India

DREAM & REALITY

V. V. NAGARKAR

With the partition of the Indian sub-continent and the attainment of Independence in 1917, young India dreamt of a democratic, secular, economically independent and integrated, welfare state. In simple and non-technical language, the author makes a socio-economic survey of Indian agriculture, industry and commerce since 1947 till the nationalization of the nation's fourteen major banks in 1969. He examines, giving reasons and narrative illustrations, our policy, and our successes and failures in its operation.

The infrastructure of the dream is the work so far accomplished in the twenty-two years since independence The author closes this study by looking forward to the remaining task that lies ahead so that we might grasp the entelechy of the entire dream. This book might well prove to be the focal point of the younger generation's growing awareness of responsible citizenship.

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Foreword by
Indira Gandhi

Orient Longman

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PRIME MINISTER

FOREWORD

It is the right of every nation and every individual to be free. Freedom is also the first requisite for the removal of poverty and social injustice. Our struggle for freedom was long and hard. And in the last 20 years, despite many shortcomings, we have laid the basis of social transformation. We have now reached a stage where change can be, and indeed has to be, much faster. The nation demands heroism and also hard labour, combined with a faith which will never succumb to frustration.

I hope that this book will lead our younger citizens to a better understanding of the times in which we live and the goal which beckons us.

Indira Gandhi

(Indira Gandhi)

New Delhi,
November 19, 1970.

PREFACE

On 9th August 1967, some of us who had participated in the 'Quit India' struggle of 1942 had informally met at Bombay to observe its 25th anniversary. The discussions naturally centred round old memories and the events since. We talked about the achievements and failures of free India. The same topic cropped up a year later when I met Shri Padmakar Patwardhan, Director, Orient Longman, Limited. He named the title of this book and asked me to work on it.

My occupation had carried me away from the subject of Economics for about two decades. Though a graduate in the subject I had not developed a serious interest in it until July 1947 when for the first time I attended a lecture by Prof. D. R. Gadgil for the final year M. A. class. Till then I had convinced myself that a preoccupation with student and labour movements gives one the right to abstain from the class room. I realised for the first time how much I had missed.

Guidance by Economists Shri S. S. Marathe and Shri M. V. Desai who had taken part in the freedom struggle, helped me to pick up the thread once again. Discussions with eminent editors like Shri Shamlal and Shri B. G. Verghese proved very rewarding. Shri R. M. Honavar, Prof. A. B. Shah, Dr. P. G. Sahasrabudhe, Shri M. R. Kolhatkar, Shri. T. Venkataramayya and Smt. Smita Dave, all made very useful suggestions during the preparation of the script. However, the responsibility for the opinions expressed in the following pages is entirely my own.

I am indeed grateful to the Prime Minister, Shrimati Indira Gandhi for agreeing to write a Foreword.

I am sure the line drawings by Smt. Usha Biswas, will be appreciated by the readers. Shri V. N. O'key of Bombay generously offered to complete some of the drawings during the serious illness of Smt. Biswas. Apart from preparing the pictographs Shri Nagen Bhattacharya also took the trouble of working on the lay-out. Shri. H. B. Mathur worked day and night to edit and recast the final draft. To all these friends I am immensely indebted. My wife, Kumudini, took keen interest at every stage. Her suggestions with regard to the illustrations were particularly valuable.

New Delhi
21st November 1970

V. V. Nagarkar

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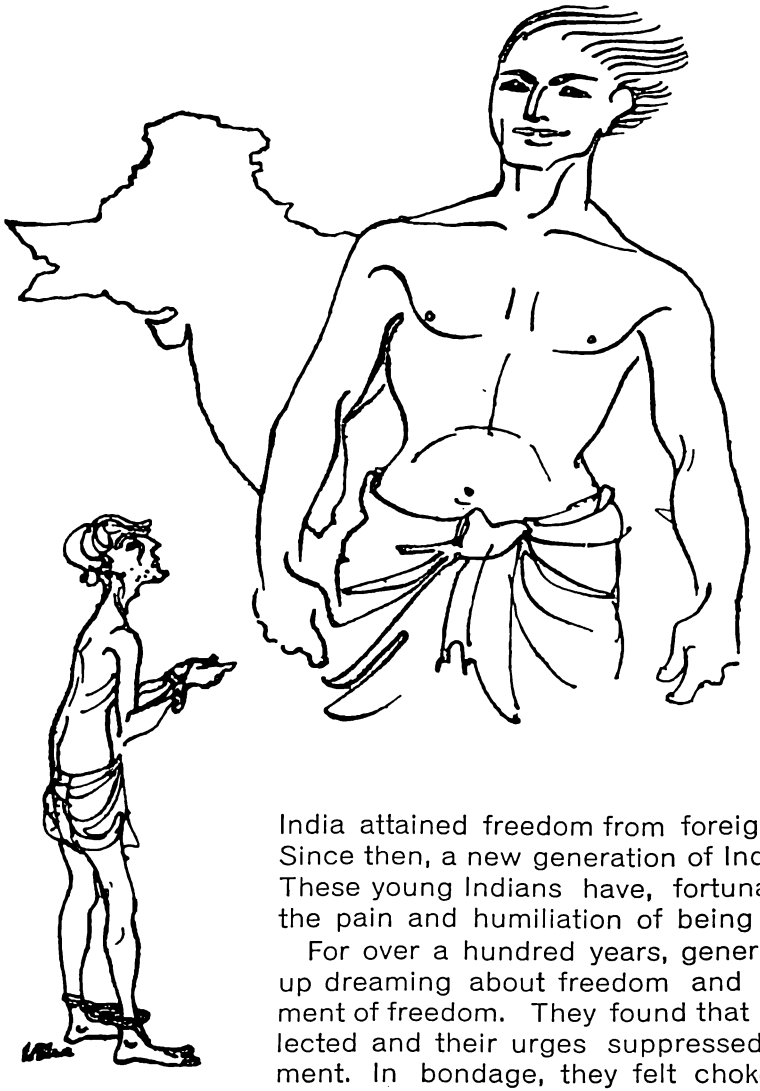


1. DREAM

India attained freedom from foreign rule in August 1947. Since then, a new generation of Indians has come of age. These young Indians have, fortunately, not experienced the pain and humiliation of being in bondage.

For over a hundred years, generations of Indians grew up dreaming about freedom and striving for the attainment of freedom. They found that their needs were neglected and their urges suppressed by an alien Government. In bondage, they felt choked. This feeling was

well expressed by Rabindranath Tagore, the great poet of India, in the following beautiful lines :

Where the mind is without fear and the head is held high
Where the mind is led forward by Thee
Into ever-widening thought and action
Into that heaven of freedom, my Father, let my country awake !

For a long time the foreign rulers did all they could to suppress this urge for freedom. They even questioned the very idea that we were one nation. "When you have so many religions and castes, so many races and languages," they asked, "how can you claim to be a nation?" We were determined to show the world that we were united and one, and most of all as capable as any other.

From the early 19th century, thinkers like Raja Rammohun Roy, in their writings, had started drawing an outline of the free India of their dreams, of a society in which every citizen—male or female, Hindu or Muslim, Bengali or Tamilian—would hold his head high and would have the opportunity to improve his lot by his own efforts and shape his destiny the way he liked.

This vision of a free India took hold of the imagination of the Indian people. It was the main inspiration behind our freedom struggle. And even while this struggle was raging in its full fury, its leaders were thinking about planning for a social and political order that was to be created after the attainment of Independence. The outline of such a society can be found in the resolutions adopted by the Indian National Congress, which spear-headed the freedom movement, and in the speeches and writings of our leaders.

As early as the year 1928, an all-party conference appointed a committee under the chairmanship of Pandit Motilal Nehru to draft a constitution for the free India of the future. The committee's report, known as the Nehru Report, laid great stress on the idea of equality of all Indians, irrespective of their caste, creed, colour, language or sex. It formulated, in clear and forceful terms, those principles of social life which were later to find a place in the Constitution of free India.

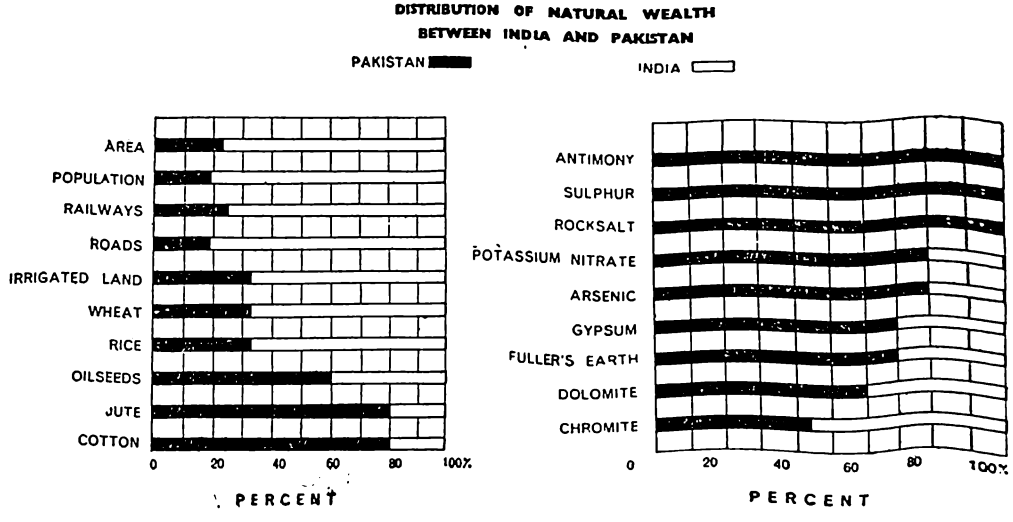
The aim of the freedom struggle was not merely to end foreign rule and attain political independence. It was also to bring about basic improvements in the economic and social conditions of the masses by putting an end to poverty, ignorance, superstition and disease and by creating conditions for rapid economic advancement of the Indian people.

In 1930, the Indian National Congress passed a resolution at Karachi, expressing the determination of the people of India to embark upon a plan of large-

scale industrialisation for rapid economic growth. The resolution recommended that the Government of free India should have initiative and control over basic industries like steel and power and over the transport system. This would lay the foundation for further industrial growth. This was the beginning of the era of economic planning. The eminent engineer, M. Visvesvarayya, was among the pioneers of planning in India. In 1934, he drafted a programme for the development of our industries and agriculture. In 1938, the then Congress President, Netaji Subhas Chandra Bose, formed a National Planning Committee with Pandit Jawaharlal Nehru as its chairman. This committee also suggested that we should establish large and small scale industries in order to secure gainful employment for our population. A little later, a group of eminent Indian industrialists put their heads together and prepared a plan for rapid economic development. This plan was known as the 'Bombay Plan.' Its authors were confident that if their plan was worked out, India's national income could be trebled within a period of fifteen years. At the same time, the income of an average Indian could be doubled. J. C. Kumarappa, a Gandhian economist, also prepared a plan which claimed that India's national income could be trebled not in fifteen but in ten years. Manavendra Nath Roy, a great revolutionary and a highly original thinker, placed before the country another plan. Called the 'People's Plan', it described the way in which we could increase our industrial production six times, and our agricultural production three times within a short period of ten years. All these plans represented our dream of achieving prosperity within as short a period as possible.

These plans symbolised our dreams of finding quick solutions to the enormous problems we were facing. Long foreign rule had reduced large masses of Indians to abject poverty. Poverty had bred malnutrition and disease. People in remote villages and tribal areas lived at a sub-human level. Five million people used to die of tuberculosis every year. Fifteen out of every 100 babies born every year died before they were a year old. Generally, those who survived could look forward to a life span of only 27 years. Famines were making their regular visitations. The Bengal Famine of 1943 was the worst. It took a toll of millions of lives.

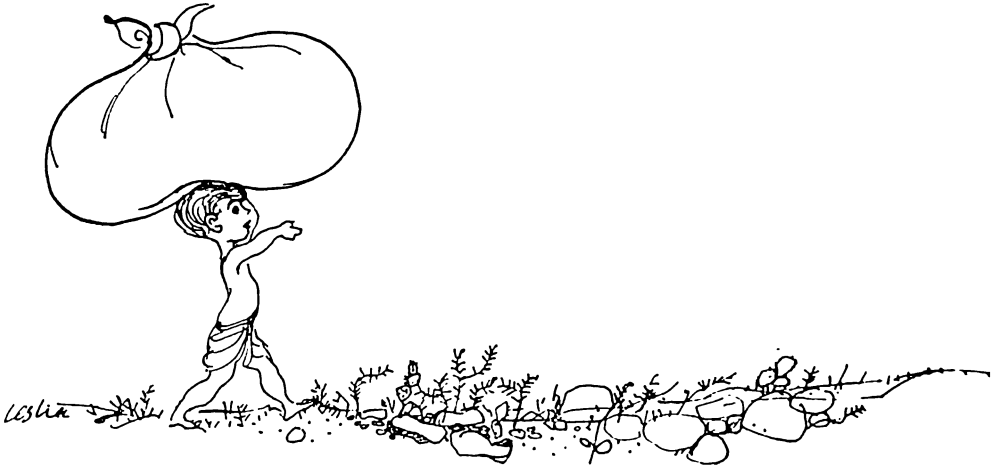
Most of our people lived in villages. Nine out of ten villagers were illiterate. We were short of doctors, scientists, managers, engineers and skilled workers. There was a scarcity of resources with which to start new industries. The industries that we had, were old-fashioned and were over-worked during the Second World War. They were in a state of neglect. Agriculture was worse off. The land tenure system was primitive and unjust. The practices followed on the farms were ancient and uneconomical. Ill-fed and ill-equipped, the Indian farmer could produce barely enough to keep himself and his family above the starvation level. Freedom was, therefore, considered an indispensable means to overcome mass poverty and to reconstruct the economic and social life of the country.



But when we did get freedom in 1947, we were a maimed nation because of partition, it meant not only the division of the country but also the break-up of thousands of homes. There were riots on a mass scale and hundreds of thousands of families had to leave their homes. Suddenly we were faced with the problem of finding food, clothing and shelter for more than 7 million people who were displaced from Pakistan. The Indian economy, already in a bad state, was put to further strain. Partition deprived India of large areas producing grains, jute and cotton. It took away Karachi which was a vital port for North India. The rail link between Calcutta and Assam was disrupted. While most of the cotton and jute

A continuous flow of refugees

mills remained in India, areas producing cotton and jute stayed in Pakistan. Overnight we became importers of cotton and jute for our mills. Our problems were already colossal. But partition added to our burdens. With a sense of determination, we commenced our endeavour for nation-building.



2. THE ENDEAVOUR

To wage war against poverty and to lift the masses from the accumulated backwardness of centuries called for a colossal mobilisation of resources, meticulous planning and an unremitting effort on many fronts. The Government alone could not do it. The people had to be aroused and involved in the new struggle for economic emancipation.

The task facing the first Government of free India was stupendous. Something had to be done radically and fast. But before an effort could be mounted and a proper machinery for planning and implementing the processes of development could be created, some serious hurdles had to be crossed. The biggest of these was the situation created by the partition of the sub-continent into India and Pakistan. What led to this tragedy is a long story, but it raised a host of big and complex problems that demanded immediate attention. Our people rose to the occasion and within the short period of a decade this colossal problem of finding new homes and jobs for millions of people displaced overnight was completed.

Another serious problem that faced us immediately after the attainment of independence was that of integration within the larger Indian Union of the so-called princely States. At the time India became independent, there were nearly 600 States ruled by Rajas and Maharajas under the protection of the British. Some of the States, like Hyderabad and Kashmir, were very big. Others were tiny States of just a few square miles. In free India, there was no place for these States, because the country could not remain cut up into little bits and pieces. Their integration with the rest of India presented a delicate problem. A hero rose to the occasion. Sardar Vallabhbhai Patel, who was the Deputy Prime Minister under Jawaharlal Nehru in free India's first Government, accomplished the task with great skill and tact. In a little less than two years, all the States within India had become a part of free India.

Political unity of the country having been accomplished, the next important task was to involve the people of India into the processes of governance and economic development. This called for a basic reform in the social and political

system that had grown under centuries of foreign and feudal rule. The administrative machinery that we inherited from the foreign rulers was designed solely for the maintenance of law and order and collection of taxes. It had to be given a new purpose and direction. It had to be geared to the various tasks for bettering the condition of the masses.

Despite partition on religious grounds, we did not give up the dream of founding a modern, secular, democratic India. We decided to look upon religion only as a matter of personal faith, and abolished all legal forms of discrimination on the ground of either creed, caste, colour, language or sex. We held to our dream of building up India as a nation on the foundation of human equality and brotherhood.

The Republican Constitution that we framed for ourselves soon after the attainment of Independence guaranteed equal rights to all citizens, proclaimed the equality of men and women, and gave the vote to every adult. Discrimination against the untouchables on the ground of religious practices is no longer permissible. In fact our Constitution declares the practice of untouchability to be a criminal offence. The Constitution or the smriti of free India was drafted

by one who belonged to the class of the former untouchables. He was the late Dr. Bhimrao Ramji Ambedkar, a great scholar and social reformer. That the modern smriti of India has been written by a former untouchable is in itsel a great social revolution. Our secular Constitution has enabled hundreds of former untouchables to occupy some of the highest positions in public life. Similarly, the women of India have come to hold elected offices and high posts in government and industry. Their elevation to such positions would have been unthinkable but for the principles of equality laid down in our Constitution.

Dr. Bhimrao Ramji Ambedkar, a great scholar and social reformer, drafted the Constitution of free India.

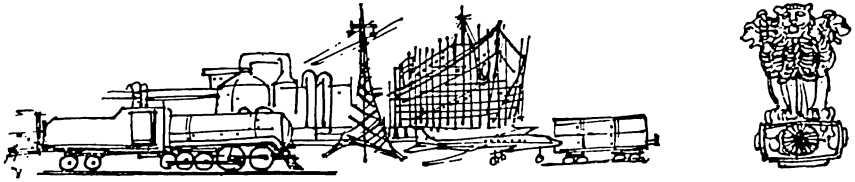
The Constitution of India records our dreams and aspirations. It promises social, political and economic justice to every Indian and seeks to secure for him the right of a fair means of livelihood as far as practicable. Political liberty, i.e. liberty of thought, expression and assembly is a means to secure political justice. Adult franchise and democratic institutions enable every individual to elect representatives to Parliament and to the State Assemblies. Every adult is also free to seek an elective office.

Keeping in view the vast size of our country and the diversity of problems of various regions, we adopted a federal system of government. The Central Government and the Parliament at Delhi look after defence, foreign relations, communications and many other responsibilities. The State Governments and their respective legislatures take care of maintenance of law and order, education, agriculture and other matters for their respective regions. The Central Government and, the State Government also share certain common responsibilities.

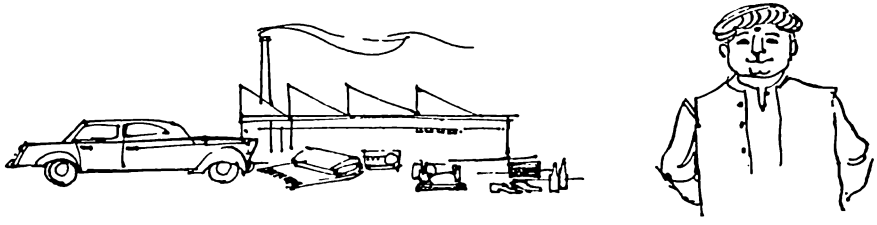
The late Dr. Zakir Husain, President of India, used to describe India as a 'cooperative commonwealth'. The enormous responsibility of bringing about rapid social change and economic development is shared by the Government,

the private industry and the cooperative societies. We have the public sector, the private sector and the cooperative sector. Working in harmony together for the common good of the Indian masses, these three sectors of community life constitute the 'cooperative commonwealth' of India.

Public Sector



Private Sector



Cooperative Sector

We chose the path of democracy in order to achieve economic prosperity by mobilising, through persuasion and consent, the maximum possible resources for nation-building. While laying down the broad social and economic goals before the country, our Constitution desires these goals to be achieved through

the instrument of democratic planning. A Planning Commission was appointed in 1950. In tune with the objectives mentioned in the Constitution, the Commission set before itself the task of ensuring proper distribution of natural and other resources in order to keep economic inequalities at a minimum level and to secure an adequate means of livelihood for all.

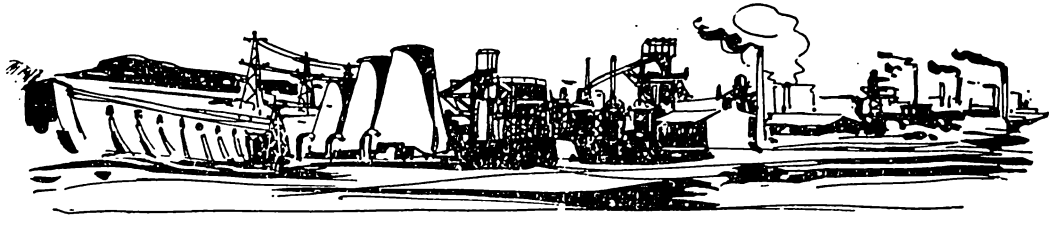
This was to be achieved through a series of five-year plans. The First Five Year Plan, drawn up by the Commission and approved by Parliament, was launched in 1951. It was a 'preparatory venture', the first step towards growth. Since then two more Five Year Plans have been drawn up and implemented, and we are at the beginning of our Fourth Five Year Plan.

There are some who question the wisdom of planning, but such people seem to forget a fact of history. The fact is that the task of initiating and guiding the economic regeneration of an under-developed, backward society is inevitably the State's responsibility. Without the State taking the initiative, and guiding the developmental process, there can be no progress, particularly in a society like ours where the gap between resources and needs is really wide. Our resources in money and technical knowledge are limited. At the same time there was the urgent need to put them to maximum use in the shortest possible time. Hence planning became inevitable.

An important feature of planning in India is that our Plans are drawn up and implemented on the basis of the fullest consultation, consent and participation of the people. There is no dogmatism in our planning. That is why we have made a clear allocation of targets and responsibilities between the public, private and the cooperative sectors. We operate a mixed economy in which the share of the public sector may not look very large, but it covers overall areas of activity vital to the well-being of society and the economy's future growth, for instance, steel-making, ship-building, heavy engineering, basic drugs, fertilizers, power, railways and air transport.

We had decided to see that economic development was helpful in attaining the social objectives: increase in employment opportunities and avoidance of gross inequalities of income and wealth. Hence, major decisions regarding production, distribution and investment were the responsibility of the Government and the Planning Commission. The purpose was to ensure rapid economic development and to see that its benefits accrued more and more to the poorer sections of the population. The goals of economic prosperity and socio-economis equality within a short period needed the watchful eye of the Government, the Planning Commission and the Parliament. These three make an effort ot

see that in its bid for increasing production, a small class of private producers does not amass huge fortunes for itself and that the benefits of the increase in national wealth are shared by the people as a whole. It is for this reason that during the last two decades the public sector is expanding faster than the private sector or the cooperative sector. A long-term strategy had to be worked out to develop agriculture and industry, power and transport, health and education. In the absence of the essential means of economic progress, the State had to take the lead in providing the basic infrastructure—roads, railway lines, electricity, irrigation, education, health and banking—so that agricultural production, trade and industry could grow, providing employment to some of the millions who were in need of it. The irrigation and power schemes, steel, machine-building and chemical projects that a large country like India required, were beyond the immediate resources of private enterprise; the Government, as representative of the people, had to step in.



3. ACHIEVEMENTS

Political and Social

Very few of the newly-independent countries in the world have enjoyed such a degree of political stability as India has achieved during the short span of 20 years. We have the spectacle here of peaceful and orderly working of the world's biggest democracy. A popular government dedicated to orderly progress holds a mandate from the people. This is a mandate which the Indian people renew in general elections every five years. Since Independence, four general elections have been held—in the winter of 1951-52, in 1957, 1962 and 1967. These elections to Parliament and State legislatures are held on the basis of universal adult suffrage.

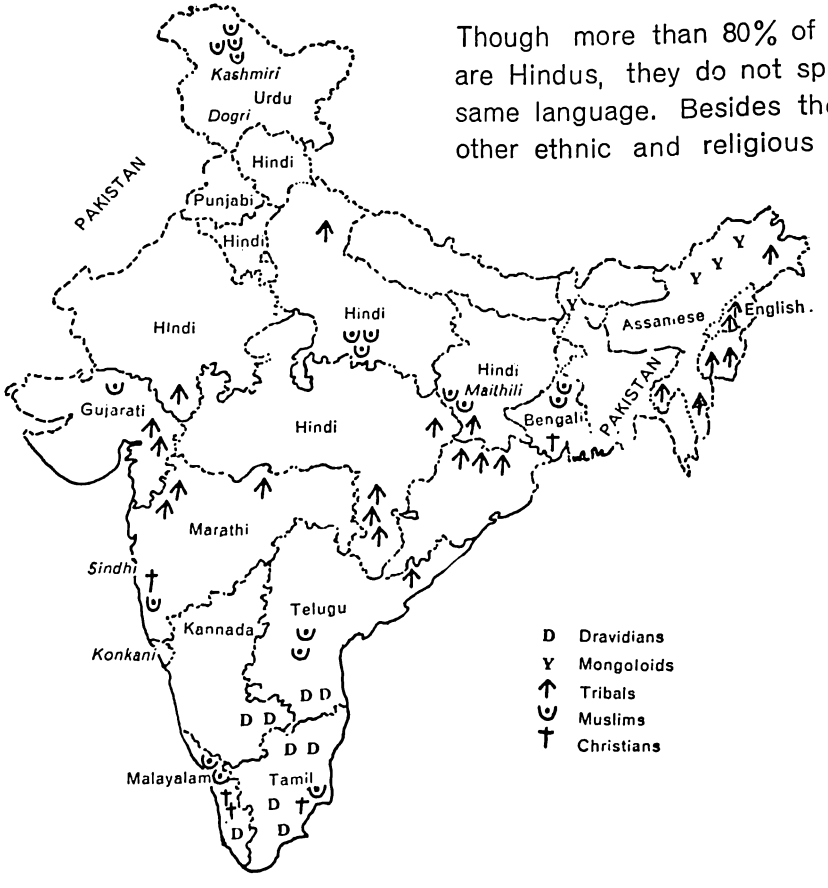
Adult franchise may call for no special comment in countries where political evolution has been gradual and orderly. In India, however, the change from the extremely limited franchise of pre-Independence days to universal adult franchise was a bold step. Each successive general election has taken the country further towards coherent and purposeful use of the secret ballot to reflect popular will.

There is no distinction of caste or creed in India's secular democracy. Men and women, Hindus and Muslims, brahmins and untouchables, rich and poor, city-born and villagers, have an equal right to vote and to stand for elective offices. Though the predominant population of the country is Hindu, eminent men and women belonging to other faiths have adorned some of the highest elective posts in the country. Today a great daughter of India holds the office of Prime Minister. In the first few decades of this century, or at any time prior to Independence, such a development would have been unthinkable.

Such political changes as have taken place in the country since Independence have been through peaceful and orderly means. Particularly, in the changed political climate produced by the last general election held in 1967, almost all the political parties have had the opportunity of securing power in one part of the country or the other. Transfer of power from one party to another takes place as a natural course and in an orderly and peaceful manner, as if we have

had a democratic system of government for a long time !

All this has happened in spite of the fact that no other country in the world has as many diversities as India. There are diversities of all types. To destroy these diversities will be to impoverish the rich Indian culture which is a harmonious whole of a variety of racial, religious, and linguistic characteristics and attainments. The most remarkable feature of Indian life is, and has been for centuries, the existence of unity in the midst of diversity. The participation of millions of Indians, from different regions and belonging to different cultures



Though more than 80% of Indians are Hindus, they do not speak the same language. Besides there are other ethnic and religious groups.

and creeds, first in the freedom movement and then, after Independence, in the political life and economic development of the country, has given a new depth and dimension to Indian unity.

The isolation of one region from another, and the domination of one section of society over another, have disappeared or are fast disappearing. Their place has been taken by a new sense of equality and fraternity. Under the impact of political forces released and nourished by the emergence of a democratic and secular society, and by the growth of representative institutions like panchayats and co-operatives in rural areas, social and political power and status is passing from the hands of the old urban elite to the hitherto less-privileged sections of our society. A new leadership is rising from the grass roots. At the same time, rising farm incomes, reconstruction of village life through community development and the spread of industry and urbanisation, have all combined to broaden the older frames of family and social relationships.

Thus India today is passing through a great transition. The stagnation of centuries has given place to a rapid and planned, social change. Social institutions like the extended family and caste-system are fast losing their hold. Already, mobility has increased and people are migrating long distances from their homes in search of better levels of living. In the process, people are also moving away from their traditional, caste-prescribed occupations. With the advancement of education, many of the first-generation learners are seeking white-collar jobs in search of higher status. Among the middle class youths large numbers are entering new careers in science and technology. The youth are no longer content to conform or to accept poverty as their fated lot, their karma. Instead, they are realising the importance of personal endeavour to succeed in a competitive world. Attitudes to age and marriage are also undergoing a change. What we are witnessing in India today is nothing short of a social revolution. These changes are the product of economic growth and they, in their turn revitalise and accelerate the processes of economic growth.

In the Laboratories

The Swadeshi Movement was an important aspect of our struggle for Independence. Those who took part in this struggle shunned foreign goods, encouraged indigenous material and craft, and propagated the doctrine of swadeshi or self-reliance.

Since Independence, a new form of swadeshi movement has been launched by our scientists and technicians. The new swadeshi movement is not a sentimental development. It is based on sound principles of economics and on intelligent application of skill and new techniques to make the best use of the available human and natural resources; avoidance of waste is also an important tenet of economic activity. The aim of the swadeshi movement is to make our country self-sufficient in foodgrains and to make our industries self-reliant.

In the vanguard of this movement are our scientists and engineers. In the laboratories, in big and small workshops all over the country, our scientists and engineers are busy discovering the ways to put our available resources to the best possible use and finding indigenous substitutes for materials for which we had been depending on others. Science thus has been playing a pivotal role in the development of our agriculture and industry by devising improved techniques, substituting cheap and abundant materials for those in short supply, and utilising waste materials.

The technological advances have been made possible by rapid expansion of education in general and of technical education in particular. The number of students in schools and colleges has increased over six times since Independence. The number of students in science, engineering and medical colleges has increased five-fold. Fourteen thousand engineering graduates and 28,000 diploma holders are being turned out by our technical institutions every year. There are facilities for training in almost all the branches of engineering such as civil, mechanical, chemical, metallurgical, telecommunications, electronics,

textile, pharmaceutical, etc. This has sharply reduced our dependence not only on foreign machines and materials but also on foreign know-how.

Prior to 1947, organised scientific and industrial research had received very little attention. With the coming of Independence, promotion of scientific research, of industrial and agricultural research in particular, came to be recognised as one of the major purposes of national policy. A chain of national laboratories came into being, and permanent links were established between scientific research and agricultural and industrial growth.

Nowhere has the application of scientific research been more beneficial than in the agricultural field. What has come to be known as the 'green revolution' in the countryside owes as much to the behind-the-scene work of our scientists as to the diligence and dynamism of our farmers.

The Agricultural Research Institute, popularly known as the Pusa Institute, in New Delhi, and the research departments of various agricultural universities, gave new vitality to our agriculture by devising better techniques of cultivation and developing new and high-yielding varieties of wheat, rice, maize, millet and other grains. The Paddy Breeding Station at Coimbatore alone evolved as many as 84 new varieties of rice. The Central Potato Research Institute at Simla produced many new varieties of potato, which not only increased the production of potatoes three-fold, but made the varieties immune to a deadly

disease called 'blight.' The Cotton Research Stations at Surat, Bangalore anp Dharwar have developed hybrid cotton seeds which yield higher quantity and better quality of cotton than before. The Indian Agricultural Research Institute recently evolved a new variety of maize which contains more proteins than are found in milk. A research institute in Gujarat has produced an altogether new grain by crossing wheat and rye. The new grain looks and tastes like wheat and contains more protein than wheat grain.

While the Deccan plateau produces the best quality of sugar-cane, U. P. and Punjab have been so far content with a rather inferior variety. The Agricultural Universities in these two States have now introduced sugar beet to replace sugar-cane; it will subsantially increase the production of sugar in North India.

The Central Indian Medicinal Plants Organization of Lucknow and its various subsidiaries made surveys of plants found in various parts of India and discovered that as many as 75 per cent of the world's medicinal plants thrived in the North-Western Himalayan region. Since then these laboratories are encouraging commercial exploitation of these plants through systematic cultivation. The organisation's regional laboratory at Jammu has made experiments in the cultivation of plants which yield substances possessing medicinal properties, like menthol, citric acid, atropin and belladonna. Soon we may not need to import these important medicines from abroad.

The geologists of India have done remarkable work in discovering minerals buried underground and others found on the surface of the earth. We thought we had only 60,000 million tons of coal but further exploration in the last two decades has shown that we have double that quantity buried under the earth. In 1947, our position regarding crude oil seemed hopeless. Today, we know we have substantial reserves of this material. There is a strong possibility that in the near future we may strike under-sea oil near the shore off Bombay. According to the present estimates, we have deposits of 21,000 million tons of iron ore, 2,000 million tons of lignite, 180 million tons of manganese ore, 119 million tons of bauxite and over 67,000 million cubic metres of natural gas. We are still one of the biggest producers of mica in the world. Our treasures in the form of rare metals is enviable. We have either on the surface of the land or below it the best and largest deposits of kyanites and silleminite. Uranium deposits have been discovered in Bihar, Rajasthan and the Himalayas. Thorium is the atomic fuel of the future. Our geologists have discovered the world's largest deposits of thorium on the beaches of Kerala. We have nearly a third of the world's known deposits of rare earths and metals including columbium,

tentanium, lithium, lepidolite, ilmenite, zirconin, titanium, garnet and many others.

However, we continue to be poor in non-ferrous minerals and metals like copper, lead, zinc, nickel, tin, sulphur and asbestos. But vigorous efforts are being made by our geologists to locate hidden reserves. Deposits of copper have been located in Rajasthan, Madhya Pradesh and Ladakh; lead in Orissa; rock salt, lignite, borax, sulphur, bauxite, limestone, gypsum and graphite in Jammu; sulphur and gold in Ladakh and nickel in Rajasthan. Copper, zinc and phosphates have been traced also in Andhra Pradesh and U.P. The coal found in Assam contains some proportion of sulphur. Our scientists have worked out methods of recovering sulphur from Assam coal.

Improving the quality of available resources is one of the important jobs which our national laboratories are performing. In technical language this work is called the 'beneficiation processes'. Though we have abundant coal, we do not have sufficient quantities of coking coal (metallurgical coal) which is needed in furnaces and foundries. The scientists at the Central Fuel Research Institute at Jamshedpur have carried out many experiments with inferior coal and devised a mixture which is as good as metallurgical coal.

The National Metallurgical Laboratory at Jamshedpur is busy working out 'beneficiation' processes for the ores of metals like iron, manganese and copper. It has also designed plants for converting low grade metals into high grade ones. Similar reserach is also being undertaken by laboratories like the Central Glass and Ceramic Research Institute which has developed processes to improve the quality of lime-stone, sand and other articles required in the manufacture of various kinds of glass.

The Central Salt and Marine Research Institute at Bhavnagar has developed processes for the recovery of various types of salt from sea-water. Till these processes were developed we were importing certain grades of salts. The Institute has also been able to recover potassium from mixed salts. Our country has no known reserves of potassium. The Bhavnagar Institute has also developed processes for the production of various chemicals like magnesium chloride, magnesium sulphate and sodium sulphate; and is now trying out processes for the manufacture of chemicals and proteins from sea-weeds and other marine plants.

Another important job our scientists are doing is substitution of scarce material with abundant material in industrial processes. This has made possible the use of iron, aluminium, chromium and such other materials which we have, instead of tin, nickel, zinc, copper and sulphur which have to be imported. For

instance, our scientists have found that aluminium can substitute copper in electric transformers, wires and cables. Aluminium sheets can replace galvanised sheets. Aluminium foils can replace thin sheets of lead and tin. Till recently stainless steel could not be manufactured without nickel. But our scientists have found a process to make stainless steel by using aluminium instead of nickel. Again, cork which is used in making stoppers of bottles and some parts of refrigerators had to be imported till recently. Our laboratory at Jadavpur has developed a kind of foam glass which can act as a substitute for cork. Graphite and platinum which are not found in India are necessary for the manufacture of many chemicals. Our scientists have now been able to manufacture chlorates and perchlorates without using graphite and platinum.

Self-reliance in many other items has been achieved. For instance, our steel mills had to import special shears for cutting steel bars. Even these imported shears did not last more than a week or so. A small team of engineers at Rourkela worked hard and produced Indian shears which are not only cheaper but also more durable.

A special kind of carbon is required for storage batteries, for search-lights, and for jobs like welding. This special carbon worth millions of rupees had to be imported. Scientists at the National Physical Laboratory have been successful in manufacturing this special carbon from materials available in India.

When we embarked on our big programme of industrialisation we had to import most of the machinery, raw materials and, in some cases, even parts of various articles, which we only put together or 'assembled' in our factories. The average Indian component of our manufactured goods was as low as 20 per cent. During the last twenty years our scientists and technicians have been making supreme efforts to substitute the imported elements by indigenous ones. Several factories have now devised methods to carry on their work without importing material and machinery, including spare parts from other countries. In some cases now, the swadeshi or indigenous component is as high as 100 per cent.

It is good economy to avoid waste. But to convert wastes into useful products is even better. The Structural Engineering Research Institute and the Central Building Research Institute at Roorkee are busy converting agricultural and industrial wastes into strong building materials. By utilising waste-ash from the power stations they have discovered a new and cheap variety of concrete. It is cheaper than the usual concrete by 40 per cent. They have also designed new methods to build stronger houses at lower cost by using cheaper and more abundant materials. India is the world's largest producer of mica, but factories in India or abroad would purchase only the best quality of mica; the inferior

quality had to be discarded. These have been piling up for many decades. Our scientists have now found a way to manufacture heat-insulating bricks from the waste mica. These bricks are used in steel mills and the furnaces in other factories. Formerly we used to import this insulating material. Now the bricks prepared from waste mica are being widely used in India and even abroad.

A motor car needs lubricating oil, which, after it is used for some months, is generally thrown away. Now we can process it and use it again and again.

Our country is short of newsprint. Now we can utilise printed paper over and over again with the help of a new process developed by our scientists. The process is called 'deinking', because it removes ink from printed paper and makes it blank again.

A number of forest wastes are now utilised as raw materials for industries. Edible oil can be extracted from the bran of paddy. Proteins can be extracted from oil-cakes as well as from sea-weed. The scientists are thus finding ways to show that there are very few things in the world that can be regarded as total waste.

Foodgrains and fruit are called perishable articles because these do not remain 'fresh' and deteriorate or rot early. But the new 'durofume' process helps preserve foodgrains for years; and it costs only 10 paise per gunny bag of foodgrains. Formerly we used to import wax of a special kind to preserve fruit. But now similar wax can be produced from sugar-cane and sisal trees. A thin coat of this can help preserve any fruit for a long time.

The Hindustan Shipyard at Vishakhapatnam has invented a device which can cut down consumption of fuel by the ships. The experimental device which has been fitted on a ship called 'Vishwa Bhakti', cut down Rs. 80,000 worth of expenditure on imported fuel per year— a saving of 800 tons of fuel for one ship alone.

The Central Electro-Chemical Research Institute at Karaikudi has developed processes for producing a number of chemicals, dyes and perfumes at lower costs. In this and numerous other ways, scientific research is enabling our industries to cut down costs and increase production.

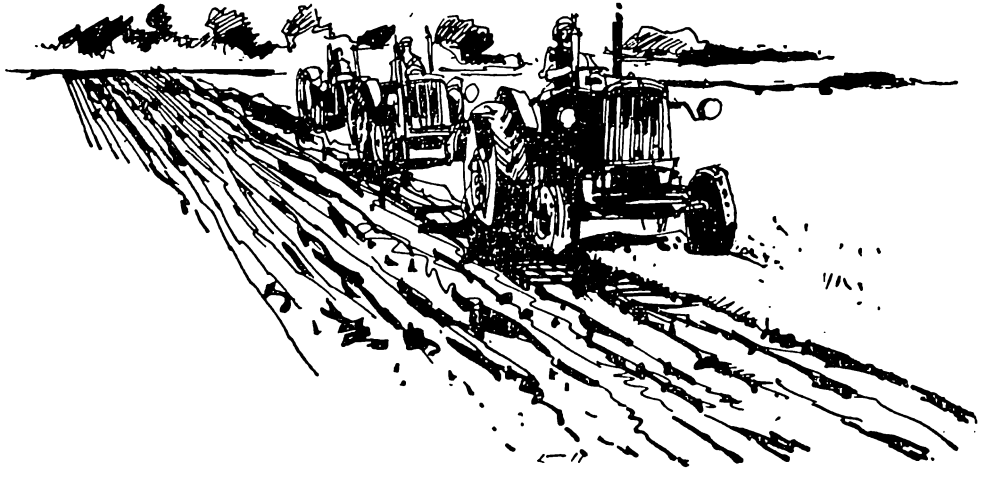
By far the most noteworthy achievement of our scientists has been in the field of nuclear research. India is one of the six countries of the world which produce their own uranium fuel for nuclear reactors. The plutonium plant has been designed and set up by our nuclear scientists entirely on their own. We possess sufficient technological ability to produce an atom bomb if we so desire. For the present, we are content with harnessing atomic energy for a wide variety of peaceful uses, mainly in the fields of agriculture and medicine. Experiments

at the Bhabha Institute and at the Gamma Garden at the Indian Council of Agricultural Research have demonstrated how beneficial nuclear science can be in producing better seeds and richer varieties of grains.

On the Farms

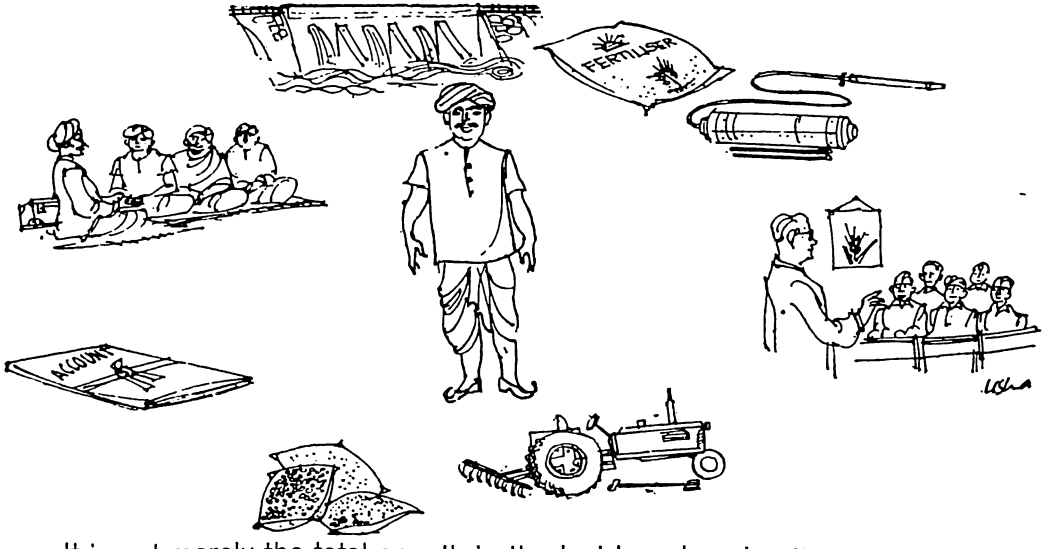
Discussing the achievement of our scientists and enigneers earlier in this chapter, we spoke of their role in bringing about the 'green revolution' on our farms. Let us try to understand the nature and dimension of this revolution.

In terms of output alone we have doubled the production of foodgrains since Indepencence. Our country produced only 48 million tons of foodgrains in 1947; this fell further to 37·8 million tons in 1948; it has now jumped to 100 million tons. Similar rises have been registered in the production of commercial crops like oilseeds, sugar-cane, cotton and jute. We have reached near self-sufficiency in jute and are no longer dependent on imports from Pakistan.



Item	1947-48	1968-69
Oilseeds	5·6 million tons	6·90 million tons
Sugarcane	5·5 million tons	12 million tons
Cotton	3·5 million bales	5·3 million bales
Jute	1·9 million bales	3·05 million bales

The increase in agricultural production has been mainly due to the efforts to make the farmer a better farmer, a scientific farmer, a more productive farmer through training and guidance. While there were only 22 agricultural colleges in the country at the dawn of Independence, their number is now 75 from which more than 5,000 agricultural graduates pass out every year. Agricultural universities have been established in almost all the States. Some of them, as in Uttar Pradesh and Punjab, have undertaken independent research with great success. There are now, in all, 17 agricultural research institutes in the country. Agricultural schools, colleges, research institutes, demonstration farms, the rural broadcasting programme, etc., have gone a long way in producing more intelligent farmers, properly equipped with a fund of knowledge and technical skill needed for scientific and productive farming.

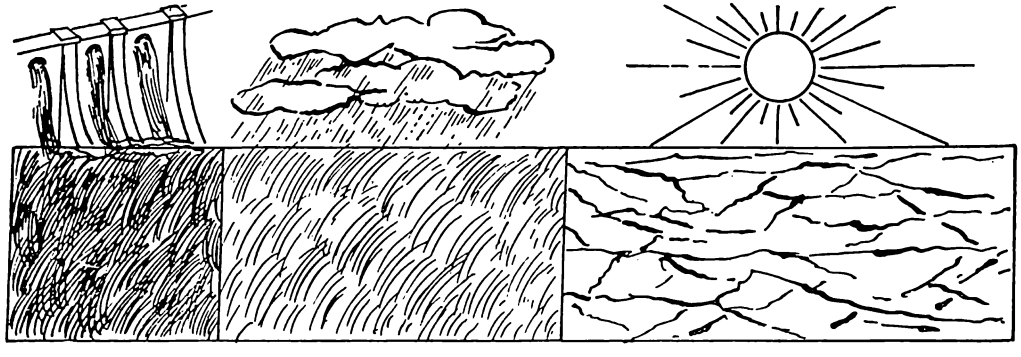


It is not merely the total growth in the last two decades that is impressive; what is far more significant is the momentum that our agricultural economy

has generated during the last few years. Thus by 1965-66 we had only 0·97 million wells in the country which had either diesel or electric pumps fitted to them. By 1968-69 the number rose to 1·67 million. The consumption of fertilisers more than doubled within this short period of three years. In 1965-66, hybrid seeds were being imported on a large scale. Within three years we were not only able to become self-sufficient in hybrid seeds but actually started exporting them. A few years ago most of the 50 pesticides used by the farmers in India were being imported. Now we have set up factories for producing 30 types of pesticides. Three years ago only 16·6 million hectares of land had the facilities for protection of plants from pests. Now more than thrice the area is protected with the help of pesticides. Mechanisation of farms is taking place at a rapid rate. The number of tractors used on Indian farms jumped from 54,000 to 90,000 in three years.

What has happened in the last three or four years is not a sudden development. Behind it lies a gigantic and many-sided effort to revitalise our villages and revive our rural economy which had been enfeebled by centuries of stagnation and neglect.

In 1947, out of the total land area of 326 million hectares (one hectare is about two and a half acres) only 132 million hectares were under the plough. Of these, only 26 million hectares had irrigation facilities. The rest depended on vagaries of the monsoon. Not much of the land under plough was fertile. Continuous use over the ages had depleted soil-fertility. Some lands suffered from either excess of salts or deficiency of necessary minerals. Land on the slopes was being washed away by the rains every year. In the coastal regions—especially in Kerala—land was being eroded by the sea.



Over many centuries, family land had been divided and sub-divided among

the children and grandchildren of the original owners. This had resulted in fragmentation of land into futile little strips and patches. Farms, grasslands and even barren lands were thus fragmented. Often, land holdings of a single farmer were spread over a considerable area. This made farming difficult and uneconomic.

As a first step in the improvement of agriculture, we decided to increase the area under cultivation, to extend irrigation facilities to reduce dependence on monsoon, and to embark upon a massive programme of soil-conservation and improvement. Strips and patches held by the farmers at different places needed re-distribution in such a manner that each farmer had all his lands at one place. This measure is known as 'consolidation of holdings'.

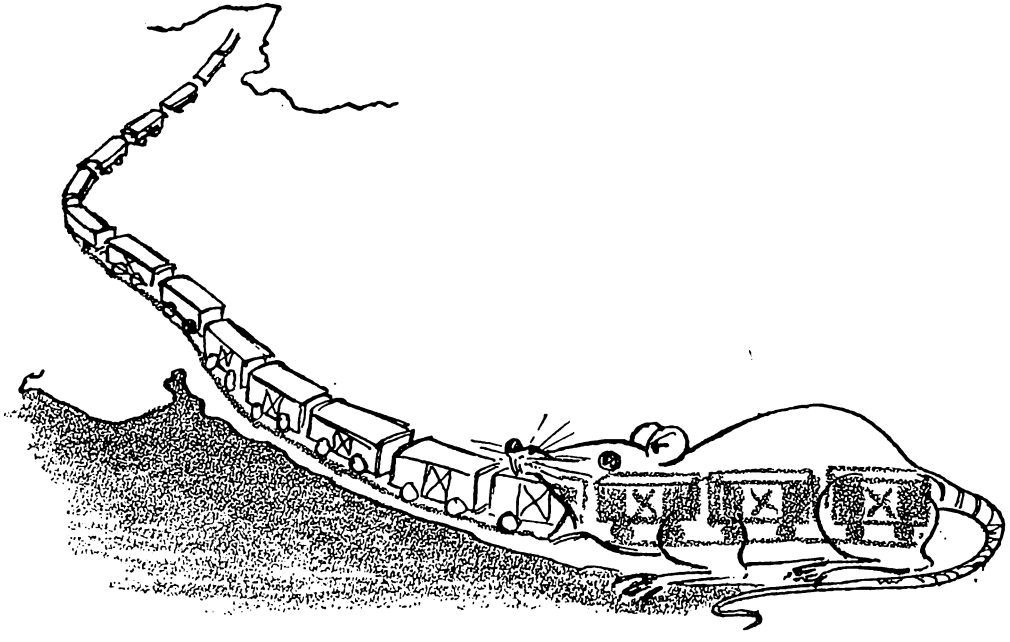
A large portion of the farm land in India was tilled by tenants who did not own land. Much of the land was owned by zamindars and absentee landlords who seldom visited the farms. Many tenants had to pay exorbitant rent for cultivating the lands. Yet they could be ousted from the fields they ploughed at the whim of the landlords. Naturally, in the absence of security of tenure, farmers had very little stake in the improvement of the land they tilled. Realising that agricultural production can increase only if the farmer is given a greater stake in land, almost all States have adopted measures to eliminate the intermediaries between cultivators and State. Laws were passed to fix ceilings on rent and to ensure security of tenure. The zamindari system was abolished. A few States passed laws to make the actual tiller the owner of the land. At places limits were fixed over which no land-holder could possess any land; land in excess of these ceilings was distributed among the tenants or the landless labourers. Vinoba Bhave, the saint of modern India, started the 'Bhoodan Movement'. Land received as donation from big landowners was given away to landless villagers.

The next step was to reduce the farmer's dependence on the monsoons by ensuring round-the-year supply of irrigation water. For this purpose, and for purposes of power production, flood control and navigation, several giant river valley projects were launched. Each one of them became a mighty venture revolutionising the life of the entire regions around it. Among these 'temples of new India' are Bhakra and Rihand in north India, Damodar Valley Project and Hirakud in eastern India, Koyna, Gandhisagar and Nagarjunasagar in southern and south-western India, and many other large and small schemes located all over the country.

Next only to the river valley schemes in magnitude, in the programme for national reconstruction is the nation-wide community development programme and the promotion of cooperative credit and marketing societies in

rural areas. Community Development and Co-operation have become major instruments of awakening in the villages. Through these programmes and with the help of numerous social, technical and extension agencies created under it, a continuous flow of finances, materials, ideas and techniques into the farming areas is maintained. This more than anything else has helped in bringing about vast improvements not only in the way our farmers live but also in methods of their work.

For thousands of years the Indian farmer was using primitive methods of farming. At places he would just broadcast or throw seeds on the unploughed land. Some tribals were following the practice of what is known as 'jhoom cultivation'. They would cut down trees in the forest, till a piece of land for a year and leave the place to go elsewhere to clear a fresh piece of forest land for cultivation in the next year. The farmers were helpless during visitations by pests and diseases which sometimes caused a total loss of produce. The farm rat is one of the most destructive pests in India. The quantity of foodgrains that the rats consume is astounding. If the food thus lost were to be loaded in wagons and put on the rails, the train would be so long that it would cover the entire railway track in the country.



It was, therefore, necessary to educate the farmer in modern methods of cultivation. A cadre of agriculture-extension and village-level workers was created for this purpose under the community development programme. Demonstration farms were set up. Factories were started to produce modern farming implements like tractors and power-tillers. Seed farms were started in villages to provide the farmer with better seeds. The farmer was encouraged to dig manure pits in order to convert the wastes into good manure. Fertiliser factories were set up. Pesticide production was started on a big scale.

The co-operative credit and marketing societies in rural areas have helped to free our farmers from the clutches of money-lenders and from exploitation by avaricious middle-men. In short, everything possible has been done to strengthen the hands of our farmer and to help him produce more from his land.

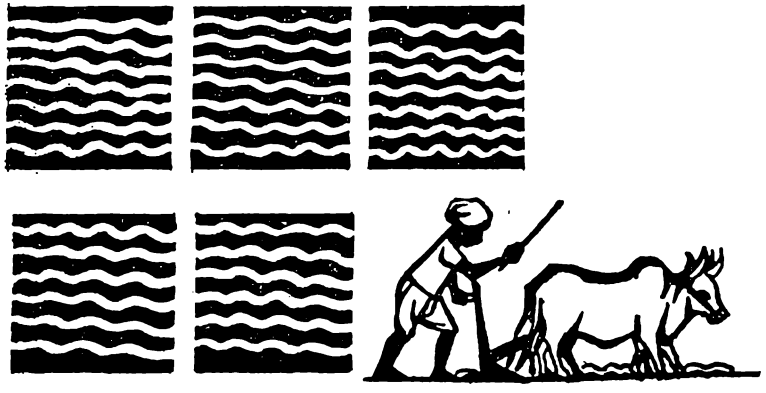
Livestock is an essential part of rural life. At the time of Independence we had a cattle population so large that if it was distributed among the people, each family would have had one cow, and three familes would have been able to share the milk of one buffalo. Even then, milk production in our country was far from adequate even for our children. This was because the average milk yield per cow in India was the lowest in the world.

Hence we decided to improve the breed of Indian cattle. Artificial insemination and cross breeding and other scientific practices were resorted to. Veterinary schools and colleges were set up, and gosadans were started to look after neglected cattle. Gradually, the situation improved. Modern dairy-farming, practically unknown in the country before, came into being. Today, we have 91 dairy farms which process 1·8 million litres of milk per day. The Kaira District Milk Producers' dairy, which is widely known as the 'Amul' dairy, is one of the largest of its kind in the world. It produces most of the known milk products. The first few processing plants were imported. But now we manufacture all the required machinery for fluid milk processing.

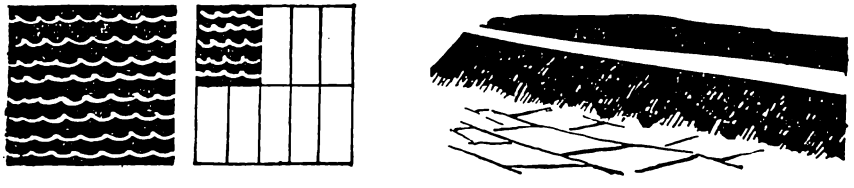
Though fortunate in having a vast sea shore, India's production of sea-food was very poor in the past. With the use of modern methods such as motor trawlers, mechanised boats and cold storage, deep sea fishing is making some headway. The quantity of fish caught has risen to over 1·4 million tons within a period of two years or so. Fish and fishery products are valuable foreign exchange earners. These brought Rs. 230 million as foreign exchange in 1968-69.

PROGRESS IN AGRICULTURE

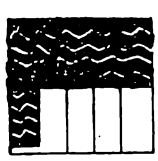
50 million hectares of additional land brought under the plough

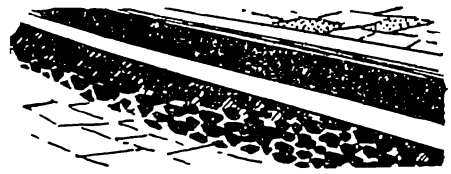


Over 12 million hectares of inferior land improved by bunding, use of basic slag, etc.



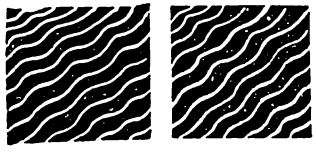
59 lakh hectares of land saved from floods through flood control schemes





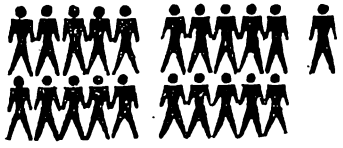
23·68 million hectares of scattered pieces of land consolidated into manageable and economic farms

Additional 20 million hectares of land brought under assured irrigation

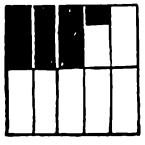


Our farmers now use 35 times the quantity of chemical fertilisers they used in 1947-48

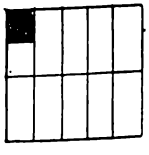
Due to abolition of Zamindari, Jagirdari and Inams, 21 million tenants given ownership of land.

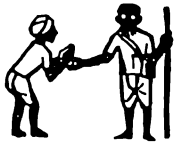


3.62 million other tenant farmers given ownership of 3.37 million hectares of land.

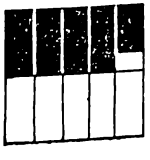


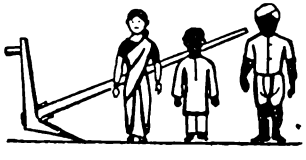
4.8 lakh hectares of land distributed among the landless by Bhoodan workers





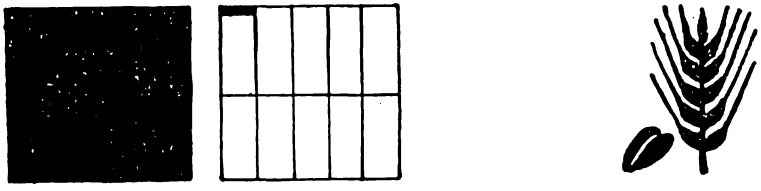
4·71 million Hectares of land distributed among the landless





Additional 6·07 million hectares of land brought under multiple crops.

High yielding varieties of seeds introduced on 10·5 million hectares of land.



In the Factories

The most spectacular progress made since Independence is in the growth of industry, both big and small. This growth is visible not only in the size of industrial output, which has gone up three-fold in the last twenty years, but in the range and quality of articles now produced. Many of these were until recently imported from abroad and are now being produced within the country for the first time. We are manufacturing now our own railway engines and coaches, aeroplanes, cars, radios, fans, watches, drugs, machine-tools and even certain varieties of heavy machinery. Agricultural machinery like tractors, power-tillers, diesel and electric pump-sets for irrigation, and implements used on farms are now manufactured within the country. Electricity generators, heavy motors and transformers are produced by the public sector projects. In India's factories today, there are more India-made machines than foreign. These account for nearly 64 per cent of the total; twenty years ago, the reverse was the case.

India is one of the few countries which can manufacture almost all the conventional weapons for defence and other defence equipment, aeroplanes, tanks, trucks, ammunition, radar, etc. Our shipyards have been building merchant vessels. Cranes needed at ports and railway yards and at construction sites are now made in India.

A breakthrough has been achieved in the field of electronics, which is vital for defence and which has revolutionised communications within the country. Electronic equipment and components worth Rs. 850 million were produced in 1968-69; production in 1969-70 promises to cross Rs. 1,100 million. Another sophisticated area of advance is nuclear energy. One nuclear power station has been commissioned at Tarapore and four others are under construction. The last one is being built entirely by our technicians. We can produce over 80 per cent of the articles required for setting up a nuclear power station.

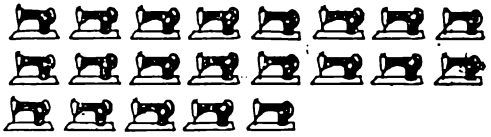
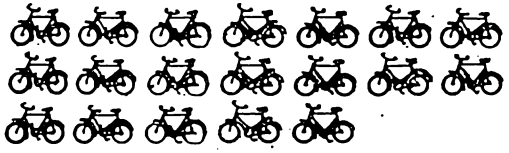
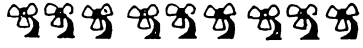
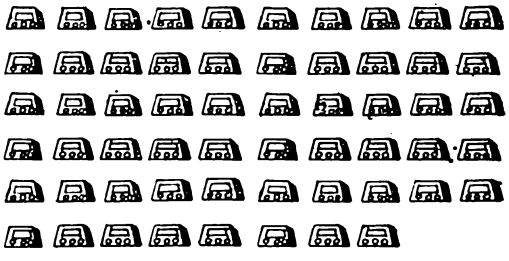
With the discovery of additional oil and establishment of many refineries the petro-chemical industry is growing fast. We manufacture various types of plastics, synthetic rubber and artificial yarn like rayon, nylon and terylene. Stainless steel and other types of alloy steel are produced by the various steel projects. Sophisticated machine-tools, electrical appliances, modern drugs and pharmaceuticals, surgical instruments, which were a preserve of a few industrially advanced countries till now, are also made in India. Prior to Independence, India's exports consisted of raw materials like tea, mica and jute. The position is now changing. In 1968-69, 58 per cent of our exports were of manufactured and semi-manufactured articles.

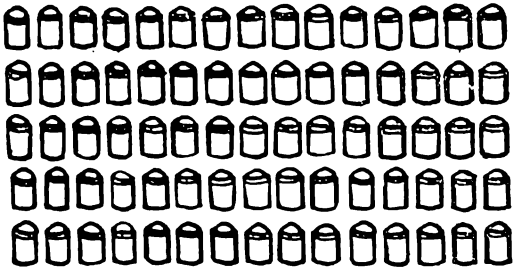
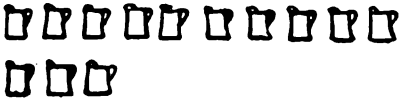
The Bhabha Atomic Research Laboratory has constructed the first Indian computer. The scientists there have also manufactured a helium-gas laser which emits a concentrated light beam and is, therefore, valuable in research, communications and surgery. In the field of nuclear medicine, India has made a valuable contribution in combating two deadly diseases—goitre and Parkinson's disease.

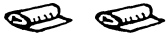
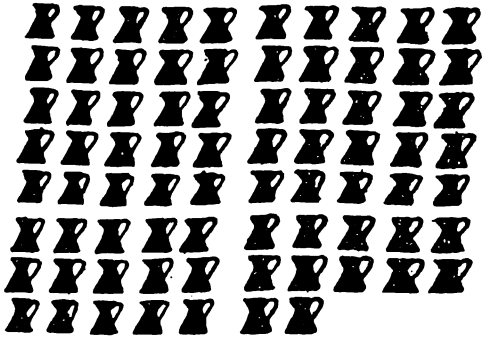
Our industries are producing today all the three major categories of goods. Articles which are required for daily use such as cloth, footwear, watches, paper, paints, etc., are called consumer goods. Machines which turn out consumer articles are called producers' goods. Basic materials like steel, cement, electricity aluminium, copper, rails, railway engines, ships, motor vehicles, aeroplanes, etc. are produced by what are called basic industries. Without these, no producer industries or consumer industries could be set up. Thus, if steel is not produced it would be difficult to manufacture machines which produce consumer goods. Mining and oil refining are also basic industries.

PROGRESS IN INDUSTRY

	Production in 1947-48	Production in 1968-69
Coal	 30 million tons	 75.3 million tons
Iron ore	 2.4 million tons	 21.2 million tons
Pig iron	 1.4 million tons	 7.17 million tons
Steel ingots	 1.2 million tons	 6.5 million tons
Aluminium	 3400 tons	 1,25,300 tons
Lead	 600 tons	 24,400 tons

	Production in 1947-48	Production in 1968-69
Sewing Machines		
	20,000	4,27,000
Bicycles		
	99,000 (1951)	19,54,000
Automobiles		
	16,500 (1951)	79,200
Electric Fans		
	1,60,000	14,81,000
Radios		
	25,000	14,60,000

	Production in 1947-48	Production in 1968-69.
Fertilisers		
	45,600 tons	7,32,000 tons
Caustic soda		
	4000 tons	3,13000 tons
Soda ash.		
	29,600 tons	3,99,000 tons
Sulphuric acid		
	81,000 tons	10,24,000 tons
Cement		
	15,00,000 tons	1,22,00,000 tons
Paper and paper board		
	81,000 tons	6,60,000 tons

	Production in 1947-48	Production in 1968-69
Cotton cloth		
	3950 million metres	7902 million metres
Woolen cloth		
	6·1 million metres	12·6 million metres
Art silk		
	287 million metres (1951)	1004 million metres
Paints and varnishes		
	39,200 tons	90,000 tons
Refined petroleum products		
	2,00,000 tons	1,54,00,000 tons

ARTICLES NOT PRODUCED PRIOR TO INDEPENDENCE

Figures for 1968-69

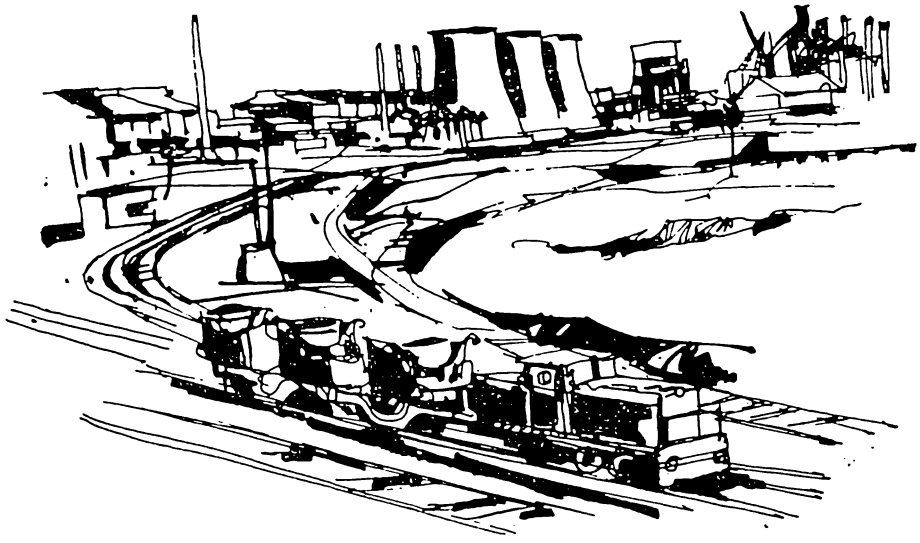
Motor cycles, scooters		70,800 units
Dry batteries		400 million units
Storage batteries		875,000 units
Newsprint		30,000 tons
Synthetic rubber		26,000 ,,
Automobile tyres		3,42 million units
Bicycle tyres		23.58 million units
Stainless and other alloy steel		43,000 tons.
Petro-chemicals		53,000 ,,
Dye stuffs		7,360 ,,
Man-made fibres :	Rayon filament	51,300 ,,
	Staple fibre	60,000 ,,
	Nylon fibre	6,500 ,,
	Polyster filament	4,500 ,,
	Fabrics	975 m. metres
Oxygen gas		35 m. metres
Metallurgical and other heavy equipment		20,000 tons
Coal and Mining		10,500 tons
Chemical machinery		Rs 80 million
Electric generators		0.4 m. KW
Turbines		0.5 m. KW
Agricultural tractors		14,000 units
Cotton textile machinery		Rs. 138 million
Cement machinery		Rs. 74 million
Sugar machinery		Rs. 115 million
Paper machinery		Rs. 24 ,,
Machine tools		Rs. 247 ,,
Ball and Roller bearings		11·1 million units
Cranes		7,000 tons
Power tillers		500 units
Power driven pumps		307,000 units
Diesel Engines		123,000 ,,
Railway wagons		16,5000 ,,

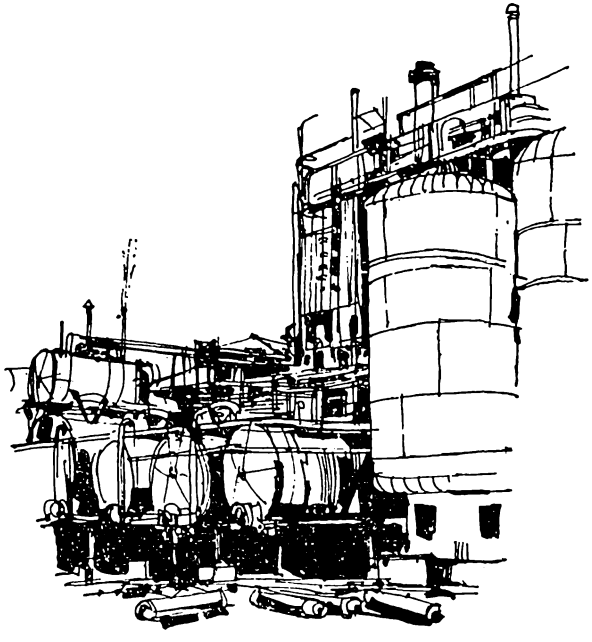
Besides basic industries, industrial development needs a network of roads, railways and communications. From the very beginning of the planning era, we have been paying special attention to the development of this 'infra-structure'. At the dawn of Independence, we had 1,50,000 kms of surfaced roads and 2,50,000 kms of un-surfaced roads. The length of surfaced roads in the country has increased more than six times, and that of the un-surfaced roads more than three times. We now have over 10 million kms of surfaced roads and over 8,00,000 kms of un-surfaced roads. The number of motor vehicles in the country was 2 lakhs in 1947. It is six times that number today. We have also built over 7,000 kms of new railway track. More than 10,000 trains are running every day all over the country today. The distance covered by our railways in a single day is more than twice the distance between the moon and the earth. We have a railway track running 60,000 kms long, the longest in Asia. The number of railway passengers in the country has more than doubled. While 22 years ago, three million passengers travelled on railways every day, the number has gone up to over 6 million now. Whereas in 1947, the railways carried over 25,000 tons of goods per day, today they carry over 5,50,000 tons, a 20-fold increase.

Our shipping tonnage has jumped from 2 lakh tons to over 22 lakh tons, an increase by over 11 times. Whereas we hardly produced any railway engines and coaches at the time of Independence, we have so far produced over 500 electric engines, about a thousand diesel engines and over 10,000 steam engines. The new Integral Coach Factory at Perambur has so far produced over 34,000 passenger coaches and over 38,000 goods wagons. The Indian Airlines Corporation which serves air passengers within the country and the Air India International which carries passengers from India to different countries have expanded rapidly. The number of persons carried by different airways has jumped from 2.5 lakhs to over 2 million and the number is growing at a rapid rate.

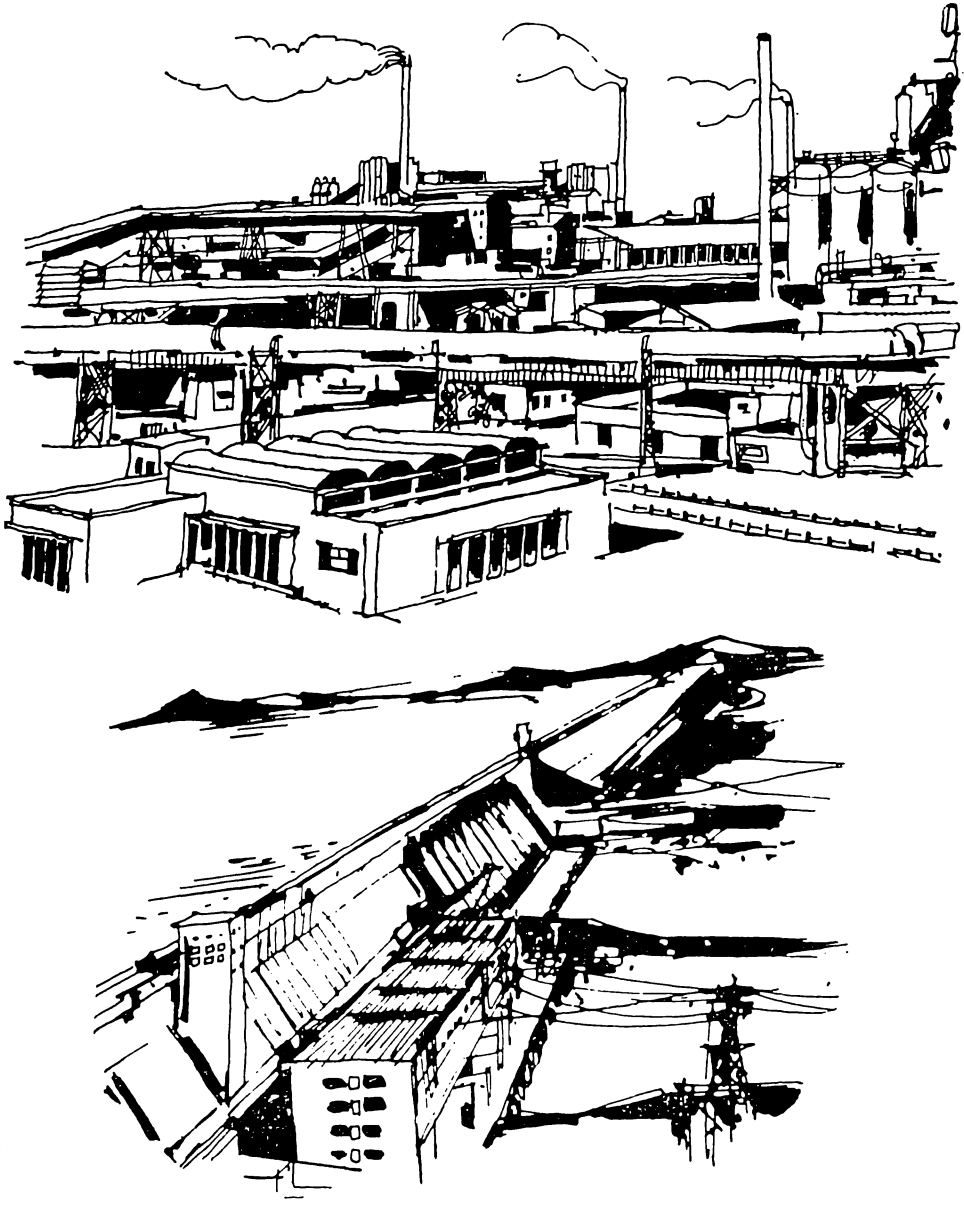
We had about 20,000 post offices in 1947. These were mostly in big and small towns. During the last 22 years, we have carried the post office facilities to remote rural areas by opening more than 53,000 new post offices. We had only 7,000 telegraph offices. Now we have over 23,000 of them. In 1947, we had only 1,20,000 telephones in the country. Now we have over a million telephone users.

This rapidly expanding transport and communicatons system is the surest guarantee of further industrial expansion in the future.

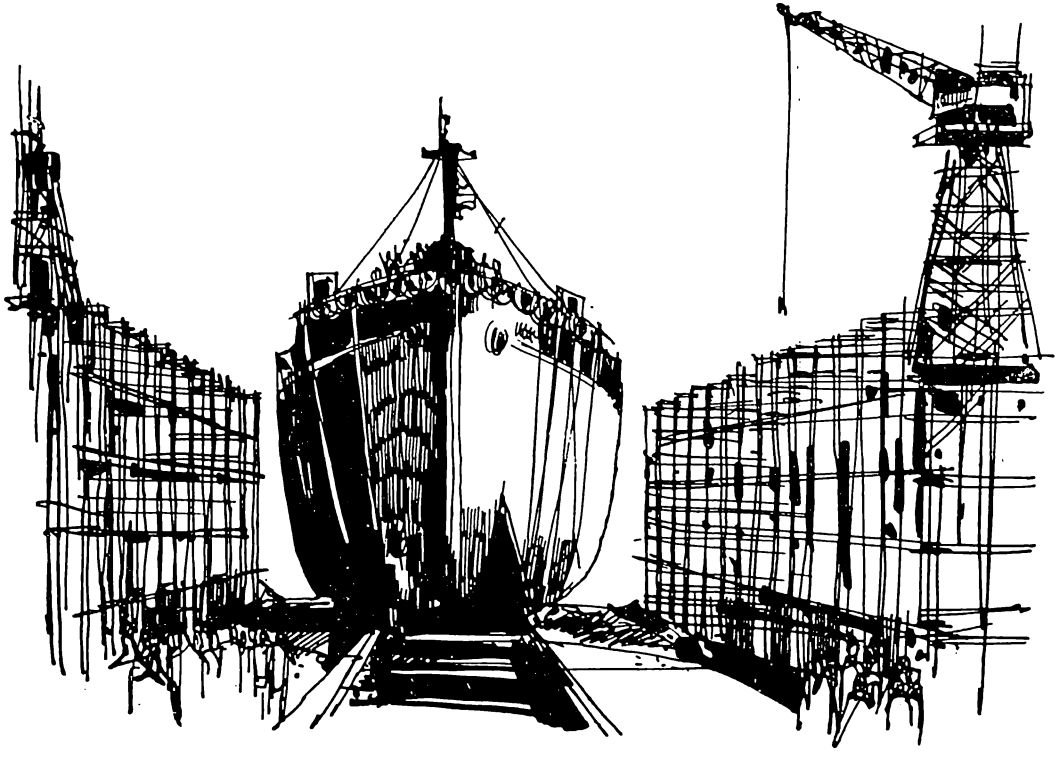




Temples of New India



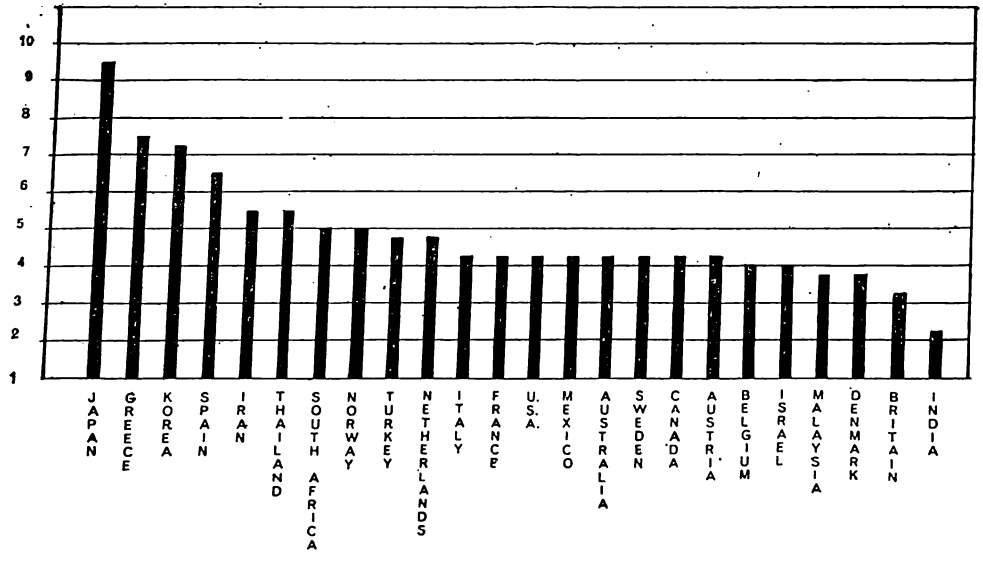
Temples of New India



4. THE UNFINISHED TASK

In the earlier chapter we have reviewed our achievements in various fields. In certain respects these compare well with those of the more advanced countries in the early stages of their development. But our rate of growth is not fast enough and we seem to be on the losing side in the race with advanced countries. The table below gives an indication of the speed at which various nations are marching on the road to economic development.

Rate of increase in per capita income



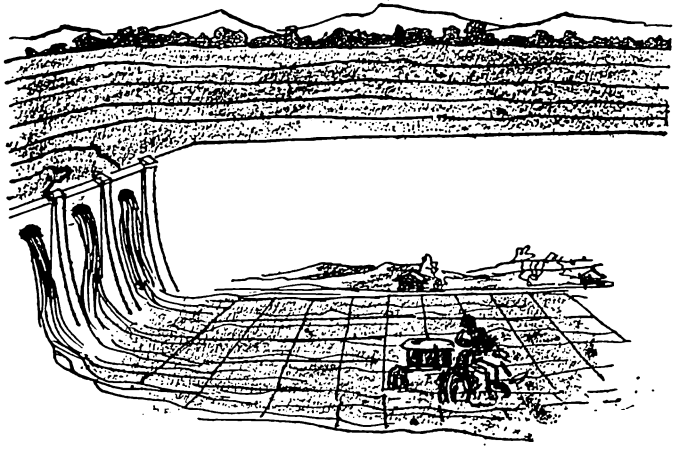
In spite of the two decades of rapid progress, we continue to be one of the poorest countries of the world. Forty out of every 100 Indians cannot afford to

spend even a rupee a day on their daily necessities. To ensure a square meal for each Indian, food production will have to jump from the present figure of 100 million tons to 130 million tons immediately. And it will have to keep pace with the increase in the number of mouths to be fed.

Though we have a number of textile mills in the country and export cloth to other countries in order to earn foreign exchange, we do not produce enough to meet even the minimum needs of most people. Our biggest handicap here is the shortage of raw cotton. Experts say that we will cease importing raw cotton only if we increase our per hectare yield of cotton from the present figure of 112 kilograms to 150 kilograms. The target set by the experts is not very high because the average yield in other countries is many times that in India. For example, Soviet Russia and Egypt produce six times more cotton per hectare than what India produces. The average production in the U. S. A. is

about five times ours; China and Pakistan also produce more than twice the quantity of cotton per hectare than we do.

Thousands of families in our towns continue to live in slums, often crowded like cattle in single rooms. The position in the villages is no less unpleasant. Over 71 million of our rural families live in 'kutcha' huts which cannot withstand excessive rain or rough weather. The annual rate with which we are building pucca houses and tenements is so poor that at this rate we shall need 150 years to provide pucca dwellings for all the families in India—and that too if the population remains constant. But worse still, we have not been able to fulfil even the modest targets we had set for ourselves. Amounts of money sanctioned each year for building houses for low-income groups of people are not fully utilised.



Though we have been able to double the land under assured irrigation, we have so far utilised only a third of the surface water available for irrigation purposes. At the present rate of extension of irrigation facilities through major and minor schemes, we shall take another 60 years to fully utilise our surface water potential. We have done better

in harnessing underground water. According to present estimates we have tapped almost half of the total available underground water for irrigating the fields through ordinary and tube wells. In this respect there has been rapid development. But it will still take four decades to construct all the wells that we need.

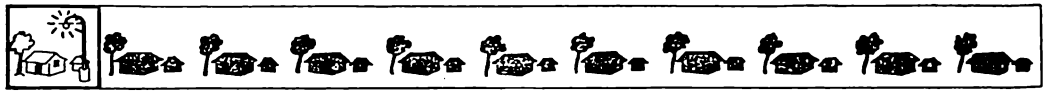
A pressing problem about our major irrigation schemes is the slow progress in effective utilisation of water. Though the big dams hold huge quantities of water, the wastage of water through seepage, evaporation, spill-over and defective distribution is as high as 80 per cent. Experts have estimated that if only we could save 5 per cent of the wastage, this would make a big difference; another 25 per cent of farms could be provided with water. Major and minor irrigation projects have brought some prosperity to the rural areas, but the State Governments, who run these projects on a commercial basis, incur a net loss of over Rs. 750 million every year.

To improve the situation, we have not only to expand irrigation facilities as fast as possible, but also to see that the wastage of water is reduced to a minimum and that our irrigation projects are run on a commercial or at least on a no-profit-no-loss basis. Otherwise, any additional irrigation would only mean additional losses.

We have still to get out of the vicious circle of famines, low agriculture production, recessions in industrial production and economic crises. We have both dry and wet famines. Excessive rains cause floods in vast areas on the plains and result in disaster. In 1969 alone we had flood havocs in Assam, Bihar, Orissa, Rajasthan, Uttar Pradesh and West Bengal. Medium to high floods also caused some damage in Gujarat, Kerala, Madhya Pradesh and Maharashtra. Till 1954, we had no regular flood control schemes. During the last fifteen years our flood control schemes have provided some security and relief, but vast regions are still to benefit from these schemes. The amount spent by us on flood control projects during these years is almost the same as the losses suffered on account of floods in 1968 alone. It is, therefore, essential that we should accelerate the execution of flood control schemes.

Just as 80 per cent of our water stored in big dams is wasted while it is being taken to the fields, 16 per cent of the electricity generated in the power houses is lost in transmission. In some of the States, like Andhra Pradesh, Assam and Rajasthan, the losses are as high as 25 per cent. If the losses are reduced by even one per cent, the annual savings would be of the order of about Rs. 56 million. In advanced countries, the losses in transmission are kept at a minimum

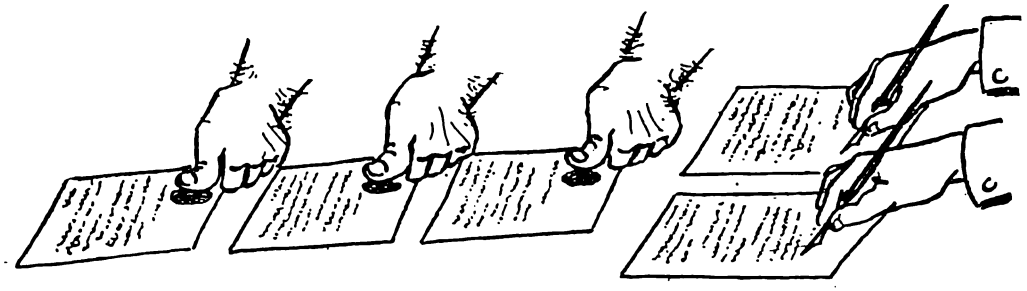
level and seldom exceed 7 per cent. Hence there is a scope for reducing the losses by half, leaving a net saving of more than Rs. 500 million per year.



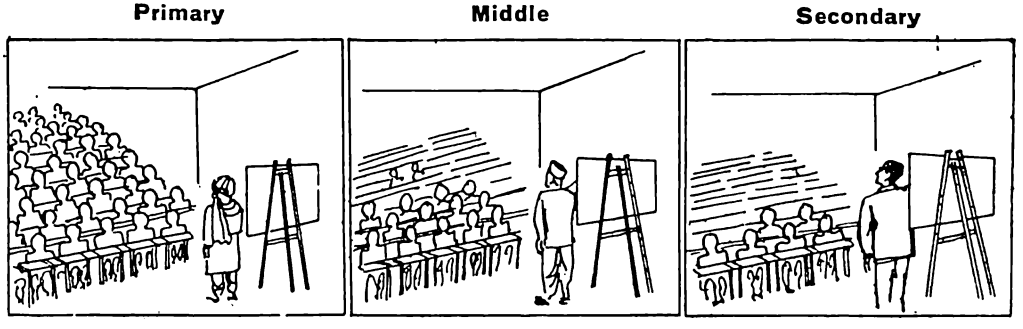
A vast number of villages do not enjoy basic amenities like electricity, drinking water, bus stops, post offices, marketing centres, medical facilities, radios, etc. Life in these villages has not changed in any marked degree from what it was twenty years ago or even a hundred years ago.

In some States the situation is quite acute. Madhya Pradesh villages suffer from an acute scarcity of doctors. Ninety-eight out of every 100 villages in this State did not have a single doctor in 1964, and the situation has not much improved. A survey in 1964 showed that except in Kerala and West Bengal a third of the villagers had to walk about 8 kilometres to consult a doctor. Only 8 out of every 100 villages in UP and Madhya Pradesh had post offices; only 5 per cent of the villages in UP had bus stops. Thus the task of providing basic amenities to the villagers still remains colossal.

Though hundreds of schools and colleges were started in the last two decades, the percentage of literacy is still miserably low. Out of every five Indians, only two can read and write.



The problem of drop-outs is another gloomy aspect of our educational system. The total number of students in classes I to V in 1960 was over 35 million. By 1965-66 these 35 million should have continued in classes VI to IX. However, their number was found to be only 10 million indicating that as many as 25 million had dropped out from the schools.



The number of drop-outs increases as the students pass the lower standards. Normally we should try to see that the number of drop-outs is kept at the minimum possible level. This is because no significant advance can be made by a country where large masses continue to live without proper facilities or opportunities for education. If the level of education continues to be low it is bound to adversely affect our economic progress.

There is, however, another side to the picture which reveals the peculiar dilemma of development. With all the drop-outs from various standards in the schools and colleges of India, our education is still growing faster than the capacity of our economy to absorb intelligent and well-educated persons. The number of unemployed educated persons in India is so large that it exceeds the population of a big industrial city like Poona. The number of graduates

and post-graduates who had registered at the various Employment Exchanges in the country by the end of 1969 was 2,15,000. Fifty thousand engineering graduates and diploma holders are without suitable jobs. Unemployment among educated young men is increasing at an alarming rate of 16 percent per year. Hence, the most difficult task before us is that of increasing the rate of growth of the economy at a speed which will enable the industries to absorb all the eligible people coming out of high schools, colleges and technical institutions.

As in the case of the educated unemployed, the number of uneducated unemployed is also growing fast. By the end of 1969 we had a backlog of 10 million unemployed or partially unemployed persons in the rural areas and of over three million in the cities. At the end of every Plan period, the number of unemployed increases, in spite of the new opportunities and jobs created. A fact

that should, however, be taken into consideration is that all those who register themselves with the Employment Exchanges are not without jobs. A recent sample survey of 18,000 job-seekers in 51 Exchanges showed that only half of them were without any jobs at all. If the results of this survey are true everywhere, this would mean that out of the 3.4 millions who are on the live registers of the Employment Exchanges, 1.7 millions had no jobs at all. But even this figure is quite big. As the number of unemployed persons is increasing every year, we must expand our industrial and agricultural activity extensively in order to absorb all those who are unemployed. The vast number of the unemployed in the country is a graphic and grim reminder of the unfinished tasks that lie ahead.

5 PROBLEMS OF DEVELOPMENT

The High Cost of Growth

Our achievements, as we have seen, are impressive, but the size of the unfinished task is equally substantial. Although we have made progress, it has not been fast enough. We are still far from the economic and social goals set out in our Constitution. This is due to the numerous weaknesses and impediments, both natural and man-made, which block our way and which need careful examination at this stage. Many of these difficulties are inherent in the process of development itself and have to be faced by every nation that embarks upon a gigantic programme of social change.

It is one thing to conjure up a dream and another to realise it. When we worked out our plans on paper, we could not fully foresee the magnitude and complexity of our difficulties and handicaps. The transformation of an ancient society into a modern one, the ushering in of secular democracy and the building up an economically prosperous society are tasks that call for an extraordinary amount of material resources, intelligence, hard work and luck. Not all of it has been coming forth in the right measure at the right time.

Let us start with the simple example of a man who wants to construct a house. He consults an architect for planning the house and estimating its cost. Then he himself or a contractor undertakes its construction. If all the materials and skilled workers required for building are available and if he has the necessary finance with him, the house may be ready in time. But he cannot be sure. This is because unforeseen difficulties crop up. The foundation may pose a problem due to the depth of the rock below. An underground stream may flood the whole foundation. If these difficulties are solved, then the mason or the carpenter may commit some mistakes. Occasionally bricks, stones, wood, cement and steel may either not be available or the prices of some of these articles may suddenly shoot up. Many such difficulties may delay construction and a much larger expenditure than first thought of may be necessary.

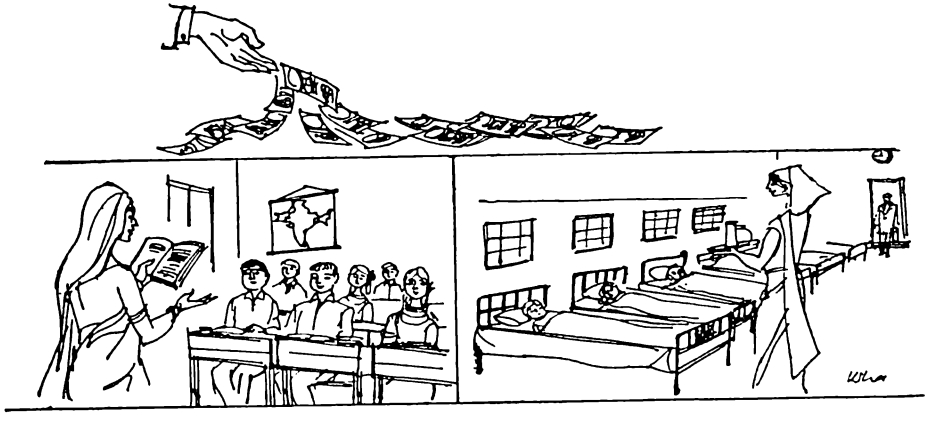
If a small operation like building a house presents so many difficulties, one

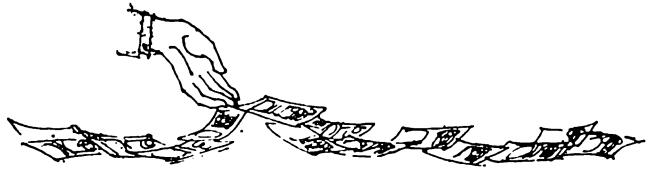
can imagine how complex and difficult must be the task of building a nation. We were required to spend huge amounts of money for various purposes. Though we withdrew our savings from the Bank of England and though we received foreign assistance in one form or the other this amounted only to a small fraction of our requirements.

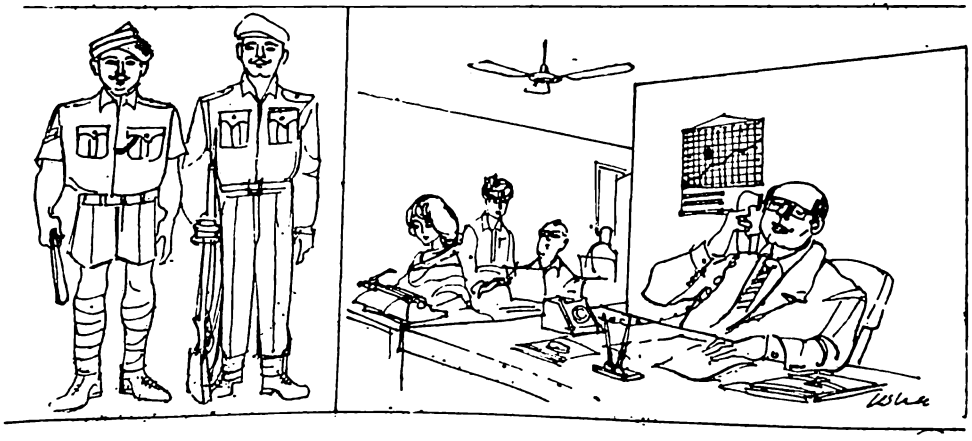
As more and more industries were established in the country, our requirements of foreign raw materials, machinery and technical expertise grew rapidly. As our exports did not increase sufficiently rapidly, we were faced with the seemingly perennial problem of finding foreign exchange with which to purchase various articles from other countries. In 1955-56 we imported foreign raw materials for our factories which cost us Rs. 250 million. Within ten years the demand for these articles rose threefold and in 1966-67 we imported foreign raw materials worth Rs. 800 million. This forced us to borrow larger and larger amounts from foreign countries. We have not only to repay the loans but have also to pay huge amounts of money as interest charges.

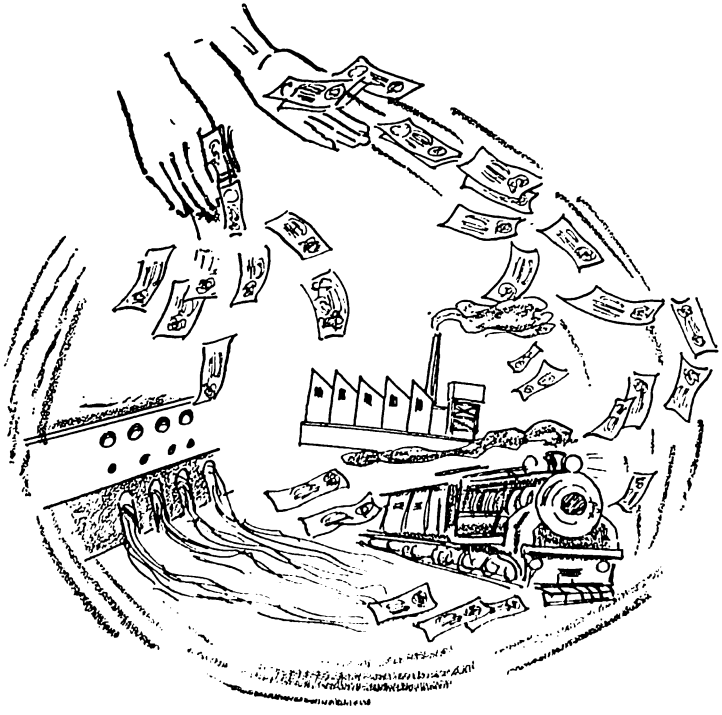
We were incurring considerable development expenditure. We were spending money for starting new industries, building of roads and railway lines, constructing high dams across the rivers to provide irrigation to our fields and electricity to our factories. This is developmental expenditure which raises production but does not cause any increase in prices. But we also had to spend heavily on non-developmental and welfare items. These provide jobs and incomes to millions of people but do not result in an increase in the production of goods.

There has been a big rise in expenditure under non-developmental heads

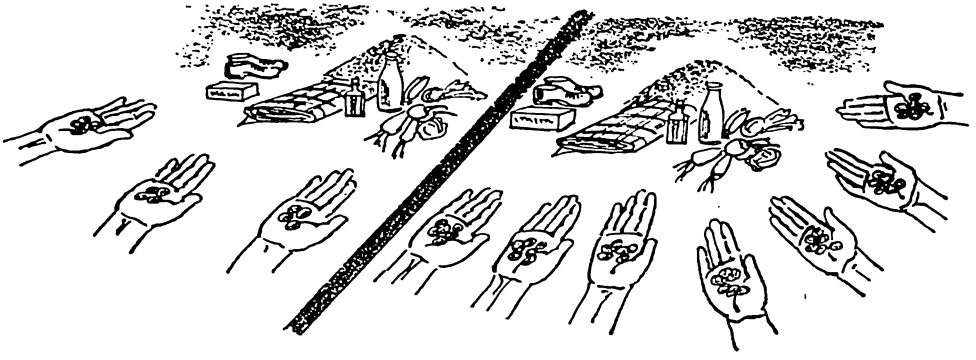








like administration, police and army. Expenditure on health and education is also non-developmental expenditure and it has been increasing rapidly with the increase in the number of schools, colleges, universities, hospitals and dispensaries. Non-developmental expenditure, i.e. expenditure on welfare and administration, results in creating more employment without a corresponding increase in production. More and more persons go to the market with additional money in their pockets. Production of consumer goods and services is not growing so fast. This creates scarcities and the prices start shooting up.



When we started on the road to economic development we looked forward to a long period of peace and thought that we had a friendly world around us. For a long time the wisdom of spending money on defence was questioned in certain quarters. But this attitude underwent a change when the Chinese invaded India in 1962. Then followed the conflict with Pakistan in 1965. Immense resources which would have been available for development had to be diverted to defence. This unforeseen non-developmental expenditure resulted in a further rise in prices. Thanks to our industrial base and some spadework in the direction of self-reliance in defence materials, we were able to increase our armaments without much dependence on other countries. However, the two wars and a comprehensive defence programme put a severe strain on our economy and our resources. New industries were created for producing defence material which cannot find its way into the consumer market. Naturally, prices of consumer articles have been soaring for many years.

All these factors had a depressing effect on our plans. As if this were not enough, crops failed in many parts of the country in 1965, 1966 and 1967. The farmers had little or no money to buy articles produced in the factories. As a

result, the demand for many products decreased. As the factories were not able to sell their products they had to retrench many of their workers. As the foodgrains production had fallen, the prices of foodgrains rose. The Central and State Governments could not find enough funds for the projects on hand. Naturally production in a number of basic and engineering industries had to be slashed. This caused a general slump. It can be seen that the tempo of industrial activity is intimately connected with agricultural production. Industrial production rises and falls with agricultural production.

The increase in prices caused a wage increase in the form of enhanced dearness allowance. As a result, both the developmental and non-developmental expenditure shot up. The workers in the big projects, in the fields and the factories had to be paid more. The prices of raw material and land values increased. The teachers, the clerks, the scientists, the doctors, the service men, the policemen—all had to be paid much higher salaries which were mostly spent on consumer goods. This in turn resulted in a further rise in prices and in more expenditure. It was a sort of vicious circle. In spite of the recession after 1966, prices did not come down. The difficulties of development only increased. A factory which would have cost, say, two million rupees in 1950 would now cost more than eight million. The last two years of the Third Plan were rather difficult. Many schemes had to be abandoned and the Plan almost came to a standstill. At the end of the Third Plan, we had to take recourse to small annual Plans.

Planning in a liberal democracy has some limitations. All the objectives —social and economic—need to be worked out in detail by the experts. But the views of the experts have to be explained to the people. Their cooperation has to be sought for implementation of various schemes. Political and social persuasion is essential for securing the active cooperation and participation of the people. But this has not been forthcoming in amp le measure. There are powerful pockets of resistance to certain changes. For example, we aimed at land reforms and sought to implement them by laws making tenants and actual tillers either the owners of the land they tilled or at least ensuring for them security of tenure. But in a number of States the laws remained only in the statute books and were not implemented at all due to the strenuous resistance offered by politicians and legislators representing the interests of those who were likely to lose their land. Provisions about ceilings on holdings of land were seldom enforced in a number of States. Where these were implemented, many landlords were able to circumvent the provisions of aw by fictitious transfers and benami transactions.

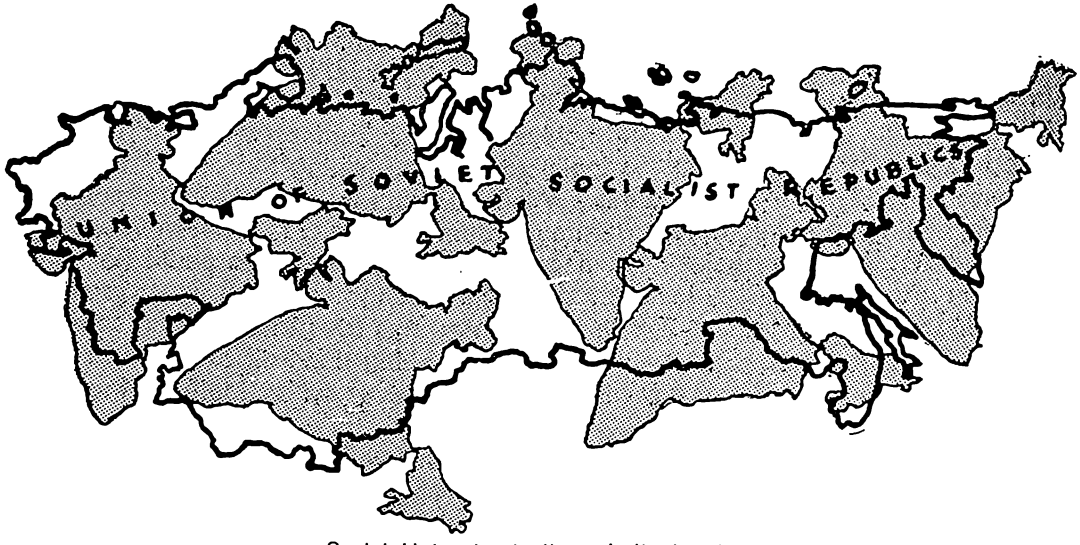
As most of the big schemes needed enormous amounts of money, it was essential that all the taxes and levies were paid promptly and in full by those on whom these had been imposed. Whenever the budgets were presented in Parliament and the State Assemblies there was a stiff opposition to any increase in taxes. Tax evaders and holders of illegal finances were in a position to bring pressure to bear on the legislators for frustrating the efforts to raise resources needed for the schemes. When attempts were made to raise compulsory savings on which the government promised to pay interest there was a nation-wide agitation against the measure. That this agitation could be built up soon after the Chinese invasion shows the strength of these unscrupulous individuals. Each interest group in the country thus tries to shift its responsibilities to other interest groups and all this is being done all the time in the name of the people. Thus any move to impose taxes on agricultural income evokes stiff opposition.

In view of the constant rise in prices, schemes which would have cost Rs 10 million in 1951 cost Rs 40 million now. Hence the need for mopping up resources has been ever increasing. Due to stiff resistance on the part of various interest groups to undergo any sacrifices for the cause of the nation's economic progress, the gap between our needs for money and the availability of income from taxes and loans increased and the government was forced to take recourse to deficit financing by printing more and more currency notes. A situation similar to one during the war years continued unabated for over two decades of Independence as a result of which prices received a further push upwards.

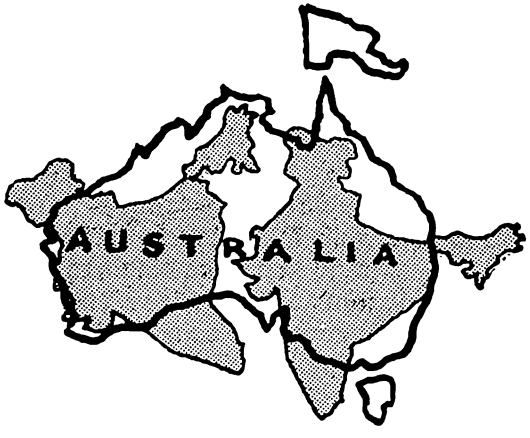
The Population Explosion

At the time of independence, India was a nation of 340 million people. Now its population is estimated to be over 500 million. The addition to population now is around 13 million a year, i.e., more than the total of Australia's inhabitants. This population explosion presents us with a problem of gigantic dimensions.

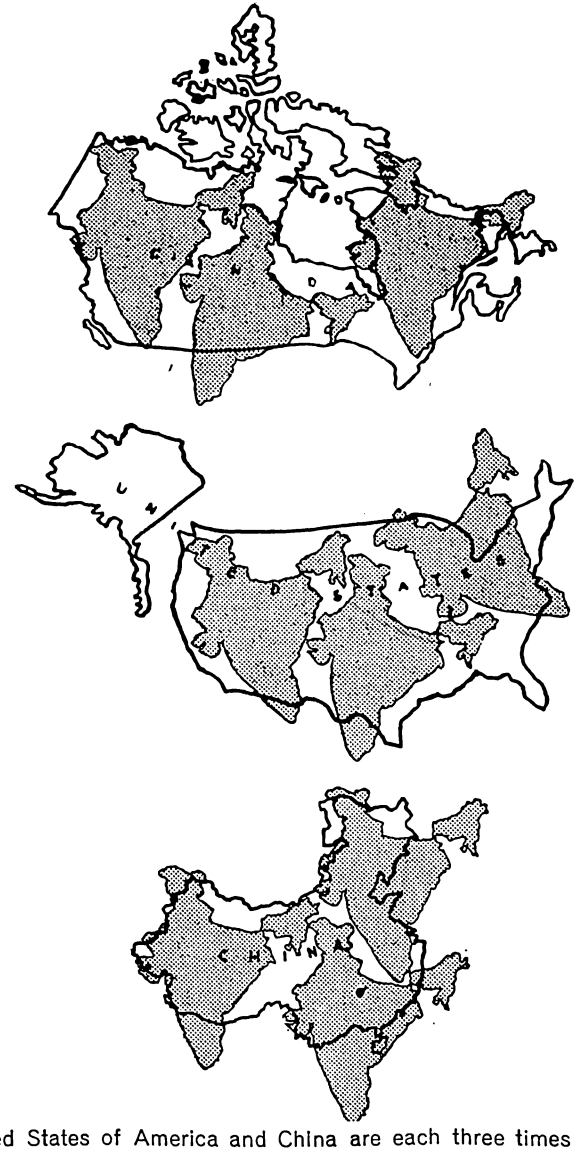
The high growth rate is partly due to the lowering of the death rate from 27.4 per thousand in 1951 to 16 now, while the birth rate has remained constant. The expected span of life of an average Indian has increased from 27 years to 52 years, thanks to the improvement in health services. The rate of infant mortality has also come down. All these factors have combined to aggravate the problem created by increasing numbers of Indians. This increase has raised the density of population, and as a result we are being crowded more and more into a limited area. The following illustrations give an idea of the extent of this overcrowding.



Soviet Union is six times India in size

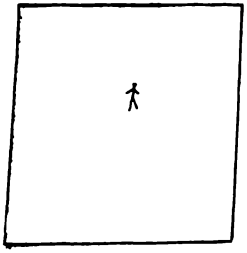


Area of Australia is twice that of India

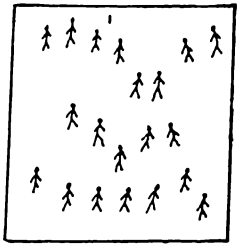


Canada, United States of America and China are each three times the size of India

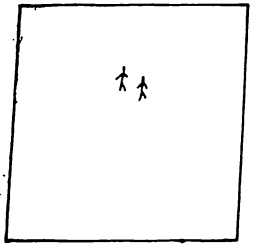
POPULATION PER SQUARE KILOMETRE



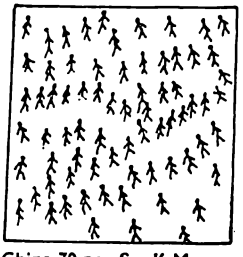
Australia 1 per Sq K.M



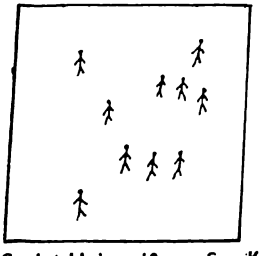
United States 20 per Sq. K.M



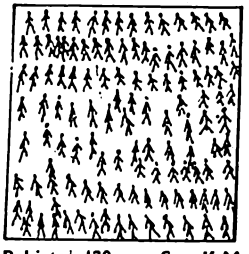
Canada 2 per Sq. K.M.



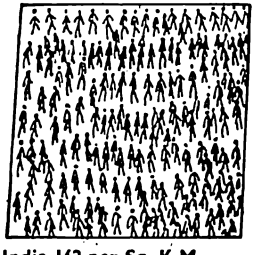
China 70 per Sq. K.M.



Soviet Union 10 per Sq. K.M.



Pakistan 120 per Sq. K.M.



India 162 per Sq. K.M.

We have only 2 per cent of the total land mass of the earth. This 2 per cent land mass is now holding and supporting 14 per cent of the world's population. The number of people demanding a share in the total quantity of food, clothing and shelter that we have goes on increasing. And, as a result, any increase that we manage to bring about in the production of articles of basic needs is quickly nullified by a more than equal increase in the number of people clamouring for the newly created goods and amenities. Our need for basic necessities is increasing at the rate of an additional 31 million tons of food grains, 1.5 million houses and 160 million metres of cloth per year. But after about five years, the increase in population is expected to cross the 15 million mark and even an additional 31 million tons of foodgrains, 1.5 million houses and 16 million metres of cloth would not be enough for the fresh additions to our population.

If only our population had remained constant, the economic advance we have made so far would have by now made us self-sufficient not only in food but also in many other items. But since Independence the increase in our population has been more than the present population of many countries like Pakistan, Indonesia, Brazil, Japan or France. This has created serious problems for us.

The population explosion has also affected our savings and investments. Savings are possible only if we produce more than what we need for consumption. If we are able to save more we would be able to invest in industries and development plans. But there was such an enormous growth in our population that though our net national product increased from Rs 1,33,080 million in 1960-61 to Rs 1,68,300 million in 1968-69 (at 1960-61 prices) our per capita income rose only from Rs 306 to Rs 319. This means that while the increase in production was 26 per cent, the increase in per capita income was only 4 per cent. When the net national product rose by Rs. 35,220 million, our per capita income rose only by a paltry sum of Rs 13. It does not need much explanation to conclude that the capacity of the people to save has not increased. If our population had remained more or less steady or had only slightly increased, the per capita income would also have increased as impressively as the net national product, leaving an adequate margin for savings and investments. Much of the land utilised for growing foodgrains would have been diverted to the production of industrial raw materials like cotton, sugarcane, oilseeds, jute, etc., and our dependence on other countries for agriculture-based industrial raw materials would have been reduced. More savings by the people would have resulted in more investments in new industries and a faster rate of industrial growth.

We are not in a position to take advantage of the technological revolution which has given the world better machines for increasing productivity, reducing the number of workers required to produce the same quantities and bringing down costs of production. Let us take the example of our steel industry. India has an abundant supply of iron ore. It is found in most of the States. We have a number of big steel mills. Yet we export much larger quantities of iron ore than the steel mills consume. Making steel is not as profitable in India as in Japan. We employ 31,000 workers to produce, on an average, one million tons of steel. On the other hand, Japan produces the same amount of steel with only 1,000 workers. Thus in Japan one man can perform the job which is done by 31 men in India. There is so much of excess labour in our steel industry that we are now thinking of doing away with fresh recruitment for our new steel projects. Our steel is so expensive that we cannot compete in the world market.

As in the case of the steel industry, excess labour is employed in several other industries such as jute, textiles, sugar, cement, tea, coffee, the railways and so on. As the cost of production of articles produced in India is high, we find it difficult to sell our products in other countries. But we cannot do without exports. Hence we have had to devalue our currency. We had to agree to accept less dollars, less pounds and less roubles for our rupee. Thus while in 1947 we could purchase one American dollar for three rupees and fifty paise, we now have to pay seven rupees and fifty paise. In other words, the Americans used to get Indian articles worth three and a half rupees per dollar in 1947; now they are able to get articles worth seven and a half rupees per dollar.

But even devaluation does not help much. It has been very difficult to introduce technological advances in existing industries because of the fear that if better machines are used we would be required to reduce the number of existing workers in a factory. As a result we are running our cotton textile and jute factories with old-fashioned machines so that more workers can be employed to run these machines.

On the eve of Partition, Pakistan had very few industries. When Pakistan started her programme of industrialisation she could afford to install modern machines in her cotton textile and jute factories. As a result, Pakistan is in a position to produce cloth and jute goods at a much cheaper rate than we. Hence Pakistan has emerged as a very powerful competitor against India in the world market. If other countries set up modern automatic machinery for producing articles which we sell in the world market, they would be able to sell these at such low prices that we would be forced either to modernise our machinery or to withdraw from world markets.

Regional Disparities

As industrialisation progressed, regional disparities in industrial and economic development widened. New industries normally need those articles and services which are already present at places where old industries exist. Such places possess the necessary infrastructure of transport, marketing facilities, electricity, water supply and so on. Skilled workers and managerial personnel are also easily available in industrial towns. As a result, most of the new industries were set up around existing industrial centres such as Bombay, Calcutta, Delhi, Kanpur, Ahmedabad, etc. The States which were already industrially advanced, had the further advantage of faster industrial growth and the industrially backward States lagged far behind. Hence States like West

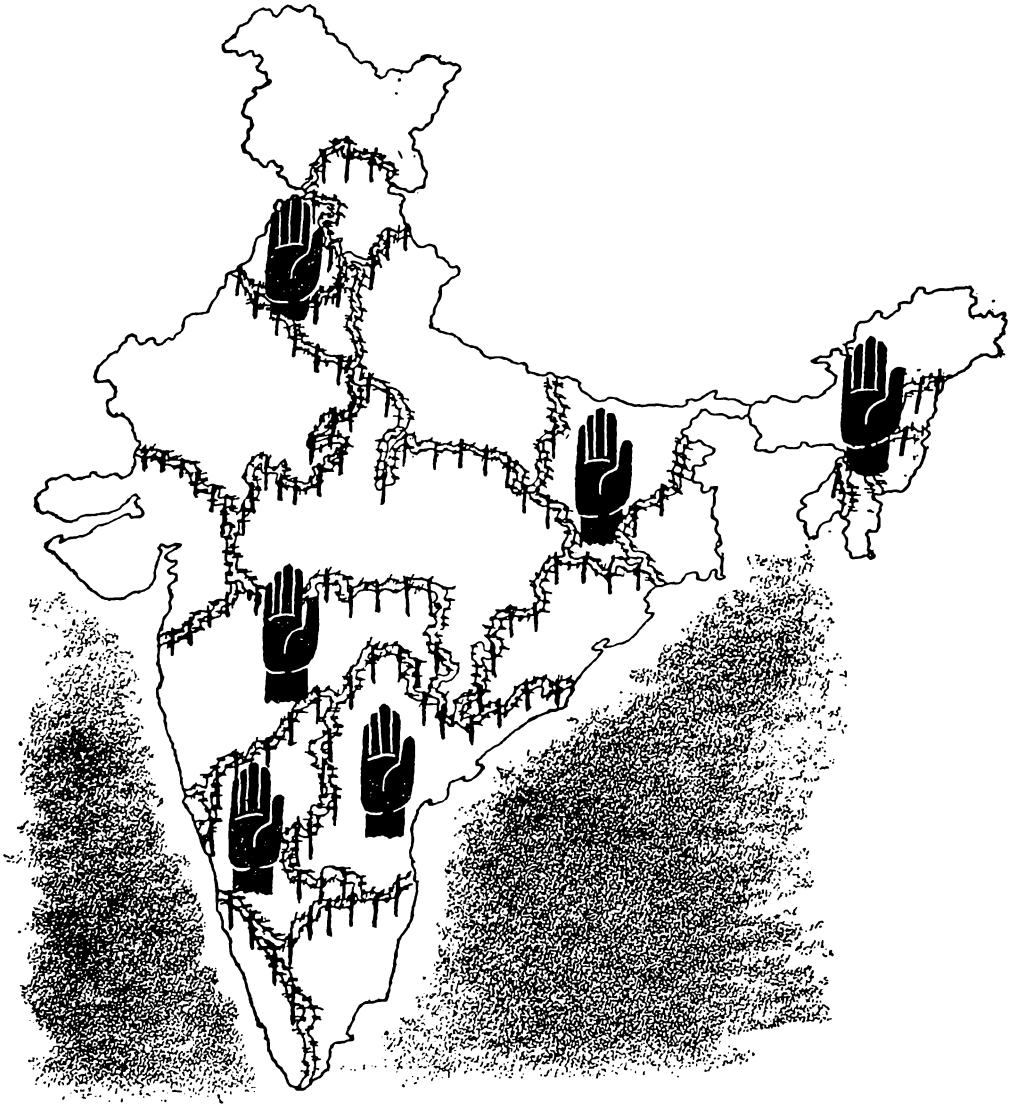
Bengal, Maharashtra, Gujarat, and Tamil Nadu saw a big growth in industries. These States also attracted small-scale industries. A survey of small-scale industries in the country at the end of 1968 showed that out of a total of 125,000 units in the country as many as 80,000 were located in Maharashtra, Delhi, Tamil Nadu, West Bengal and Punjab. Even in these States, the small industries had clustered around cities like Bombay, Delhi, Madras, Calcutta and Ludhiana.

By the end of 1966, out of the 65,000 big factories in India, the Northern States of Punjab, Haryana, UP, Rajasthan, Jammu and Kashmir, Madhya Pradesh and Himachal Pradesh together had only 8,000 factories. As against this, Maharasthra alone had 9,100 factories. The value of manufactured articles in these seven States was only Rs 2,200 million, while articles manufactured in West Bengal alone were worth over Rs 3,650 million.

Due to the population explosion and regional disparities, people in search of jobs started moving from less developed regions to more developed regions within the country. Owing to the huge industrial expansion in the States like Maharashtra, Gujarat and West Bengal, qualified and able persons from other States migrated to these States. Bombay city, which at one time had a majority of Marathi-speaking people, today has a larger proportion of non-Marathi-speaking population. Like-wise Calcutta city also has a sizeable non-Bengali population. In these and other similar places, competition for securing jobs expresses itself in language conflicts between the 'sons of the soil' and the 'outsiders'. Bihar, Madhya Pradesh and Orissa, where big public sector projects came up, also saw migrations of non-Biharis, non-Madhya Pradeshis and non-Oriyas towards these huge industrial complexes. Here also the competition for jobs expresses itself in slogans like Bihar for Biharis, Assam for Assamese, Bengal for the Bengalis and Orissa for the Oriyas. These slogans have been converted into powerful demands for reservation of jobs for the sons of the soil. This claim that the local people should be given preference over outsiders has spread far and wide in the country. Thus invisible walls have been built at the boundaries of the various linguistic States in the country and these seem to be rising higher every day.

Over-population, scarcity of jobs, regional imbalances and the walls built round every State to deny entry to the non-residents seeking a livelihood, tend to produce a feeling of alienation of one group of Indians from other groups. With the employers in some States recruiting only local people, the very foundation of our nationalism is put in jeopardy. The constitutional right of every Indian to settle in any part of the country is being eroded daily almost everywhere. The principle of equal and common citizenship is being negated in

practice. The politics of scarcity is destroying, even during our own lifetime and under our eyes, our goal of building up a secular, modern, liberal, welfare state and damaging our sense of solidarity.



The rot is spreading to areas and regions within the linguistic States also. Just as there are some advanced and some backward States, there also are, in each State, advanced and backward regions. This has led to separatist movements within the frontiers of almost every State in the country: Western UP and Eastern UP, North Bihar and South Bihar, Telengana and the coastal parts of Andhra, Vidarbha and Maharashtra, Saurashtra and Gujarat, old Mysore State and the new Mysore State, Jammu and Kashmir, Hill State and Assam, and so on. At places, even inter-district rivalries within one State are seen raising their head, making fantastic demands for reservation of funds and facilities for small areas.

Our development projects have to be located near geographically suitable places. Irrigation dams could be located only at certain spots in the country. The Oil and Natural Gas Commission could operate only in those regions where oil is available. Heavy steel projects had to be built near places where there was an abundant supply of iron ore and coal. Because of geographical advantages certain parts of the country have developed fast while many other parts of the country have complaints that they have been neglected in development. As total resources for development are limited and as there are certain geographical and economic compulsions in selecting sites for big projects, a sort of a politics of poverty is being witnessed in the country. Whenever any project is pecided upon, a tug of war commences for locating it at one place or another. All possible arguments are advanced to press the case for a particular site. These claims are refuted by counter-claims for some other sites and there is usually a big time lag between a decision and its implementation.

Delays and Shortages

Delays in the execution of schemes have become so common that cases of completion of projects within the planned period are regarded as exceptions. In many cases the delays have been dangerous and have cost us heavily. A few examples would be useful. As against our requirement of 85,000 tons of copper per year we produce only 9,000 tons and have to import huge quantities at a very high price. In order to reduce our dependence on imports of copper we decided to look for copper deposits in every nook and corner of the country and to exploit these wherever possible. Accordingly, it was decided to start manufacture of copper near Khetri in Rajasthan where copper ore was discovered. The Khetri project was due to be ready in 1964. For various reasons, some of them avoidable, this project has been delayed for several years and according

to the present indications it would be completed in 1973. Meanwhile, the cost of the project has increased by many crores and we have had to import more and more quantities of copper from other countries. If the project had been completed in 1964, we could have saved foreign exchange on imports of 31,000 tons of copper per year for almost ten years.

Similarly, the first stage of the Rajasthan canal was expected to be completed in 1968 at the estimated cost of Rs 1,840 million. But between 1963 and 1968 only half of the proposed project was completed. Instead of building the canal for a length of 122 miles in five years we could build a canal of the length of only 60 miles in six years. The amount spent so far was only Rs. 570 million. In the meanwhile, due to the delays and rise in cost of production, the first stage would cost at least Rs. 400 million more than was earlier estimated. Thousands of hectares of land could not be brought under the plough, and if we calculate the loss in food and other agricultural production, the damage becomes really serious. This is only one example. It has been estimated that due to delays in execution of various irrigation projects, the cost of the projects went up by Rs. 10,000 million.

Again, the time-table for construction of the Bokaro steel plant has also been upset. If the plant had been built within the planned period we would have saved on imports of flat steel which was to be manufactured at Bokaro. The delays have also resulted in a rise in the cost of construction. Such delays have been very costly to the nation. The losses in terms of rise in cost of construction and foreign exchange in a number of such delayed projects have slowed down the developmental processes.

Just as there are delays in execution of projects, there have been delays in execution of reforms also. Thus in a number of States the old land structure still persists. The laws passed to give security of tenure to share-croppers, placing ceilings on holdings, etc., have remained more or less on the statute book. Ways have been found by ingenious landlords to circumvent the regulations about land ceilings by making false transfers in favour of minors or non-existent relations. Hence, in spite of the legislation, some big peasants continue to hold hundreds of hectares of land which should have been distributed among the landless. Such a situation leads to tensions and conflicts which often erupt into violence. In some parts of the country, there have been violent peasant movements to hasten land reforms.

The progress in consolidation of landholdings has also been slow and quite often haphazard. A survey carried out by the Planning Commission in eight States showed that the speed of consolidation of holdings in those States was

so slow that at this rate we would take another 50 years to complete the work. The losses suffered by our country due to the delays in the consolidation of holdings can be seen from the fact that where such consolidation has taken place correctly, as in the Punjab, increase in agricultural production has been as high as 5 per cent.

Another set of problems has been created by unexpected shortages resulting from unrealistic estimates in the planning of certain projects. For instance, after the Chinese aggression in 1962, we took a fresh look at our future requirements of engineers in the new circumstances in which we had to expand our defence industries along with regular developmental activities. It was then thought that we would need thousands of more engineers and promptly decided to start many more engineering colleges and polytechnics. By the end of the Third Plan, 10,000 more engineers passed out of the colleges and polytechnics. However, this calculation of our future requirements proved disastrous. The economy could not grow as fast and we witnessed for the first time after Independence, the strange phenomenon of unemployment among engineers. Our economy will not be able to absorb all the new engineers for a long time to come and perhaps the phenomenon of unemployment among engineers would continue for another decade. This over-estimation of our requirements has resulted in an huge additional expenditure on new engineering colleges and polytechnics and expansion of the existing ones. As only very bright students get admission to engineering colleges and polytechnics, this also means a considerable waste of talent.

It is always difficult to predict about the future but sometimes we have to pay a heavy price for wrong estimates about future requirements. Similar exaggerated estimates have also resulted in setting up of some plants which are bigger than what we needed and also starting of two projects when we needed only one. On account of this, we have some factories which have a capacity to produce far more than what we can sell in the country or in foreign markets. Naturally, many giant factories are now working below their capacity. In technical language, this means that they are working with idle capacity. As they are not being fully utilised, they are running at a loss.

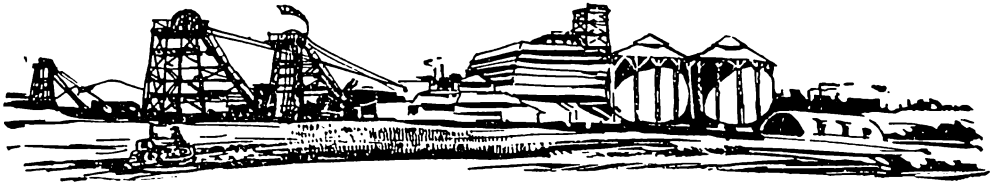
This poses a big dilemma for us. We need more factories and more industries so that we can find jobs for the unemployed millions. However, we have both in the public sector and private sector many industries which are running below capacity. Despite this we will have to make estimates of our future requirements of different products and trained personnel. We will have to take all these factors into consideration while making detailed plans for industrial expansion.

Over-supply of certain categories of workers is one side of the paradox. The other side is shortages of some urgently needed material. As our industrial production shot up, the requirements of industrial raw materials, especially of non-ferrous metals in which we are very poorly endowed, increased by leaps and bounds. Our requirements for copper are about ten times greater than what we produce. In the next four years our needs will jump to 125,000 tons. But even with Khetri and the proposed expansion of the existing plant of the Indian Copper Corporation at Ghatshila we shall not be able to produce for many years to come even a third of our total requirements. Though we have huge reserves of bauxite, these have not been adequately utilised with the result that we had to import 38,000 tons of aluminium in 1967-68. The need for zinc and lead is also growing at a fast rate. We are importing non-ferrous metals worth Rs 1,000 million at present. It is feared that our import bill might rise above Rs 1,500 million in 1975. Hence there is a great need to concentrate our efforts on exploration of deposits of non-ferrous metals. The huge rise in our requirements has pushed up the prices of these metals; consequently costs of production of finished products have gone up. But it will not be enough to locate the deposits of copper, zinc, lead, nickel and such other non-ferrous metals. Once we locate these, we would also have to see that delays as in the Khetri project do not occur.

As more and more farmers took to scientific farming, they needed increasing quantities of chemical fertilisers. Though we set up many fertiliser factories in the last decade the demand has out-paced supply. Consequently, every year we are importing larger quantities of fertilisers. In 1960-61 we imported fertilisers worth 187 million dollars. The import bill jumped to over 450 million dollars in 1968. As in the case of the Khetri copper project many fertiliser projects have been delayed at every stage. With devaluation we have had to pay more for the imports of non-ferrous metals and fertilisers. The only solution is rapid expansion of the indigenous output of these materials. But this means avoidance of delays by the people who sanction or execute a project.

Technology has been advancing at a fantastic rate in the developed countries. Processes and methods become obsolete within a year or two by which time newer and better processes are developed. Our scientists and technicians have to be alert and keep themselves abreast of the advances in technology. New skills have to be acquired and improved upon. Modern industrial culture makes insatiable demands on efficiency. No industrial progress is possible without a constant improvement in efficiency—in administration, setting up of plants, running them and improving upon methods of production. As we have

not been able to make rapid advances in technology ourselves, we have been employing foreign experts. In technical language this is called import of know-how. Our dependence on foreign know-how has been a stumbling block on our path to self-reliance. Fortunately, in many fields our technicians have acquired self-sufficiency. But nothing is stable and constant in this fast changing world of modern technology. We cannot afford to be complacent.



6. AT THE CROSSROADS

Centre-State Relations

The gains of two decades of development, and the strains of the effort that has gone into it have brought into sharp focus several social and political issues. Thinkers, policy-makers. planners, administrators and plain citizens are all equally concerned about these issues, which lie at the centre of the great ferment of ideas taking place in the country today.

The most important controversy relates to Centre-State relations. Barring a few exceptions, only one political party, the Indian National Congress, was in power both at the Centre and in the States for full two decades. As a result, the normal political processes, pulls and pressures did not operate here to the extent they operate in older democracies. There were a few tensions between the Centre and the States in the past; but these were not strong or significant enough to put the federal principle to test.

The political picture changed radically in 1967. Non-Congress parties were voted to power in half a dozen States, while the Congress party continued to be at the helm of affairs at the Centre. Relations between the Centre and the States today vary with the attitudes towards the Congress of different parties in power in different States. But the more important factor is the sense of grievance in some States at the disparities in the economic and social conditions of different regions. There is no gainsaying the fact that the economic development in the country has been somewhat uneven. As mentioned in an earlier chapter States like Maharashtra, West Bengal, Gujarat, Tamil Nadu, Punjab and Haryana have made great strides. Others, like UP, Rajasthan, Bihar, Orissa and Kerala, have lagged behind. In the process, the gap between the affluent States and the poor States has widened, creating inter-State tensions and a clamour on the part of some States for more financial assistance from the Centre and a greater share in investment and growth.

Some States demand powers to impose taxes on items which were, so far, being taxed by the Centre. Some complain that the Centre is playing altogether

too heavy a role in agriculture and education which are State subjects under the Constitution. There has been a demand for the curtailment of Central Ministries of Agriculture and Education. There has also been a demand that the subjects over which both the Centre and the States have a common jurisdiction should be transferred to the States. There has been some controversy on the role of the Governors of the States also.

Failures or shortfalls in the development programmes of the States are blamed on the niggardly attitude of the Centre in assigning finances to the States. Sometimes the Centre is accused of over-reaching its constitutional authority by undue interference in the affairs of the States. The controversy regarding Hindi being the national language has also added a certain sharpness to Centre-State tensions.

On the other hand, it is often argued that the States depend too much on Central assistance and that they are doing little to mobilise their own resources. Some of them are even accused of mismanaging their economic affairs. No less responsible a body than the Finance Commission has blamed the State Governments for running commercial schemes like irrigation and electric power under heavy losses.

It is further argued that in a federal system like ours, the Centre has immense responsibilities, particularly in regard to law and order and defence, and in giving shape and direction to the plans and programmes of national development. It has to go to the aid of States at times of calamities like floods, earthquakes and famines, and at times of serious communal or other disturbances like the recent ones in Gujarat, Bengal and Maharashtra. The Centre has to maintain a vast communication system; run a chain of national laboratories; conduct surveys for mineral resources and develop water and power resources. It is inevitable that a country which is concentrating all its energies on development should have a strong Centre to co-ordinate numerous big and small activities that benefit the nation as a whole. Had the Centre not taken the initiative in agricultural research, the ' green revolution ' in agriculture would have taken a longer time in coming, or it might not have come at all. The Centre's contribution to the country's progress in education, particularly in the field of technical education, is also not to be under-rated. The five institutes of technology at Kharagpur, Kanpur, Delhi, Madras and Bombay were started by the Centre and they are even now being run by the Union Education Ministry. These institutes have standards of instruction that compare well with the best institutions abroad. No single State would have been able to start institutions of such calibre and of such importance to the cause of national development.

Men or Machines

The controversy for and against the use of machines to replace human labour is as old as the industrial revolution. When the new machines made their first appearance a couple of centuries ago, old-fashioned spinners and weavers and other handicrafts-men were thrown out of jobs. They started a movement for destroying these machines. This movement became famous as the 'Luddite Movement'. It, however, could not stop the industrial revolution. The use of machines in agriculture and industry naturally tends to reduce the need to employ human labour. Previously it was only the unskilled manual labour which the machines tended to replace. In modern times, the problem has acquired a new dimension, as some of the more sophisticated machines like computers and other electronic devices are ready to replace the more skilled varieties of labour.

In India, the controversy regarding mechanisation is related to our unemployment problem. Every year the ranks of the educated unemployed are swelling. Introduction of labour-saving devices and automation will worsen this situation. On the other hand, the compulsions of rapid economic development make mechanisation of production processes absolutely essential. The choice is difficult, but it is clear. We have to choose between having a bullock-cart economy or a modern technologically advanced economy.

When production, both industrial and agricultural, trade, imports, exports and volume of business, all increase beyond a certain level, it is almost impossible to do without modern sophisticated machines. Take the work at our ports, for instance. Our ports now handle almost over ten times the volume of goods they were handling before Independence. If all this cargo were to be handled by manual labour, the ships would have to wait in the ports for months together causing waste and delays. Moreover, iron ore and heavy materials of this kind can be loaded and unloaded more quickly and efficiently by huge automatic machines.

Let us take another area where automation and use of sophisticated machinery is inevitable. During the last two decades the number of telephones in the country has multiplied very fast. To handle this growing traffic of telephone calls, both local and trunk, a new and highly sophisticated system called the 'cross-bar' system has been introduced in various towns. The telephone users at these places can directly dial persons in far off towns. Similarly, when it becomes humanly impossible to handle huge and complicated tasks, the use of complex machines like computers cannot be avoided. We can dispense with

sophisticated machines only if we want to have a primitive type of economy. Clearly, we do not want this. Nor can we afford to put the clock back.

What stands in the way of rapid modernisation and sophistication of our industry and agriculture is our inability to make fuller use of the scientific and technical talent available within the country, and slowness in applying the results of scientific research to industrial and agricultural techniques and processes. And this brings us to the debate that is going on in the country about the functioning of our national laboratories and the utilisation of indigenous technological talent. Our industries do not seem to be making full use of the processes developed by our scientists. As a result researches in our national laboratories have not contributed as much to the increase in the national wealth as they could. Strangely enough, this is used as an argument against the current standard of research in India.

Though it is true that scientific research in the country has not helped much to increase our national wealth, the reluctance by the industry to exploit scientific achievements in our laboratories has led to a vicious circle. It has depressed the zeal to develop new processes and products. As a result, a number of institutions have engaged themselves in research on the same problem. One senior scientist recently stated in a public speech that the position was not much better in the universities where the standards of research were falling and there was also much duplication of research work. But lack of encouragement has resulted in inevitable frustration. The frustration has led to personal and group rivalries. The vicious circle can be broken only if determined efforts are made to exploit the results of earlier research and to relate new research to the pressing needs of agriculture and industry.

Despite all these drawbacks, we have achieved a measure of self-reliance in agricultural research, mechanical engineering, development of metals and mines and nuclear science. In the fields of organic chemistry, inorganic chemistry, chemical engineering and petro-chemical industry, our progress has not been satisfactory. This need not dishearten us unduly. In an era of rapidly advancing technology no country can ever hope to be wholly self-reliant. Hence we cannot altogether do away with foreign know-how, employment of foreign technicians and even collaboration. What is necessary is that we should not repeat the earlier mistakes. We must find a way to make full use of the processes developed and know-how available within the country. Once we remove the causes of frustration among our scientists, they will be able to make significant contributions to the development of the national economy and the enrichment of the people's lives.

Social Tensions

For the last few years one cannot open a newspaper on any morning without being attracted by the news of some violent outburst in one part of the country or the other. Communal riots, student unrest, bundhs, looting of shops, or burning of buses, and destruction of public property have become things of everyday occurrence. What is at the root of these angry outbursts, this violence? Political commentators and social scientists offer a variety of reasons for these disorders in our society. The main cause, according to them, is what is described as the ' crisis of rising expectations '. There is in some quarters, particularly among the young, a certain measure of impatience with the inevitably slow processes of development. There is a longing for quick results, quick changes. If these do not happen, there is frustration, which often expresses itself in acts of violence and defiance.

Another cause of tension in our society today is disparities and imbalances in growth, which we have already discussed in an earlier chapter. While the benefits of development go to all regions of the country and all sections of the people, they do not do so in equal measure. At early stages of development, there is a tendency for the rich to become richer. New pockets of affluence develop in areas and levels where developmental activity is most intense. In other areas, and at other levels of society, deprivation deepens, giving rise to new rivalries and conflicts between one region and another, between one section of the population against another.

But economic factors cannot wholly account for the presence of tensions and incidence of disorders in our society. Social and political causes are responsible for the prevalence of tensions between one community and another, between one linguistic group and another. The Assamese-Bengali riots in Assam some years ago, the agitation for separate Telangana in Andhra Pradesh, the anti-Hindi upsurge in Tamil Nadu, and the ghastly Hindu-Muslim riots in Bihar, Gujarat and Maharashtra point towards the presence of deeper maladies and maladjustments.

Ignorance of the ways of one and another, fear of losing one's own cultural identity, persistence of prejudices among people of one community against another, and the exploitation of these fears and prejudices for political or personal ends, are some of the causes that could be mentioned in this connection. What is needed to cure these maladies is a more equitable distribution of economic gains among the people, a severe repression of all divisive forces, and a powerful educational campaign to promote national

integration. Even then, a certain measure of tension will be there so long as our society remains in a state of transition from the old to the new, from the traditional to the modern.

Tradition and Modernity

The era of modernity began with man's struggle to assert himself against forces before which he felt he was powerless and the laws which sought to place limitations on his powers of thinking and acting. Even a child displays curiosity about things around him. Man's spirit of enquiry started reasserting itself during the 16th century in Europe. Martin Luther questioned the traditional interpretation of the Bible. The revolt by Martin Luther released forces of free enquiry. Later, scientists led by Galileo questioned the religious dogma that the Sun moves round the Earth. By various experiments Galileo demonstrated that it was the Earth which moved round the Sun. For this heresy Galileo had to suffer severe torture and humiliation. Centuries later Charles Darwin questioned the scriptural dogma that man was created in final and perfect form along with the universe and that woman was born out of the rib of man. He showed that man's life was not equal to that of the universe and that man evolved out of the lower animals like apes. The spirit of enquiry showed itself in many directions and man began exploring the unknown. Thus the spirit of enquiry even into the fundamental religious beliefs and dogma came to be associated with the dawn of modernity.

Man, with his logical mind, began to question other established beliefs of the Middle Ages. Why should a woman be regarded as inferior to a man ? Why should some races be considered superior to others ? Even the Divine Right of Kings was challenged, for the idea of 'blue blood' appeared repugnant to the modern spirit. New human values began to be born, which emphasized the equality of man and the concepts of democracy and secularism.

Man no longer felt as hopeless against the forces of nature. Instead of surrendering to the vagaries of nature, he tried to tailor his enviroment to his needs. Instead of propitiating the rain gods he started trying to force rain out of clouds. He tried to find causes and cures of disease and poverty which in old days were regarded as works of fate.

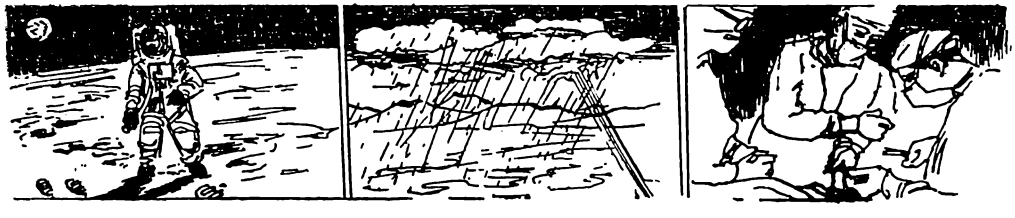
The spirit of modernity is not a revolt against religion as such but only against superstitions, against discrimination between man and man, and against that feeling of fatalism which enervates man's spirit and zeal to face and change reality. Modernity rebels against dogma of any kind and shuns regimentation, indoctrination and unquestioned belief and obedience to religious authority.

Every social reform runs against a wall of reaction

English educated Indians of the last century were attracted to the spirit of modernity prevailing in the West. Raja Rammohun Roy and other leaders started having a critical look at their religion, offered new interpretations to old dogmas, and sought to find the true meaning of religion. They attacked customs like sati and untouchability. Then came religious leaders like Ramakrishna Paramahansa and Swami Vivekananda who continued the work of reinterpreting of religion. They sanctioned several social reforms and blunted the edge of belief in supersitition and discrimination between man and man.

This was the intellectual climate in which our struggle for freedom from foreign rule was conducted. And when freedom came, and in spite of the partition of the country on religious grounds, we framed a secular constitution which sought to abolish all discrimination between man and man on grounds of birth, language, sex, creed or race. The Constitution of free India is explicit on this point. It emphasises the resolve of the people of India to transform an ancient tradition-bound, heterogeneous and stagnant society into a steadily intergrating modern society. The urge for rapid economic progress is also born out of the spirit of modernity which is based on a sense of confidence in man's ability to improve his lot.

During the last two decades our secular democracy has served as a vehicle of dissemination of economic and social power from the hands of the small urban elite to the common man, especially to the people belonging to the backward communities. With rapid industrialisation and urbanisation, artificial barriers between different communities and different sections of society are being lowered. While the old social order is breaking, a new form of national integration is emerging through functional organisations like trade unions and rural and industrial cooperatives. Sections of society long suppressed are coming up to claim their rightful place in the life of the country. Professions



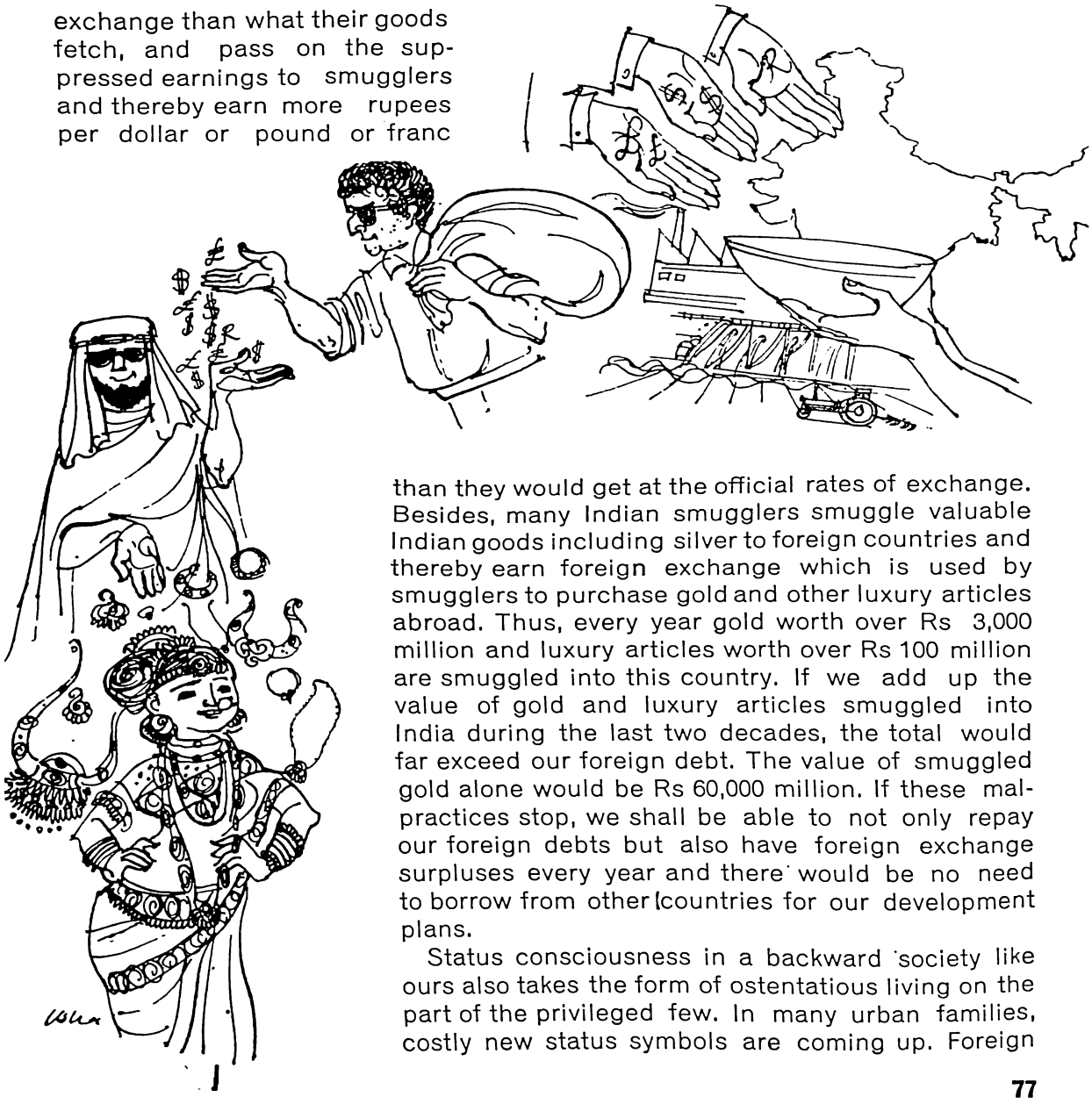
hitherto known as the preserves of the men only are opening their doors to women. Family life is changing, so are patterns of relationship between father and son, husband and wife, employer and employee. However, the process is painful and not at all smooth. There are powerful pockets of resistance to modernity, and every social reform runs up against a wall of reaction, which is emboldened by the prevalence of ignorance and superstition among the masses.

Some superstitions which are proving disastrous for economic growth are still deep-rooted among our people. India accounts for 25 per cent of the world's cattle population but not even 5 per cent of world's milk supply. Millions of unproductive, useless cattle roam the cities and the fields. Yet the cow continues to be worshipped and organised movements are launched against the slaughter of useless cattle.

Another traditional weakness with us is status consciousness. This expresses itself in a thousand and one ways. Possession of gold and a display of gold ornaments is a favourite pastime of the status-conscious. Though we have been facing acute foreign exchange crisis for many years, our thirst for gold remains undiminished. According to one estimate we import, through smuggling and therefore wasting valuable foreign exchange, gold worth over Rs 3,000 million every year. And, while the Indians fritter away foreign exchange in the purchase of the yellow metal, our Government has to beg for loans and grants in order to find the finances to purchase machinery needed for modernising our agriculture and industry.

There is another aspect to this question of smuggling. Many Indians living abroad send money to their relatives in India. But instead of remitting the amounts through the Reserve Bank of India they hand them over to smugglers who use the money to purchase gold in the world markets. As smuggled gold fetches high price in India, these foreign smugglers are in a position to pay higher rates of exchange in rupees to those Indians living abroad who remit money to their relatives through the smugglers. In addition, many firms trading with foreign countries show less earnings of foreign

exchange than what their goods fetch, and pass on the suppressed earnings to smugglers and thereby earn more rupees per dollar or pound or franc



than they would get at the official rates of exchange. Besides, many Indian smugglers smuggle valuable Indian goods including silver to foreign countries and thereby earn foreign exchange which is used by smugglers to purchase gold and other luxury articles abroad. Thus, every year gold worth over Rs 3,000 million and luxury articles worth over Rs 100 million are smuggled into this country. If we add up the value of gold and luxury articles smuggled into India during the last two decades, the total would far exceed our foreign debt. The value of smuggled gold alone would be Rs 60,000 million. If these malpractices stop, we shall be able to not only repay our foreign debts but also have foreign exchange surpluses every year and there would be no need to borrow from other countries for our development plans.

Status consciousness in a backward society like ours also takes the form of ostentatious living on the part of the privileged few. In many urban families, costly new status symbols are coming up. Foreign

luxury articles like transistors, television sets, furniture, crockery, cameras and linen have acquired status value. Possession of foreign cars is another form of ostentation favoured by the affluent. What is the net result of this ? We not only continue to remain a poor nation, but also lose our self-respect in having to beg for assistance from foreign countries.

7. NEW DIRECTIONS

The year 1969 marks a watershed in India's development effort. That year saw certain basic reorientations in policy in the light of an honest reappraisal of many matters connected with social goals of planned development and the methods and policies best suited to reach these goals. The various suggestions by the Administrative Reforms Commission, the Fourth Plan document and the new economic policy initiated by the Prime Minister are decisions of immense significance that hold out great and new hope for the future.

As some of the measures relating to the new economic policy enunciated by the Prime Minister have already been put into effect we shall begin with an examination of the new economic policy. The new policy makes explicit and clear the national goals that are implicit in the Constitution as also in the First Plan document.

Though the country had accepted the goal of a socialistic pattern of society the details of the pattern had not been precisely worked out. Meanwhile, one of the side-effects of economic progress was that the rich were becoming richer and the poor poorer, and there seemed to be no way out of this undesirable situation. Bank nationalisation was the first major step in the direction of reduction of income disparities and prevention of concentration of economic power. With bank nationalisation, the commanding heights of the economy are placed at the disposal of the nation.

In July 1969, fourteen major banks, each with deposits of Rs 500 million or above, were nationalised. A new credit policy was put into operation. The scope of credit-worthiness was widened to cover all those who are engaged in fruitful economic activities. The new credit policy is designed to help farmers, artisans, self-employed persons and other low-income sections of the people like taxi-drivers and rickshaw-pullers, who were neglected by the commercial banks in the past on the ground that they were not credit-worthy.

The new credit policy came into operation in July 1969. By December 1969, the magnitude of its impact began to be felt. In less than six months, advances made by the nationalised banks to farmers, small-scale industrial units, small

traders, road transport operators and self-employed persons increased considerably from Rs 1,310 million to Rs 4,880 million. In the same period, loans from nationalised banks to farmers alone rose from Rs 390 million to Rs 920 million, raising the number of farmers benefiting from such loans from ·17 million in July 1969 to ·36 million in December of the same year.

The new economic policy envisages a vigorous drive to implement land reforms, enforce ceilings on holdings of land, and give security to tenants and share-croppers. Restrictions are to be imposed on transfer of ownership of land from members of Scheduled Castes and Scheduled Tribes. Tenants and share-croppers will be eligible for loans for agricultural operations. Minimum wages will be prescribed for agricultural labour in different regions. Security of tenure and facility of short-term loans to tenants will go a long way towards increasing agricultural production. The whole rural economy would benefit from the new policy and as the rural economy progresses, manufactured products of industries would find a wider rural market. A booster to the agricultural economy also serves as an impetus to the industries.

Licensing policy will now be implemented in such a way as to prevent growth of monopolies and concentration of wealth in a few hands. A greater number of industries, particularly those which produce articles of daily use, will be reserved for the small-scale sector, and big industrial houses will not be given licences to set up consumer industries. There will be checks on unproductive expenditure on perquisites and such other forms of ostentatious living by private sector executives and managers. Foreign technology will not be allowed in fields in which Indian technology has made headway. Special efforts will be made to finance new enterprises in industrially backward areas. Heavy penalties will be imposed on restrictive trade practices like deliberately keeping down production and sales in order to boost prices. Ceilings will be imposed on urban incomes. All these measures are designed to draw an increasing number of poorer people into the processes of development and to spread the benefits of economic progress evenly among the people.

A major and constant source of hardship to the ordinary people has been our inability to check spiralling prices. In the ultimate analysis, the only way to stabilise prices is to increase the production of consumer goods, especially of essential articles like food and clothing. Once the essential commodities are available in sufficient quantity and at low prices, the prices of other commodities would automatically come down. However, before such an ideal state of affairs

is brought about, certain difficulties presented by population increases and the rising cost of development projects will have to be overcome.

A crucial factor in the stability or instability of prices is the price of foodgrains. This is so because foodgrains form a major sector of expenditure. Food prices rise because of scarcity of foodgrains. The Fourth Plan seeks to solve this problem by creating huge stocks of foodgrains. These stocks could serve as a buffer during lean years and reduce the gap between ,requirements and actual production. At the same time, to boost production of foodgrains, the Plan aims at carrying out a five-point programme, which would ensure an annual growth of at least 5 per cent. The programme comprises irrigation schemes, additional supplies of agricultural inputs like fertilisers and pesticides, full exploitation of the high-yielding seeds, and intensive efforts in selected areas to raise yields of major commercial crops. The credit and marketing facilities are also to be enlarged. Raising buffer stocks and carrying out this intensive programme for increasing output would need large sums of money. But, as the Plan rightly mentions, this will be a useful investment in stability. Buffer stocks and increased production of foodgrains would help maintain a high level of supplies and the tendency towards rising food prices would be effectively checked.

The cooperative sector, which is a key factor in the socialist pattern, is going to assume a bigger role in the growth of industries. Cooperative societies will be encouraged to start fertiliser factories and other agro-industries such as food processing, ginning and pressing of cotton, and so on. The cooperative sector will also play a significant role in providing agricultural inputs and in marketing of agricultural products. Cooperative societies will handle sales and purchases of fertilisers, pesticides, improved seeds, implements and farm products. The Fourth Plan document looks forward to an annual turnover of Rs. 10,000 million by cooperative marketing societies at the end of the Plan.

An equally important role in our economic life is going to be assigned to public sector projects. Their working is going to be made more efficient, purposeful and profitable. All impediments in the way of their smooth functioning are being removed. Young and efficient engineers, dedicated to the projects, will take over the management of these undertakings. They will be given a free hand in taking quick and effective decisions. Diversification of production is being introduced to enhance the profits of public sector industries. They will manufacture a wider variety of products, their machinery would be better utilised and the overall costs would come down.

A special committee appointed by the National Development Council is going into the problem of reducing regional imbalances, which is another source of economic inequality in the country. As far as possible, no new industrial units would be set up in big cities. A few places will be selected in each State for further industrial expansion. These places would be as far away as possible from large industrial centres. In order to attract new industries at these centres, special concessions will be given such as tax concessions, development rebates, exemption from sales tax and excise duties and transport subsidies. In backward areas, transport and communications, electricity supply and marketing facilities will be strengthened to help the growth of industries.

The goal of self-reliance is also drawing closer than ever. Reliance on foreign exchange and on external know-how will be further reduced during the Fourth Plan period. The new strategy is to expand the capacity of those industries which have an export market; to diversify production so as to boost exports; and to impose rigorous quality control methods such as pre-shipment inspection in order to ensure that the quality of Indian exports is kept high and prices of Indian goods are able to compete in world markets.

Another major field of social advance is administrative reform. The new policy is based upon a deep study of the present problems and aims at changing over from administration by general-purpose bureaucrats to administration by trained technicians and managers. High positions in administration will be thrown open to scientists, engineers, economists, teachers and men with specialised training. This is an age of technology and advanced science. As our economy catches up with the standards in advanced countries, technocrats and experts will have a major role to play in running the affairs of the country.

8. TASKS AHEAD

The impact of agricultural and industrial growth, and the social changes brought about by reformation of old institutions and enforcement of new attitudes and policies, is beginning to be felt in a hundred and one ways in the life of the people today. Those of us who were not adults during the British rule would not be able to appreciate the full depth and dimension of these changes.

Take a simple thing like food. Periodical famines and starvation deaths were a normal part of life in India in the pre-Independence days. Even in 1943 the great famine in Bengal took a toll of millions of lives. Since Independence starvation deaths are not taken lightly and there is no longer a fatalistic approach to such issues. Even the complaint of one starvation death raises a storm in the State Assemblies and Parliament. The end of dependence on food imports is in sight and soon we should be able to produce all the food that we need.

In the industrial field also we are making steady progress in self-reliance. Our import substitution programme is making a big headway. By last year we were able to produce as many as 315 different articles which till recently we were importing. While twenty years ago we were producing only a few manufactured goods like textiles, sugar and so on, now we produce a very wide range of articles. We manufacture over 90 percent of our defence materials, ships, aeroplanes, heavy trucks, tanks and other armaments. In the nuclear field we are one of the half-a-dozen advanced countries. In mechanical engineering and metallurgy, in particular, the standard of our technology has reached a very high level.

The pattern of Indian industry has also undergone a transformation. While imports of industrial machinery are falling, those of industrial raw material are rising. Our exports of finished products are rising at a rapid rate. From a poor backward country exporting agricultural products and industrial raw material we have grown into a nation which exports machinery and manufactured items. Our entrepreneurs have been able to establish industries in other developing countries. Technicians from other countries are visiting India to take advanced training. In a few years we should be able to launch a satellite into space and

enter the space age. While we chose to develop atomic energy for peaceful uses only, we retain the ability to make atom bombs.

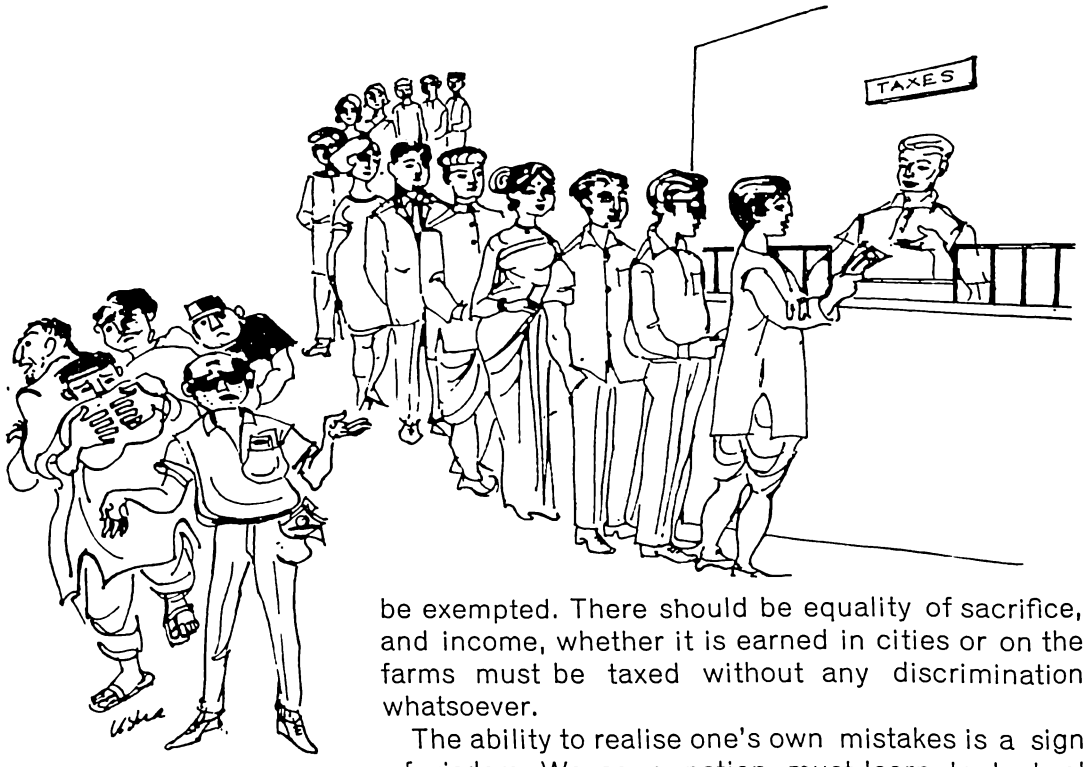
With all these achievements to our credit, we still remain a poor nation. The task that lies ahead of us is stupendous. There have been many miscalculations and mistakes in planning and in implementing the Plans. There has been some failure in ensuring people's participation in our developmental activities. The modernising process which our society is undergoing has been haphazard and has given rise to tensions and conflicts. Social evils like tax-evasion have not been fully curbed. By last year the number of assessees who had not fully paid their income tax had crossed the two million mark.

Though 15 million births were avoided due to our massive family planning effort in the last few years, the birth rate per thousand population in India continues to be high—almost more than double of that in advanced countries. Already the population explosion has wiped out a part of the progress that we have made, with the result that increases in our per capita income have been negligible.

Meanwhile, the expectations of the people keep rising. These are expressed in terms of demands for rise in money wages, and for more consumer goods. Unfortunately, any rise in money incomes is quickly wiped out by spiralling prices. For many years we have been caught in the vicious circle of increased wages and rising prices. This impedes the completion of development projects, and slows down the process of growth.

We as a nation have to do some cool and realistic thinking. If development plans get bogged down due to rise in prices we have to see that all necessary measures are taken to prevent runaway prices. The Fourth Five Year Plan has given the highest priority to increase in food production and building of food stocks to even out shortages during lean years when the monsoons fail. Much will depend on whether this target is achieved. Deficit financing or printing of additional notes to find additional money for development has to be kept at the lowest possible level. This would be possible only if we are able to collect all the taxes due from the people. We cannot afford to have millions of income tax assessees being in arrears.

Similarly, we cannot afford to run many public utilities at a loss. There is no reason why the States should provide electricity and irrigation and drinking water to the people at a loss. In fact, such schemes should always run at a profit so that funds are generated for further expansion and growth. There is a good case for taxing farm incomes. There is no reason why agricultural scientists should be required to pay tax, while farmers who benefit by their work should



be exempted. There should be equality of sacrifice, and income, whether it is earned in cities or on the farms must be taxed without any discrimination whatsoever.

The ability to realise one's own mistakes is a sign of wisdom. We as a nation must learn to look at ourselves critically and judge our performance scientifically. Then alone will we be able to get at the root of every problem, discover our failings, and take steps to remove them. Such an analysis alone will enable us to face bigger problems in future. We can afford neither to be complacent nor unduly pessimistic. Both these attitudes are disastrous. We should develop the ability to make a correct and objective analysis of our failings and take firm steps with courage and confidence.

Modernisation. when not properly understood, brings its own evils. This makes the people lose their moorings. The old values are fast disappearing and new social values are yet to emerge. A hundred years ago, Japan geared up political and economic structure in order to usher in an era of modernity.

The Japanese gave up a number of customs and traditions that were not in keeping with modern values. However, they retained the traditional Japanese value of leading an austere life. This was the traditional ' samurai' way of puritanic life. Instead of frittering away huge profits from industry on various ways of ostentatious living they led simple lives and reinvested their profits in new industries. The common man in Japan had, therefore, a healthy respect for the industrialist. But the traditional value of leading a simple life seems to be at a discount in free India. The age-old values of denial of material pleasures and retirement at an advanced old age, vanaprasthashram, are conspicuous by their absence today.

Prior to Independence, there was a feeling that our progress was blocked by foreign rule and that as soon as we were free the floodgates of prosperity would open and within a short time we would convert India into a land of milk and honey. But the majority of us do not seem to realise that the road to progress is not smooth. Nation building needs a high price to be paid in terms of blood, sweat and toil.

A country can progress only when its citizens learn to rise above narrow considerations of personal gain and to think of larger national interests. Take, for instance, a rich farmer. He is keen to secure all the benefits from Government schemes in order to get all the inputs and credit at the cheapest possible rates and also to get the maximum prices for his produce. We cannot give high prices to farmers for foodgrains and at the same time sell foodgrains to the consumer at cheap rates.

If everyone concentrates on improving his own standard of living in a legitimate manner, there is not much harm done. In fact, in a way, this helps the economy over a long period due to increase in production. But when wealth is sought to be achieved through illegitimate methods, by evading taxes and resisting imposition of taxes, blackmarketing and hoarding, smuggling, and other anti-social practices, the prospects of development are adversely affected. We have to find ways and means to make the average Indian grasp the gravity of the situation as well as the stark reality that as a nation we are poor and are likely to be poor for a long time to come.

Some form of a cultural reorientation is badly needed for the country. There should be a people's movement against inefficiency, laxness, delays, corruption, conspicuous consumption, evasion of taxes, smuggling, etc. Unless there is a popular movement against the lust for gold, disastrous status symbols like possession of smuggled luxury articles, social evils like the dowry system, ostentatious expenditure on marriages and such other functions, we will not be able

to create the necessary climate for economic development and social transformation.

A serious effort must be made to secure a wider and deeper participation of the people in national reconstruction. This would need a cadre of dedicated public workers and an army of new patriots. There is an urgent need for inculcating a scientific temper among the people. There is too much anger and frustration; much of it is unnecessary. There is still too much looseness and obscurantism in our thinking and behaviour. What is needed is a little more realism, a little more altruism, and a little more discipline of thought and action.

Science has to be taken to the people. Young scientists deserve encouragement. They must get the necessary support for unimpeded research and experimentation. Too many discoveries and inventions by our young scientists have been put on the shelf. Barring a few, the industrialists in India have neglected to make the best use of the advances made in science. Many have taken a short cut by borrowing foreign technology. Most of them are concerned with immediate returns on their investments. Very few of them have shown any zeal for making things of which their country could be proud.

There is another aspect of our social life which should cause some concern. Some recent United Nations publications show that after Rabindranath Tagore there has been not a single Indian writer whose works have been widely translated into foreign languages. During the last two decades our record in international sports has been dismal. We cannot boast of even half a dozen sportsmen of international repute. Most of the world famous scientists of Indian origin have done their research work outside India. The Sahitya Akademi gives generous grants to authors. But how many Indian authors have really made any impact on the international literary scene? One has to accept the unpalatable fact that during the period of foreign rule India produced greater personalities in various fields than what she has done after Independence.

But this phenomenon need not dishearten us unduly. Perhaps, the days of big men, big deeds are over. This is the era of the common man, and of small men, big deeds. Today's heroes are the farmers, workers, scientists of small means who, in farms, in factories, in the laboratories, are engaged in producing, inventing, creating. They are the real source of strength to the nation.

The worker in the factory or on the farm; the industrialist who embarks on new business and industrial ventures; the business manager who constantly strives to improve efficiency in production; the manager who maintains harmonious relations with the workers; the farmer who uses modern techniques and improves the per-acre yield of his farm; the Government servant who does

his job well and with a sense of dedication; the policeman who maintains law and order and helps everyone secure justice without fear or favour; the lawyer who pleads the right cause; the social worker who helps to solve the day to day problems of the people and helps to usher in the new social revolution in which human equality and values are upheld; these are the new patriots of India.

All these patriots, singly and collectively, are helping to take the country forward. The doctor who saves a life, the health officer who fights an epidemic, the social worker who rushes to the aid of the victims of natural and man-made calamities are all engaged in patriotic activities. In our struggle for rapid economic development and for establishing a new social order based on equality and brotherhood, all those who do their job with a sense of purpose are the new patriots of India. On them depends the future of this counrty.

While in his teens, the author discontinued his studies in response to a call for participation in the 'Quit India' Movement of 1942 and joined the Kisans of Mahad in Colaba District. On September 10. 1942, some students from Poona including the author and a large mass of poor Kisans from Mahad captured the Taluka Town and held it for some time. Thereafter, he engaged himself in various forms of action during the freedom struggle and worked under various aliases. Ultimately, in April 1943, he was arrested under the name of V. G. Damle. The evidence against V. G. Damle was formidable enough to charge him as an accuesd in the famous Maharashtra Conspiracy case along with several leading freedom fighters of the region. Soon after his release in 1945, he was again arrested under his own name. Later, he resumed his educatio. at Poona and passed B.A. (Hon.) Economics in 1946 and M.A. (with Economics and Advanced Economics) in 1948.

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