and tradition conducive to stagnation will have been broken. One might even take the extreme view that it is necessary for the survival of society that there should be such a constant ferment, with its concomitant attributes of a willingness to try the unconventional in all aspects of life.

WHAT has been said above in respect of general education applies to the many other things which in one way or the other give the people a new area to work in or a new idea to experiment with. Since the process of widening the mental horizon and faculties of the people is inherent in every new venture that a society undertakes, be it in the field of industry or agriculture, political organisation or social engineering, it is the sum total of all these that goes by the name of social change. In this sense, it would not be incorrect or facetious to view the whole of the Plan as constituting the so-called investment in man in India.

# INDUSTRIAL PRODUCTION UP 8.3 p.c.

NINETEEN sixty-one, despite floods and fuel shortage, witnessed increased production in both agriculture and industries. The production of food grains stepped up to 79 million tons—a record, representing a rise of 4 million tons over the previous year and 2.5 million tons over the previous best. The prices of food grains showed a moderate fall. A five per cent decline was marked in prices of cereals.

Industrial production was 8.3 per cent larger than in 1960. The increase was shared by almost all the principal industries. The output was conspicuously higher in the case of iron and steel, minerals, machinery (including electrical machinery), machine tools and transport equipment. The monthly turn-over of iron ore increased from 8.9 lakh tonnes in 1960 to 9.5 lakh tonnes. The output of finished steel was 21 lakh tonnes in the first nine months of 1961, compared to 16 lakh tonnes in the corresponding period of 1960. The monthly rate of coal production increased to 47 lakh tonnes from 43 lakh tonnes in 1960.

Enterprises in the public sector showed all-round progress. The Hindustan Machine Tools produced 1,002 machines against 842 in 1960. Similarly the Hindustan Antibiotics produced 41 million mega units of penicillin compared to 36 million mega units in 1960. The products of the Hindustan Cable Factory were valued at Rs. 1.89 crore, an increase of Rs. 64 lakh over the previous year.

HMT has been awarded a prize for being the best public sector undertaking in the year. Hindustan Antibiotics and Hindustan Cable have also been honoured for their work.

A number of new items were taken up for manufacture for the first time. These include time-pieces, postal franking machines, porous sintered bearings, plasticizers, butyl alcohol and butyl acetate.

The watch factory of the Hindustan Machine Tools, Bangalore, and the Nangal Fertiliser Factory went into production during the year.

To give incentive to the manufacture of machinery, the 'Build Machines, Build India' programme was

launched. Similarly, as a step towards balanced regional industrialisation, location sites for seven heavy industrial projects were selected in the less developed areas.

In the small industries sector, the 60 industrial estates alone produced goods worth Rs. 16 crore.

During the year, licences were given to 1,244 entrepreneurs for setting up new industries or expanding the existing ones. More than 400 arrangements for technical and financial collaboration with foreign firms were also sanctioned.

## NEW STANDARDS

THE Indian Standards Institution adopted 239 new standards and revised 57 during 1961, taking the total number of standards to 1,872.

The Institution granted licences to 371 (259 in 1960) manufacturers among 724 (548 in 1960) applicants.

An Implementation Division has been set up for popularising Indian Standards.

## *As the Plan Moves*

The Certification Marks Scheme of Indian Standards was extended to all steel produced in both public and private sectors.

The activities of the Institution are expected to be doubled during the Third Plan period.

## FERTILISER PROFIT

THE Fertiliser Corporation, a State-owned enterprise, has announced a dividend of Rs. 39 lakh for 1960-61, the first year of its working.

The Nangal Fertiliser Factory of the Corporation went into production early in 1961.

The Corporation also established a Central Institute of Fertiliser Technology at Sindri and increased production at the Sindri Fertiliser Factory during the year.

The Fertiliser Projects at Trombay, Nahorkatiya and Gorakhpur are

## BRIGHT SPOT

**Bombay Port has set up a record in handling cargo—14,721,000 tons in 1960-61 or nearly a million and a half tons more than in the previous year.**

in progress and may start production by the end of Third Plan.

The Heavy Water Plant at Nangal, another venture of the Corporation which is expected to be commissioned early next year, will produce 14.5 tons of heavy water every year.

## CLAY WASHERY

THE first unit of the clay-washing plant of the Neyveli Integrated Project was commissioned on December 30. The plant has a capacity of 1.25 tons of washed clay per hour. The plant has been built at a cost of Rs. 14 lakh.

The Neyveli Integrated Project also comprises a giant power generating plant and a fertiliser factory based on lignite.

## Free Facilities For Family Planning

Contraceptives are to be distributed free of charge in medical and health centres in rural areas irrespective of the income of the user. So far only sheaths, jellies and foam tablets were distributed free and other contraceptives had to be paid for by those whose monthly income was more than Rs. 300.

## Deposit Insurance

A Deposit Insurance Corporation has been set up from January 1. It has a paid-up capital of Rs. 1 crore, and its function is to provide guarantee to bank depositors up to a limit. Insured banks will pay to the Corporation, at quarterly intervals, a premium of 5 naye Paise per 200 rupees per annum on their deposits.

# C.I. PRESSURE PIPES BY IISCO

## IISCO-STANTON *Cast Iron Spun Pipes* *Made to BSS 1211 of 1958* *and Vertically Cast Pipes* *to BSS 78 of 1938*

Our pipes are being utilised all over the country from Kashmir to Kerala and from Assam to Gujarat. A few of the largest schemes being supplied today from Kulti at the present moment are—

Ernakulam — Mattanchery and other Schemes under the Third Five-Year Plan, Kerala		
3" dia. to 24" dia. Spun Pipes	—	8,62,000 Rft.
Trivandrum Water Supply Augmentation Scheme		
48" dia. Vertically Cast Pipes	—	42,240 Rft.
Madras State Third Five-Year Plan		
Water Supply and Drainage Scheme, Madras		
3" dia. to 24" dia. Spun Pipes	—	48,02,000 Rft.
Thippégondanahalli Water Supply Scheme, Bangalore		
36" dia. Vertically Cast Pipes	—	89,760 Rft.
Ajmer Water Supply Scheme, Rajasthan		
21" dia. Spun Pipes	—	3,69,000 Rft.
Manjira Water Supply Scheme, Hyderabad		
16" dia. to 24" dia. Spun Pipes	—	8,760 Rft.
36", 40", 42" & 45" dia. Vertically Cast Pipes	—	53,585 Rft.

### THE INDIAN IRON & STEEL CO. LTD.

Works : Burnpur & Kulti

Sales Office :

12, MISSION ROW, CALCUTTA I

Managing Agents :

MARTIN BURN LTD.

Martin Burn House, 12, Mission Row, Calcutta I

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# THE STORY OF KOYNA

(Continued from page 34)

taneous boring from two ends of the hill almost blindly along a precise gradient. What was important from the technical point of view was that the two groups of 'borers' should not end up by burrowing two parallel tunnels, but should meet half way. The slightest deflection of the tunnel axis would have, at one end, carried off the engineer miles out of his destination. But our engineers, depending on cold calculation and using their theodolites, kept their track with such an exactness that at the end of a two-mile tunnel each met the other at barely a difference of two inches. They fixed, first of all, an infallible reference point in the form of a fixed pillar on top of a hill. This was their meridian with constant reference to which from the mouth of the tunnel, they burrowed into the hill through a blind alley.

The story of the Koyna Dam will long be told. Laymen will discuss it as a great harbinger of agricultural and industrial prosperity to Maharashtra; engineers will discuss its technical aspects before they launch on new adventures of similar kind elsewhere in the country. The Koyna Project is primarily meant to generate electricity and will, in a secondary way, help agriculture by bringing about 200,000 acres of arid land under irrigation. The first phase of this Project involving the commissioning of two generators will be over in a couple of months. The generators have been installed and the tunnelling work has been completed. By 1965 all the eight generators will be working. The transmission lines designed to carry electricity to Bombay have been nearly completed. All those who have been displaced as a result of the submerision of villages in the reservoir have been allotted land, and nice little villages have sprung up all around the Dam site.

## QUOTATION BOX

Governments of backward and impoverished countries are in the position of a man trying to catch a train that always pulls out of the station just as he arrives. By the time a five-year plan to find places for ten thousand extra children has been realised, twenty thousand tots are at the door.

—*Elspeith Huxley writing in the series 'The Crowded World' in 'Punch'.*

More than 50 schools of the Delhi Administration and the Municipal Corporation are at present housed in tents. Most of them run double shifts, compelling the children to undergo the early morning and late evening rigours of winter days. ... There is an acute shortage of school buildings in the Capital, but this fact has not elicited the compassionate notice of any official or public agency.

—*A report from 'The Hindustan Times'*

Shramdan is uneconomic, immoral and wasteful. All work done should be paid for.

—*Mr A.G. Kher, Speaker of the U.P. Vidhan Sabha.*

The social aims of a university are most likely to be attained not in the lecture room or the laboratory but through the polishing which keen, young minds receive when they are constantly rubbing against one another.

—*Sir John Sargent in his address to the Jadavpur University Convocation.*

Bad plays, even on the noble subject of national integration, can only bore people.

—*'Ditcher' in 'Capital'*

I want India to be simple and dignified and do not want it to be pushed into a world of gadgets.

—*Prime Minister Nehru*

The underdeveloped countries nowadays take intellectuals a great deal more seriously than western countries did during a comparable stage of their growth. The intellectual is after all supposed to hold the secret of accelerating the whole process of producing wealth, he has taken over the same sort of place as the 'small businessman, in the North American myth.

—*Andrew Shonfield*

The stumbling block to the growth of research in India is the conventional argument that there is not enough talent in the country, which is not borne out by facts. It is a tragedy that cognisance of talent and creative work is taken in India only when it has received recognition abroad.

—*Dr Alladi Ramakrishnan, Director, Institute of Mathematical Sciences, Madras*

In many centres of learning (in India) the head of a department cannot sign a requisition exceeding Rs 12.50.

—*Dr S. Chandrasekhar, the astronomer*

Smilingly, he listed another reason why a scientist should have addressed such a conference: "It would be a relatively dull affair if we were to listen to competent men only".

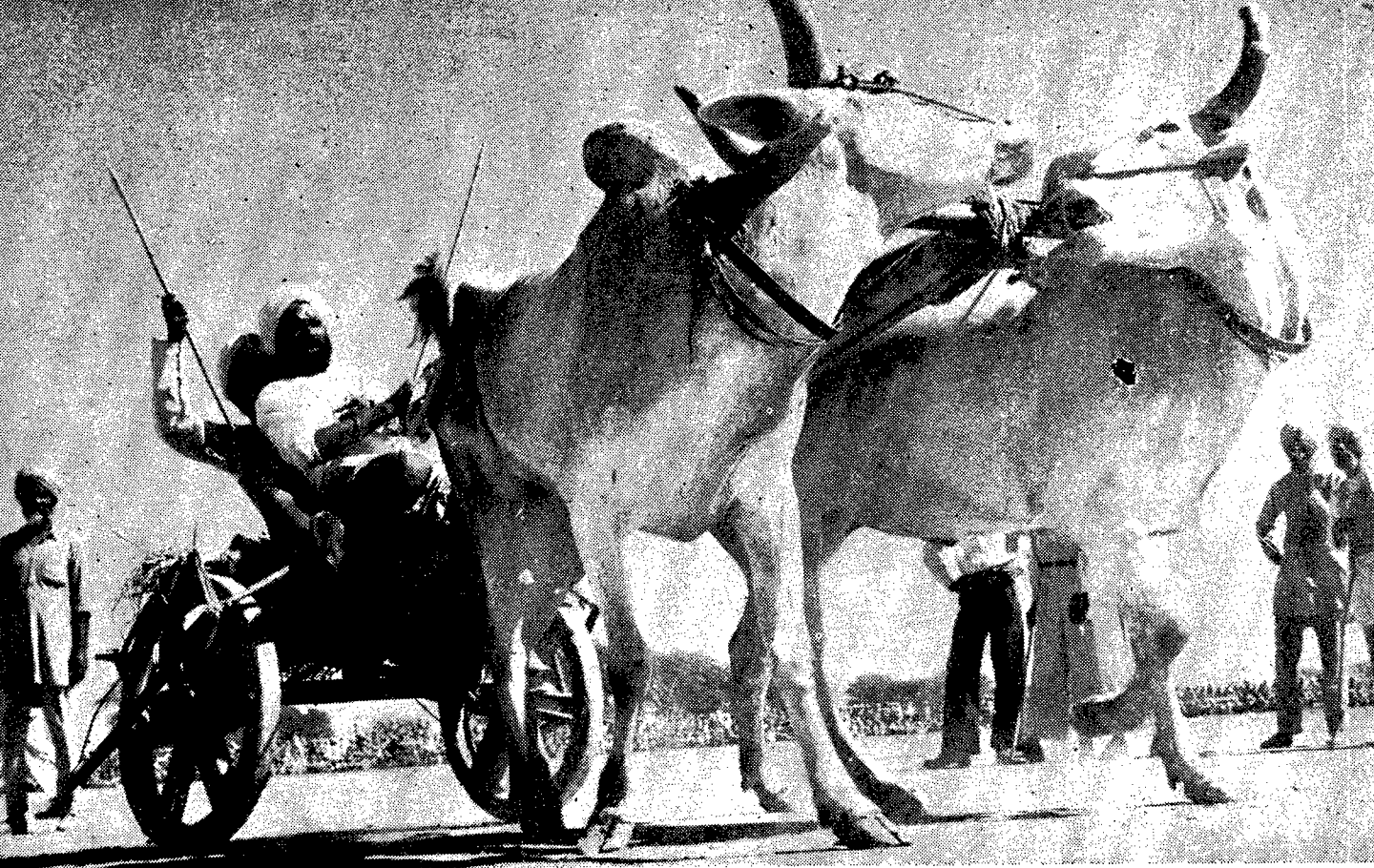
—*From a report of Dr D.S. Kothari's speech at the annual session of the Indian History Congress*

Following the intensive and extensive development of the iron and manganese mines, Goa had almost become the mainstay of Portuguese economy. . . . The export trade figures of Goa that are immediately available reveal that this former colony of Portugal exported last year about 6 million tons of iron ore worth over Rs 25 crore (2.2 million tons to West Germany, a similar quantity to Japan, nearly 1,00,000 tons to France and 75,000 tons to Italy), half a million tons of manganese ore, cashewnuts and dried fish worth over Rs 1 crore each, betel nuts worth about Rs 14 lakh, canned food worth about Rs 33 lakh, bamboos worth over Rs 1 lakh and coconut worth Rs 8,000.

—*From an article in 'The Eastern Economist'*

A personal visit to the officer in charge (of the express delivery service) at the Central Telegraph Office elicited the homely advice that one should go on complaining in writing, but one should not expect results, "for nowadays nobody has got control over the Class IV employees."

—*From an editorial note in 'The Economic Weekly'*



# Bull-Shouldered Men

As retreating hordes of vanquished heroes add fresh gloom to horizons already clouded by frustrations of defeats past, Indian sport lets out a seasonal wail, part introspective and part exclamatory. What is lacking talent or know-how?

Experts come and go, diagnoses are screened and doublechecked and lakhs of rupees in taxpayers' money melt away each year in the quest for the answer.

Why should India take a back seat in international sport after a whole decade and a half's ceaseless effort, ungrudging state aid and unbounded ambition?

What is REALLY lacking—talent or know-how?

Rural India where heart-specialists rate second-best to the village *hakim*, Saville Row ranks a poor second to *durzee*-tooled wardrobes, the sports expert seeking to diagnose ailments real and imaginary will be laughed out of the village.

That goes for our pampered champions as well because a sports

VERNON RAM



champion in rural India has to offer more by way of credentials than a slickly tailored tracksuit or a blazer he may or may not have merited.....

Take, for instance, Kila Raipur in rugged Punjab's tough-as-nails Ludhiana district.

Here, once a year, are assembled the district's prized specimens of rural champions—he-men with real hair on their chest, bullshouldered and sturdy as an ox, fearless as a lion and ready to battle man or beast to prove their worth.

No heraldic trumpets, no rolling of drums and no publicity at all are sought—or received. But over 2,00,000 villagers pack Kila Raipur for one week each season to see Ruritania's Olympics-with-a-difference.

How many champions do we have who can halt a pair of oxen at full gallop? ... who can hoist a plough shoulder-high in one hand in a single action? ... who can lift a five-maund sack of wheat in one press-snatch-jerk movement?

# PUNJAB'S RURAL OLYMPICS SHOW WHERE OUR SPORT HAS GONE WRONG



...who can pilot a camel to the finishing post in a race ? ... who can wrestle with and defeat the village *pahelwans* raised only on milk and almonds ?

As the dust settles down after the week's carnival of speed, strength, skill and stamina, the question pops up again...

What is, REALLY, lacking—talent or know-how ?

Kila Raipur's rural Olympics... and the countless other Kila Raipurs that make rural India...and the countless champions we haven't had the time, patience or interest to discover—maybe they represent the answer we have had with us all along and not even know it !



# Vanaspati

## Improves Our Diet

**N**UTRITIONISTS advise that our daily food must contain at least 2 oz. of fat because it's vital to good health. But our country's production of traditional fats—ghee and certain vegetable oils—can supply us only  $\frac{1}{2}$  oz. per person per day!

Our traditional fats are not only in short supply but also rather expensive. Millions of our people have therefore been subsisting on fat-poor diets to the detriment of their health and vitality.

How can our fat supply be increased? The only practicable way is to grow more groundnuts, as they yield maximum oil per acre, and to draw on our ample resources of cottonseed—and convert their oils by

hydrogenation into an acceptable semi-solid food-fat, vanaspati. The manufacture of vanaspati helps to increase the amount of food-fat available per person from our limited cultivable land.

### Worldwide use of vanaspati

Most advanced countries have found their traditional food-fat supplies to be progressively inadequate. The

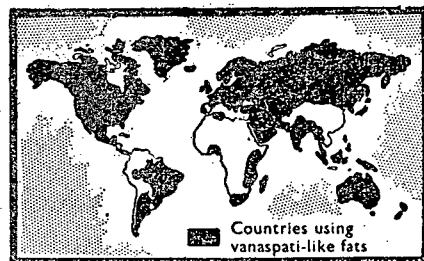
shortage has been met invariably by hydrogenating edible oils to produce large quantities of vanaspati-like fats known variously as shortening, vegetable ghee and margarine.

How the people in most advanced countries with high health and living standards ensure an adequate intake of fats by consuming both vanaspati-like fats and traditional fats is seen from the table below.

### Vanaspati-like fats are used throughout the world

Annual Food-Fat Intake (lbs. Per Head) In 1959			
COUNTRY	TRADITIONAL, FATS (Butter, ghee, etc.)	VANASPATI-LIKE FATS (Shortening, margarine, etc.)	TOTAL
Canada	18.1	8.7	26.8
Denmark*	23.6	41.4	65
Finland	32.4	14.6	47
France	22.5	5.3	27.8
INDIA	9.8	1.7	11.5
Netherlands*	9	44.8	53.8
Norway	8.4	53.1	61.5
United Kingdom*	18.5	19.9	38.4
United States*	8	20.6	28.6
West Germany*	17.2	27.1	44.3

*Even the butter-rich countries (\*) consume more vanaspati-like fats than butter. And, like these consumers of hydrogenated fats in other countries, millions in India rely on vanaspati—the pure, nutritious, inexpensive food-fat—to improve their diets nutritionally.*



Albania Algeria Argentina Australasia Austria Belgium Brazil British East Africa Bulgaria Burma Canada Central African Federation Czechoslovakia Denmark Ethiopia Finland France E. & W. Germany Greece Hungary India Iran Iraq Ireland Israel Italy Japan Libya Malaya Mexico Morocco Netherlands Nigeria Norway Pakistan Poland Portugal Rumania Saudi Arabia Sweden Switzerland Turkey Union of South Africa U.S.S.R. U.A.R. U.K. U.S.A. Yemen Yugoslavia.

For more information, please write to: The Vanaspati Manufacturers' Association of India, India House, Fort Street, Bombay

## PRIDE OF PLACE

WHEN a Bengali housewife wants to add to her kitchen equipment she does not go in for brassware or stainless steel. She prefers buying a few more articles made of bell-metal. They last longer.

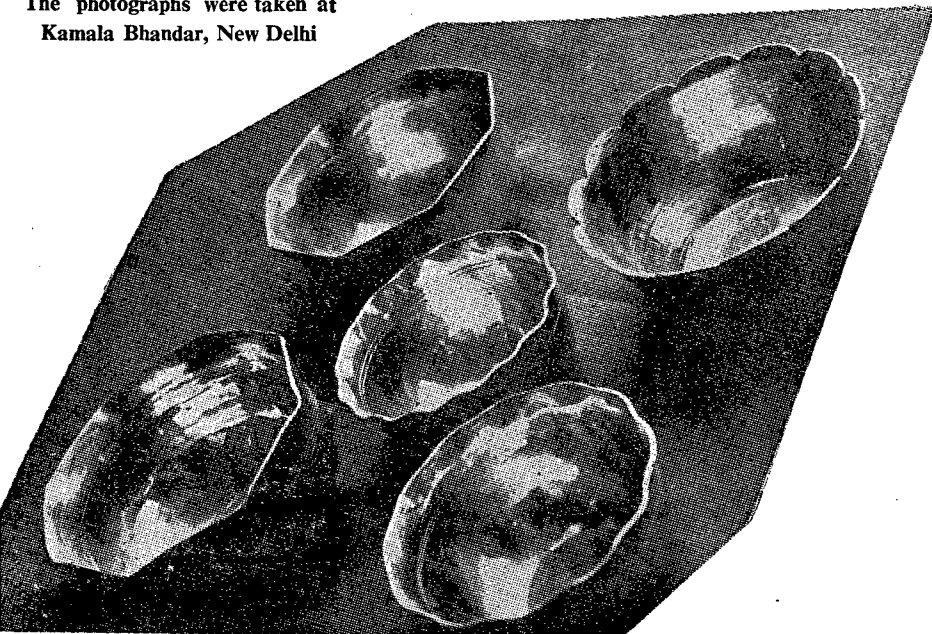
Every bride in Bengal gets a set of bell-metal articles as a marriage gift—pitchers, thalis, tumblers and bowls. What gives these articles their distinctive quality is the gold-like lustre. The more they are used the more glittering they become. And they don't get so easily discoloured as brass when not in use.

Bell-metal is an alloy of copper and tin used in the proportion 7 to 2; thus it contains more tin than bronze does. A hereditary craft, bell-metal work is done by the Kansaris in most Bengal villages. Khagra, a part of Berhampore in Murshidabad, is especially known for its bell-metal work. Because of their artistic design and durability, the Khagra



## Bell Metal Articles of Khagra

The photographs were taken at Kamala Bhandar, New Delhi



bell-metal articles have a demand in market.

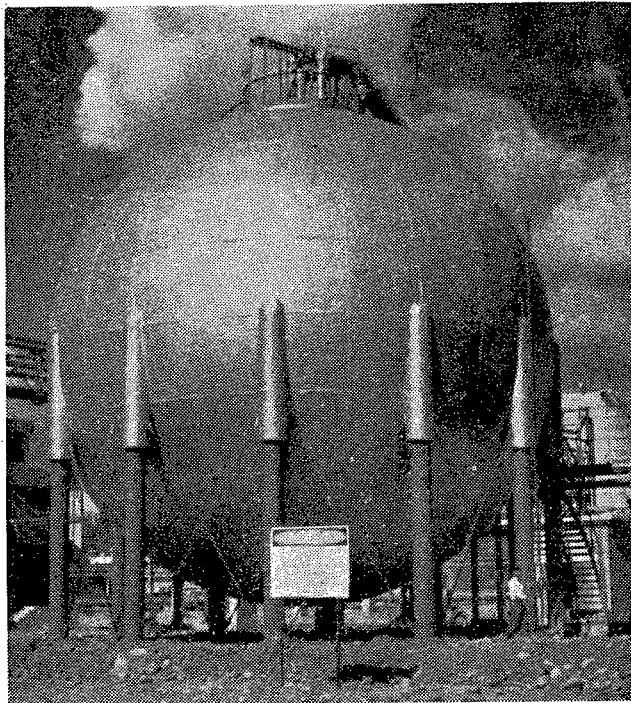
The work involves complicated labour. The metal is first melted in a crucible. The molten mass is placed in moulds and cooled in salt water. It is next heated and beaten into sheets on an iron anvil. The sheets are then cut into smaller sizes and each piece heated and hammered again. The hammering is continued till the sheet is reduced to the thickness desired. *Pan* (scrap brass and borax) is used for soldering. Finally, the articles are decorated with incised floral or geometrical designs direct with small chisels.

Bell-metal articles are much more expensive than brass and bronze. As inevitable consequence, they are gradually losing out to the cheaper competitors.

FAME often comes in such an unaccountable way that no one is cut off from hope. This is true of both persons and places. Take Bhakra-Nangal. Only a dozen years ago who knew these twin names? And who imagined that this inaccessible gorge, and these barren hills would draw so many people? Over the years, Bhakra-Nangal has come to stand for our determination to break out from darkness into light and from poverty into plenty.

## AN EVENING ON THE EDGE OF GOBIND SAGAR

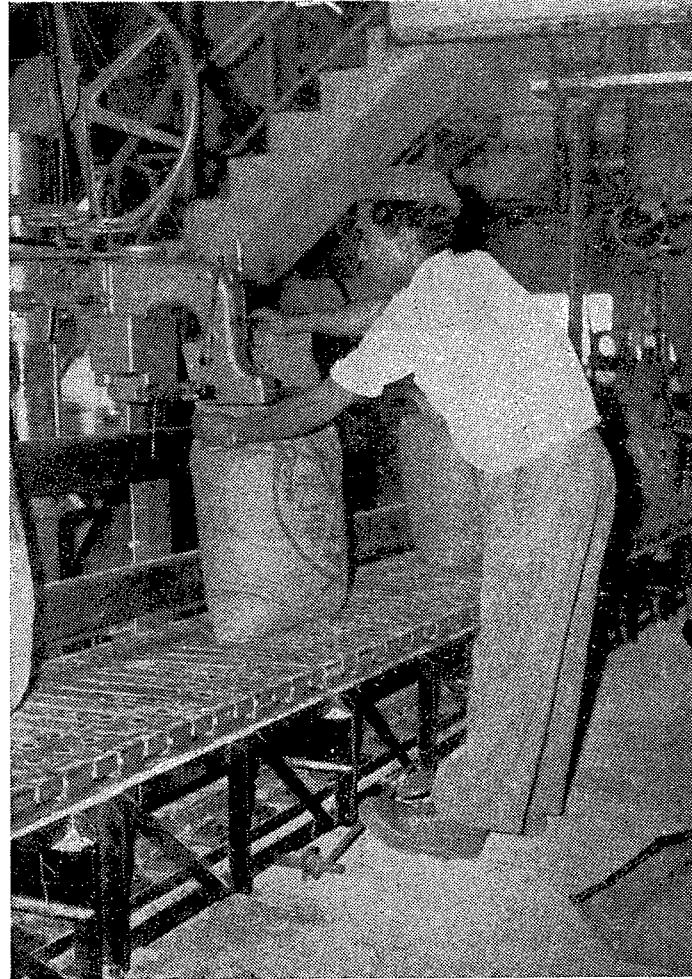
V. K. TYAGI



As a Nangal official and I raced through the Lower Siwaliks (so dear to geologists' hearts) I could see, amidst the rocks neatly cut and hills sliced off, warnings against rash driving at every turn and curve. Not in Mussoorie, or Simla or Dalhousie, or even Kashmir, can so many warnings be seen. And these brought to my mind the numerous cautionary words that aged householders used to utter when their younger relations went off on a pilgrimage. For this place too is a centre of pilgrimage. Wasn't it here that the Prime Minister first spoke of the temples of the new age?

The Bhakra Dam is visible from three or four miles. As it first hove into view, silence fell between

*'Yojana' visits Bhakra which has neared completion and looks at the new phase of Nangal*



Certain names in India have always taken a natural hyphen: Tilak-Gokhale, Sapru-Jayakar, and now Bhakra-Nangal. In the last few years the stress, in the new pair, was on Bhakra. -Now Nangal has also come into its own. The four products of Bhakra and Nangal—irrigation water and power, fertiliser and atomic heavy water—combine to make India modern and prosperous.

me and the official. I wasn't tongue-tied from amazement. Frankly, the Bhakra is not at all enchanting or overpoweringly imposing from distance. Just looks like a wall slipped into position in a slanting fashion. The operation might have been a challenge when it was being done, but now that it is an almost completed achievement, it looks so inevitable, so easy. I was

jerked out of a mental haze when the driver slowed down to enquire if he was to drive to the Power-House or to the Lake first. It was nearly sunset. We therefore opted for the top.

Blasts of a chill wind sent a hundred needles down my spine. I had already had enough of the cold wave in Delhi. This was even more trying. About a hundred paces up the dam on the left bank near the thigh of the mountain we stood on the edge of a deep precipice. All around there was water, nothing but water as far as the eye could be strained. What a sight in the twilight! A profound mystery, and I, a mere earthing contemplating it.

As I gazed at the lake, characters of mythology, legend and romance crowded upon me. Farhad's words of challenge echoed in my heart: "O ye mountains, come not in my way, otherwise you will be shattered." Also behind the mountains sprang up the proud daughter of the Punjab, Sohni, who used to cross at midnight the waves of the turbulent river to meet her lover Mahiwal.

Behind the dam, the River Sutlej lies shackled and subdued, tamed and trained into the service of man. No longer can its waters run waste to sea or deal destruction to homes and farmlands. This is Gobind Sagar, named for the tenth Guru of Sikhs. The vital statistics of this lake are colossal. It can store eight million acre-feet of water, and it spreads over nearly 41,000 acres. And this water makes grain grow hundreds of miles away. And it turns thousands of wheels. It is life and light to millions. It is our answer to the pitiless desert.

Evening shadows thickened around us and we walked back to the Left Bank Power-House. It is here that one is confronted with an act of faith. Condescendingly, although with reserve, the dam reveals its might, massiveness, majesty and miracle. The Nangal official could feel I was stupefied. He pursed his lips almost as if to restrain himself from saying: "I knew this would happen."

From the Power-House, we scanned the dam from shoulder to shoulder. Since the construction work is carried on round the clock in three shifts the whole area was lit up by thousands upon thousands of electric lamps. The more brilliantly did the dam shine. Giant cranes, machines of monster size, huge buckets of concrete, bags of cement, stones, steel, equipment, plus hundreds of men, some bare-footed, bare-headed and bony; others turbaned, in shoes showing holes, but hasty, determined and dedicated; still others with long ropes tied round their waist precariously balanced on dizzy heights or sitting in water, tiny specks, fading dots—all were engaged in translating into concrete reality what was but a dream, a few years ago. Bhakra, among the highest of the world's high dams, has to go up by only 38 feet more to reach its maximum height of 740 feet in a few months' time. Some of the other parts of the project like the Nangal Dam, the Nangal Hydel Channel, the Ganguwal and Kotla Power-Houses, and the Bharka Left Bank Power-House have already been completed. Excavation on the Right Bank Power-House is going on.

On our way back from the Bhakra Dam, after we had traversed three miles, the Nangal official asked the driver to stop.

"Look! There on the right bank of the Sutlej, do you see lights?" I looked out of the window and discerned a canopy of colours, yellow, red, blue and green, shimmering, shivering, sailing and dancing. Maybe the builders of dams could also pick stars, stitch them together and cover the landscape with it. Beneath this stretch of lights, sprawled the Naya Nangal township with the lights of fertiliser factory shining prominently. Already late for dinner we sped on to the factory's hostel in the seventh sector.

Students in India are in theory Brahmacharins. At the other end there are the Sanyasins, who renounce the world either to relax or to preach (who, however, have still to eat). The ancient four-stage system prescribed a stage of semi-retirement, Vanaprastha; very few belong to it nowadays. We are all Grihasthas, married ones, proud of our creativity. Because of the Grihasthas the numbers increase, and food is needed—urgently and in even larger quantities. Family planning and fertilisers—although an unusual combination—alone can help us at the moment—the first as a check on human beings and the second to enrich the soil.

Barely eight miles from the Bhakra Dam the country's second largest fertiliser factory in the public sector is located in Nangal (the first being at Sindri, Bihar). When full power is available it will produce 1,200 tons of fertiliser a day and also 14.5 tons of heavy water a year to be used in nuclear reactors. The source and availability of raw materials largely determines the location of a factory. You may very well ask, "What are the raw materials for calcium ammonium nitrate, the fertiliser produced at Nangal". The answer is: air, water and electricity.

Oh, air? That is everywhere. True and simple. But 80 million gallons of water per day from the Sutlej and 1,64,000 kW of electricity drawn from the Bhakra Power-House—these two factors make Nangal a suitable site.

The factory is built in a walled area of about 500 acres and it employs nearly 3,000 people. In serried order we can see the numerous plants which make up the factory—the Electrolysis plant, the Heavy Water plant, the Ammonia plant, the Nitric Acid plant, and so on—all gigantic, awesome, stately. The layout is neat and functional, the buildings impressive. I noticed that operators in most of the plants were comparatively young. They looked eager and interested in their jobs. There was an atmosphere of competence.

At the Ammonia Plant a young, bespectacled operator accosted me in rather off-hand manner. "Not so bad, the smell of ammonia. Don't wrinkle your nose". I looked at him, and noticed the twinkle in his deep-set, small eyes. I found that his name was Kiran Shankar Bhat. He could relax because he was off duty. I found him an engaging conversationalist. He had good things to say about the staff-management relations, service conditions and the general standard of efficiency.

(Continued on page 57)

# Education Policy in Plan

(Continued from page 24)

getting a better deal than they used to before the Plan period, though the balance still remains in favour of the urban areas.

**Regional Disparities :** When allocating resources, special account is taken of the backwardness of a State in key sectors, of which education is one. This will become clear from the rate of growth in the facilities for primary education indicated in the table below :

States	Enrolment in classes I-V 1955-56	(In lakhs) 1965-66
Bihar	17.81	48.00
Jammu & Kashmir	1.26	3.02
Madhya Pradesh	14.00	30.00
Orissa	6.51	16.00
Rajasthan	5.36	21.00
Uttar Pradesh	28.05	66.50
For all States	247.76	487.86

**Girls' Education :** The position in regard to the education of girls has also been improving as will be seen from the following table :

Age-groups	Enrolment as percentage of the population in the age-group		
	1950-51	1960-61	1965-66 (estimated)
6-11	24.6	40.4	61.6
11-14	4.5	10.8	16.5
14-17	1.8	4.2	6.9

Relatively also, the percentage of girls has been increasing more rapidly than the percentage of boys. For example, whereas the number of boys of the age-group 6-11 attending schools in 1960-61 increased by nearly 70 per cent when compared with the number of boys attending schools in 1950-51, the corresponding percentage increase, during the decade, in the case of girls was 104. In the case of the age-group 11-14 the percentage increase of boys during the decade was 86 and that of girls 177. These figures for the age-group 14-17 were 134 and 160, respectively.

**Assistance to Backward Sections—Scholarships :** While the country is still far from providing an adequate number of scholarships for the backward section, the progress made so far has been impressive. The expenditure on scholarships, which in 1950-51 was Rs. 3.5 crore increased to about Rs. 18 crore by the end of the Second Plan. In addition to the continuing annual expenditure of Rs 18 crore on scholarships, the Third Five Year Plan provides Rs. 37 crore for new scholarships in different fields. Besides these, there are research scholarships and fellowships provided by the University Grants Commission and scholarship schemes in fields such as scientific research, agriculture and health. Of Rs. 37 crore mentioned above, Rs. 17 crore are for scheduled castes, scheduled tribes and other backward classes.

## Increase in Expenditure

A rough idea of the total effort put forth in the field of education during the last decade of planned development may be had, at a glance, from the increase in

resources that have been spent on education in recent years. The expenditure on education from all sources increased from Rs. 114.39 crore in 1950-51 to Rs. 240.64 crore in 1957-58 (latest figures available). During this period, although the contribution from other sources also increased in absolute terms, the State had to bear the larger share of the burden and government contribution increased from 57 per cent in 1950-51 to 65.6 per cent in 1957-58. This percentage is likely to be higher by the end of the Second Plan.

Government contribution in the First Plan was Rs. 153 crore, in the Second Rs. 256 crore and in the Third Plan it will be Rs. 560 crore. These sums do not include the expenditure on the maintenance of institutions before the Plan period, which is called the "committed expenditure". The committed expenditure, which was Rs. 375 crore in the Second Plan increases to about Rs. 700 crore during the Third Plan. Contribution from other sources has increased during the last decade from about Rs. 50 crore to about Rs. 90 crore per year. In the Third Plan, on account of the transfer of responsibility for elementary education to Panchayats and Panchayat Samitis and a great effort on the part of Municipalities and Municipal Corporations, this contribution is likely to increase to about Rs. 120 to 130 crore per annum.

**Relative increase in expenditure :** That the nation has been allotting a very high priority to education may be seen from the fact that the revenue expenditure on education (most of the expenditure on education is on revenue account) increased from 9.3 per cent of the total revenue expenditure of the country in 1950-51 to 11.9 per cent in 1957-58. Another indicator is the fact that whereas per capita national income is estimated to increase from Rs. 284 in 1950-51 to Rs. 385 (i.e., 36 per cent) in 1965-66 the per capita total expenditure on education will increase from Rs. 3.2 in 1950-51 to Rs. 9.4 (i.e., 194 per cent) in 1965-66. The per capita Government expenditure on education will increase from Rs. 1.8 in 1950-51 to Rs. 6.7 (i.e., 272 per cent) in 1965-66.

Another feature of the situation, as it has been developing, is the increasing interest taken by the Central Government in educational development. The Central share of governmental expenditure on education increased from 4.9 per cent in 1950-51 to 11.2 per cent in 1957-58 and is likely to increase considerably further by the end of the Third Plan.

## An Evaluation

Thus it will be seen that considerable efforts have been made by the Government and the community to increase educational facilities, which is the first requisite for providing equal opportunities to all Indian citizens. So far as its expansion is concerned, the progress has been impressive. So far as the qualitative change and suitable orientation of the system to bring it in line with social objectives is concerned, the results have been modest. The country has succeeded, however, in identifying the problems and has made some preliminary efforts to solve them. Compared to what needs to be done in the field of education, however, the country has yet far to go before it can have an effective and adequate system of education.

## Ourselves

WITH this issue, *Yojana* steps into its sixth year. The journal was launched in the Second Plan in order to carry the message of the Plan and an understanding of its aims and values throughout the country. How far we have succeeded in this purpose is not for us to judge but for the people to say. When changing the size of the journal on November 13, 1960, we interpreted our task as that of reporting the Plan in a dynamic manner, encouraging rural initiative and technical inventiveness, promoting a frank debate on problems of development and supporting the forces of social change and cohesion. More recently we have also endeavoured to improve the get-up of the journal in order to tell the story of progress in a more attractive manner through word and picture.

We invite our readers and well-wishers to write to us and tell us in what ways *Yojana* could become more useful.

## God with Gun and 'Murmura' in Plastic!

WHAT does one associate with a village which is called Dhap Dhapi? A small waterfall, perhaps. Dhap Dhapi, which peers out of guava orchards in Bengal, has no waterfall but has a small but unusual temple. The special feature about the deity in the temple is that he carries a gun, showing that the Hindu Pantheon is by no means steeped in the Puranic Age.

The deity wears vermilion profusely and the musket in his hand is almost his size. All in all he is very impressive, as any patron-god of hunters has to be. Hunters on their way to the Sunderbans to kill a tiger or two made it a point to stop off at Dhap Dhapi and seek the deity's benediction.

Our visit to Dhap Dhapi happened to fall on the village's weekly fair-day. Sauntering around the little clearing where devotees prayed, higgled-haggled with hawkers or drank coconut water, we caught sight of yet another evidence of technological change. Puffed rice, which, with 'gur' and groundnuts, is the national snack of our children, was being sold there not in gunny bag or bamboo basket or an iron trough or a mere piece of cloth but in plastic sacks!

## A Mother's Doubt

A YOUNG man came to Delhi for an interview. His application showed that he was already holding a job and the chairman of the interview board, as is natural with chairmen, asked him to speak about his work. "Sir, I motivate people about family planning in the taluka under my jurisdiction." "Are you married?" "No Sir." "Won't people ask you how an unmarried man can claim to speak about birth control?" "You see Sir, they know I am educated, and they don't ask such questions."

He was a lucky lad, but the lot of many other family planning propagandists is not so easy. It is still a subject teeming with prejudices and misconceptions. The first task of the devoted worker is to remove these prejudices. Miss Shakuntala Paranjpye, who has done so much to put a sense of moderation into parental heads, has an impressive collection of case histories of needless fear.

Here is the story of a Maharashtra State Transport worker in his own words. "Every time my wife had a child I incurred a debt of Rs. 100. I am an honest man and pay up what I borrow. By the time I paid up one debt, my wife would be ready with another child. In sixteen years I had six children and I was never out of debt. My boss advised me to have myself sterilised. He said he had undergone the operation himself. I consulted friends. They disapproved

## IGNORAMAN

WANTS TO KNOW

When Does

A COMPANY

Become

An ENTERPRISE?

of the idea. Did I want to ruin my life? Did I want to be a eunuch? The argument that my officer had undergone the operation did not convince them. My aged mother came to know of my plan and made a scene. I had to undergo her nagging for many days. It was only my wife who was on my side, as it was she who had borne the burden.

"Finally I underwent the operation. Two hours later I walked back two miles to my home. After a week I resumed work. I was advised not to see my wife for three months. After that we resumed our normal marital life, but with no worries. I asked my mother to question her daughter-in-law whether her husband was still a man or had changed sex! My mother made all inquiries, and finally expressed her regret at having opposed me needlessly."

## The Itch to Read

PEOPLE who live only in Delhi don't often realise the hunger there is in the country among people for knowing and reading. In Calcutta and in Bombay or in any town in Kerala, reading rooms are always full, and one might even see queues there.

The Information Centre started a couple of years ago by the Rajasthan Government in Jaipur provides new evidence of this appetite. In its first year, 83,000 people visited the Centre's reading room. In the second year the number rose to nearly a lakh and a quarter. As many as 400 newspapers and periodicals are kept on its files. The Centre also answers inquiries and arranges film shows. A hundred and eighty shows were held last year.

# EDUCATING THE INDIAN

(Continued from page 13)

present society, the purpose of higher education is to turn out those who can think and suggest social change. This means, necessarily, deep study and unhurried contact between educators, research workers and young men. It cannot be done by targets and time schedules or giving degrees by correspondence. Nor can a nation composed of cobblers, carpenters and accountants only, worthy and necessary as these professions are, attain very great heights.

## We Must Stress Duties

ONE of the advantages of developing late is that it enables one to see and benefit from the mistakes that other nations have made in their progress to higher levels of political, economic and social practices. We have the different models before us. Regimenting a people into similar ways of thinking and feeling with the stress on material progress and unrelieved equality, though with the ultimate idea of a stateless and classless form of society, is one. The operation of the economic laws of the jungle, representational government at its most tenuous and the highest priority for a way of living which leads to the greatest possible production and consumption of goods is another. Either of these is

there for us to choose with various intermediate forms. Has India a third and better alternative? Great technological advance and the disease of gigantism in industrial methods are common to both, resulting in regimented values and conversion of the vast bulk of the people into a body of disinterested paid labourers and wage earners engrossed in climbing their petty social ladders. One would imagine that these and other problems such as the widespread sense of revolt and frustration and apathy towards the community showing up in the 'advanced' societies would attract attention and discussion. There are not many signs.

In the ultimate analysis the quality of the citizen depends on his right relations with himself, his physical environment, his community and his nation; his understanding acceptance and practice of the constitutional ideals, the fundamental rights and the principles of State Policy; and his sense of rule of law. It has been said the citizen has a right to be consulted on public affairs, has the right and duty to give his views and is bound by the decisions based on such discussion. For this the people must understand and think. Leadership can teach but must in the long run reflect the thought of the led if it is to survive. When short-time goals cloud the picture and hinder the nation's progress, when privileges rather than duties, personal gains rather than social good raise their ugly heads, the one and the only permanent remedy lies in persistent and positive social education.

## Yojana Essay Competition

Rs. 250 IN PRIZES

For the fifth year in succession, *Yojana* is conducting an essay competition to promote clearer thinking among our students in regard to the basic problems of planned development. The competition is open to all college students.

### Subjects

One of the following:

1. Economic integration as basis for national integration.
2. Role of public enterprises in India's economic development.
3. Lessons of ten years of planning in India.
4. Education and economic development.
5. Ways of modernising Indian agriculture.
6. Mobilising people's effort for the Plan.

### Length and Language

Essays may be submitted in either English or Hindi. They must not exceed 1,200 words.

### Prizes

Four prizes will be awarded as follows:

1. Best Essay in English by under-graduate student—Rs. 50.
2. Best Essay in Hindi by undergraduate student—Rs. 50.
3. Best Essay in English by student in Master's Degree classes—Rs. 75.
4. Best Essay in Hindi by student in Master's Degree classes—Rs. 75.

### Last Date

Entries should reach Chief Editor, "Yojana", Yojana Bhavan, Parliament Street, New Delhi-1, by January 31, 1962.

Each entry must be countersigned by the head of the institution where the candidate is studying.

# A Meeting in Makara

Date: February 3, 1962

Place: In the House of Capricorn.

**Aditya:** The meeting is called to order.

**Budha:** Look at him. He quickly assumes the chair without being proposed.

**Brihaspati:** I see, you have grown more resentful of Aditya since we last met. Maybe because you are nearest to him. But how can you forget that he is *ex-officio* chairman?

**Budha:** Point of order, Mr. Chairman. Chandra has no business to be at this meeting. He is not a planet.

**Aditya:** (Aside) Neither am I. (To the meeting) Point of order ruled out. Chandra has been a founder member of the Club. But have we a quorum?

**Angaraka:** Very much so. We are eight.

**Shukra:** Where is Rahu?

**Ketu:** Rahu is not attending the meeting. The astrologer-physicians won't let him. He must be home stuffing his mouth with meteors and comets.

**Aditya:** Order, order. The agenda of the meeting is as follows: Any matter allowed by the Chair.

**Budha:** That is a funny sort of agenda.

**Chandra:** Budha, you are getting more and more obstructionist. What has come over you?

**Shukra:** Oh, he is a heretic, a renegade. He is keeping company with the astronomers and dares to disown astrology. This is what this Scientific Age is doing to us Planets. Denying our powers, so that we'll soon come to believe we are powerless. I'm sure it will be Brihaspati's turn next.

**Brihaspati:** There you are at your old game of vilifying me. How jealous can you get?

**Shani:** Tut, Tut

**Brihaspati:** Why tut tut?

**Shani:** Because I am for Peace, Co-existence, for Nuclear Disarmament, for a World Without War, for .....

**Angaraka:** The taciturn Shani has spoken! (Turning to him) A world without war! A universe without me? It is your old dislike of Aditya that makes you speak so.

**Shani:** Yes, who would like to be bossed over by his own son?

**Aditya:** (Waking up at the mention of his name): Order, Order (Again dozes off).

**Budha:** There he is again, the Eye of the Universe! The Ever-Wakeful! I can't understand why the poets, the flatterers of puny glitter, praise him although the fellow doesn't have a hundredth of the effulgence of Sirius the Dog Star, one of the smallest of the stars! Soon even Man can make a megaton bomb that is brighter than 1,000 Suns.

**Aditya:** (Waking up again) Who speaks of me thus slightly? (Shaking off drowsiness with an effort) We must transact business. It is rarely that we have such a large attendance. (Looking around) Eight of us together, really!

## HAMARA HINDUSTAN

**Angaraka:** Last time we were eight, we had fun and games after the meeting in the form of the Battle of Panipat. Earlier, do you remember the Battle of Kurukshetra? (His words are drowned in the mumbling of Shani and Budha).

**Aditya:** Order, Order. To business. We have lost a lot of time in talk. The first item on the agenda says—and it's the only item: Any business allowed by the Chair.

**Chandra:** I propose we adopt a resolution congratulating India on taking Goa and winning the Calcutta Test.

**Ketu:** Too trivial compared to our august cares. (And in a whisper) I feel like swallowing you.

**Budha:** I propose we adopt a resolution declaring that we shall no longer take the advice of the astrologers who have lorded over us as the Shoguns lorded over the Meiji Kings and Rasputin over Tsar Nicholas.

**Shukra:** As the repository of the traditional wisdom of the sages, I resent Budha's attempt to cut us away from what sustains us.

**Budha:** It is time we realised we are not omnipotent. We might succeed in fooling the gullible, but tell me, have we any influence on Khrushchev, on Kennedy, on Nehru, on Macmillan, on de Gaulle, on Tito, on Gerasimov, on Teller, on Cockcroft, or even on Gagarin, Sheppard and Titov? You live in an old age, dupes of self-deceit.

**Aditya:** I call the member to order. He is casting aspersions on other members.

**Budha:** Sir, I amend the words. May I change that last sentence into 'Objects of the consequences of auto-suggestion'?

**Aditya:** That's better. (Turning towards Angaraka) Yes, you want to be recognised? You want the floor?

**Angaraka:** Yes Sir; I beg to move the following resolution: This meeting, Conscious of its time-honoured responsibilities, Mindful that any refusal to exercise these responsibilities will lead to a general loss of belief in the credentials of its members, Actuated by the conviction that inaction will lead to the early occurrence of the population explosion on the Earth after which there will be nobody on whom to enforce our wishes

Does hereby ordain:

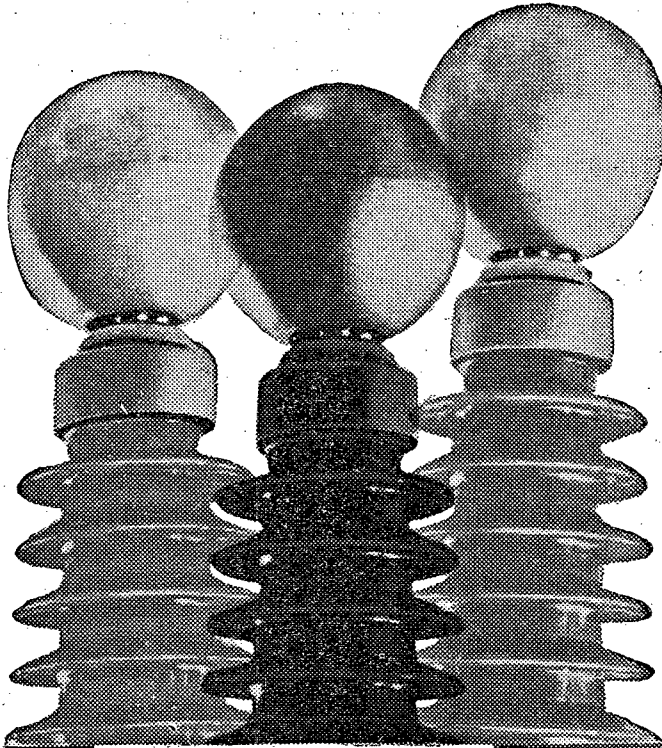
Local wars in \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
Earthquakes in \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
Floods in \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
Storms in \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
Snow in tropical areas like \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
and deaths of \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_,  
and authorise a small committee of international astrologers with a majority of Indians to fill in the blanks.

**Shani:** That's a vicious resolution. It is shameful.

**Angaraka:** What is all this? Control yourself...

**Shani:** (Shakes him off)

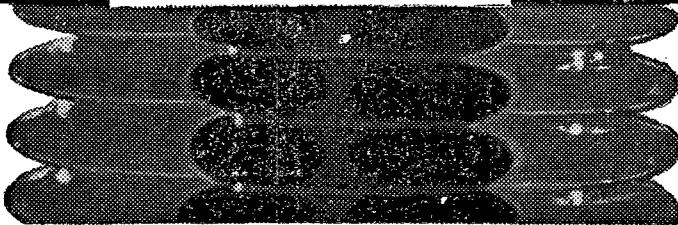
**Budha, Ketu, Brihaspati, Chandra** all rush to the dais. **Aditya** has just given himself a hypodermic injection and gone off into a snooze. The meeting ends in disorder.



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# Some Tips For STORING HARVEST

JANUARY is the month of the Pongal or the harvest festival in the South. Farmers wait eagerly for this happy annual season, because the prosperity in the new year depends on the harvest reaped.

After a good harvest, the farmer is interested in storing the food grains properly. Bad storage causes heavy loss, which can be avoided by taking some simple precautions. The important factors responsible for damage to food grains during storage are insects, rats and high moisture content. Grains should be first properly dried before storage. They should be kept on a place well raised above the ground. The store should be well ventilated, having been provided with close fitting doors and windows which open outside. In stacking bags, it is good to pile them on some sleepers or wooden logs allowing some space on the ground. It will help ventilation as well as protect the bags from absorbing the floor moisture. Stacks should not be more than 15 bags high.

To protect the grains from insect attack the stacks should be periodically inspected and dusted with either BHC or DDT, once in two months, if not at shorter intervals. After closing all the doors and windows the stacks can also be fumigated with ethylene dichloride and carbon tetrachloride. Rats can be controlled by the use of poison baits. Zinc phosphide is an effective poison and 5 per cent can be used on all baits like boiled rice, bread, etc. Since it is poison, it should be carefully handled.

## Turmeric Polisher

IN areas where turmeric is cultivated, the harvesting will begin soon and farmers have to start processing the same for the market. The curing of turmeric has to be done nicely to fetch a good price. Polishing is done for removing the rootlets and scales and giving a

shining appearance. A turmeric polisher will help you in this respect.

In the past, the problem of cleaning the cured rhizomes and polishing them was difficult and involved heavy labour. The turmeric polisher evolved by the Agricultural Department is good for the cleaning and polishing operations. It consists of a horizontally mounted barrel, two to three feet long and made with expanded metal. The expanded metal has sharp edges and

I.C.A.R. Agricultural

## FARMING NOTES

Information Service

acts as a knife when it rotates. The barrel is provided with a handle at either end and is rotated by two men.

The outer part of the expanded metal is covered with woven wire-netting. The turmeric to be cleaned is put inside the barrel and rotated when the rhizomes get cleaned and polished. The rhizomes get rubbed against the sharp edges of the expanded metal. The rubbing removes the rootlets and scales and gives the turmeric a polished and shining appearance. After rotating for some time, a door which extends to the full length of the barrel is swung open and the entire charge falls down to a basket below. The polisher is very cheap. It saves labour and can polish about a ton of rhizomes per day.

## Leaf Spot Disease

THE leaf spot disease is found widespread in many turmeric areas in Madras. Spots appear extensively on the leaves. They eventually get dry and die, thus adversely affecting the formation of turmeric.

The disease can be controlled by proper spraying. In many places two sprayings with one per cent Bourdeaux mixture has been found effective. Dithane has also proved equally useful and it has been noted that dithane-treated fields also give higher yields. Dithane is applied as a spray by diluting one pound in 60 gallon of water.



Five-foot high turmeric plants grown in a Mysore farm, using improved methods of cultivation.

# 2,000 RADIO RURAL FORUMS AT WORK

*QUESTIONS from Mrs. Vidushi Sharma, Oakwood Cottage, Simla-1*

1. What are the basic objectives of the Radio Rural Forums?
2. As there is a Chief Organiser of Radio Rural Forums at the State level, who are the organisers at village level?
3. How far can these forums be successful in a region like Himachal Pradesh which has a number of dialects and where people expect local touch in the programme?

**ANSWERS :** 1. The basic objectives of the Radio Rural Forums are: (1) to promote organised community listening and discussions on common problems; (2) to establish a mutual communication between the broadcaster and the listeners for the benefit of rural people; and (3) to educate the people on subjects of their interest such as agriculture, social education, rural development, co-operation, etc.

2. Radio Rural Forum is a voluntary association of villagers. The Chief Organiser visits the village where a forum is to be established. He enrolls responsible villagers as members of the forum and, with their consent, selects a convener from amongst them for conducting the village forum. The convener is thus a voluntary village worker organising the forum in an honorary capacity.

3. The Radio Rural Forums have proved to be a success in various parts of the country since their inception in November 1959 after the unique success of the pilot project in five districts around Poona Station of AIR. They serve the need of the village people in their own tongue. Essentially they have a local touch about them, as they pick up problems for broadcast from the particular areas. As such, there is no reason why these forums should not be successful in a region like Himachal Pradesh. Although the dialects differ from area to area, the Simla Station of AIR has evolved a simple form of Hindi, strewn with local idiom, which can be easily understood by the people

of the whole region. Moreover, the main feature of the programme is that after discussion on a programme, the difficulties of the members and their questions are reported to the Radio Station for discussion in the next broadcast. This provides a direct local appeal to the listeners.

At present there are 2,129 forums all over the country. In Himachal Pradesh there are 41 forums of which 29 are sponsored officially and the rest organised by the people. Most of the States and Union Territories have been brought under the forum project. The Third Plan has set a target of 25,000 forums.

## YOU ASK US

Questions from readers on planning and development will be answered on this page. Please address the queries to the Chief Editor, Yojana, 216, Yojana Bhavan, New Delhi-1. It might be noted that the purpose of this feature is not to answer queries of a purely business nature.

## EDUCATION POLICY

*QUESTION from Mr. S. K. Chowdhury, 109/20 Hazra Road, Calcutta.*

What is the education policy of the Government of India in the planning era?

**ANSWER :** As the Third Plan points out, "Education is the most important single factor in achieving rapid economic development and technological progress and in creating a social order founded on the values of freedom, social justice and equal opportunity. Programmes of education lie at the base of the

effort to forge the bonds of common citizenship, to harness the energies of the people and to develop the natural and human resources of every part of the country."

With this end in view, education in the planning era in India is undergoing a steady process of reorientation. It is a process of not only the expansion of educational facilities for the growing economy and population of the country but mainly of reorganisation of education in all its aspects from the primary stage to the college curriculum. In this process basic education has been introduced at primary level and wider scope has been given to technology. The Third Plan aims at expanding and intensifying the educational effort and bringing every home within its fold, 'so that education becomes the focal point of planned development in all branches of national life'.

The main emphasis in the Third Plan will be on the provision of facilities for the education of all children in the age-group 6-11, expansion and improvement of the teaching of science at the secondary and university stages, development of vocational and technical education at all levels, expansion and improvement of facilities for the training of teachers for each stage of education, and increase in scholarships, free studentships and other assistance. Effort will also be concentrated on the education of girls and the existing disparities in levels of development in education between boys and girls will be substantially reduced. All elementary schools will be oriented to the basic pattern. Reorganisation of university education along the lines of three-year degree course will be completed, and facilities for post-graduate and research work will be further expanded and improved.

During the first two Plans the number of students in schools increased from 2.35 crore to 4.35 crore, that of schools from 2.3 lakh to 3.98 lakh and that of students at university level from 3.6 lakh to 9 lakh. At the end of the Third Plan, it is expected that the number of students at school will increase by 2 crore; that of schools by one lakh and that of university students by 4 lakh (60 per cent of them being in science classes).

The Third Plan has allocated a sum of Rs. 560 crore for expansion of education.

It is almost a year since I met Data Din. I do not have my notes with me, it was either 15th or 16th December, but one does not need any notes to remember Data Din.

It was not a bright morning. My colleague Nagarajan was scowling at the dull and diffused light which seemed bent on denying him an opportunity to take a sharp photograph of Anand Bhavan. But the mist which had already frustrated him at the holy Sangam was still there. It was gentle and whitish but persistent. Now it occurs to me that Data Din, too, has the same gentle and enduring quality.

I espied him watering the lawn, quite impervious to the weather or the visitors, an old man with a benign expression, white turban, white moustache, wheatish colour, old but with a straight and dignified bearing. I walked up to him and started talking. Twenty minutes later we were sitting on the steps which led to the lawns and we were still talking while Nagarajan and the caretaker waited impatiently.

Data Din joined the Anand Bhavan staff the year Jawaharlal Nehru returned from England after finishing his studies. Even at that time Jawaharlal was easily approachable, while, according to Data Din, everybody, from Data Din to Jawaharlal, stood in awe of the lord and master, Motilal.

The house trembled when he roared and thundered and rejoiced when the master won a case, for that meant gifts and bounties for all.

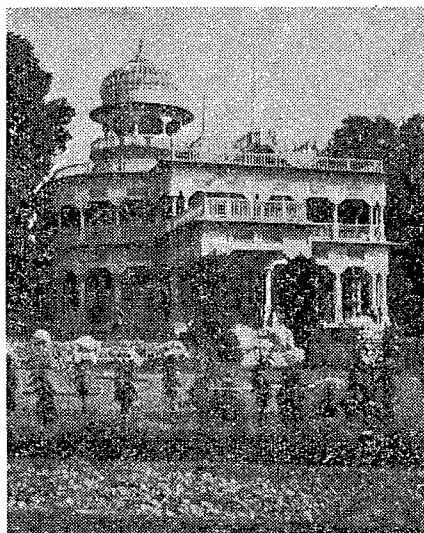
Data Din has four sons. His wife is dead. One of his sons ran away to Jabalpur, leaving his wife behind who now takes care of her father-in-law. But Data Din does not like this arrangement. He would have been happier if the boy had taken his wife with him. I can take care of myself, says Data Din, and then it is only a question of few days. Like a true Indian peasant he faces death philosophically. But he is also sure the boy will come back.

Data Din gets Rs 60 per month. According to him all the servants at Anand Bhavan get the same pay. At the time I met him there was only one other servant left from the days of Motilal, that is Hari. But even Hari recently passed away at the Prime Minister's house in Delhi.

Data Din gives a highly original

## IN A HOLY CITY AN OLD GARDENER

account of how Anand Bhavan was built. On his return from England, Jawaharlal asked his father for a *baithak* (sitting room). Motilal built

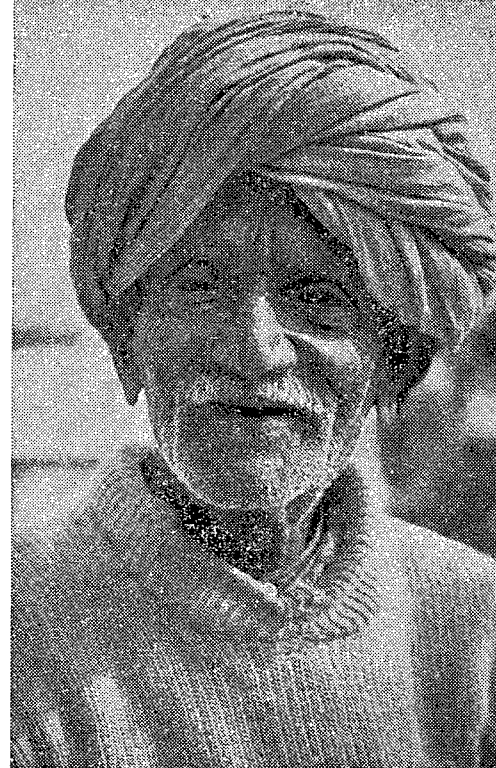


a whole new house, modelled, so believes Data Din, after the palace of King George V in London, where, according to Data Din, Jawaharlal used to stay when he was in England.

My chat with the old man over, I went and saw the library where historic meetings used to be held, and gazed at the rare photographs of the Nehru family.

I also saw the bedrooms of Jawaharlal's parents, the room occupied by the young secretary, Rafi Ahmad Kidwai, and the austere furnished room where Gandhiji used to stay.

We came out and the mist was still there, gentle, whitish, and persis-



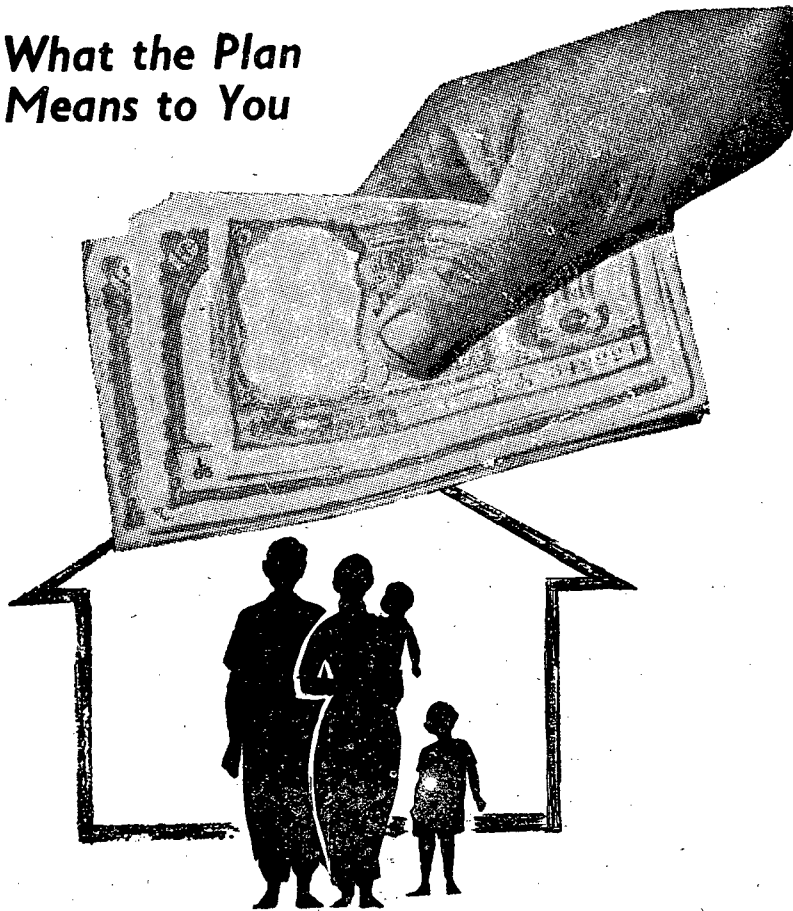
Data Din...gentle and enduring  
Left: Anand Bhavan, Allahabad

tent. Out of the mist came Data Din and with an old-world courtesy presented me a small rosebud.

It seems to me that when we visit old monuments, they remain heaps of bricks and stones till some chance remark or idea sets a spark to our imagination: only then a monument becomes real, alive and intimate. A couple of months ago the Prime Minister told a meeting of vice-chancellors how a young man who was a B. Sc. went to him and said he wanted a job. On inquiry he found he was the son of his old gardener of Allahabad. I do not know whether the Prime Minister was referring to Data Din or some other person when he gave this example of changing social aspirations in which a gardener's son takes a science degree and wants a white-collar job. And, if he was referring to Data Din, I do not know to which of his four sons he was alluding—it might even have been the prodigal of Jabalpur coming back to his father and wife. All I can say is that reading the Prime Minister's words in the newspaper reminded me of the old and steadfast Data Din who served to make Anand Bhavan real to me, and transformed it from an empty shell of a house into a home full of sweet and gracious memories.

M. A. HUSAINI

**What the Plan  
Means to You**



**Rs. 275 MORE  
PER FAMILY**

Average annual income per family, by the end of the Third Plan will go up to Rs. 1,925 as against Rs. 1,650 in 1960-61.

*Help make the Plan a success to increase your income and ensure*

**THIRD  
FIVE YEAR  
PLAN**



**A Good Life  
for Everyone**

DA-61/614

# BETTER BOOKS FOR CHILDREN

(Continued from page 32)

that this is a man who works not to a scheme but a passion. He recounted yet another elephant story and showed the drawings he had made. The book is to consist mainly of pictures with just a line or so underneath each. It is for five-year-olds.

"How come you have so many elephant stories?"

"Oh we once invited readers to send us elephant stories, you know, and we received nearly 600!"

"All of them true stories?"

"Most of them true stories, and a few local legends. But if you know elephants, you can believe anything about them."

**P**OPPING out of the ground floor attic where he hides or works away, we went to another set of rooms in the same building where a remarkable treasure rests, the entries to the International Children's Competition organised by *Shankar's Weekly* every year. This year's entries had been already received—more than one lakh compared to last year's 76,000. Girls were busy entering the names and particulars of the competitors on index cards. All around, stacked ceiling high, were the drawings and paintings that children of faraway lands had done with love and pride. What thoughts did these children of Mexico and Finland have when they sent these? How did the aboriginal lads of Australia feel when they put colour on bark sheets and framed them in twigs? Didn't India, the distant country, become near to them all? Here, untampered by inherited prejudices or bureaucracy, were international relations being built up.

"How do the Indian entries compare with those of other countries?" I asked.

"Very well. You won't believe it, but I think no other children surpass ours in this field."

"But how is it that all this artistic talent gets lost when we grow older? I recall E.M. Forster quoting someone to say that Indians are the least aesthetic of all people."

"Blame the education system. The British only wanted us to learn to be toadies and petitioners. Art and other talents were erased from us. That was education. Things have changed. I am sure many of our competitors will grow up into top-class artists. Let me tell you Delhi has the best painting talent in the world today—speaking of only the youngsters."

"What do you put it down to?"

"To our competition. The work of children from so many parts of the world is on show here. Our children see it and are influenced and inspired. When

a child goes to an exhibition, it is not like us adults going to an exhibition. Oh! you should see them studying the prize paintings we exhibit. And you should see them at work at the on-the-spot competition we hold every year. It is only when the adults and teachers are around that their ideas are cramped."

The world of adults and of children. The world where rainbow colours fade to grey. Where laughter turns to a grimace. How can we prevent the shades of the prison-house closing in on the child? I came away from my conversation with Shankar a happier and a more thoughtful adult.

H. Y. S.

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## An Evening at Gobind Sagar

(Continued from page 47)

The workers were well-housed and in the colony specially built for the fertiliser factory employees the big and small met without fuss or formality.

As we approached a Horton's Sphere, distinguishing mark of a fertiliser factory, Kiran had his last dig at me. "Not a balloon, sir!" he said, and went off, without giving me a chance to find a repartee.

Commissioned on February 22, 1961, the Nangal Fertiliser Factory is a Rs. 30-crore State enterprise, built and throughout operated under the minimum guidance of foreign experts. As a result of facilities provided in the factory several hundred technical men have been trained for implementing the much larger fertiliser programme in the Third Plan. Three more fertiliser factories are being established in the public sector at Trombay (Maharashtra), Nahorkatia (Assam) and Gorakhpur (U.P.).

Both the dam at Bhakra and the fertiliser factory at Nangal epitomise India's two sides of advance—agriculture and industry. For the factory Mr. P. Tribhuvan, its Welfare Organiser, has coined a wonderful slogan: "Since we are on the right bank of the Sutlej, invariably, therefore, we are on the right side of things." And he is right.

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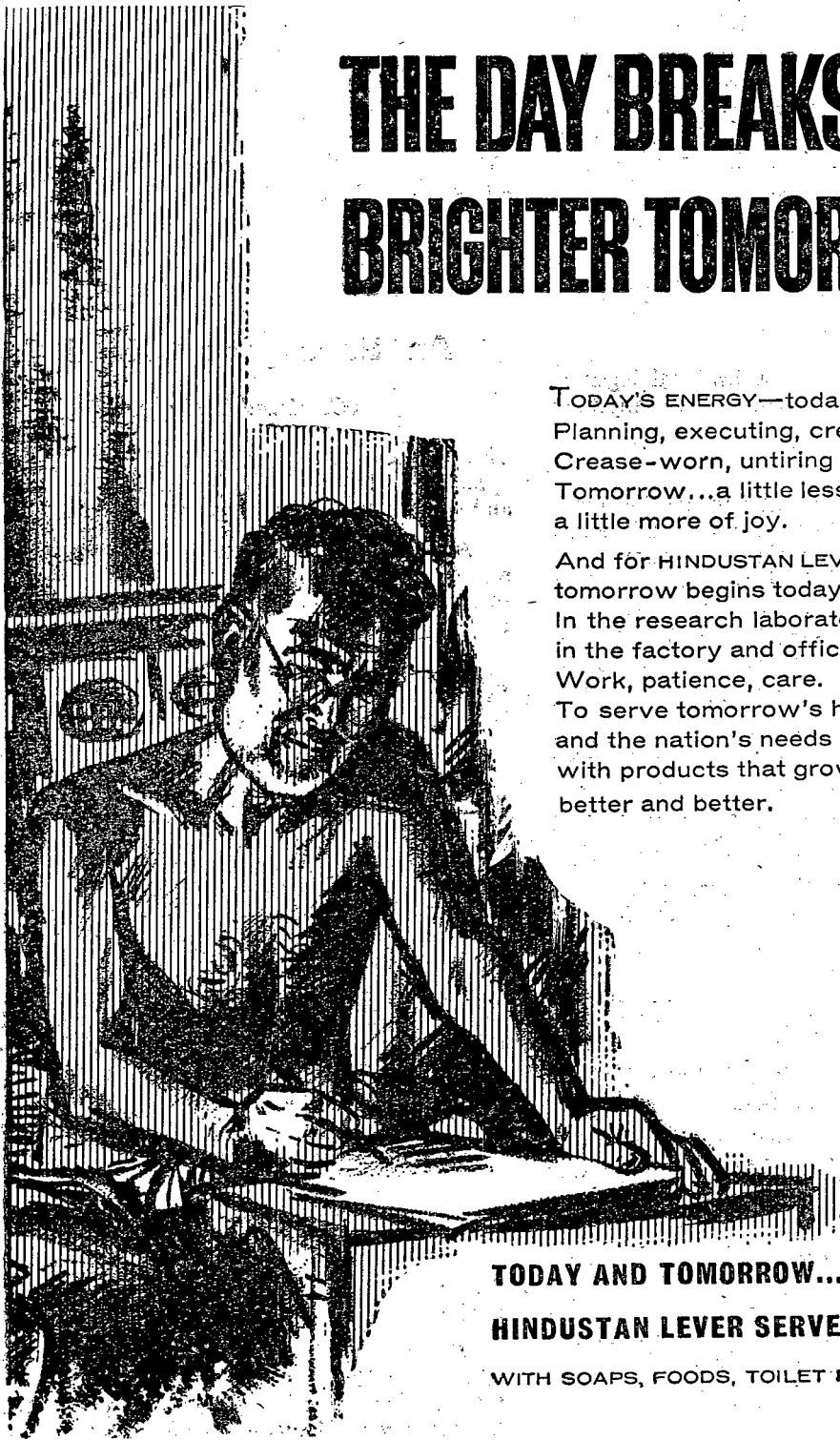
## PROGRESS OF CO-OPERATIVES

**Co-operative Farming:** Six State Governments have drawn up plans to set up co-operative farming wings in the extension training centres.

**Co-operative Sugar Factories** produced 4.35 lakh tons of sugar in 1960-61—which was nearly one-sixth of the total sugar production during the year. Thirty out of the country's 174 sugar factories are co-operative.

**In Handlooms,** about half the country's total has been brought under the co-operative fold. On March 31, 1961, there were 13.42 lakh co-operative handlooms compared to 8.8 lakh in 1955.

# THE DAY BREAKS BRIGHTER TOMORROW



TODAY'S ENERGY—today's ambition.  
Planning, executing, creating.  
Crease-worn, untiring into the night.  
Tomorrow...a little less of care,  
a little more of joy.

And for HINDUSTAN LEVER, too,  
tomorrow begins today.  
In the research laboratory,  
in the factory and office.  
Work, patience, care.  
To serve tomorrow's homes  
and the nation's needs  
with products that grow  
better and better.

**TODAY AND TOMORROW...**

**HINDUSTAN LEVER SERVES THE HOME**

WITH SOAPS, FOODS, TOILET PREPARATIONS

PR. 36-X32

## HANDICAPS TO SCIENTIFIC RESEARCH

THE remarks under the title "Three Questions To Our Scientists" in 'Side Track' of *Yojana* of December 10, 1961 call for some comment.

The contributor of the note and those of his way of thinking would do well to realise the handicaps under which any research is being carried on in this country. No privately managed institution considers research to be an integral part of college teaching. In fact it should be part of even school teaching. State-managed educational institutions are no better. It is only the enthusiasm of the research worker and that of the few students who are ready to face the obstacles that accounts for even the small amount of work that is done.

No college has a library worth the name which can be considered adequate for research. Both scientific periodicals and monographs are very expensive and beyond the resources of a college. Most teachers are so inadequately paid, compared to those in other occupations with the same qualifications, that none can afford to buy books for a personal library—something that is essential for any research worker. This is also responsible for the poor quality of many books published in this country.

As for equipment of laboratories, the finances permit of only the crudest type, which would have been all right 75 years ago. Modern equipment costs a lot and the axe, whether it is for exchange or for running an institution, falls readily on this. Only such equipment as has a use in conducting examinations is bought by institutions under affiliating universities. The only research possible is what can be done with available resources. It is at the early stages of one's career that foreign languages can be picked up and facilities for learning these are negligible, most institutions not affording even a few linguaphone records which can be quite useful for a beginner.

The comments on young research workers being unaware of INSDOC is not surprising. It is partly due to inadequate publicity of the activities of INSDOC. I should also add that the coverage of periodical literature is better in similar publications abroad. Documentation in the country is poor and it is possible to have a rational arrangement to cover up inadequate resources by suitable pooling of resources and mutual co-operation.

The comment on electronic aids for translation is naive. The commentator should be aware that freaks can result from such translation and that the human agency is better for the purpose. "Out of sight, out of

mind" when translated mechanically by the electronic aid into Russian and retranslated by the same aid became "blind idiot".

Tamparam, Madras S. V. ANANTAKRISHNAN

The author of the comment says : There is no real point of difference between Prof. Anantakrishnan and myself. I was only pointing out that those who require facilities are starved of them, while some senior scientists, who ought to be doing research, are forced to be administrators. As for the reference to electronic aids, the sentence in the note was : 'Even with electronic aids, the Americans can't translate Russian scientific literature fast enough'. This was brought in apropos of the very rapid growth in the output of scientific literature—Ed.

## VILLAGERS BUILD A ROAD

Peasants are a hardy people. True to their qualities, the peasants of Dhandoli Kalan, Chhahar and Sular (Sangrur district), took up construction of the Chhahar-Sular link road on December 23. Beating drums and singing folk songs from *Heer-Ranjha* and *Mirza-Sahiban*, the enthusiastic villagers completed this six-mile long vital link to the main Sangrur-Jind road within three days. The road has saved the peasants from hardship while plying their bullock carts on the sandy-in-summer-and-muddy-in-rains track. The road will also facilitate the transport of agricultural produce to the organised market at Sunam.

This is a heart-warming example of how the rural peasantry works for the progress of the plans.

Dirba (Punjab) BHAGAT SINGH CHAMAK

## TRIBAL UPLIFT

THE Third-Five Year Plan has a programme for the uplift of tribal people on a bigger scale under Community Development. The programme aims at "mitigating poverty, imparting new skills, promoting health and better living, and improving communications, without upsetting the stability of social and cultural values, the pattern of leadership, institutions and the scheme of obligation within the tribal community".

To achieve these goals, the tribal community has to be guided and given help. This guidance and help should come from the administration. At present, there is much disparity between tribal society and the rest of society. The process of development will eventually reduce the economic distance between the two parts of societies and it is essential that the social

distance, too, be minimised, so that the process of fusion may not harm the section of society which is at the lower level.

All tribes are not homogeneous socially, culturally and economically. Therefore, for effective implementation of development programmes, the administration has to be modified to suit each community. Centralised authority or a uniform pattern will not be feasible. For every tribal community there must be a separate executive agency helped by a working group. A central body could supervise the work of these executive agencies, with authority to prescribe rules.

Every society is characterised by organisation and structure. Organisation is relatively more dynamic and structure is more static. Organisational reorientation may not affect the structure. For development on the desired lines, a change in structure is necessary. Therefore, an understanding of the structure of tribal societies is of primary importance.

Every society has a patternised behaviour in all spheres. The behaviour pattern, the norms, the sanctions constitute the structure, while belief, knowledge, attitudes and values together with technology and its products, constitute the culture. Structural stability depends on its cultural vitality. Hence the implementation of Plans will be successful to the extent to which the culture is flexible. Any new introduction will be modified to the working scheme of the system and absorbed as a trait. A major change disturbs the focus and disrupts the society. So, to reshape the entire culture pattern, changes have to be introduced gradually, choosing a vulnerable point. Even this cannot be done unless the value system and attitudes are changed.

The first step in our approach to the problem should, therefore, be to obtain the latest and first-hand information of the social system of the tribes concerned. This will take a good deal of time, since it involves the problems of language, reluctance or hostility of people, the risk of disturbing the normal course of life and the inaccessibility of the area. These hurdles have to be crossed, carefully and cautiously.

To save time, a team of workers should be sent to study the entire system, each worker taking one aspect of the system for intensive study. This has another advantage of giving greater breadth of contact. The members of the team must scatter themselves and must not work in a group. Their duty does not end with getting information; they have to establish good relations for future contacts.

Once the study is over, the vulnerable point for plan-implementation has to be chosen. This task is made easier if there is an earlier monograph on the same tribe. For, by comparison, the changes in the system can be perceived and the sphere of change can be dealt with first. For instance, if a tribe has given up hoe cultivation for plough cultivation, this is the point where the implementation of plan can begin. Audio-visual educational methods are to be adopted to incorporate the values of plough cultivation. Then modern implements are to be introduced gradually. The parents can also be induced to send their children to

school. Advance can simultaneously be made in introducing medical facilities and improving communications. These will create in the tribal people a faith in modern ways of life. The tribal farmer can also be taught subsidiary occupations like carpentry and masonry off the season. This will be an additional source of income to him for a better standard of living.

In this fashion, the value system and the attitudes are to be slowly changed, while bringing the tribal people to a better standard of living. If, instead, changes are imposed, the result will be a lifeless copy of modern society with all its tensions.

New Delhi

BALRAM

## THE FALTERING CLASS

(Continued from page 26)

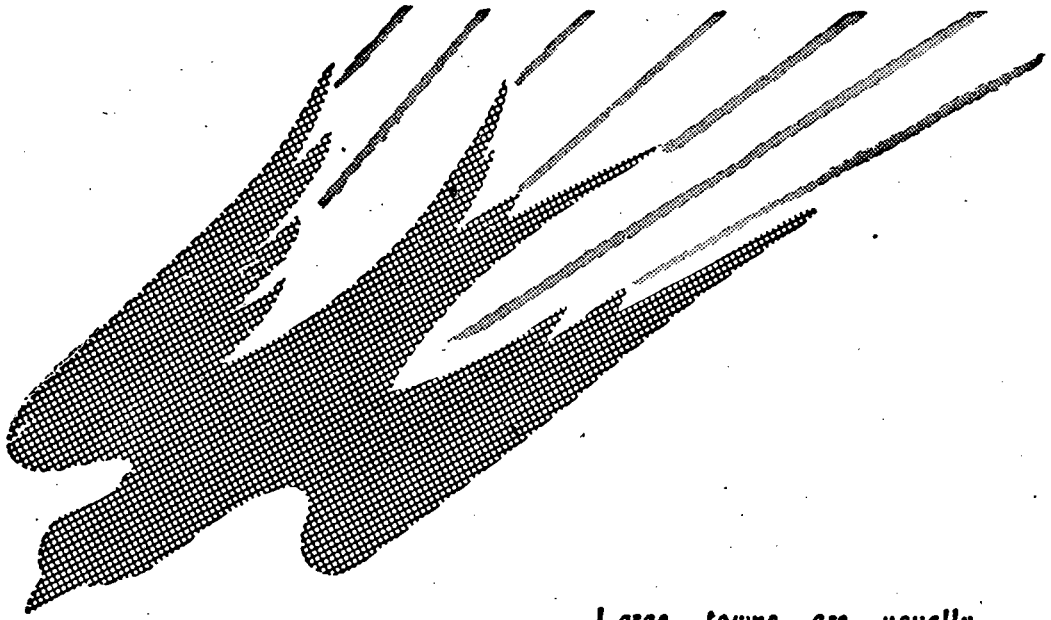
ABOVE all, as far as conditions of work are concerned it is the age of the votaries of the cult of "Getting on". To get on, one must possess an abundant capacity for obedience, a slick amenability, and the will to efface all vestiges of self-respect. Able young men working hard to text-book specifications of a dedicated sense of duty find themselves suckers when they are left behind in the race by the Smarty, whose knowledge and ability they held in contempt, but who knew when to smile. In this matter—alone of all things—the private and public sectors find a meeting ground.

"In recent years," the Plan tells us (page 166), "there has been a change in the attitude towards manual work on the part of educated persons..." Yes. Maybe, towards the nature of work; but little change towards ambitions, contentment, social responsibility and civic duty. Here the revolution of expectations has aggravated the scramble to a place in the sun, flowing from top to bottom.

The Middle Class now is so large that it has itself to be split; an upper, a lower and perhaps a middling Middle Class. At the top are the people who occasionally figure in the personality columns of newspapers and are there proclaimed to be rendering national service at Rs. 3,000 a month and above. Next come those with a four-figure salary, sometimes even less, (shocking, shocking) who are engaged in a tireless striving towards that state of perfection where they too can render national service. Lower down the rung come the meal-ticket earners.

The social mobility (of which the Plan talks in a different context and with a different meaning) caused by the cult of "get-on-ism" is indeed the biggest factor in the so-called feelings of bitterness, frustration and disgruntlement that seem universal. This is not offered as a justification, but as an explanation; and it is an explanation—though partial—at which the planners and those who mould our destiny should try to have a closer look.

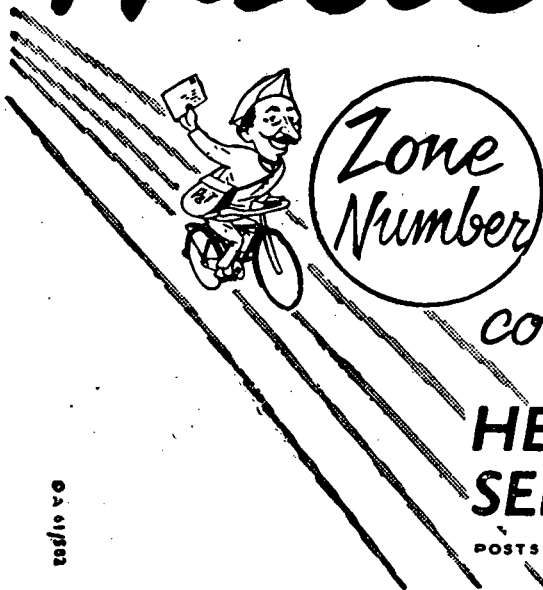
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# Post- Haste

Large towns are usually divided into postal delivery Zones, to speed up sorting and delivery of mail. Give wings to your letters; address them fully, showing the zone number.

When you write, please include your own zone number in YOUR address.



*completes the address*

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SERVE YOU BETTER**

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