

THE GUNS OF AURORA

25 PAISE

1/10-22

YOJANA

ELEVENTH YEAR 22 NOVEMBER 12, 1967

Algiers To

New Delhi

Co-ordination
in Science

INDIA
AFTER
NEHRU

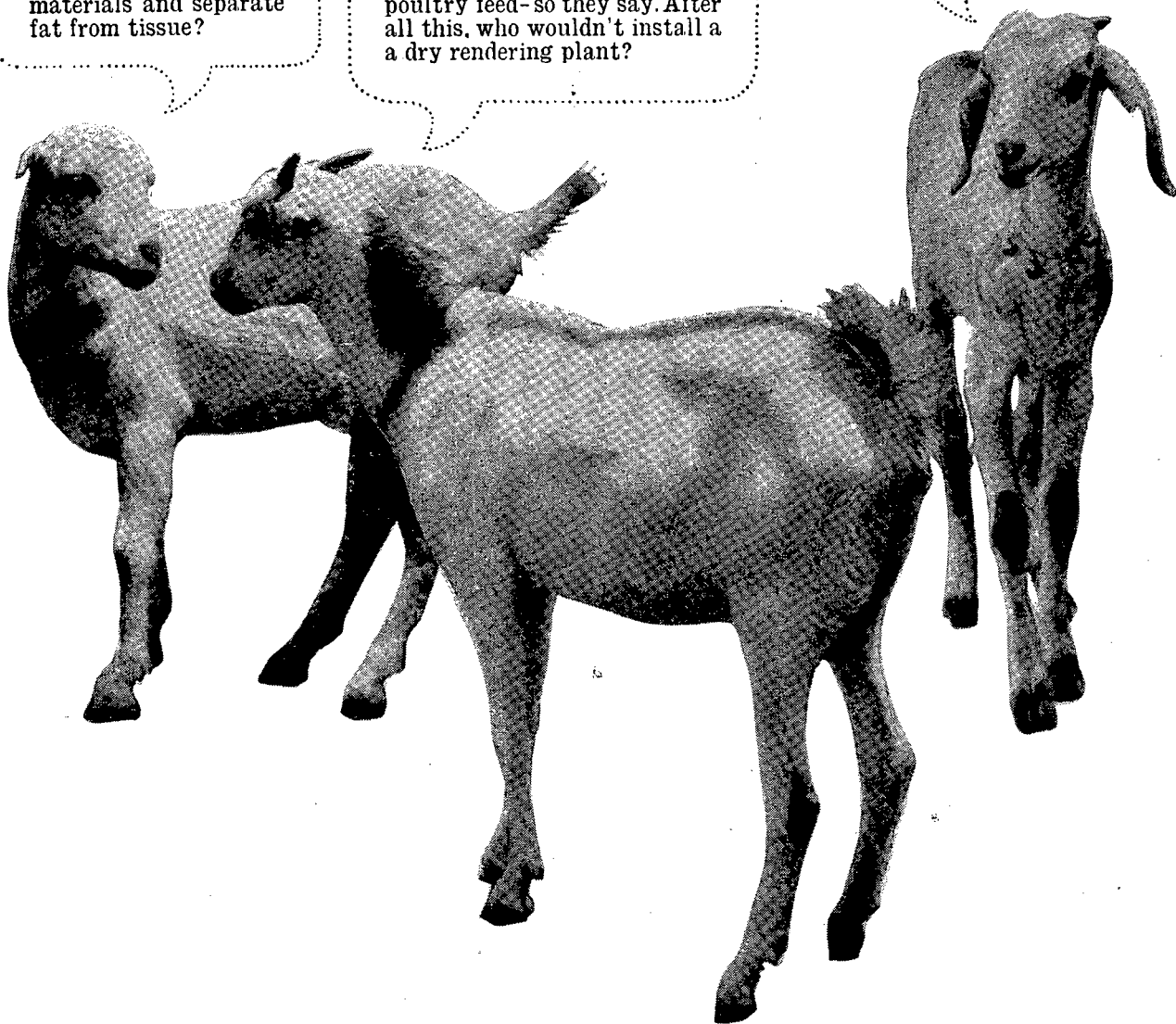


PASSING
OF AN ERA

Say, have you heard of dry rendering plants? Equipments that remove moisture from raw materials and separate fat from tissue?

Wish I hadn't. I dislike the thought of plants that produce fat, meat and bone meal from condemned carcasses, bones and butcher scrap. And think of it. The meat and bone meal has vitamin B and high protein content. Excellent as cattle and poultry feed—so they say. After all this, who wouldn't install a dry rendering plant?

I wouldn't! But do you know who's at the bottom of this business? Larsen & Toubro. They get these plants from Atlas—people who specialise in things like these. But L & T undertakes the entire erection—mechanical and electrical. If there's anything new in slaughter-house equipment, I'll bet my hide L & T is behind it!



WAITING FOR THE MESSIAH

OVER three years have gone by since the day of June when the ashes of Jawaharlal Nehru were carried by the Ganga, "the river of India", to the "great ocean that washes our shore". We are nearing another 14th of November. This is only a day of formal remembrance as the 2nd of October. Gandhi and Nehru have so much become part of the "history and myth and tradition and song and story" of India that the formality of remembering them has little meaning.

Yet one might wonder if they are not becoming memories and if their age is not beyond return. We are living in exciting times; and not the least exciting is the experience of a break with a continuity which only a few years ago seemed endless.

On November 7 was the 50th anniversary of the Soviet Revolution. Lenin, wrote Nehru, had become a mighty tradition. Yet how much of Lenin remains?

Lenin, a Marxist, regarded nature as primary. Gandhi, almost Hegelian, believed in the primacy of spirit. To the Indian materialists Gandhi's "change of heart" idea seemed as impracticable as the Sermon on the Mount.

Yet it is only true that Lenin strove for much more than the rectifying of the material circumstance and Gandhi did not reject this circumstance altogether. Even if the language is evangelical, did not Lenin "touch the people to their very souls"? And did not Gandhi aspire for the greater Indian well-being?

The Bolshevik attraction for Gandhi was the principle of non-possession which, according to him, was an application of the ethical ideal. He called Lenin a master spirit. Though the Mahatma rejected the sanctifying of violence, he could see that Lenin's ideal had "behind it the purest sacrifice" and that "the noble example of renunciation" would "quicken and purify the ideal as time passes."

Both in India and in the Soviet Union a great effort was made after Gandhi and Lenin. It succeeded in a larger or smaller measure. At the end of this striving it is worth asking how much of Gandhi or Lenin remains in one country or the other.

Has the pure pursuit of material objective led gradually to the mercenary spirit and a diminishing of the revolutionary fervour? Gandhi certainly tried to transform man, and Lenin, though he would have denied such purpose, hoped that man could be made different.

Have "economism" and "development" helped in the quickening and purifying of the ideal? Would not Gandhi and Lenin have striven for a constant renewal of the revolutionary fervour? And if this had been renewed, would there be cries of self-interest in foreign affairs or the slogan that others should die so that we might live?

The Indian mind never quite stopped being fascinated by divine incarnation to uphold the right. The world, too, has always hungered for a Messiah. Could it not do with one just now?



The first seventeen years of freedom were dominated by the personality of Jawaharlal Nehru who steered the country along a course of secular democracy, industrialisation, social justice and anti-imperialism. How this was a continuation of the Gandhi era and how this itself led to new forces challenging the concepts of that era are discussed in pages 2 to 6.

The Prime Minister's visit to East European countries has helped in strengthening old ties and forging new ones. A significant aspect of India's relations with these countries is the expanding economic co-operation. Khagen De Sarkar feels that in trade, though there has been a sizeable increase, there is scope for planning the exchange of goods. He pleads for follow-up action to consolidate the gains from the Prime Minister's tour (Page 7).

Mrs Gandhi's participation in the celebrations in Moscow of the 50th anniversary of the October Revolution symbolises the Indian people's friendly interest in Soviet purpose. Narayan Swamy gives a brief account of the events in Petrograd on that historic day of November (Page 10).

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MOMENTUM OF THE STRUGGLE

THE Gandhian age largely began with Gandhi, though some of its aspects—nationalism, Hindu reformation and egalitarianism—preceded the Messiah. But it did not end with Gandhi. The initial years of Indian Independence may be regarded as significant for the rapid growth and subsequent gradual decline of the ideas of the Gandhi era.

For a large part of these twenty years, the ideas of the Gandhian age were so much on the ascendant that an illusion was created that the forces opposite had been defeated, whereas, in fact, they were imperceptibly gaining ground. Their growth in the sixties was faster than in the earlier years. There is always a blurring of the frontiers between the age that is vanishing and the one that is emerging. Roughly, however, 1967 represents the divide between two epochs. The first years of independence were the years of growth to be followed by the decade of decline of an era.

On the surface, this formulation would appear to be removed from facts. The "Gandhians" would argue that the rejection of Gandhi had started with Westernisation, under Nehru, of the Indian economy as well as of politics. If large-scale industry and centralised planning were a negation of the Gandhian idea of village-based economy, parliamentary democracy and a federal structure weighted in favour of Central authority were the antithesis of the Mahatma's idea of a rural democracy where power should, in fact, reside in the village. Similarly "stateism" associated with Nehru by his detractors, is not quite what Gandhi would have advocated.

Therefore, (it is often argued), the first years of freedom were the

years of negation. They were followed by the years of renewal. The attack on planning which, in recent years, under the impact of stark economic realities, has gathered strength, the movement for smaller industry and minor irrigation, the pleas for state autonomy and the vigorous campaigns for a freer economy are all put forward as evidence of a swing back to Gandhi. This kind of argument was typified in the remark, heard after Nehru, that in Lal Bahadur, India had an Indian Prime Minister.

THE ESSENTIAL AND THE INESSENTIAL

The validity of this formulation is to be rejected on two, among many, counts. For one thing this mistakes the inessential Gandhi for the essential Gandhi. For another, the Gandhian era, though largely his, was definitely more than his.

Let us take these one by one. The bulk of the Indian opinion seldom accepted non-violence as a basic code of political action. It is true that the non-co-operation idea, which revolutionised Indian politics, was accepted for its novelty and for its extreme suitability in the kind of colonial rule the British practised. And, since the chances of an armed struggle appeared remote, the brilliant alternative of non-violent non-co-operation appealed to the imagination of the politically conscious public. But the Indian struggle, even when it was strictly under Gandhian auspices, was far from non-violent in crucial periods. Gandhi himself recognised the reality which explains his powerful defence as "leonine" of the 1942 acts of violent resistance and his approval of the armed defence of Kashmir.

Insofar as the Indian movement is concerned, non-violence must belong to the inessential Gandhi; similarly, the village idea. For, though, under his impact, the village came to occupy an important part in the consciousness of the Indian political movement, the concept of self-contained village republics, based on cottage industry and simplified basic education,

"I have sometimes found it difficult to understand Gandhiji's approach because my mind functions differently. While fully appreciating the political aspects of non-violence in our struggle, I have been unable to appreciate many of its implications. Gandhiji, though he lays emphasis on certain ethical and other aspects, does not ignore political aspects, as every one knows. It is perhaps a question of emphasis for him. He has developed a certain technique of action which has yielded great results to our movement for freedom....."

In many matters I have ventured to disagree with him and probably I may continue to disagree with him. But at the present moment I have no doubt that we must give full and loyal co-operation to him, so that he may have full (opportunity) of developing the movement....

This does not mean my accepting all the implications of everything that Gandhiji may put forward, but I do propose to function as a disciplined soldier as long as I can."

—Nehru

found niggardly response. In fact the contrary idea of a technological and industrial bias to Indian education and industry and, consequently, of a kind of larger democracy which could satisfy the demands of modern development dominated the urges and visions of the national movement.

What, then, was the essential Gandhi? Pre-eminently, he was the architect of Indian unity, the initiator of mass action and the liquidator of the many iniquities that had paralysed Indian, more particularly Hindu, society. The integrity of the Gandhi idea would be lost even if one of these three ingredients is removed, while it would remain unimpaired without Ahimsa or the village idea.

Gandhi spoke of Nehru as his heir, for he belonged to the essential Gandhi and so was more Gandhian than most Gandhians. And Nehru did, as his Master had prophesied, speak his language, after him. Not merely did he speak, but his leadership was a continuation of the Gandhian era.

Indian integration, as it evolved in the early years of freedom,

was based on the Gandhian movement. This is true as much of territorial integration as of its political content. This movement had swept before it every barrier. The administrative unity achieved by the British was incomplete in the sense that large areas were outside its scope. Even where its impact was complete, it was based largely on imperial power. Gandhi, almost overnight, as it were, made this unity comprehend the whole of Indian geography and transformed it from an imperial concept to popular political aspiration. At freedom, the Indian mind had been conditioned by a quarter century of Gandhi to regard the land bounded by the Himalayas and the seas as more than a geographical entity held together by a pervasive religion. Intellectually and emotionally, the people had come to regard India as a political unity. This had so strongly been woven into the fabric of Indian consciousness that the significance of the integration, following the British withdrawal, was somewhat lost in the character of naturalness that had been imparted to it by the momentum of the Gandhian movement.

DEMOCRACY COROLLARY TO MASS ACTION

The outstanding fact of the last twenty years is the emergence of the Indian national identity. This fact is not diminished by various later manifestations of conflicting wills, for they are subordinate to the paramount will to preserve the new nation that has emerged from the debris of devastation to which centuries of imperial ambition had reduced this ancient country.

The Republic, one and indivisible, was not the climax of conquests and acquisitions. It was not an accident of power and adjustment. It was an inevitable consummation of the surge of national sentiment which is very likely to survive moods of sectionalism and remain a lasting contribution of the Gandhian movement.

Inevitably, too, the unfolding of the new Indian personality had to reflect the dominant moods of the Gandhian movement. Gandhi's

ON PLANNING

"When the Planning Commission was started about 12 years ago, I definitely thought it should not function as part of the Government. But now it is just like any other part of the Government, in fact, deliberately it has duplicated every department of Government and has the same hierarchy of Secretaries, Under-Secretaries, Directors and what not. That is the normal habit of Government."

"It is easy to talk about planning in limited spheres of activity. Naturally, planning for a whole nation involves infinitely greater effort than planning in bits. Planning, in the larger sense, is thus an integrated way of looking at a nation's manifold activities. In view of the fact that we function under a democratic set-up, which we have deliberately adopted and enshrined in our Constitution and in this Parliament, any planning that we do must naturally be within that set-up. The Planning Commission does not have the right to draw up a programme that has no relation to our constitution or to the set-up under which we work."

Our plan ... must cope with the amalgam and variety we have in India ...

This is the first attempt in India to integrate the agricultural, industrial, social, economic and other aspects of the country into a single framework of thinking. It is a very important step and even if the thinking is partly faulty it does not detract from the magnitude of what has been attempted and accomplished. It has made the whole country planning conscious. It has made people think of this country as a whole....

We do not think that democracy, as is sometimes believed in other countries, means the economic doctrine of laissez-faire. That doctrine, although some people still talk of it, is almost as dead as the century which produced it—dead even in the countries where people talk about it most.

And when people say, 'You have been over-ambitious in regard to the Second Five Year Plan, I will reply that we propose to be over-ambitious every time. It is that outlook that we wish to produce in the country, not the outlook of caution and of creeping along slowly. For the stakes are high. We dare not go slow—for we may fail completely by going slow.'

The private sector is going to be a controlled sector It will be increasingly controlled as time goes on."

—Nehru

revolutionary contribution lay in his emphasis on mass action by the people of India as a whole, not merely the middle class of the cities who, inspired by Western liberalism, had been responsible for the massive Hindu reformation of the 19th century and who had been struggling to concretise a vaguely-felt political aspiration. The liberal movement was inadequate for shaping the Indian personality because the bulk of the people in the villages was untouched by it and equally because the Indian ethos had to be established before it could assimilate the ideas of the West. Gandhi gave Hindu reformation a deeper and revolutionary purpose. He was not content with romanticising the equality idea as the urban movement had tended to do. He would rather shake rural society at its foundations.

Nehru said once that Gandhi was, without doubt, the greatest revolutionary of our times, because he could move the masses. With his penchant for the idiom and instinct for psychology, Gandhi identified himself with *daridra narayan*. He spoke for the "dumb semi-starved millions scattered all over India" and declared that "every other interest has to subserve the interests of these dumb millions".

To make this philosophy complete, he lifted the reform movement, both in content and in degree, to revolutionary proportions by going to the core of the hierarchical system. By championing the cause of the lowliest of the low, he unleashed a tidal wave of revolutionary fervour. Simultaneously, he catalysed the women's movement. And his overall political strategy was symbolised in Khadi.

TOTALITY OF THE ERA

This was the essential Gandhi who dominated the national movement. This apart, the Gandhi era was not exclusively (though overwhelmingly) Gandhi's. There were other influences, chiefly the liberalism of the West, which, in their spheres, gained great hold over the public mind. Many of these influences had Gandhi's blessing. Some did not provoke his hostility. A

few flourished despite his resistance.

It is the totality of Gandhi plus the other dominant trends of political, social and economic thought which constituted the Gandhi era. It is this totality which was reflected in the greater part of Nehru's stewardship. And it is this totality which came under sharp attack during the later part of Nehru's life and which was mauled even more fiercely after his passing, signifying the decline and end of an era.

While in social change, in mass action, in complete democracy, and in equality, egalitarianism and individual rights, Gandhi's contribution stood independently of the Western liberal influence, the liberal influence, in itself, was of profound significance to the Indian movement, as, in later years, the influence of the Soviet revolution. India's confrontation with the West was unique in the sense that, unlike in Latin America or the Philippines, there was no loss of local identity. Even without Gandhi, the Indian entity might have had the strength not to be swamped by Western logic. With him, this was guaranteed. By ridding Indian society of its weakness and kindling a new national ethos, he facilitated a unique encounter with the West.

While Nehru belonged to the essential Gandhi, he was quick to accept the Western liberal influence and was equally quick to respond to the new revolution in Europe's East. In his Autobiography he wrote, "Today (India's ancient culture) is fighting silently and desperately against a new and all-powerful opponent—the *bania* civilisation of the capitalist West. It will succumb to this newcomer, for the West brings science and science brings food for the hungry millions. But the West also brings an antidote to the evils of this cut-throat civilisation—the principles of socialism, of co-operation and service to the community for the common good. It may be that when India puts on her new garment, as she must, for the old is torn and tattered, she will have to cut it in this fashion, so as to make it conform both to present conditions and her old thought".

This little man has been and is a colossus before whom others, big in their own way and in their own space and time, are small of stature. In this world of hatred and uttermost violence and the atom bomb, this man of peace and goodwill stands out, a contrast and a challenge. In an acquisitive society madly searching for new gadgets and new luxuries, he takes to his loincloth and his mud hut. In man's race for wealth and authority and power, he seems to be a nonstarter, looking the other way; and yet what authority looks out of his gentle but hard eyes, what power seems to fill his slight and emaciated frame, and shows out to others! Wherein does his strength lie, wherein this power and authority?.....

Often we do not understand him; we argue with him and get angry sometimes. But the anger passes leaving us rather ashamed of our lack of balance and restraint. Only that pervasive influence remains and he seems to become the vehicle and embodiment of some greater force of which even he is perhaps only dimly conscious. Is that the spirit of India, the accumulated experience of the millennia that lie behind our race, the memory of a thousand tortured lives?"

—Nehru

SOURCE OF SOCIALIST IDEA

It was natural that the Indian evolution, under him, should reflect the totality of the Gandhian era. The adult vote was meant to enthrone the people as the arbiters of Indian destiny. Gandhi had no patience with the argument that the elite, being the more qualified, must rule over the masses, not being qualified enough. His entire mass movement was so conceived that there was no scope for an evolutionary democracy. The leap was from complete authoritarianism under the British to complete democracy where sovereignty would reside in every Indian citizen, whatever his social, economic or educational status. This inevitably helped the spread of the egalitarian idea which was one of the elements in the socialist bias to Indian policy making. Simultaneously, the concept of individual rights, which had taken deep root in the Indian mind,

was nourished. To the extent that egalitarian purpose helped in the idea that the Indian State derived its sanction not from any particular group but from the people as a whole, it induced in the general mass of people a sense of deeper involvement in India's political integrity. To this general movement must belong secularism, the concept of minority rights and the idea that the backward sections, whom an earlier tyranny had robbed of an equitable share of community benefits, are more equal than others in a general scheme of equality. Hindu law reform, the concept of equality before law, the upholding of the rights of women and generally the decisions of egalitarian content flowed from the Gandhi movement.

In foreign policy, too, India's uncompromising anti-imperialism was a projection of the goals of the Gandhian movement. If Nehru rescued the world idea from sentimentalism and brought to the co-existence idea the touch of practical compulsion, the basis of his policy was the Gandhian principle of freedom and non-exploitation.

The most significant impact of the national movement is to be found in the kind of federal structure evolved by the Constituent Assembly. Gandhi and Western liberalism found a common point in the modern national idea which included the concept of minority rights, regional development and

// "Gandhi laying stress on India's past treasures of the mind and spirit, told us not to close our doors and windows to the winds that blew in from the four quarters of the world; but he warned us not to be uprooted or blown away by these winds.....Gandhi was the man of action, the true revolutionary, single-minded in his aim and going as the arrow from the bow..... Gandhi did not talk or perhaps read much of poetry or art, and yet his life.....was a poem in action, and he wanted to put himself in harmony not only with nature, but with the lowest in nature. And so Gandhi crept into the hearts of those who were disinherited and whose life was one long tale of unhappiness."

—Nehru

subnational aspirations. There was in India a strong sentiment for linguistic autonomy. But the regional demand never overwhelmed the sentiment for a strong, purposive Central authority. Regionalism never acquired, during the Gandhi era, the force of destructive rage against the Centre. While there might have been resistance to the unitary idea, there was none to conferring on the Central Government great prestige and authority. Any Constitution, framed in the context of resurgent nationalism, was bound to limit federalism to the minimum.

The Constitution itself was oriented towards Central authority. What followed the Constitution confirmed this orientation. The planning era was to witness a gradual extension of Central authority even in areas where its constitutional sanction was doubtful. In education, labour legislation, health programmes, food production, procurement and distribution, industrial licensing and a host of other fields, the *de facto* Central authority has been far in excess of what the letter of the Constitution allows. The trend was strengthened by a general attitude of the people to look to the Centre for remedying whatever injustices were presumed in the States. This strong centralism was a reflection of nationalism which was the central aspect of the Gandhi era.

It looked as though there was no stopping the momentum of the ideas of the Gandhian age. Yet, even as these ideas were carried forward with amazing swiftness, they were creating the circumstances, first for the years of challenge and later for the decline of an era.

"He taught us the love of truth and straight dealing not only in our individual lives but also in public affairs and in the intercourse of nations. He taught us the dignity of man and of man's labour. He repeated the old lesson that, out of hatred and violence, nothing but hatred and violence and destruction can result. And so he taught us the way of fearlessness, of unity, of tolerance and of peace."

How far have we lived up to this teaching? Not very far, I fear."

—Nehru

Decline of Gandhi

SECURE in the affections of the people and without a challenge in political authority, Jawaharlal Nehru, if he had so wished, could have fully carried out his ideas, of which, if his earlier prolific writings were any indication, he had many. Criticism of Nehru, policywise, is largely a post-1962 development. Uptil then and afterwards also, the main criticism was that he failed to use his undoubted authority and influence to further the Indian revolution.

This revolution meant different things to different men. Hindu nationalism would have liked him to continue the power of the Centre not in the interest of economic democracy but in smothering voices of regional dissent. Thus Kashmir and Nagaland have, for far too long, been allowed special treatment. The left, on the other hand, would have preferred Nehru to put through his socialist ideas with greater vigour.

That the democrats reposed as much faith in individual authority as the non-democrats deprives the criticism of its force. Nehru rejected the theory of personal rule. His entire upbringing was against fascism and authoritarianism. Temperamentally, he was not made of the stuff that made dictators.

This apart, in the peculiar balance of political power in India, the continued effectiveness of Nehru depended as much on his popular following as on the support of powerful forces, largely urban but in a smaller measure rural also. A more radical posture might have induced a counter-attack. And he would be a bold man who could say that mere people's support would have overcome the counter-attack.

To the extent that the momentum of the days of struggle gave a direction to policy, Nehru had little difficulty. But without sustaining this momentum and injecting fresh life into the democratic movement, he had little chance of giving full play to his ideas of the days of "Whither India?" Avadi was his first conscious attempt to induce

into the Congress the mood of the '20s.

ISOLATED IDEAS

But his ideas were lost in the institutions he created. For another, while trying political democracy, economic planning, secularism, independent foreign policy, social reform and the rest, he let each of these ideas stand apart; they did not flow from a single formulation. For a third, the haphazard circumstance of Independence started a logic whose significance was insufficiently grasped.

"Khadi must be taken with all its implications. It means a wholesale Swadeshi mentality, a determination to find all the necessities of life in India... It vitally touches the life of every single Indian, makes him feel aglow with the possession of a power that has lain hidden within himself and makes him proud of his identity with every drop of the ocean of Indian humanity, of its economic freedom and equality and, therefore, ultimately, in the poetic expression of Jawaharlal Nehru, 'the livery of India's freedom'."

—Gandhi

Partition itself was hastily conceived. There was little time between the decision and the event so that chaos was inevitable. The States problem, the Kashmir raid and the Punjab cataclysm were built into the structure of the Independence scheme. In consequence the energies of the leadership and the people had to be diverted not to the realisation of the earlier ideas but to creating some order out of the initial chaos. There was a great swing to stability and conservatism, because the need was of consolidation. In this context the state structure, left by the British, got stabilised.

The crisis brought out the best in India's services, civil and military. Thus the bureaucratic idea flourished at the cost of the political idea. And in the absence of fundamental formulations this display of civil and military efficiency and patriotism could not be fitted into a larger political purpose.

Here was the incipient attack, though fortuitous and motiveless, on Gandhi. For the mass idea was giving way to the elite idea. Thus the Constituent Assembly was a body of experts. The Constitution was an exercise in grandeur; the people's rights were assured by Gandhi but their formalisation was the urban idea. The periphery of the concept flourished but the core languished. Parliamentary democracy was conceived as the expression of people's sovereignty but it was shackled by institutionalism. The objectivity of the permanent Secretariat, the inviolate majesty of the judiciary, the independence of audit and the authority of the Service-Commission were at least as much emphasised as the adult vote. In effect the adult vote became incidental. Extra-Parliamentary institutions, reflecting the privileges of the elite, held as much away as Parliament. And Parliament itself was circumscribed by form.

Planning, too, became formalised and was transformed from a political idea into an expert exercise. And, soon, secularism, minority rights, social reform, education, etc. were fitted into concepts and institutions.

Physical Law

Two factors redeemed the situation. One was the continued idealism of Jawaharlal Nehru. The second was the inertia of Gandhi. Both could have continued to operate if there was no external force. But Newton had already established the first law of motion. New forces change the line of movement unless the original force is constantly replenished.

Slowly as the old idea was continuing in motion because of inertia, it was being brought to a stop by not a single new idea but many new ideas. One was the assertion of Hindu nationalism, impatient of what was regarded as appeasement of Pakistan. Hindi was the livery of this nationalism. The second was the assertion of the regional idea and opposition to Hindi was its livery. A third was pragmatism by which was meant, that at home, economics should be rid of theorisation and, abroad, policy should conform not to con-

cepts but to self-interest, whatever that might be.

In every case Nehru tried the eminent idea, but this was ineffective. The result was that slowly the integrated Gandhi idea of uniform, humane nationalism, egalitarianism, non-exploitation, idealism, secularism etc. was yielding place to contradictory ideas of militant nationalism, equally militant regionalism, enterprise theories submerging the egalitarian and non-exploitative ideas, pragmatism etc.

The decline of the era had started under Nehru and was almost complete when he left. His basic contribution to modernising Indian industry and Indian life, to the secular idea, to idealism in foreign affairs and to egalitarianism may endure, but, to make it last, great effort will be needed.

"We have got to be ideal villagers, not the villagers with queer ideas or absence of ideas about sanitation and giving no thought to how they eat or what they eat. Let us not, like most of them, work anyhow, live anyhow. Let us show them the ideal diet. Let us not go by mere likes and dislikes but to the root of those likes and dislikes...If we should have electricity in every village home, I should not mind villagers plying their implements and tools with the help of electricity. But then the village communities or the State should own power houses just as they have their village pastures.....The village movement is as much an education of the city people as of the villagers."

Gandhi

What was the position at Nehru's passing? Socialism was no longer an undisputed ideal. Public sector mismanagement and the strains of Delhi-based planning had led to the growth of the movement for economic freedom. Though secularism was not seriously contested, Hindu nationalism was asserting itself. Simultaneously, the extension of Central authority produced the regional reaction. In foreign policy, what was possible during the Suez crisis could be sustained later only with effort.

Stage of Contrast

Thus, when Nehru died, Indian politics had reached an advanced stage of contrast, confrontation and differentiation. The emergence of the Jan Sangh and later of the

Swatantra was a departure from the era of almost national identity with the goals of the Gandhian movement. It is true that neither the Jan Sangh rejected secularism nor the Swatantra denied equity. But essentially they reflected a departure from the Gandhian movement.

Therefore, Lal Bahadur could not very well be accused of having charted a new course. In fact he came to power when politics had almost irrevocably changed. His own economic and political ideas apart, the objective circumstance called for a new style of functioning. A bigger plan, however sensible, was not easy. A frontal attack on regional and militant nationalist tendencies was equally difficult. And Lal Bahadur's first major triumph itself consolidated the militant trend to the extent that his return, at Tashkent, to Gandhi and Nehru was not uniformly popular.

Becoming Prime Minister in this context, Mrs. Gandhi was realist enough to recognise that things were not the same as when Nehru accepted office. Economically and politically, India had become more vulnerable. Those who accuse Mrs Gandhi of pragmatism, perhaps, would not admit that the Indian situation permits little else, the more so after the elections when solutions have to be found outside the framework of current concepts and even of the Constitution.

India after Nehru is in a transition from one era to another. The Indian picture is full of contradictions. If through them can still be seen a deepening unity, it is because the measures initiated by Nehru, covering the gamut of Indian life, have given Indian unity its most abiding bond of popular enthusiasm. Arising from these very measures are contradictions and conflict.

The answer may lie in a total understanding of the Indian situation. That total understanding may lead to considering if the moment has not come for a Second Republic.

India remains a nation united in aspiration and promises to develop in that unity. But a lot depends on how immediate challenges are immediately met. Not that a lapse will make a difference now; it may later, much later.



Warsaw

P.M.'S VISIT TO EASTERN EUROPE

KHAGEN DE SARKAR



Bucharest

Haphazard Trade Policy Should End

Need For Follow-up Action

No one needs discovering the socialist countries of Eastern Europe. For the Prime Minister of India, her 11-day official trip to four of them—Poland, Yugoslavia, Bulgaria and Rumania—was not a voyage of discovery, though she used the opportunity to get to know these countries better. She could establish personal rapport with the statesmen of the four socialist countries. In the present-day world of open diplomacy, this in itself is of no mean value.

More so when we take into consideration the fact that, till now, India has been really close to only one of these four countries—Yugoslavia. The three others in Eastern Europe, who have made considerable and real progress in the last two decades, had been a little neglected by India, except in trade, where, under the compulsion of circumstances, the volume has gone up.

Imagine, both at Sofia and Bucharest, their Prime Ministers had to mention that the last great Indian to visit their countries was Rabindranath Tagore—in the 20's! The omission, certainly, was not deliberate. But that could not prevent a grievance being nursed—in fact, I had heard this grievance mentioned in diplomatic quarters here in our capital. And it is good that Mrs. Gandhi repaired the

omission and visited these countries despite her many pre-occupations at home.

It was both a successful and an important trip. There is no need to exaggerate either. The socialist countries (outside China and Albania) had long ago accepted India as a friend and had responded to Jawaharlal Nehru's consistent policy of non-alignment and peace. There are no outstanding issues between India and the countries of Eastern Europe.

Mrs. Gandhi's was a hurried trip—three days each in Poland, Bulgaria and Rumania, and two days in Yugoslavia. Even in this brief period she could see a cross-section of people in these countries. She missed no opportunity to express her admiration for what their Governments have been doing for their people, her gratefulness for the warm feeling they have for India and the hope for closer co-operation in future.

Everywhere the welcome was big and sincere. In Warsaw, children ignored the cold and the rain and greeted her at the airport; at Belgrade and Sofia, thousands of them lined the streets. Workers in Rumania's famous oil refinery and their world-renowned wine-producing centre gave her a spontaneous ovation.

In all these countries, there is hectic house-building. Shops and stores are well-stocked and there is considerable buying. Even at a crystal (cut glass) shop in Warsaw, where things are supposed to be costly, I counted about a dozen customers in thirty minutes.

In this world of new socialism, which is opening its doors to the entire world, things are changing rapidly. Old ideas, socialist or other wise, are becoming irrelevant. There is realism in economic matters, for instance, in trade. Just as the western world would not forego socialist Europe's market, the socialist world cannot afford to ignore the trading opportunities with Western Europe.

The significance of Mrs. Gandhi's visit perhaps lies, apart from goodwill, in the boost it will give to trade with these countries, of which the prospects are considerable. The benefit, no doubt, will be mutual.

If India means business, the goodwill visit must be followed up with intensive search for the promotion of trade and commerce. We cannot take things for granted, for the socialist countries have other areas to invest in. Though there have been efforts to improve India's trade with Eastern Europe, they have been somewhat haphazard. Figures for the four years from

who accompanied the Prime Minister had enough occasion to take note that our country has a lot of scope to develop trade relations with the socialist countries, provided there is some conscious planning and the bureaucrats in the secretariat do not throw a spanner in the wheel. Any slackness will be to our disadvantage. The loss will not be Eastern Europe's.



Belgrade

1961-62 would indicate that there was little planning.

With Bulgaria, a very advanced country today industrially, trade has expended from Rs. 97 lakh to over Rs. 4 crore in four years, but India's adverse balance rose from Rs. 7 lakh to Rs. 1.83 crore! Except in one year, the balance has been uniformly adverse. With Poland, too, the adverse balance has persisted. With Hungary, Czechoslovakia and even Yugoslavia, though the volume of trade has increased, planning has been lacking. Almost in every case the balance is adverse, which means we do not know what to export or if we know, we do not know how to make it available to these countries.

Fresh and vigorous thinking is necessary if India is to develop a steady export market in the socialist countries. The few journalists

Mrs Indira Gandhi on the Soviet Success

"The October Revolution is a crucial event of human history. It signalled the triumph of an idea and the start of a great experiment in remoulding man and remaking society."

"In the last 50 years the achievements of the Soviet people have been considerable and have won the world's admiration. The Soviet people have withstood tremendous challenges and have saved the world from the dark force of Nazism at an unbelievable cost."

"Today they are in the forefront in many fields of activity. They are partisans of peace and of international co-operation. They have stretched out a hand of friendship to the developing nations."

"On the occasion of the Golden Jubilee of the Revolution, I recall the dreams of Lenin which the people of the Soviet Union have so largely fulfilled."

IS GOD IN CHURCH ALONE ?

Forty years ago Jawaharlal Nehru wrote of the first ten momentous days of the October Revolution. "Within a week", he said, "they had tackled the problem of minorities, which, like the poor, is always with us in India."

If Lenin could do so, it was largely because he had, in every detail, thought out the course of action immediately after the day of victory which, he was sure, was coming. On minorities and language, his views were unambiguous. He said :

"What does a compulsory official language mean ? In practice, it means that the language of the Great Russians, who are a *minority* of the population of Russia, is imposed upon all the rest of the population of Russia. In every school the teaching of the official language must be *obligatory*. All official correspondence must be conducted in the official language, not in the language of the local population..."

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Like the decrees on peace and land, the ideas of the Soviet Revolution were based on a certain philosophy with which one might or might not agree. In fact the bulk of the national leadership in India—Gandhi and Nehru, for instance—rejected the Soviet method and even many of the ideas of the revolution. But there was an effort to understand these ideas. Thus Nehru wrote in 1927 or 1928 :

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groups or classes, each with different economic interests. So long as this condition lasts, every government must express the relative importance and strength of these social classes. The long course of history is interpreted as a conflict between these different social groups or classes. We thus have what is called the economic interpretation of history, or historical materialism. In each historic period, we are told, there is a dominating class, and the interests of other classes are only considered insofar as they serve to prolong or strengthen this domination. But this domination of one class over the others is seldom, if ever, clearly and openly expressed in the form of government. It is disguised in various ways to delude those who are exploited by it, and, where changes are slow, the dominating class creates an impression of eternal rights and duties, to safeguard its own interests."

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The cause for which the people have fought, namely, the immediate offer of a democratic peace, the abolition of landed proprietorship, workers' control over production, and the establishment of Soviet power—this cause has been secured.

The workers' and peasants' revolution, about the necessity of which the Bolsheviks have always spoken, has been accomplished.

10 a.m. November 7, 1917

By a just or democratic peace, the Government means an immediate peace without annexations (i.e., without the seizure of foreign lands, without the forcible incorporation of foreign nations) and without indemnities...

The Government considers it the greatest of crimes against humanity to continue this war over the issue of how to divide among the strong and rich nations the weak nationalities they have conquered.

The Government abolishes secret diplomacy, and, for its part, announces its firm intention to conduct all negotiations quite openly in full view of the whole people. It will proceed immediately with the full publication of the secret treaties enforced or concluded by the Government of landowners and capitalists from February to November 7, 1917. The Government proclaims the unconditional and immediate annulment of everything contained in these secret treaties insofar as it is aimed, as is mostly the case, at securing advantages and privileges for the Russian landowners and capitalists and at the retention, or extension, of the annexations made by the Great Russians.

Landed proprietorship is abolished forthwith without any compensation.

The landed estates, as also all crown, monastery, and church lands, with all their livestock, implements, buildings and everything pertaining thereto, shall be placed at the disposal of the *volost* land committees and the *uyezd* Soviets of peasants' deputies pending the convocation of the Constituent Assembly.

November 8, 1917

GANDHI and NEHRU on LENIN

"I must confess that I have not yet been able to fully understand the meaning of Bolshevism. All that I know is that it aims at the abolition of the institution of private property. This is only an application of the ethical ideal of non-possession in the realm of economics and, if the people adopted this idea of their own accord or could be made to accept it by means of peaceful persuasion, there would be nothing like it.

But from what I know of Bolshevism, it not only does not preclude the use of force, but freely sanctions it for the expropriation of private property and maintaining the collective State ownership of the same. And if that is so, I have no hesitation in saying that the Bolshevik regime in its present form cannot last for long. For it is my firm conviction that nothing enduring can be built on violence.

But, be that as it may, there is no questioning the fact that the Bolshevik idea has behind it the purest sacrifice of countless men and women who have given up their all for its sake; and an ideal that is sanctified by the sacrifices of such master spirits as Lenin cannot go in vain; the noble example of their renunciation will be emblazoned for ever and quicken and purify the ideal as time passes."

—Mahatma Gandhi

“ ‘I know a pair of eyes which have been for ever-numbered by the burning sorrow of the Terror’, said Gorky of Lenin. This sorrow did not leave him to the end. It made him a fierce fanatic and gave him the strength of will to persevere and achieve. But sorrow for the misery of his fellowmen did not make him gloomy or reserved. He was ‘filled to the brim with the sap of life,’ and even ‘in the unhappiest moments of his existence, he was serene and always prone to gay laughter.’.....

"During the critical days of 1921 when Moscow itself was threatened by the enemy and most

people thought that the Soviet power was going to collapse, Lenin thought of the introduction of electric light in the villages and issued an ordinance for the immediate supply of electric light to certain areas.....

“By amazing power of will he hypnotised a nation and filled a disunited and demoralised people with energy and determination and the strength to endure and suffer for a cause.....

"And we may well say with Romain Rolland, that Lenin was 'the greatest man of action in our century, and at the same time the most selfless'.

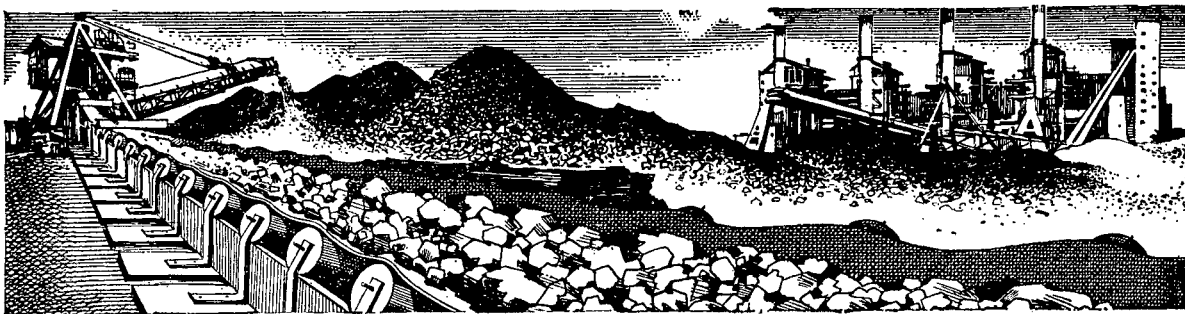
"Lenin has become a mighty tradition, not only in his native Russia but in the world at large. As time passes he grows greater; he has become one of the chosen company of the world's immortals. Petrograd has become Leningrad, and almost every house in Russia has a Lenin corner or a Lenin picture. But he lives, not in monuments or pictures, but in the mighty work he did, and in the hearts of hundreds of millions of workers today who find inspiration in his example, and the hope of better day.....

“While the rest of the world was in the grip of the depression and going backwards in some ways, in the Soviet country a great new world was being built up before our eyes. Russia, following the great Lenin, looked into the future and thought only of what was to be, while other countries lay numbed under the dead hand of the past and spent their energy in preserving the useless relics of a bygone age.”

—Jawaharlal Nehru

"The revolution in Russia was regarded in India as a triumph over despotism.....It has given an impetus to Indian political aspirations".

Montagu-Chelmsford Report



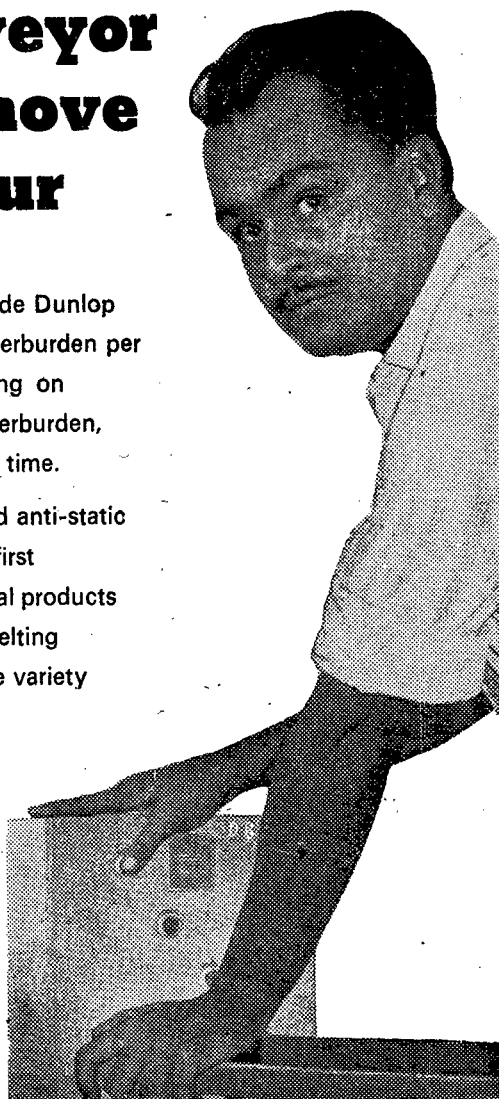
race against time : India's widest conveyor belts, by Dunlop, move 4700 tonnes per hour

At the Neyveli Lignite Project, a complex of 1500 mm wide Dunlop conveyor belts will carry an enormous 4,700 tonnes of overburden per hour at a belt speed of 240 metre per minute. Operating on shiftable conveyors and handling lumpy and abrasive overburden, these belts—widest in India—cut both transport cost and time.

Again, in the special field of mining, PVC fire resistant and anti-static belting which reduces the risk of underground fires, was first manufactured in India by Dunlop. Other important industrial products made by Dunlop India are Vee belts and Transmission belting for power transmission in all types of industry, and a wide variety of industrial hoses and adhesives.

Wherever India's engineers and workers are racing against time, Dunlop products help in some way or other, giving the power and speed to fulfil target on schedule.

DUNLOP INDIA
—keeping pace with India's Industries



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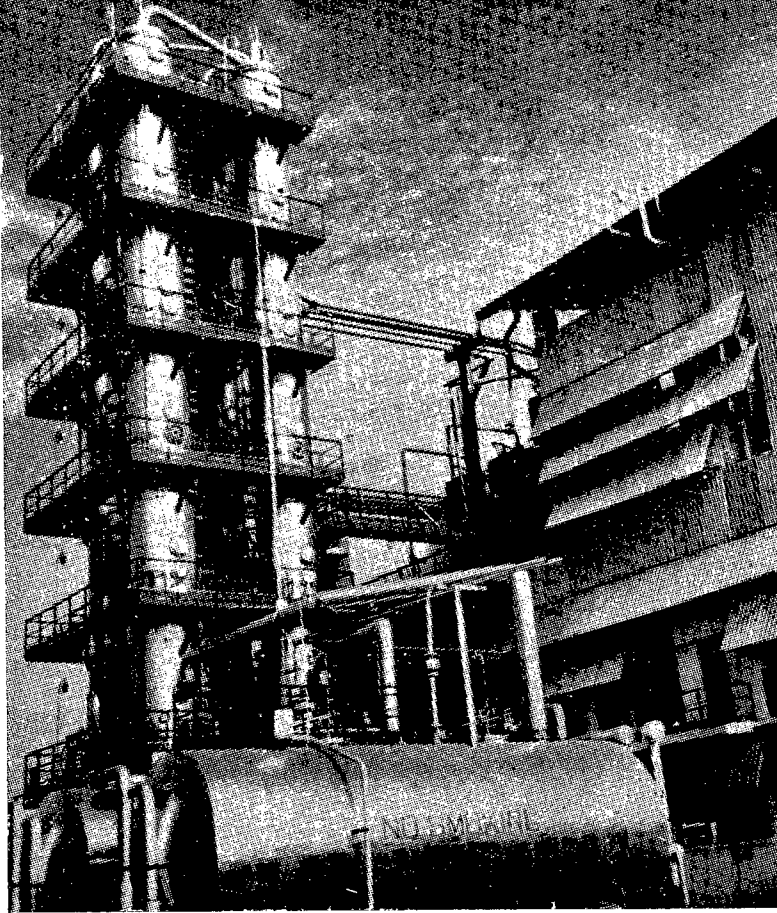
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TIME FOR A NEW EMPHASIS

BALRAJ MEHTA



The Benzol Plant of the Bhilai Steel Works

INDO-SOVIET economic co-operation, beginning with the first large credit of Rs 64.74 crore extended by the Soviet Union for the Bhilai Steel Plant in 1955, has developed in the course of the last 12 years into a major element in the entire complex of India's development process. Its impact has been so meaningful and strong that it has been felt not only in terms of some big projects coming up in the industrial structure of India. It has helped to lift up the basic quality of the economy and its further development to altogether a new level.

Speaking strictly in quantitative terms, the Soviet economic assistance in the period when we set out on the road of industrialisation with the launching of the Second Five Year Plan has been massive. By the close of the Third Five Year Plan, a total of Rs 489.27 crore in credits had been extended by the Soviet Union, including authorisation of Rs 104.31 crore for the first stage of the Bokaro Steel Plant. Another credit equal to Rs 250 crore has been subsequently authorised. By the end of 1966, India had already utilised more than Rs. 300 crore of this assistance in the construction of over 40 large industrial and other key projects of high value to the economy. Nearly Rs 550.79 crore (at the exchange rate after devaluation), equal to about 721.91 million dollars was still available as on January 1 this year for use in the future years.

This assistance has gone into the creation of important new production and technical capacities within the country in such vital sectors as steel, coal, oil, heavy engineering, machine building and precision instruments, power generation, drugs and pharmaceuticals. Side by side, a big spurt in trade exchanges between India and the Soviet Union has taken place, touching in value nearly Rs 200 crore annually, placing the Soviet Union among the first five trading partners of India. This has represented a major diversification in India's foreign trade considering that trade with the Soviet Union and other socialist countries was negligible only 10 years ago. It now constitutes nearly 20% of India's total trade turnover which is equal to our trade with the U.K. or the U.S.A.

What makes the economic co-operation between India and the U.S.S.R. specially significant and enduring is that the economic assistance India has received from the Soviet Union is directly and closely entwined with the concepts and arrangements for expansion of

trade between the two countries. The repayment of credits is linked to exporting of goods from India to the Soviet Union. Since the trade, governed by the mechanism of non-convertible Indian rupee as the exchange medium, is so arranged as to be balanced, Indo-Soviet economic relations in their formative years precluded imbalances and strains in their working.

Precisely because the economic co-operation between India and Soviet Union has developed so successfully and to such advantage in the last 12 years, it is now entering a new, more diversified and higher phase. This will, of course, call for fresh attitudes and approaches. But there need be no misgivings if they will be developed; indeed they are already in the process of being developed.

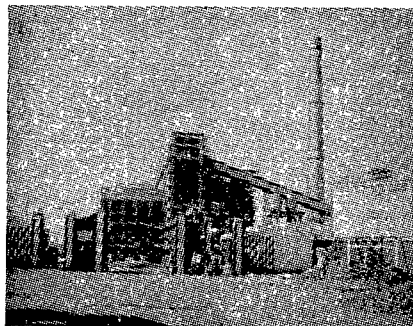
When the Soviet Union entered the picture, India's development process was in its very initial stage. Our economy was very backward, almost colonial in its structure and composition. The Soviet assistance gave powerful support and leverage to pull it out of this situation and helped to start a grand design of

industrialisation, at the very core of which stands the building up of a heavy industry base. When this assistance started coming, there was not much chance of getting help for building up heavy industry from any other source and certainly not on the scale and quality offered by the Soviet Union and some other socialist countries.

Outstanding Role

The pattern of assistance in the circumstances then obtaining had necessarily to be in the form of supply of complete plants on easy credit and technical assistance to put them up on turn-key basis. This pattern has given rich results. Not merely have a large number of industrial complexes sprung up but a reserve of trained manpower and expertise in the setting up of large modern projects and their operation has been created. In helping to reach what is called the mid-point stage in industrialisation and making India among the more advanced of the developing countries, the Soviet Union's role in the last decade has been without question the most outstanding and most rewarding.

Since the credits advanced for the purpose were on an easy rate of interest—2.5 per cent a year—and repayment obligation was spread out over a 12 year period after the completion of the delivery of plant and equipment in each case, the Soviet assistance did not cause any strain in our balance of payments



The Korba power station

position as the industrialisation programme unfolded itself.

In the present stage of its economic and technical capability reached after 12 years of development, however, India is now in a position to undertake its further growth on the basis of a somewhat changed pattern of outside assistance. In the conditions of slow-down of the development process during the last two or three years, this aspect may have remained somewhat of academic interest and not fully appreciated. But as the development is resumed in the near future, as it must, its impact should be more fully felt.

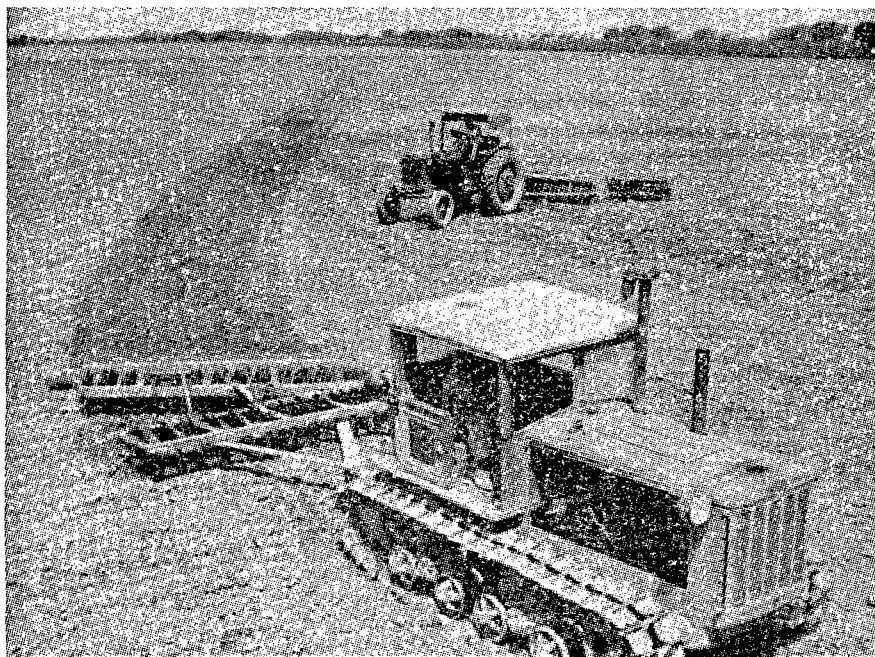
For one thing, complete plants will not be needed to be imported any more and India should not enter into any arrangements for the setting up of new industrial capacities or expansion of existing ones which will involve supply of complete plants and their installation

on turn-key basis. Maximum utilisation of Indian ability which is now substantial to fabricate equipment and machinery with only balancing items from abroad must become the essential element in the conception and installation of new plants and projects in all sectors of the economy. The stress, therefore, must shift from complete plants from abroad to the supply of components and parts. The Soviet economy is versatile enough to make such supplies in several areas of our need.

The problem, however, is not confined just to the maximum utilisation of Indian fabrication and manufacturing capacity in the capital goods sector. It extends to and has to go together with designing, engineering and construction responsibility being entirely and firmly in the hands of Indian organisations and personnel. Turn-key method and arrangements with foreign organisations on that basis must be totally rejected. The sophisticated and new technology or process know-how in which India is deficient and which has to be imported will have to be supplemental and should not supplant Indian control, initiative and responsibility.

The Soviet Union should not find it difficult to adjust herself to such a pattern of co-operation. The projects set up with Soviet assistance, specially in the heavy engineering and machine-making sectors, are really the very foundation on which this has emerged and become feasible. It is a matter of deep satisfaction for all those who have worked with Soviet personnel that it has freely passed on know-how and skills to Indians in the process of construction and operation of the joint projects. A lot of work has been done through exchange of trainees. The Indo-Soviet projects have also taken special interest in creating cells and organisations to promote Indian design and engineering capabilities. The project to

An offset harrow preparing a seed bed at the Suratgarh farm



ADJUSTMENTS

MUST BE MADE

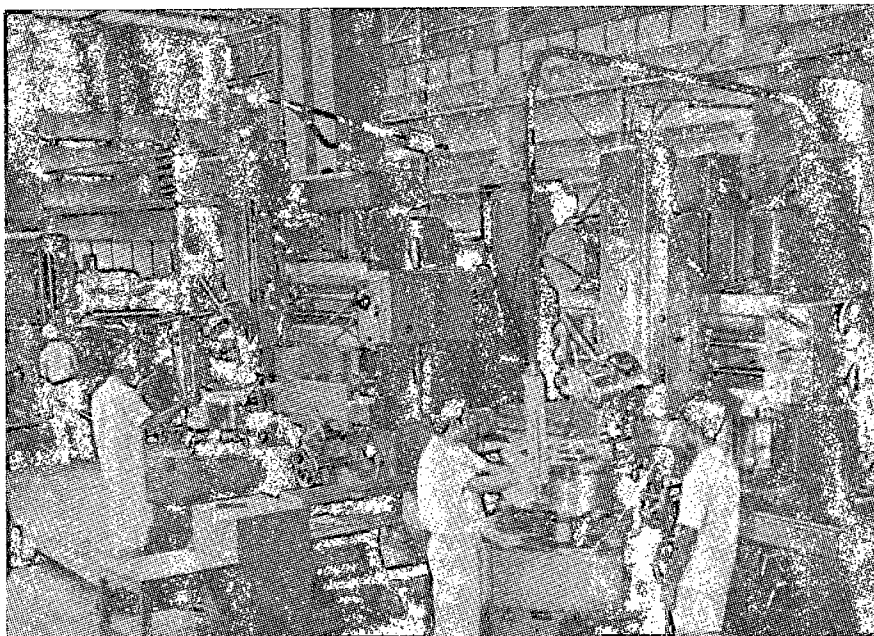
Complete Plants and Turn-Key Methods Not Valid Any More

set up a large Metallurgical Design Organisation with Soviet collaboration, a field in which it excels, is being negotiated at present and will be a big step forward in this direction.

The new pattern of assistance that has been thrown up as a result of all these developments may not put up show-pieces but will make for more diversified, complex and intimate relations of co-operation on a wide front and on a long-term basis. It will be less assistance and more co-operation and joint enterprise. The Soviet Union can be expected to take it on more effectively than any one else.

Its impact on the pattern of trade will be equally important and far-reaching. In the conditions of backwardness, India had no option but to export primary products, mainly of agriculture to the Soviet Union. The entry of the Soviet Union into the Indian market helped to expand Indian exports of these commodities in a big way and firmed up their prices and terms of trade in the international market. Gradually, more and more processed and semi-processed items in this very category as well as manufactures of our traditional industries began to figure in the trade exchange with the Soviet Union. This gave us still better returns in the form of imports of machinery and equipment and certain raw materials which were needed by our economy. This has been a highly profitable form of international division of labour in the prevailing conditions.

With India having achieved a measure of industrial development, the items entering her exports must now diversify further and the operation of the principles of international division of labour between India and the Soviet Union must



An inside view of the machine shop of the Heavy Machine Building Plant, Ranchi

begin to grow to a higher level than before. India will be interested in the sale of products of its new industries in foreign markets including goods of industries which the Soviet Union has helped to set up.

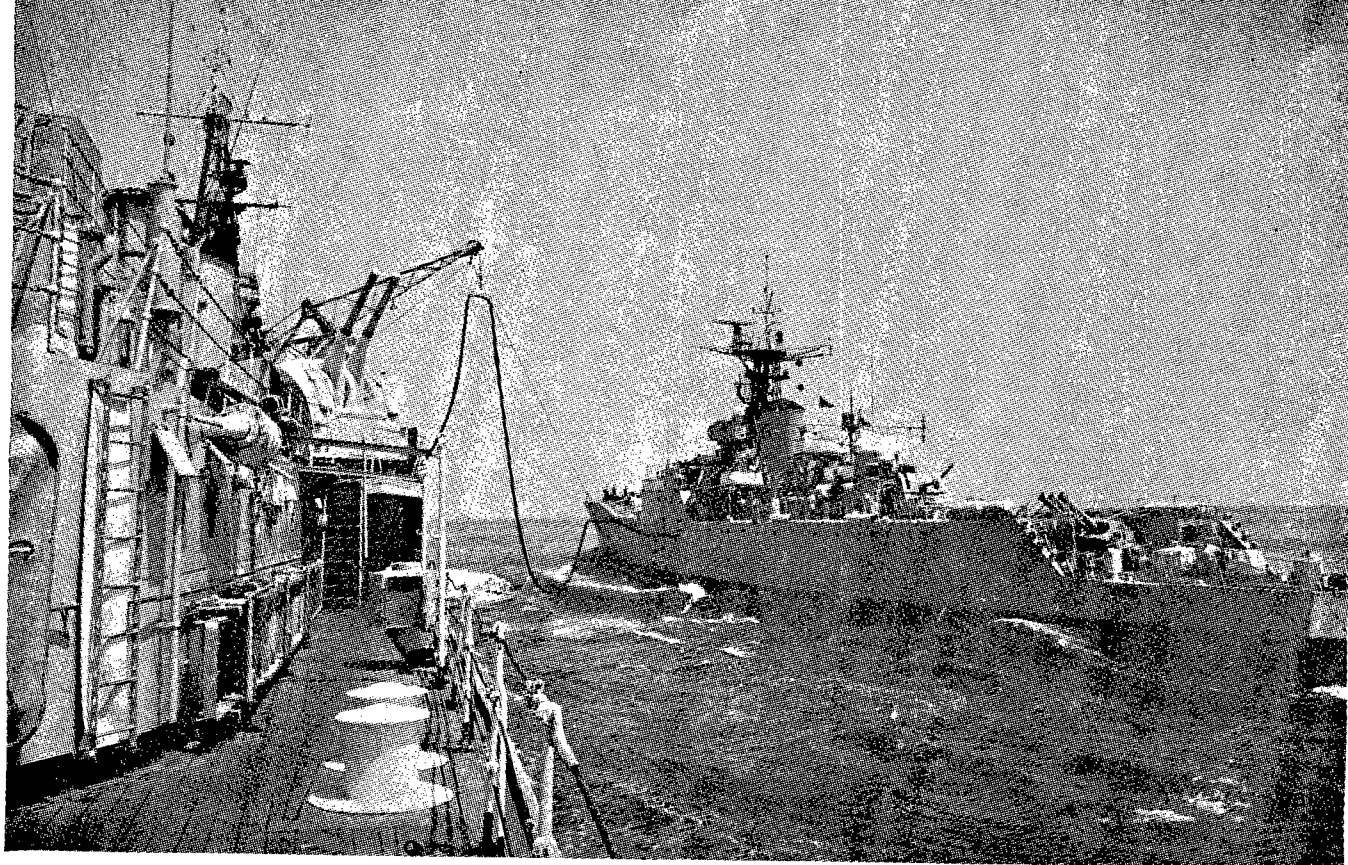
It is symptomatic of this trend that in contrast to large quantities of steel and pig iron that India has had to import from the Soviet Union in the past, it is now seeking outside markets for the sale of certain categories of its steel. It is a measure of the understanding on the part of the Soviet Union that it has readily agreed to buy the products of Bhilai steel plant which it had helped to build. Such exports from India will grow in future.

Dovetailing

This again should not present any major difficulty for the Soviet Union. In the absence of planning, there might be resistance to such goods from the developing countries because of the fear of their impact on certain traditional industrial pockets in certain countries even when their overall economy has moved to a higher industrial base and to a more sophisticated and complex production level. In the planned economy of the Soviet Union, it would be easier to make adjustments and to organise dovetailing of the production potential

of developing countries, the consumption demands in Soviet economy and its own production pattern. Such adjustments will in fact relieve its labour power from the simpler form of production and allow it to be engaged in more difficult areas. Its consumption needs from the first category of production can be met by imports from developing countries. This idea is making headway in any consideration of long term economic co-operation between developing and developed countries and initial steps have already been taken in this direction. It will require to gather momentum in due course and the Soviet Union can be expected to play a big role in it.

We are thus in the beginning of a new phase in Indo-Soviet economic co-operation. The rapid strides that the Soviet Union has made and giant advances it has registered in the fields of industry, technology and science in the last fifty years after the Great October Revolution, whose fiftieth anniversary is being celebrated, will ensure that this will work as well and as fruitfully as co-operation in the last 12 years has worked. India will be able to derive the maximum advantage from it to the extent that its own economy shows resilience, self-reliance and rapid growth.



From ship to ship on the high seas personnel and supplies are transferred by a method called Jackstay.

UNDER-SEA CRAFT That The Navy Needs

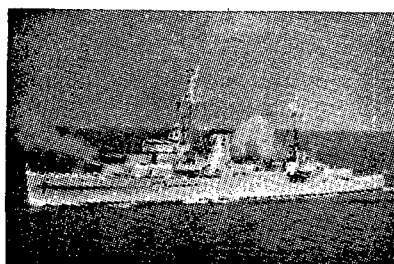
E. K. RAMASWAMI

"Happily the Soviet Union, which was ready to sell us vital equipment in times of crisis when other nations friendly to us were apathetic, is selling us submarines of a type that is considered one of the best in the world."

DESPITE the fact that the Indian Navy has a most potent striking force in the aircraft carrier "Vikrant", which no country in Asia has got, it will not be a balanced fleet until the submarines arrive.

Today the Indian Navy has, apart from the carrier which is the flagship, "Mysore", a colony class cruiser, "Delhi", a Leander class cruiser, and destroyer squadrons,

Ranjit, Rajput, Rana, Godavari, Gomati and Ganga, besides a number of frigate squadrons. The frigate squadrons include some of the latest types of anti-submarine and anti-aircraft frigates. The new types of frigates specially constructed for the Navy in the United Kingdom are Brahmaputra, Beas, Betwa Khukri, Kirpan, Kunthar, Talwar and Trisul. The old frigates, Cauvery, Kistna and Tir, are now being used for cadets' training. The other units consist of mine-sweeper squadrons, a survey unit, a tanker and some auxiliary aircraft. In size, it is perhaps next only to the Indonesian Navy in Asia. But the superiority of its training and fighting efficiency has been displayed in many of the combined exercises.



I.N.S. Delhi, an Indian Navy cruiser

During the Indo-Pakistan conflict, Pakistan somehow got wind that the ship they fear most—the carrier Vikrant—was in dry docks, and the Pakistan Navy indulged in some bluff and bustering tactics. One of their vessels fired a few shells on Junagadh, displaying poor marksmanship and hitting a few rocks. It was well known that the only submarine Pakistan has was cruising somewhere off Bombay harbour waiting for one of our cruisers to come out. The Indian Navy was sufficiently alert and prepared to nip in the bud Pakistan's mischief. But India was anxious not to escalate the conflict or extend the sphere of conflict. However, the fact remained that if

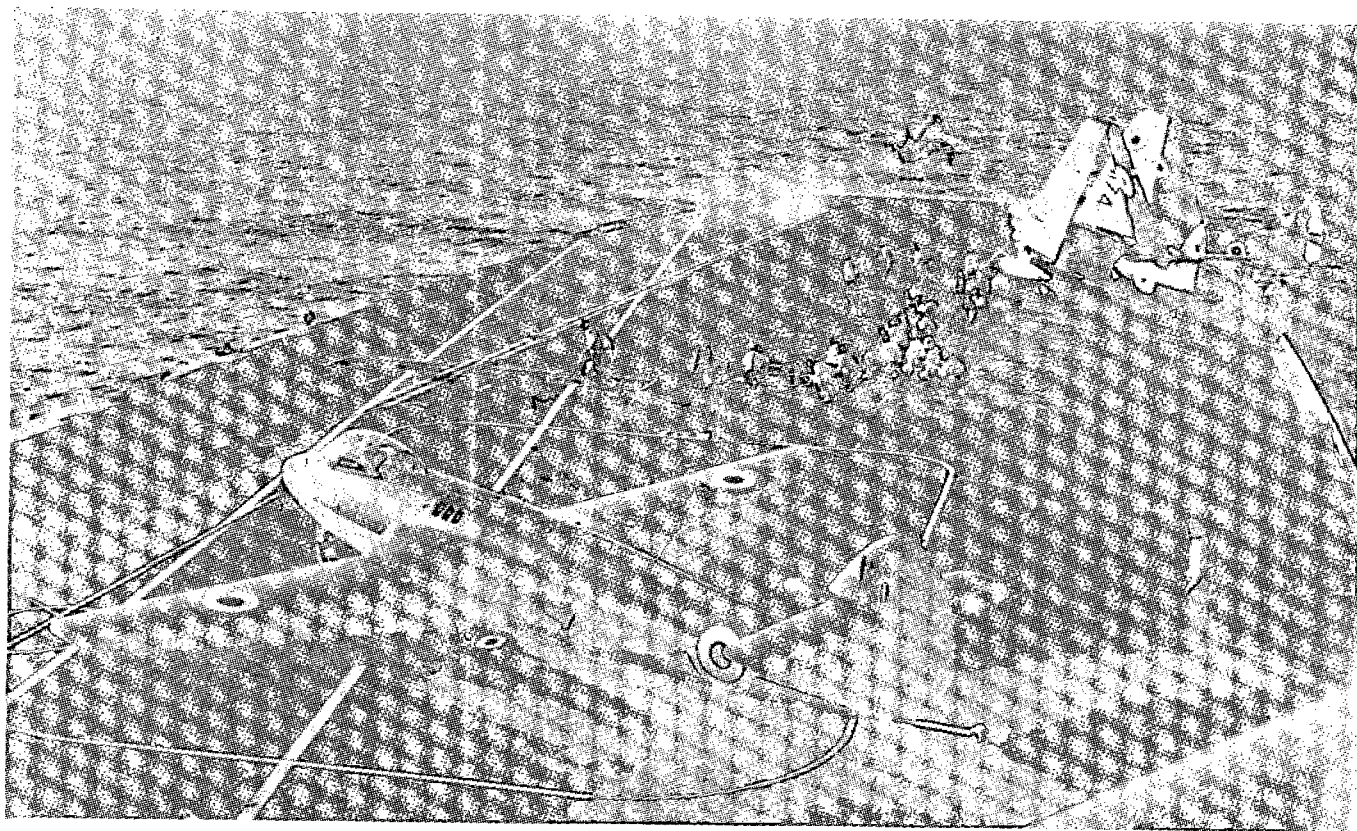
Valuable Soviet Help

reason to believe that in the very near future India will have to face the Chinese threat even on the high seas. If merchant shipping is attacked suddenly and sunk by submarines, it is difficult to identify them as in the case of surface ships. Much damage could be done by a power intent on aggression before the aggrieved party is able to point the accusing finger unless it is prepared to declare war immediately.

Ever since the Sino-Pak collusion, the possibility of Chinese submarines operating in the Bay of Bengal with Chittagong as the base,

lines from two of our neighbours who, working in collusion, pose a threat not only on land but on the sea.

By a happy coincidence India has decided to go in for Soviet made submarines as was announced in Parliament, at a time when the Navy is headed by a man who is an expert on anti-submarine warfare, Vice-Admiral Adhar Kumar Chatterji. Even way back during the second world war, Vice-Admiral Chatterji was an Instructor in anti-submarine warfare in the United Kingdom. Happily again the Soviet Union, which was ready to sell us



Sea-hawk planes being catapulted from the deck of I.N.S. Vikrant, the Navy's aircraft carrier.

the Indian Navy had a couple of submarines, Pakistan would not have indulged in the sabre-rattling on the high seas.

Naval experts all over the world know that China has built up a sizeable fleet of submarines. This fleet is being strengthened every year. It has been confirmed in Parliament that some of these submarines have been sighted in the Bay of Bengal. There is every

and in the Arabian Sea with Karachi as base, is not ruled out by naval experts. The carrier Vikrant, supported by destroyer squadrons, could either patrol the eastern coastline or the western one, but not both. So apart from making the Indian Navy a complete and balanced one, acquisition of submarines is an absolute necessity even for making the existing fleet effective to defend the two coast-

vital equipment in times of crisis when other nations friendly to us were apathetic, is selling us submarines of a type that is considered one of the best in the world. Very soon the Indian Navy will be having its own submarines. From the way in which our Naval officers and men have mastered the complicated operation of the aircraft carrier, it

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Scope for Indo-Soviet Collaboration in Farm Science

AFTER the attainment of Independence in the year 1947, our country was faced with the task of finding a solution for many of her economic problems. One of the most serious among these problems was the attainment of self-sufficiency in agricultural production. Since science and technology had necessarily got to be the foundations on which any production programme in this field was to be built up, the agricultural scientists had to face a very big challenge. Many of the developments which had taken place in the field of scientific research in the USSR had all along evoked a lot of interest among the scientists of this country. A number of agricultural scientists had occasion to visit the USSR and study the advances made by the Soviet scientists in various disciplines. These visits were often made by individual scientists and students and sometimes by teams of scientists. Special mention may be made about the studies made in the field of cotton and grapes research as well as in agricultural machinery. During the last 16 years Soviet scientists have also been showing interest in many of the developments that have taken place in the field of agricultural research in this country. A number of Russian scientists including Academician N.V. Tsitsin visited research institutions in India during this period.

SURATGARH

As far back as 1956, the Central Mechanised Farm at Suratgarh was set up with the agricultural machinery received as a free gift from the USSR. This Farm has made steady progress and stands as a symbol of friendly collaboration between the two countries. It has been realised of late that the field of collaboration between the two countries could be widened in order

B. P. PAL

Director-General, Indian Council of Agricultural Research

to produce results of a more enduring nature. In 1966, the Indian Minister of Food and Agriculture visited the USSR and during this visit he felt that there could be Indo-Soviet collaboration in the field of agricultural research, which would include exchange of visits by scientists and of equipment, scientific literature, etc. Recently two different teams of Soviet scientists visited India. One of them led by Dr. Kachibaya Nikolai Artemovich came with the limited objective of studying lac research in our country and to explore the possibility of lac industry in the USSR. As desired by them and the Government of the USSR some material was sent from this country and I am told that the scientists of the USSR are conducting some very useful research on the insect material.

The second team was led by Dr. G.I. Vorobiev, Deputy Minister of Agriculture of the USSR, and included a few senior scientists in the fields of crop science and animal science. They visited many of the important research institutions in India and met a large number of Indian scientists. This team also expressed the view that there could be more effective collaboration between the two countries in the field of agricultural research.

I had the privilege of visiting many of the important centres of research in the USSR in pursuance of a personal invitation extended to me by the Soviet Government. Earlier, Dr. D. K. Iya, Deputy Director General (Animal Sciences) in the Indian Council of Agricultural Research had visited the USSR to study the latest developments in the field of animal

science research. Though the period of my stay in the Soviet Union was comparatively short, the programme had been so arranged that I was able to see some of the great centres of agricultural research. This visit confirmed my opinion that there could be much more of fruitful collaboration between the two countries in these fields of scientific research. I was much impressed by the high quality of work undertaken in the laboratories and institutions which I visited. For instance, the contributions made by Academician Postevoy to the improvement of sun-flower which is a very important oil plant in the USSR are widely acclaimed. This is a field in which India has also got much interest and there can be very useful collaboration.

There are other oil crops like oil flax (linseed), castor, soyabean and groundnut on which a lot of useful research is being conducted in the Soviet Union. We are also conducting useful investigations of many of these crops and it will be to the benefit of both the countries if there is frequent exchange of plant materials.

Certain varieties of grapes and cotton introduced from the USSR are doing well in our country. India has very special interest in this field of agricultural research. Conversely, I found interest in our dwarf varieties of wheat among some scientists at the Timiryazev Academy at Moscow, at the Vavilov All-Union Institute of Plant Industry, and at the Agricultural Research Institute at Krasnodar.

The development of new agricultural implements, development and use of bacterial fertilisers, use and assessment of the efficiency of chemical mutagens in inducing new variations in crop plants, biological and other methods of control of pests and the control of virus diseases through the development and production of polyvalent sera are some other fields in which we will be much interested. Similarly, many of the high-yielding varieties of food crops and other hybrids recently developed in our country and acclaimed as some of the best yielders may be of interest to the scientists of the USSR. There is another direction in which the

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As I understand it, Congress socialism is Nirgun (formless) socialism; but its capitalism is Sagun (with form).

—The late Dr Lohia as quoted in the "Mainstream"

President Johnson, for example, assured Prime Minister Lee Kuan Yew of Singapore that America will see the struggle through in Viet Nam no matter what comes. We shall "ride the tiger" to the end, he said. This dramatic symbol of the problem inevitably provoked his critics to recite the old limerick :

"There was a young lady of
Niger,
Who smiled as she rode on a
tiger,
They returned from the ride
With the lady inside,
And the smile on the face of the
tiger".

—Mr James Reston in "The New York Times"

One of the greatest headlines of all times was "The Story of My Experiments with Truth".

—Mr M. Chalapathi Rau in his book "Gandhi and Nehru"

I understand that a Deputy Minister swore by God to remain loyal to the United Front and in two days he defected from it.

—Mr B.N. Chakravarty, Haryana Governor

The State of New York has released some bad news for young lovers in a car. All New York motorists are

required to keep at least one hand on the steering wheel of a car while the car is in motion.

"Citizen Herald," Walden, New York

If only there were a fifty-fifty chance of the man bearing a child after sexual intercourse, there couldn't be any more controversy about the subject. Abortion would not be a crime anywhere. A sudden thought has just struck me though, under such conditions there might not be any sexual intercourse. The practice might just fade away.

—From a letter in "Time"

QUOTATION BOX

On a busy Moscow street corner a man stood motionless, staring vacantly into space. After observing him for some time, a policeman decided there must be something wrong and walked up to him.

"What are you doing ?" the policeman asked.

"Don't know" mumbled the man.

"What's your name ?"

"Don't know."

"Where do you live ?"

"Don't know."

"What's the date ?"

"Don't know."

"What year is this ?" asked the policeman in final desperation. At

this point a glimmer of intelligence lit up the man's face.

"The fiftieth jubilee year, of course. What a silly question!"

This anecdote, which has been making the rounds here illustrates how the minds of the public have been saturated with the impending fiftieth anniversary.

—Mr Edmund Stevens in "The Sunday Times"

The point has been reached where the prestige symbols in Punjab are now mechanical. In marriage negotiations when the representatives of the two sides come together, a common opening gambit of one party may be : "Do you have a tractor ?" To which the likely reply is : "Do you have a tubewell ?"

—Mr Daniel Thorner in "The Statesman"

There are men who tame wild animals and even poisonous snakes and scorpions. Why not try taming the linguistic States?

—Mr C. Rajagopalachari

Now there is only one gulf, namely the English-knowing and the non-English-knowing, but once English goes, there will be umpteen gulfs.

—Mr K.M. Munshi

I am not one who maintains that the scorpion in the South has no sting, unlike the scorpion in the North. My policy is to acquire and absorb whatever is good from wherever it is.

—Mr C.N. Annadurai

DEVELOPMENT DIARY

OCTOBER 19 TO NOVEMBER 1, 1967

October 19

An automatic mill, the first of its kind, for the manufacture of synthetic cotton fabrics is commissioned in Bombay.

October 20

Two agreements on fertiliser pilot projects are signed in New Delhi by the Indian Freedom from Hunger Campaign Committee and the F.A.O.

October 21

The Second Super Bazar in Andhra is opened in Visakhapatnam.

October 23

Indian Airlines introduces a Caravelle Service between Delhi and Srinagar.

October 24

A bilateral air services agreement is signed in Jakarta between India and Indonesia.

October 27

India signs an agreement with Canada

to obtain \$ 29.5 million (Rs 22.12 crore) as development loans to buy equipment for the Idikki power project in Kerala; and copper, zinc, aluminium, newsprint and wood-pulp.

October 30

An agreement is signed in New Delhi between the Fertiliser Corporation of India and Montecatini Edison, Italy. Under this 10-year supply credit agreement Italy will supply equipment for fertiliser plants in India.

October 31

A trade protocol agreement is signed between India and Bulgaria fixing the volume of trade between the two countries at nearly Rs 16 crore each way for 1968.

November 1

A College of Satellite Communication Technology is opened in Ahmedabad.

A 'Telex' Service between India and Ceylon is opened. Ceylon is the 65th country to have Telex services with India.

Looking Back

Yojana November 17, 1957

The successful launching of a second earth satellite by Russia a month after the first makes a notable advance. The second "Sputnik" weighs about 1,127 lbs. It is also five times larger in size. Secondly, it has a passenger on board—a dog. It has been shot to a longer distance than its predecessor—over 1000 miles above the earth and is travelling at a speed of 18000 miles an hour. It takes 102 minutes to circle the globe.

This new man-made satellite marks the beginning of a new phase in the conquest of interplanetary space. It is only a question of time before man will replace the dog and venture beyond the earth's atmosphere. Russian scientists have already started talking of sending a man into outer space very soon in a larger satellite. The journey to the moon is already being talked about as a "not remote" possibility.

STRATEGY FOR A NEW ECONOMIC ORDER

M. SUNDARA RAJAN

THE clocks were put back a little so that the signing of the Algiers Charter can coincide with the birth anniversary of the U.N. Charter on October 24. But time is a cruel master. Can its ravages be undone? Can the increasing gap between the rich and the poor countries be narrowed? The answer that Algiers has given is in the Charter—reaffirmation of faith.

The Charter notes the present disparity of incomes and wealth in the world. The advanced countries have been adding annually 60 dollars to their per capita income, while the average for the developing countries is less than 2 dollars. The purchasing power of exports from the poor countries is steadily declining, and in a few years will equal the entire flow of external public financial resources to them. Having stressed the need for radical reform in trade and aid policies, the Algiers Conference was quick to point out that the economic uplift of the majority of nations, is not in conflict with the continued progress of the industrialised nations. The concept of convergence of economic interests has been the basic theme at Algiers. For a conference of continents like this, there could be no strict framework of uniformity of views and interests. What emerged finally was a list of practical policies and a global strategy for a more equitable and profitable international division of labour.

The tasks outlined will be pursued at the Second U.N. Conference on Trade and Development to be held in New Delhi in February next.

The Charter has hoped that the unsatisfactory Kennedy Round would be completed at the New Delhi round. It wants the conces-

sions to be applicable to all developing nations, whether members of GATT or not. As pointed out by India, no effort was made in Geneva to offer deeper than 50 per cent tariff cuts, as envisaged in Part IV of GATT itself. An equally important omission at Geneva relates to loss of preferences, enjoyed by some like India, following general tariff cuts. The need to compensation the loss requires to be stressed at New Delhi.

Hurdles

Whatever little concessions have been offered by the developed countries are spread over five years. This marginal benefit could hardly be enough. Timing is the essence of the matter. The United States is likely to give them from the new year. But India and others want the concessions right now, without being phased. The United States will do so only if other countries also give the concessions all at one stroke. This "acting in concert" is bound to strike a jarring note. Indeed, UNCTAD-II will have to ask for a general preferential system, which should last long enough to enable all developing countries to benefit. Initially, the concessions should last for at least twenty years. The Charter also suggests a ban on further quota restrictions on the goods imported by the rich.

The advanced countries should not discriminate or expect reciprocity. They should concede access to their markets for all manufactures and semi-manufac-

tures of the developing countries. Moreover, the practice of the rich to introduce restrictions by the back door should stop. Egged on by their lobbies, they raise the bogey of "market disruption" and "special circumstances", whenever their products face some competition from those imported from the poor. Why should they not concentrate on the special skills of science they have acquired instead of dissipating them on things like oil extraction? Are there insurmountable difficulties in making the appropriate domestic structural adjustments? The developed countries must answer these questions at New Delhi. The very tariff rates act as a disincentive to industrial growth. The more the processing of an item, the higher becomes the tariff wall.

One familiar argument advanced by the richer nations is that the poor countries produce things cheap, with their abundant manpower. This ghost has been effectively laid by the Indian delegate at the opening of the Kennedy Round. Nor is it true that the concessions will mean a reduction in the exports of advanced nations. As the growth rates of the developing countries are far from adequate, imports will continue to go up. New plants for industry and new consumer goods, demanded by the newly-acquired money, are bound to give the rich an assured market. It is no use accusing the developing countries of pursuing a protectionist policy or of currency over-valuation.

The emphasis of developing nations on import substitution should shift to export promotion. Otherwise, what is the use of giving them access to new markets? Are they ready to take the plunge, when hitherto non-preference markets are opened to them? The experience of India in this connection would be worth watching. Following the Kennedy Round, our products worth Rs. 191 crore can receive concessions out of exports worth Rs. 260 crore which did not enjoy any preferential advantage.

A New World Bank

The Algiers Charter has indicated that, in the field of development financing in particular, the New Delhi meeting would have to sponsor several new ideas. The Bretton Woods twins—the World Bank and the I.M.F.—were born after the war and naturally their emphasis has been on restoration of normalcy rather than on growth. In its 21 years, the World Bank, with its 7-year old soft loan affiliate, I.D.A., has lent only 12 billion dollars three-fourths of which have gone to advanced countries.

and realisation of the target of one per cent transfer of gross national product of the rich to the poor by 1970.

How Good is Foreign Aid?

Perhaps nowhere else is reform overdue as in the terms and conditions of foreign economic aid. Since 1961, ironically, with the beginning of the Development Decade, there has been no significant increase in aid by the four largest donors. A continuous commitment is invaluable for any planning to succeed.

Some countries, by tying their aid to purchases within the donor countries, are in effect giving protection to their industries. The recipients cannot go in for world tender, cannot choose the best suitable technique and cannot reap the benefit of cheaper equipment from elsewhere. It has been calculated that in certain cases, the interest forgone in the grace period is more than made up by the high

The Opportunity

These suggestions could not have come at a more opportune time. The annual Fund-Bank meeting at Rio de Janeiro had recently agreed on the need to increase liquidity to meet the growing needs of world trade. Developing countries supported the new scheme called Special Drawing Rights, not merely because they would get a fixed percentage of their quotas as additional resources, (75 per cent of which need not be repaid) but for the more important reason of the chance it gives to developed countries to increase their foreign aid. One of the arguments advanced against more multilateral aid, especially by the U.S.A., is the pressure on their gold, which is demanded in exchange of dollars by countries like France and Germany. The latter might well get the dollars (given originally as U.S. aid) from the recipients in exchange of the industrial goods they supply. Under the SDR scheme, countries will accept the credit and not demand gold in settlement of transactions. Once the scheme is accepted, the U.S.A.

RESTRICTIONS ON THE SLY MUST STOP

The IDA is today facing a crisis. The President of the Bank, Mr. George Woods, has repeatedly urged the richer countries that the IDA should have at least one billion dollars a year but the promised replenishments have yet to take shape. The latest U.S. offer is subject to Congressional approval.

Besides advocating more resources for IDA, the Algiers Charter suggests that the World Bank be made a development bank for developing countries exclusively. The current loans due by the developed countries may be obtained in advance of their maturity to augment the resources, which can be diverted to support regional development banks. Also, there should be no discrimination by the lending institutions against the public sector. The demand of the Charter is indeed modest, a doubling of the share of the developing world in the international trade in industrial products

price.

The Charter, therefore, has suggested that beyond a certain date to be agreed, all development lending should be on terms currently applied by IDA. Pending this, there should be a lowering of interest rates and increase in maturity period. Credit should be rapidly untied. The excess cost of credit tied to the donor should be made good. At least, the aid should be allowed to be used in other developing countries who may be able to meet the needs. Another suggestion is that the stand-by credit, which is generally for a year, should be extended up to ten years. Persistent shortfalls in the export earnings should be noted while debts fall due. A formula to calculate a shortfall in the export earnings should be based on the export income in 3 normal years. And lastly, the time-limits, within which the present I.M.F. loans are to be repaid, should be revised.

cannot say its payments position will be affected by more aid.

A major handicap of the developing countries relates to their production of primary products. It has been pointed out that prices of primary products have a long-term tendency to deteriorate, relative to the prices of manufactured goods. This is noticed whether there is protective high wall in the markets abroad or not. As a protection against economic ruin caused by the fluctuation in the prices of the primary products, commodity agreements have been concluded but the five such important deals have proved ineffective in getting the desired results. Since UNCTAD-I in 1964, no new commodity agreement on primary products of interest to the poor nations has been concluded. Tariff walls for farm products have grown higher. Primary products exported from developing countries, have decreased by seven per cent since 1958, but those from richer

NEW DELHI MEET MAY BE A WATERSHED

countries have increased by 10 per cent.

Both rich and poor countries should share the cost of operating a buffer stock to be set up to stabilise the market. There should also be funds earmarked for a diversification programme. A series of commodity deals, to improve the terms of trade, has been suggested including a cocoa agreement before the end of 1967, one on sugar early in 1968 and others soon after. It has been shown that nominal tariffs are a poor guide to an effective level of protection. All restrictions and charges on primary and semi-processed goods should go. At least one-third of any increase in domestic demand for primary commodities in the advanced countries should be reserved for the output of the developing countries. A novel suggestion is that the rich countries should refund some of the duties they had levied in the past. The uncertainty of the future levels of barriers acts as a disincentive. If some success is made in the advanced market, more barriers come in. There has been a lot of hair-splitting over whether the purpose of preference should be temporary, permanent or for as long as the countries remain under-developed. It is also debated as to whether more export proceeds are envisaged or infant industries are to be supported by assistance schemes. The likelihood of capital loss involved in buffer stock system has been over-stressed. In view of these handicaps, consultation and co-operation between producers of developing countries will help improve the terms of trade. The efforts at regional co-operation are no doubt important but they cannot be a substitute for larger and more remunerative exports to developed countries.

The Algiers Charter has also asked for the abolition of the widespread practice of fixing high freight rates for non-traditional products of developing countries.

The Algiers conference has frankly reminded Socialist countries of their duty. Noting the increasing trade between Western and Socialist countries, the Charter hopes this would not affect trade with the developing countries. In particular, the Charter wants the elimination of the margin between the import price and domestic selling price of goods from developing nations, a halt to re-exporting goods without the consent of the poor nations, and acceptance of repayments of credits for plants in the form of products of these plants.

One of the problems tackled at Algiers was about some of the developing countries being more developed than others. 67% of the developing countries account for less than 7% of the overall exports of manufactures from such countries. It is essential to have special measures for the least developed, relating to tariff and non-tariff barriers. But the Conference decided not to attempt an abstract general definition. A working group representing the three regions is to meet in Geneva shortly to consider the needs of the least developed.

To conclude : Injustice is inherent in the status quo. Till this is removed and the backlog of centuries is made up, the developing countries cannot be expected to join in a game of free trade. The time has come at least to prevent unilateral application of restrictions and resort to escape clauses. There should be permanent multilateral institutions which would act as watch-dogs. Care must be taken to see that what is granted by one hand is not taken away by the other. There should be no cut down of aid following a cut in tariffs.

UNCTAD-I was beset with one major defect. The advanced countries came without doing much home work. They could not agree among themselves. The United States, in particular, opposed some of the important demands made

there. It is encouraging to see that in the U.S.A. itself, it is being increasingly realised that there is a real issue in both political and economic terms and that a new policy towards the developing world is necessary. This time, the dialogue is to start well in advance. Different high-level delegations are to visit the advanced countries to appraise them of the issues involved. All eyes are now turning towards New Delhi for the second conference, which promises to become a great watershed in the economic history of the world.

CONTINUITY AND CHANGE

"The active principle of science is discovery. Now, what is the active principle of a social frame-work or society? Usually, it stands for conservatism, remaining where we are, not changing and carrying on, though, of course, with some improvement and further additions. Nevertheless, it is a principle of continuity rather than of change. So, we come up against a certain inherent conflict in society between the co-existing principles of continuity and conservatism and the scientific principle of discovery which brings about change and challenges that continuity."

DIRECTION TO PLANNING

"There is a regular campaign of running down the public sector. I am all for the fullest criticism of the public sector because we want to live in the sun. In the huge public sector undertakings difficulties arise. Let us try to solve these difficulties. I feel that the criticism of the public sector is rather associated with the dislike and fear of what, the critics think, is happening, namely a definite direction and turn being given to our planning."

—Nehru

THIS INDIA

YOJANA invites contributions to this feature from its readers all over the country. Each anecdote must be true to life, of less than two hundred words, capturing something significant of India's rich and varied life. Each published anecdote will be paid for.

One afternoon a friend came to my house and narrated the following story :

I was coming to your house. A crowd by the roadside caught my attention. In front of a bearded middle-aged man were three playing cards spread on the ground. One man put two rupees on one of the cards. The cards were reversed. He was immediately paid four rupees. I was tempted. I put my two rupees on a card, and lost. I had no money left with me. I wanted to get back my two rupees. So I put my gold ring quoting ten rupees for it, but I lost that too. I was almost out of my mind.

All this happened within a minute. I moved away from the place. One person followed me who told me that they had cheated people like this for years but nobody had bothered to stop them from doing it. I had no mind to listen and walked forward listlessly.

Suddenly, as if from nowhere, a man rushed towards me and placed my ring into my hand. I thanked him and gave him my address with a request to come to my house so that I could properly reward him. But he never turned up.

Warangal

B. Rajiah

I came to Jullundur station to board a train for Delhi on my way to the U.K. The train was to leave at 1.45 a.m. I had no reservation.

At the station I saw a constable who, I thought, belonged to the railway police. I went to him and sought his help in getting a safe berth. He asked me to board the next compartment which, presumably, belonged to the special railway police. I got a full berth and, to my pleasant surprise, without charging extra money. The policeman also took care to see my baggage placed securely in place. I felt greatly

obliged to him and slept soundly the whole night.

From Delhi station I reached a friend's house by scooter. I opened my bag to pay off the scooter driver and found that all the money (Rs. 1,500), including that meant for payment towards my air fare to the U.K., was missing. I requested my friend to pay the scooter and also lend me some money to get back to Jullundur.

Thanks to the policeman who safeguarded the interests of the nation in not allowing one to leave—THIS INDIA—my home country.

Jullundur

M.L. Puri

It was a day of general strike in Durgapur. Traffic and free movement of people were scarce on the roads. Myself and my friend were riding on our bicycles to a nearby shop. It was no surprise when we were stopped by a mob who asked us to go on foot. In

the usual way, air was released from our cycle wheels and valves were taken away by them.

Rather perturbed by the discomfiture, I asked, "It's all right you released the air; but why do you take out the valves?"

The reply came in a shout, "It is an indication of our depth of emotional involvement in the strike."

Keeping calm, I moved a little further and heard my friend saying, "They make an extra income by selling these valves."

Durgapur

S. Sundaresan

In the last election a friend of mine was Presiding Officer in a village. At mid-day an aged woman came to vote. After voting she waited before the Presiding Officer for some time. She was asked what she wanted. She told him that she wanted bullocks for which she had voted. The election workers had told her that the voters would be given those things on which they put their mark.

The Presiding Officer tried hard to convince her that she had been duped by those workers. But she did not believe him and went away loudly swearing at him.

Parur, Kerala

D. Gopalakrishnan

The other day I went to a shop near the local theatre to buy some *Khara* (salty eatables). The shopkeeper was making some corrections in a bill. Two persons were waiting for it. The bill was for Rs. 250 and was in the name of a co-operative store. After the two persons left with the corrected bill, the shopkeeper remarked that they had 'earned' Rs. 110 by a mere correction in the bill. I thought to myself, "Well, that is co-operation".

Nagpur

R. K. Pashine



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TJJC/279

WANTED A SEPARATE BUDGET FOR SCIENCE

A. N. BHYANA

Senior Analyst, Administrative
Reforms Commission.

SCIENTIFIC research activity in India is financed mostly by the Central Government and to some extent by the State Governments and the private sector. The Centre's share comes to about 90 per cent of the total research expenditure in the country and the rest is shared almost equally by the States and the private sector. Research supported by State Governments is, by and large, in the fields of irrigation, power, agriculture and in university departments. The private sector finances research in its own laboratories or shares a part of the expenditure of co-operative research associations like those for textiles, wool, paints and rubber.

The procedure for allocation of funds in the Government-managed research institutes and laboratories is as follows :

Each department or organisation prepares its annual budget which is voted by Parliament or the State Legislature under the demands for grants of the various Central or State Ministries which exercise administrative control over the respective organisations or research institutes.

Lopsided Allocations

This practice may be good for the administrative unit to keep a check over the activities of its research organisations but is hardly useful or desirable for the overall co-ordination of the research activities in the country. This procedure precludes anything more than a fragmentary, unco-ordinated and vague discussion on scientific research activities at the highest political and decision-making level, that is, Parliament and the legislatures. This results in lop-sided

allocations to various sectors of research. The data for 1964-65 will establish this.

It would be seen that the allocation for research on food and agriculture was only 13.24 per cent whereas Atomic Energy's share of 24.47 per cent is almost twice the share of food and agriculture.

The following table shows the relationship, sector-wise, between overall investment and outlay on research and development.

One obvious reason for the wide disparity between investments in the plans in the economic sectors and in research and development for the same sectors seems to be the lack of co-ordination and availability of a total picture of science at one place. We should have a

separate budget for science. This would help administer in an orderly manner the finances that are allotted for scientific research and allocate *inter-se* priorities to various sectors of research consistent with social and economic priorities. The science managers would then be able to undertake a cost and benefit analysis of research programmes. It would also help to review past accomplishments and to ascertain the extent to which the budgeting intentions have been realised.

Objectives

The objectives of a science budget may be classified as (a) Information (b) Co-ordination and (c) Administration.

(a) *Information*: The aim should be (i) to bring about a regular periodic reconsideration and re-evaluation of the social objectives

Table I

Expenditure of Central Government on Scientific Research
according to Controlling Ministries (1964-65)

Ministry/Department	Expenditure	Percentage of total Rs. in millions
1. Atomic Energy Department	143.42	24.47
2. Civil Aviation, Communication and Transport	3.35	0.57
3. Commerce, Industry and Supply	8.46	1.44
4. Defence	79.39	13.54
5. Education*	136.17	23.23
6. Food and Agriculture	77.51	13.24
7. Health	30.97	5.28
8. Home Affairs	25.22	4.30
9. Information & Broadcasting	0.78	0.13
10. Irrigation and Power	22.19	3.79
11. Railways	9.24	1.58
12. Steel and Mines	48.66	8.30
13. Works and Housing	0.80	0.13
Total	586.07	100.00

* C.S.I.R. Allocation

and purposes of science; (ii) to facilitate a comparative evaluation of different programmes in relation to each other and in the context of the economic and social life of the country; and (iii) to evaluate the cost of various research programmes and thus to chalk out the future line of work.

(b) *Co-ordination* : The budget should try (i) to get at one place the total picture of science in the country; (ii) to rearrange the resources internally with changing emphasis in the social and economic priorities; (iii) to develop a total perspective of science and take advance action to generate the necessary resources.

(c) *Administration* : The objectives should be (i) to provide legal bases for the expenditure of the organisation; (ii) to provide the framework of auditing and accountability and (iii) to make possible the systematic re-examination of internal operations from the standpoint of efficiency and economy.

In a developing economy, there will always be competing claims on the scarce resources. It is, therefore, necessary to analyse the different claims from a cost-benefit analysis and from the general impact on the problems of economic development.

The Scientific Advisory Committee to the Cabinet (SACC) can be assigned the responsibility of preparing this budget and presenting it to Parliament. Once it is approved, the monies can be transferred to the respective administrative ministries or government departments.

MANAGEMENT OF SCIENCE

B. V. RANGA RAO

Scientist of the Research Survey and Planning Organisation of the C.S.I.R.

PLANNING of scientific and technological research is a new phenomenon even in advanced countries. It has been pointed out by the Council of Scientific Policy of the U.K. that the greatest danger to science and economic growth comes from the failure to plan scientific research. Japan has excelled many European countries within a short time by planned efforts in technology.

India was perhaps the first country to have a Ministry of Scientific Research. In the Five Year Plans, necessary resources have been provided for scientific education and research. The annual investments in scientific research increased by five times from Rs. 5.575 crore in 1951 to Rs. 26.27 crore in 1959 and again by more than three times to Rs. 84.06 crore in 1966. Today India is spending

0.4 to 0.5 per cent of the national income on scientific research. This compares favourably with the percentage in other developing countries.

In 1958, Parliament passed a Scientific Policy Resolution which laid down broadly the policy in regard to encouragement of science and technology, keeping in view the development of human resources.

India today has 75 universities, institutes of technology and other institutions awarding degrees in science. In 1966 there were 4.5 lakh students enrolled in science courses at the graduation level and above.

No National Review

The number of trained scientists and technologists in the country is next only to that in the U.S.A. and the U.S.S.R. The number of technologists trained each year is already twice that in the U.K. It is estimated that more than 60,000 scientists and technologists are engaged in research activity. It is natural to ask if these developments in scientific research are being guided by a specific policy. It is necessary to know the results in terms of the money spent, the areas where we are making an impact, how the research is being organised and how the young research workers are being utilised. Are the areas in which research is done important or should we divert our resources to some other fields which are more useful in economic development?

Although activities of individual

Table II

Sl. No.	Sectors	Total investment (Rs. in million) Annual average for 1955-56 1960-61 1961-62 1966-67	Outlay on R&D (Rs. in million) 1955-56 1960-61	Outlay on R&D as percentage of total investment 1955-56 1960-61	R&D outlay in individual sectors as percentage of total R&D outlay 1955-56 1960-61
1.	Agriculture	1108 2940	28.83 64.73	2.6 2.2	29.4 27.4
2.	Irrigation & Power	3462 7676	18.88 80.93 ²	0.5 1.1	19.5 34.1
3.	Oils, Minerals & Fuels	146 1658 ¹	8.77 ³ 28.27 ³	6.1 1.0	8.7 11.8
4.	Industry	2953 5321	35.95 52.29	1.2 0.9	36.6 22.0
5.	Transport & Communication	2599 4032	4.69 8.41	0.2 0.2	4.8 3.3
6.	Works and Housing	161 404	0.98 2.84	0.6 0.7	1.0 1.4
	Total	10329 22031	98.10 237.47	0.95 1.0	100.0 100.0

¹ Central Government Outlay only ² Atomic Research is included

³ Indian Bureau of Mines excluded; Geological Survey of India included

Scientific developments in our country are yet to be guided by a specific policy. Unless such a policy is framed on the basis of objective and critical analysis, which has not been done so far, scientific research is bound to remain lop-sided. And we may continue to import technologies and experts, whenever new industrial units are started.

councils and institutions have been periodically reviewed, there have been no reviews at the national level. Review committees with eminent people have met occasionally in between their other responsibilities.

In all developing societies, collection, codification and data preservation are new activities and are, therefore, scarce. Various reports that have issued from time to time have indicated that scientific research in our country has concentrated in a few selected fields which, many scientists feel, are not relevant to our economic development. They think that sufficient attention has not been paid to the problems of proper organisation of scientific research in spite of the fact that for 20 years major contributions have been made towards the growth and promotion of science. The result is that even now when new industrial units are started, technologies, technical know-how and even experts are imported. Unless scientific and technological research policy is formulated and planned on the basis of objective and critical analysis, it may not be meaningful.

Such analysis involves collection of information on the available resources in the form of trained men, laboratory equipment and libraries and potentialities of research development and use in agriculture, industry, defence and social welfare. In other words we need to train a cadre of science critics and science personnel.

Integration With Goals

A national science policy should design an operational network of infrastructure. It should devise ways and means of integrating so-

cial and economic goals of the country with those of science. It should have the necessary machinery for collaboration with industry and an institutional set-up to keep a watch on over-emphasis in any branch, possible delays and duplication. Our policy for science has to take into consideration the special defence needs which are more complex than those of many other countries.

There is need to institutionalise studies in the collection of Research and Development (R. & D.) data, information on research and organisational problems, analysis and preparation of documents for the formulation of a science policy and creation of a national machinery to develop co-ordination.

The few studies that have been conducted during the last two or three years have revealed certain interesting facts. In areas such as electrical machines, electronics, machine tools and aircraft which are highly research-sensitive, the investments in R. & D. are very low. Central Government outlay on R & D in individual productive sectors has not followed the overall investment pattern or needs of modern technological need. Expenditure from R & D funds on equipment has been gradually falling relative to the salary bill. In view of the increasing complexity of research equipment, it should have been the other way. If all the equipment is fabricated in the laboratories, this tendency could be considered healthy but it is not so.

Negligible Research

It has also been found that research activity is relatively high in life sciences compared to that in physical sciences. This itself may not be significant but the activity in applied branches such as engineering has been very low. Even in basic sciences it is found that research activity in mathematics is negligible though it can find application in all branches of development.

It appears that research activity in sophisticated fields is relatively high compared to those in high investment areas. Research on fertilisers, pests and agricultural tools is very low. There are no institutions specialising in these fields. At a few places some work

may have been carried out but concerted efforts by research workers in groups of reasonable size are urgently needed. One important feature of science and technology in this age is that along with narrow specialisation, considerable horizontal integration is taking place. The techniques used in microbiology or biochemistry cannot be devised either by biologists or chemists or physicists alone. The use of science for industrialisation depends upon the number of ways in which different bits of knowledge can be combined. Different permutation and combinations of the physical, chemical, biological and engineering principles give rise to the development of new processes for industrial exploitation.

For beneficial integration of knowledge, co-operative efforts of scientists and technologists are necessary. It has been found that team work in the country in general is very meagre. Even when there are teams, often all the members are trained in the same discipline.

There is urgent need (1) to conduct systematic studies on technical manpower resources, their need and utilisation (2) to study the functioning of research organisations to devise functional structures at national, organisational and laboratory levels and (3) to co-ordinate research efforts in different departments and also with industrial and social needs.

The conclusions of such studies may clash with the views of eminent individuals. Like science that has to stand the tests of experiment, observation and critical analysis, science policies too should stand similar tests.

The general administrator is apt, because of his training and conditions of work, to discount the value of high expertise and to be impatient with all types who have to reason in the abstract or who begin their initial formulations with a theoretical frame-work. It may be that as a consequence the research scientist finds that he or his research has no place of importance in the formulation of Government policies or in their implementation.

—Prof. D.R. Gadgil

OUR NAVY

from Page 17

can be said with confidence that in no time they will be experts in under-sea operations.

The Naval Exercises in the Arabian Sea in the first week of this month carried out by the fleet under the personal supervision of Vice-Admiral Chatterji, Chief of the Naval Staff, and Rear Admiral S.M. Nanda, Flag Officer Commanding the Indian fleet, served to underline the need for submarines. The Exercises could have been more realistic and effective if there was at least one submarine. This conviction was shared by a group of parliamentarians who watched the exercises from the bridge of "Vikrant".

An aircraft carrier is a costly proposition. Indian Navy however obtained "Vikrant" at a fairly reasonable price. While its cost efficiency for particular types of operations in war is very good, its maintenance in peace time involves considerable expenditure. Another problem which the carrier poses is the replacement of the carrier-based planes, the Sea Hawks and Alizes. India which has made considerable headway in aircraft industry should think in terms of making planes to replace these aircraft.

Having built certain smaller types of naval craft, India now plans to construct major warships like destroyers and frigates in the country's shipyards. It may be mentioned that the Mazgaon docks which came into being in 1750 have constructed some of the finest ships for the Royal Navy. A 1,000-ton frigate built at the dockyard in 1870 which was originally named Trincomales is still being used by the Nautical Committee of the United Kingdom.

If our Naval officers and men could achieve mastery in the amphibious operations there is no reason why they should not show the same progress in making indigenously ships and what the ships need in our dock-yards and aircraft and armament factories. This aspect is as important as naval warfare in which our officers and men have demonstrated their efficiency.

Indo-Soviet Collaboration

From Page 18

two countries may be able to help each other. In India we are able to grow in some areas two or even three crops of rice in a year whereas because of the severe winter it is possible to grow only one crop in the Soviet Union. The rice breeders of the USSR may find it useful to arrange with their Indian counterparts to grow an additional crop in a year in India thereby greatly speeding up the process of evolution of new varieties.

ANIMAL SCIENCE RESEARCH

In the field of Animal Science Research, there are various spheres in which there can be fruitful collaboration between the two countries. The animal science specialists who visited India recently expressed keen interest in the work that is going on in this country, especially at the Indian Veterinary Research Institute at Izatnagar and Mukteswar and the National Dairy Research Institute, Karnal. We have had Soviet students in many of our institutes and one of them is at present making a useful study at I.V.R.I. The Soviet scientists expressed their opinion that more students and scientists could visit our institutes doing research in the field of animal science.

Keen interest has been shown by our animal scientists in many of the developments that have taken place in the Soviet Union. The following items of work may be taken as examples: African horse sickness virus vaccine for new strain, emulsion adjuvant vaccine for Pasteurellosis, virus vaccine by tissue culture specially for rinderpest, use of Allergin for diagnosis of brucellosis and cross-breeding of Zebu for high milk production.

The possibilities in this field are great.

Coop. Fertiliser Plant at Kandla

Asia's largest fertiliser plant is to be set up at Kandla in Gujarat.

The naphtha-based plant will produce 3,820 tons of fertilisers daily.

The plant will be set up in the cooperative sector by the Indian Farmers, Fertilisers Cooperative Limited, which has been formed for the purpose, with assistance from cooperative societies of the U.S.A. The cost of the project is estimated at Rs. 89.25 crore.

The proposed plant will have three units. The rated production capacity of the ammonia unit will be 910 tons per day, and that of the urea unit 1,090 tons. The compost fertiliser section will have a capacity of 1,820 tons of diammonia phosphate per day.

The plant will manufacture 3,82,000 tons of urea and 6,37,000 tons of compost fertiliser annually.

On the basis of 330 working days a year, the plant will produce 2,15,000 tons of nitrogen, 1,27,000 tons of $P_2 O_5$ and 66,000 tons of 2^o .

YOJANA BHAVAN DIARY

A delegation led by Mr. B. Venkatappiah, Member, Planning Commission has gone to the third session of the Asian Planners' Conference to be held from November 8 to 15 in Bangkok. Among the members is Mr. M. Shaghil, Chief, Co-ordination Section, Planning Commission.

Mr. B. Venkatappiah will also lead another delegation to the conference on Inter-Governmental Consultations on Regional Plan Harmonisation and Economic Co-operation to be held from November 16 to 25 at Bangkok.

Members of the Planning Forum of Cotton College, Gauhati met the Deputy Chairman of Planning Commission at Yojana Bhavan on October 30. The students also met Dr. Nag Chaudhry, Member Planning Commission.

NALGONDA PROJECT

BREAKTHROUGH IN A ROCKY TRACT

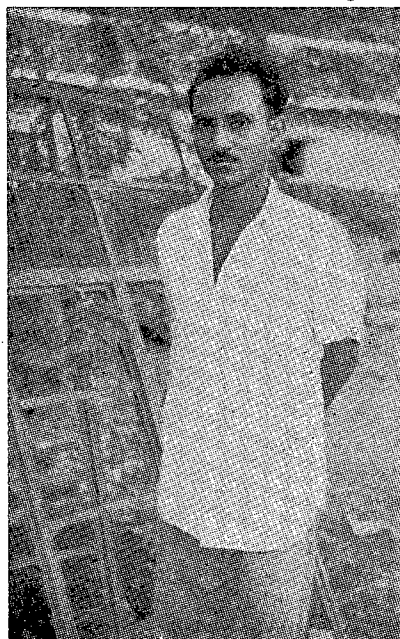
ROCK, spelt in capital letters, is the dominating influence in Nalgonda Project. For an outsider these rocks make a fascinating study: at some places they rise as a monolithic mountainous mass out of the bowels of earth like the one overshadowing Bhongir town, at others they are conglomerations of huge boulders perched one upon the other in a precarious balance, and in a variety of patterns all too baffling. But to a local man these very rocks—bare and stark—are a grim reminder of a harsh life and the need to wrest a living from nature against heavy odds.

With 80 per cent of the total population dependent on agricultural activities, the economic environments of the project are none too encouraging—scanty rainfall, a difficult soil and almost negligible natural resources. Agriculture in this backward area is mostly carried on under unirrigated conditions. Abundance of castor and proximity to Hyderabad are perhaps the only relieving factors in an otherwise dismal picture.

It was—and to a large degree still is—a really difficult area with a very limited potential for promotion of small industries. Yet what we saw in the Project is indicative of what concentrated and well-directed promotional effort is capable of achieving, difficulties and hurdles notwithstanding. True, there are no big factories in the area, and the number of small units which have come up after the inception of the project, is not more than 55. Yet there is no mistaking the break-through in industrial effort which has been achieved in the face of limitations of resources, skills and entrepreneurship. The way in which small units have started 'sprouting' all over the place, and the manner in

Text and Photographs by

J. L. SAAZ



T. Balakrishnan Singh

More Ambition than Resources

which the traditional artisans are coming out of the centuries-old ruts by picking up new skills, is indeed heartening. The impact of the Project, though scattered, is clearly visible, and after meeting the entrepreneurs and artisans of the area, one feels that the ground has been well laid and much can be built on it in the coming years.

RURAL INDUSTRY



A YOJANA SUPPLEMENT

YOUNG HOPES

Shri T. Balakrishnan Singh, the proud owner of a small engineering unit in Nalgonda (Sobha Engineering Works), is just out of his teens. After matriculating he completed his 18 months' training in turning trade at the I.T.I., Nalgonda, in March, 1965. Thereafter he had six months' implant training in a cement asbestos factory at Hyderabad where he was earning Rs. 4 a day. The boy who had more ambition than resources, was enabled by the Project to realise his dream. He was given a loan of Rs. 3,000 from the nucleus funds and another loan of Rs. 5,000 was arranged for him from the State Bank. With this assistance he has set up his engineering unit where he undertakes oil engine repairs, welding, and also manufacture of oil engine parts and steel items like grill gates, windows, steel chairs, etc. The workshop put up on a rented site is equipped with a 6½-ft. lathe, a welding set and a vertical drilling machine all costing about Rs. 10,000. Besides himself the entrepreneur employs two skilled workers and an apprentice. Though the net monthly income at present of Sri Balakrishnan Singh is not more than Rs. 200-250 yet he is full of hope for the future. "I am still not out of initial difficulties and as soon as I overcome them there is no reason why I should not make Rs. 500-600 a month", he confided to me with the robust optimism of a youngman who is out to carve his future. The entrepreneur who belongs to village Pangal comes from an agricultural family, and had he not received the training he would have had no

other recourse but to fall back upon the land. His present enterprise has not only given him the alternative occupation but has also absorbed three others.

INCOME TREBLED

In a dilapidated shed on the roadside in Nalgonda, is the humble workshop of Shri Balanarsimha, a traditional bamboo worker, who used to manufacture cheap and common bamboo products like baskets, cots etc., earning about Rs. 60 per month. The Project authorities sent him for a six-month training in bamboo and rattan work at the Regional Design Centre of the All-India Handicrafts Board at Patna, where he learnt the manufacture of rattan furniture and sophisticated bamboo items. On his return from the training he was given a loan of Rs. 1,500 so as to enable him to embark on his new venture. A part of this money was spent on the purchase of improved implements and the rest for raw-materials. All this has enabled him to raise his income to over Rs. 200 per mensem, more than three times his income only a year back. In addition, he has been instrumental in providing work to three others at an average monthly wage-level of Rs. 60.

Chandragiri Ramula
Out of Quagmire



UP THE STATUS LADDER

Chandragiri Ramulu, 45, of Ramannapet who is a hereditary cobbler and a father of nine children, has gone many steps up the status ladder—thanks to the project assistance. For 30 long years he has been making rough type of chappals for the villagers and doing repair jobs for them. He could not make more than Rs. 100 a month at any time. The Project gave him a loan of Rs. 2,000 for purchasing raw materials and improved implements. This was followed up by the grant of a leather stitching machine on 75 per cent subsidy basis. All these measures helped him to increase his monthly output to Rs. 1,500, giving him a net earning of Rs. 300-350. Now there are four more persons working with him to meet the local as well as the mofussil demand. His products are certainly of a high quality and find no difficulty in selling. Sitting snug in his small shop full of chappals and leatherware he appeared to be the master of his show with lean days left far behind.

EMPLOYMENT-ORIENTED SCHEME

The safety match unit set up under the Project aegis at Ramannapet is an employment-oriented scheme. The Ramannapet Panchayat Samiti has a large percentage of unemployed persons, specially womenfolk who could easily take to this job after some training in different processes involved. The unit which employs 25 trained women workers is marketing match boxes under the 'Jai Jawan' trademark. It experienced certain initial difficulties so far as the procurement of scarce raw materials was concerned but lately it seems to have turned the corner. The 'Jai Jawan' match box is selling not only in the local market but is also competing well with more famous makes in Hyderabad city itself. The present daily production of the unit is 60 gross of match boxes. The women working here are very poor and needy, and they are able to earn Rs. 1 to Rs. 1.50 per day. This earning, though small, is welcome as previously most of them could not earn even a single penny for lack of work opportunities.



N.V. Satyachari
Carving a Career

Jamal Bi, a middle-aged widow of a postal employee, expressed her gratitude towards the project authorities in chaste Urdu. She has been getting a pension of Rs. 18 p.m. after the death of her husband who died 20 years ago. Now she gets an additional income of Rs. 1.50 per day which stands her in good stead to keep the wolf from the door.

ARTISTIC TALENT BLOSSOMS

At Bhongir we met Shri N.V. Satyachari, 50, who possesses an exceptional ability to carve wood into figures representing folk-life. His home looked like a miniature museum with motifs ranging from gods in heavens to humble farmers in the fields. The Project can rightly take the credit for the blossoming of his artistic talent. He was sent for six months' training at the All-India Handicrafts Designs Centre at Bangalore on a monthly stipend of Rs. 100. After completion of the training he was given financial assistance to establish himself well in his profession. Shri Satyachari who was previously an ordinary wood worker doing odd jobs is now a recognised artist in wood carving receiving orders from handicrafts emporia from such far away places as Delhi. His

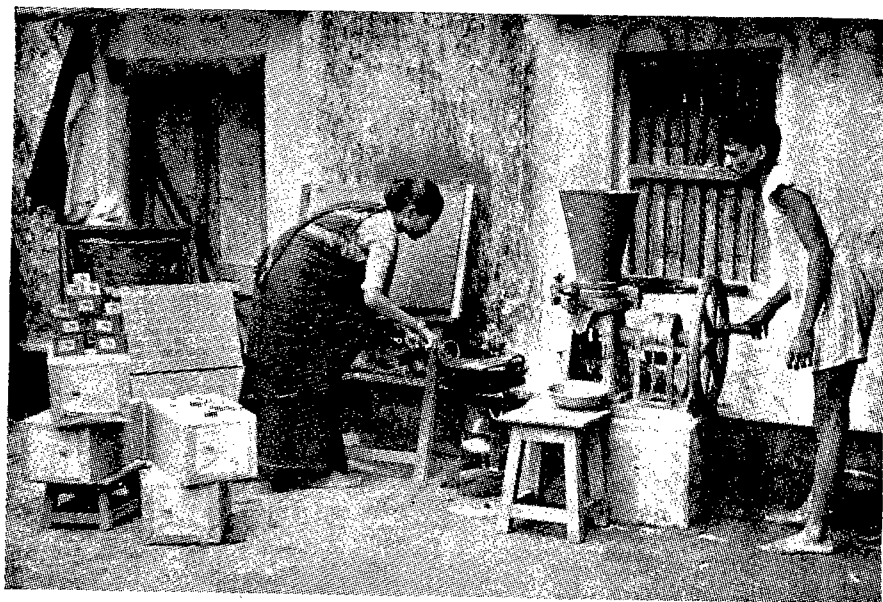
monthly earning is about Rs. 150-200 as compared to his previous best of Rs. 80-90 per mensem:

ASSISTANCE WELL ASSIMILATED

Messrs Bharat Mechanical Works at Bhongir is an example of a unit which has usefully assimilated Project assistance. A partnership concern, it was started in 1963 with a capital investment of Rs. 18,000, mainly as a servicing unit for the repair of oil engines, electric motors and erection and assembling of oil engines for the local agriculturists. Two of the partners are skilled workers who used to work at Hyderabad on Rs. 100-120 per month. As the partners got themselves interested in the manufacture of various small parts of oil engines, the Project came to their help with a loan of Rs. 5,000 with which they purchased a lathe and a power drilling machine. They were further encouraged by the grant of one tap and dye set and one micrometre on 75 per cent subsidy basis. With these incentives, the unit has added two more workmen to its existing strength of four and has started manufacturing components like bearings, bushes, crank pins, screws etc. During the last two years it has assembled 45 oil engines from their own manufactured components as well as from those procured from outside sources.

PROMISING START

The book binding unit of Shri A. Govardhan Reddy, a young-man of 26, is the beginning of an expanding business activity. Shri Reddy comes from an agricultural family of Bhattuguda village. There is good demand for stationery items such as registers, account books, etc. in Bhongir and nearby towns. With the financial assistance of Rs. 5,000 from the nucleus funds, Shri Reddy purchased a cutting machine and set up his binding unit to meet some of the local demand. His unit which has a small ruling machine employs three persons—one binder, one operator and one apprentice with a total monthly salary bill of Rs. 275. With an average outturn of Rs. 1000 per month, Shri Reddy is able to make a net income of Rs. 500 per month. He has plans to add a printing press for which he



Workers at the departmental safety match unit at Ramannapet which employs 25 trained hands

has already purchased foundry types. He is looking forward to more financial assistance so as to enable him to purchase printing machines.

MECHANIC TO MANUFACTURER

At Alair, about 12 miles from Bhongir, we came across two entrepreneurs who have given a good account of themselves. The first is Shri Mohammad Kasim Ali who has become a manufacturer from a cycle repairer. He and his son were running a cycle repair shop and maintaining some cycle rickshaws for hiring. Shri Kasim Ali, however, developed a zeal for taking up the manufacture of small cycle parts. The Project came forward with financial assistance to the tune of Rs. 8,000 for purchase of machines and working capital. He was also helped in securing D.P. sheets which was a controlled item at that time. Shri Kasim Ali purchased machines like fly press, shearing machines, grinder, dye presses, spring making machine with spray painting equipment, and started a small unit for the manufacture of cycle stands and cycle gear cases. His products are of a good quality and there is sufficient demand for them in the nearby markets at Hyderabad, Warangal and other places. The unit which is employing 4 skilled and 6 unskilled workers is paying a daily wage-bill of Rs. 31 at the rate of

Rs. 4 to a skilled worker and Rs. 2.50 to an unskilled one. The annual production of the unit is Rs. 50,500. After meeting all kinds of expenses the entrepreneur is able to have a net income of Rs. 300-400 per month.

WORKER BECOMES ENTREPRENEUR

Taking advantage of the clay deposits around the village of Gundlaguda, two miles from Alair, some tile manufacturing units have come up. Shri Pashkanti Sattaya who was a piece-rate worker of a tile maker is now himself the owner of a Mangalore-tile manufacturing unit. The Project gave him a loan of Rs. 4500 for purchase of machinery and by way of working capital. With this assistance he purchased two pugmills—one hand-operated and other run by a 5-HP oil engine—, hand operated dyes and presses, wooden frames, etc. He collected another Rs. 2500 from his own sources to put his unit on a sound footing. The unit is producing on an average 100 tiles a day which fetch him Rs. 20 and have a good market all over Bhongir Taluk. Shri Sattayya, besides working himself, employs 6 persons—one skilled and 5 unskilled—paying Rs. 4 daily to a skilled worker and Rs. 2 to an unskilled one. His own monthly earning has almost been doubled from Rs. 100 to Rs. 200.

PROMOTIONAL EFFORTS CREATE A VISIBLE IMPACT

AMONG the three rural industries projects in Andhra Pradesh, Nalgonda Project is located nearest to Hyderabad city. It comprises six panchayat samiti blocks—Nalgonda, Mungode, Ramannapet, Mothkur, Bhongir and Alair—covering an area of 1730 sq. miles and a population of 5.60 lakh spread over 443 odd villages and two municipal towns—Nalgonda and Bhongir.

The rural artisans in the area number 42,500 of which 14,000 are engaged in handloom weaving alone.

In view of large concentrations of artisans at various places in the project area, special efforts were made to improve the productivity of the artisans by equipping them with improved implements and training them in new skills. Instead of starting new training centres, it was decided to take advantage of the existing training institutes in and outside the State. Since the inception of the Project, 97 artisans deputed for training in different crafts have completed their training courses and most of them have settled in their trades improving their earnings by as much as 30 per cent. Besides these artisans, 33 women have been trained in Thunga mat weaving, and 46 persons in palmyra-leaf and *naar* products in two training centres started locally.

In order to raise the productivity and income level of artisans, improved tools and implements worth Rs. 2,93,000 have been distributed to as many as 1230 carpenters; blacksmiths, bell-metal workers, leather goods manufacturers and others on 75 per cent subsidy basis. This has gone a long way in helping the poor artisans in modernising their outlook and improving the level of skills and technology in the villages.

Sanction of loans to artisans, entrepreneurs and industrial cooperative societies on easy terms is a very important facility extended by the Project for promoting indus-

C. R. DESIKAN

trialisation. During the last four years, loans totalling Rs. 7,44,350 were advanced to as many as 441 artisans, 137 entrepreneurs and 18 industrial cooperative societies.

There has been a visible impact of this financial assistance so far as generation of industrial activity and employment are concerned. In an area where there were no significant small-scale industrial units, 55 new units have come up which cover a wide range of industrial activity. In Nalgonda alone which is the Project headquarters, 6 general engineering workshops, 6 saw mills, two confectioneries and one bamboo and cane works unit have sprung up, which involve a total investment of Rs. 2 lakh and provide employment to nearly 100 workers.

At the time of the inception of

the project, the industrial cooperative societies in the area were in a bad shape for want of finances. The Project came to their rescue by assisting 18 industrial cooperatives to the tune of Rs. 1,06,500. These include 4 carpenters', 4 turners', 2 wool weavers', 4 potters', 3 brass workers' and 1 Mangalore tile workers' societies, employing more than 250 artisans.

It has been estimated that due to project efforts employment has been generated for 900 persons in various units which have come up, adding a gross annual production of Rs. 10 lakh. Some case studies of the artisans who availed themselves of the loan assistance provided by the Project, reveal that the production and the income of these artisans have increased by 25 per cent and in each case further employment has been created for at least one additional hand.

ORIENTATION COURSE FOR PROJECT OFFICERS

THE Rural Industries Planning Committee of the Planning Commission has arranged a two-week orientation course for Project Officers and Planning-cum-survey Officers of its projects at the Small Industries Extension Training Institute, Hyderabad. Shri R. Venkataraman, Member, Industry, Planning Commission, will inaugurate the Course on November 13, 1967.

The course will cover a wide range of subjects and problems connected with the intensive development of industries in selected rural areas. Some of the topics to be discussed are :

1. Objectives and Approach of Rural Industries Projects Programme.
2. The Concept of Area Development in relation to Rural Industrialisation.

3. The Roles of Large and Small-scale Industries in India's Economic Planning.
4. Importance of Survey in Planning for Rural Industrialisation.
5. Requirements for Industrial Promotion in Rural Areas.
6. Technical and Technological Problems of Rural Industries.
7. Organisational and Administrative Problems.
8. Planning for a New Unit
9. Criteria for selection of New Areas for Intensive Development Projects.

The talks will be followed by group discussions among the Project Officers during the course of which they will get ample opportunity to exchange their field experiences. Specialists in engineering, chemical, traditional and agro-industries have been invited to hold panel discussions on related subjects.

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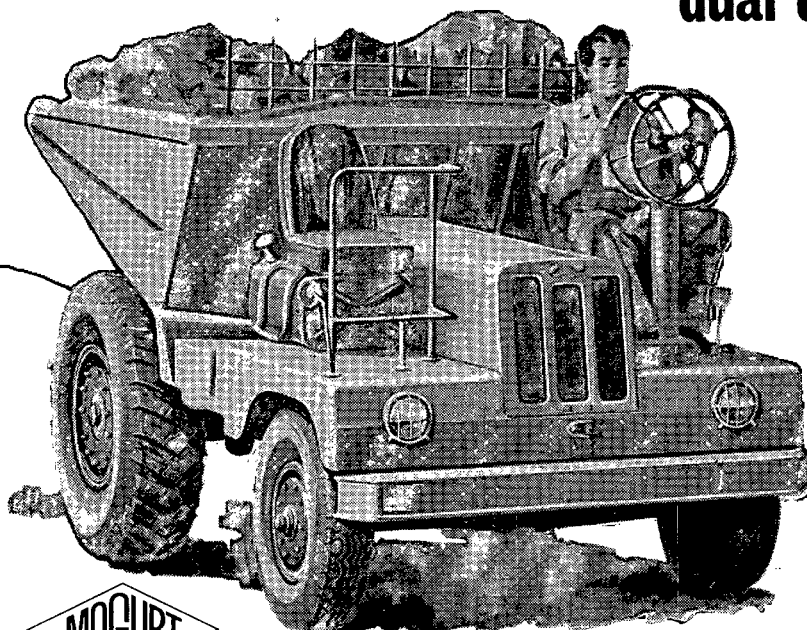
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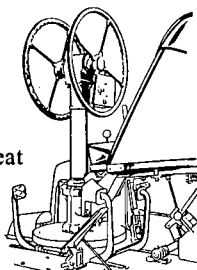
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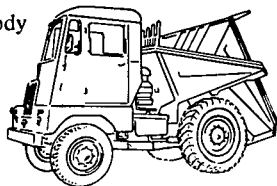
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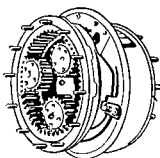
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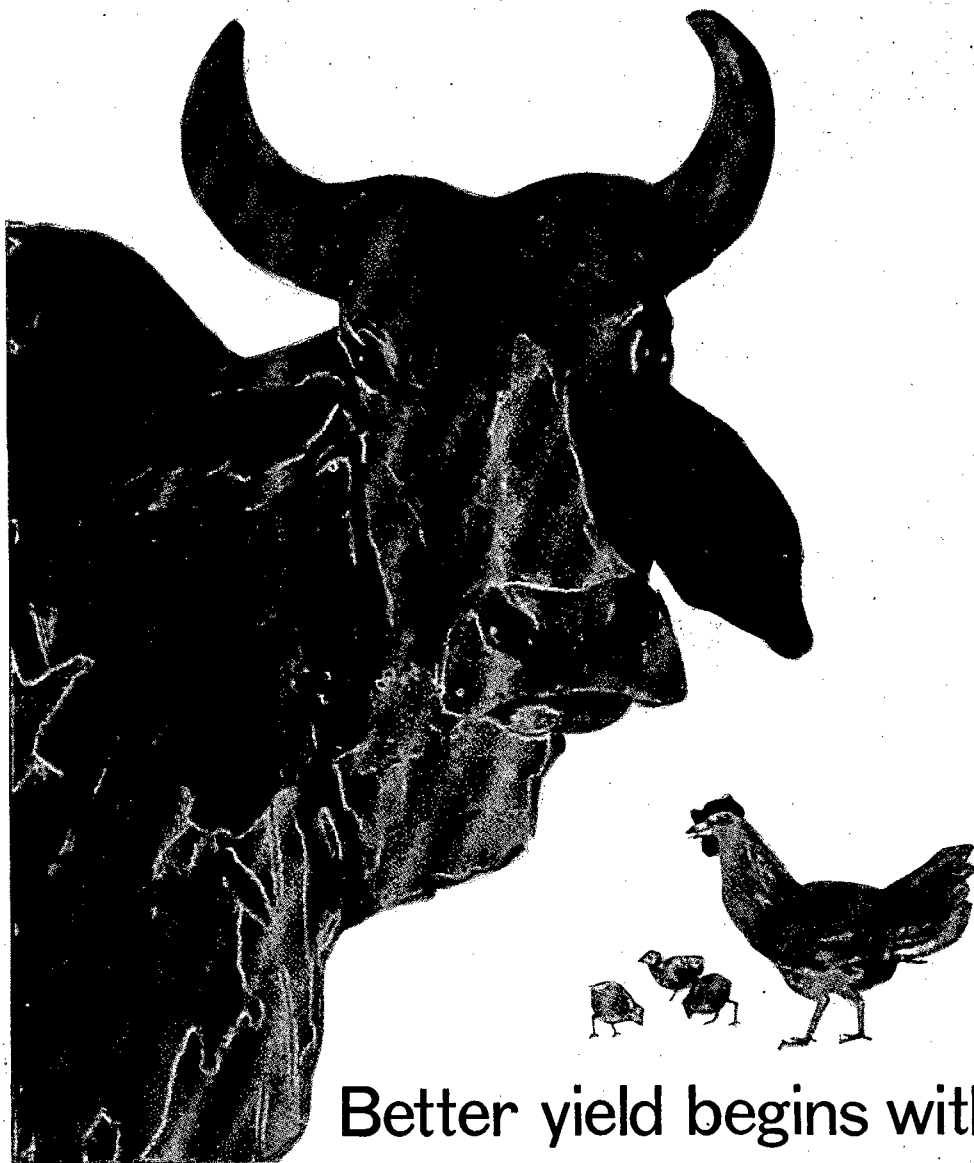
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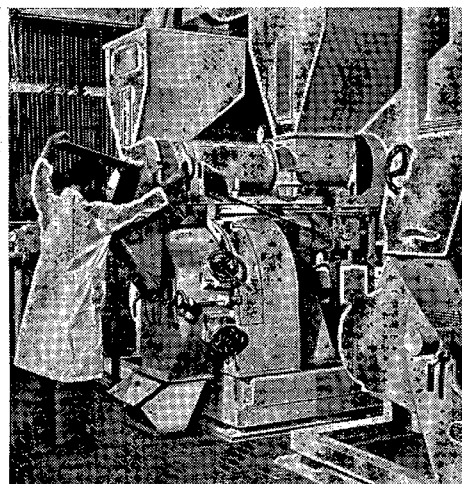
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CORRECTIVE PLANNING

THOSE who have more than the usual passion for planning would view the operation of the Annual Plans in place of a Five Year Plan with a feeling of wrench. This is not surprising as our minds are attuned, thanks to that great doyen of Indian planning, Jawaharlal Nehru, to the idea of planning as a permanent feature in the economic development of the nation. To relapse to non-planning—even apparently—would give the impression that the concept of planned development is being devalued. This is not so. The decision to postpone the Fourth Plan was a heart-rending one, but also a realistic one. A look at the economic milieu which forced Annual Plans on us will bring out the reasons why.

The Third Plan had to pay the price of two wars forced on the country by China and Pakistan. The result showed itself in the very poor rate of growth during the Third Plan period. The drubbing our agriculture took in the last two years of unprecedented drought added to the unhappy situation. The cumulative effect of the Chinese aggression, the Indo-Pakistan conflict and the droughts unleashed forces of inflation. Prices rose sharply. Recession set in and industries began to languish. Wages rose in an unsuccessful attempt to catch up with increased cost of living. Deficit budgets inevitably followed. In these circumstances, when the economy was groggy, it would have been unrealistic to burden the country with yet another five year massive expenditure.

It is not to be supposed that the Annual Plan for 1968-69, now under preparation, is merely a part of the Fourth Five Year Plan which has been grounded. The Annual Plan is an entity in itself and stands on its own legs. The plan is intended to be more a corrective than an initiative in new developmental activities. The need of the hour is to remedy the ills of inflation and correct the seemingly inexplicable phenomenon of recession accompanying inflation. The short term prospect of one year will enable the planners to make a realistic assessment of the resources available and how best to deploy them in chosen fields.

The Annual Plan for 1967-68 is based upon a good harvest expected this year. The improvement in food production will have salutary effects on the availability of industrial raw materials. This will help retard the recession in a number of our vital industries. The finances of the country will also look up with the increase in agricultural incomes. The accumulated arrears of dues from agriculturists can not only be recovered but also the increased money income can be ploughed back into agriculture to prevent expenditure on consumption.

In the sphere of public undertakings, the surpluses available from them are not sizeable now. Some 2,000 crores of rupees have been invested in them in the last 20 years. Mr. Nehru set great store by them. According to expert estimates, these public sector undertakings must bring in a minimum return of 12 per cent in order to be viable. As it is, very few of them are economically sound propositions. This position will have to be reversed by an examination of the functioning of individual public enterprises. To improve the country's finances based on these measures is primarily a remedial action for which a short-term policy and programme is required.

In India's planned economic development West Germany's contribution has been sizeable. West German interest in India which began with Max Muller's voluminous interpretation of our classics has blossomed into manifold technical and technological monuments like Rourkela, Bhadravati and Neyveli. More than 400 Indo-German joint ventures have also contributed significantly to the industrialisation of India. In the context of Dr. Kiesinger's visit to India, the first-ever by a West German Chancellor, Yojana tries to recall some of the highlights of this Indo-German partnership (pages 2 to 7).

A new programme of integrated family and child welfare launched in selected areas all over the country is discussed on pages 8 to 11.

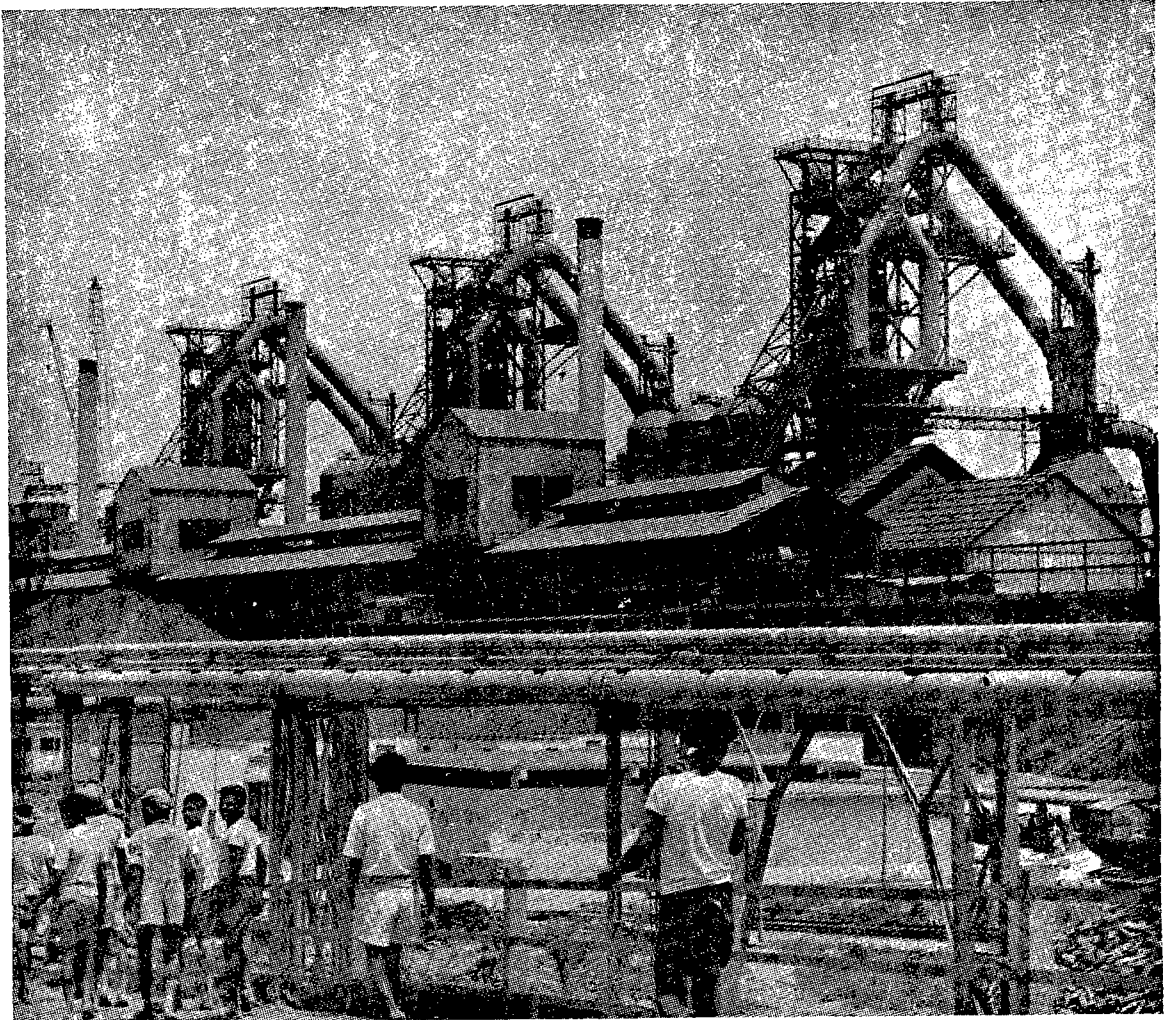
Jammu & Kashmir which unlike other States has had to bear the brunt of two external aggressions and internal unrest has not lagged behind in economic development. The State Government's consistent efforts to firmly establish infrastructures of growth through the successive Five Year Plans are beginning to bear fruit (Pages 15 to 19).

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Side Track	Cover III

COVER designed by R. Sarangan

A SILKEN BOND BETWEEN INDIA



Rourkela

The Multi-dimensional Story of Co-operation began with Max Muller. Modern Technology adds several Glorious Chapters.

INDO-GERMAN friendship, which is rooted in the past, is built upon the three pillars of cultural links, economic co-operation and political understanding. German interest in India is not a phenomenon of the 19th century only, nor is it a one-sided affair. Indeed it is an active and vital two-way exchange. German scholars and students in search of India's cultural heritage no longer dominate the scene. They are being out-numbered by Indian students and trainees learning in Germany the arts and crafts of the 20th

AND WEST GERMANY

century. At present, about 1,400 Indians are studying in Germany and some 3,000 are being trained in industrial skills, making the Indian student population in Germany the third largest in any country of the world. At the same time, German interest in Indian art, dance and music is greatly on the rise and Indo-German societies have sprung up in all major German cities.

An entirely new phase of Indo-German relations began in 1958, when Germany joined the ranks of friendly countries giving developmental assistance to India. Though Germany is a relative new entrant in this field, in less than ten years, German capital assistance to India ranks second only to that of the US, and the scope of the aid programme has expanded tremendously. With credits amounting to over 400 crore DM (750 crore rupees) by August 1967, India received the major share of the financial assistance extended by Germany to the developing nations of the world. The bulk of German financial assistance is advanced on a 25-year basis, at 3% interest, with a grace period of seven years. More loans

have been given as non-project aid, i.e., as commodity credits for the import of raw materials, spares, and components. These "maintenance imports" bring almost immediate returns in the form of increased output and productivity and usually pay for themselves in a short time. A new feature, introduced in the 250 million DM (about 50 crore rupees) loan agreement of August 25, 1967, is the provision of substantial amounts of united commodity credits, which will enable India to finance imports of any items from any hard currency country of her choice.

The Rourkela steel and fertiliser plants, the alloy steel works at Bhadravati and the Neyveli mining, fertiliser and briquetting scheme are some of the more well-known projects financed with German assistance. There are others as well in the fields of coal and steel, railway and shipping, automotive and electrical industry.

Financial aid to India is supplemented by the technical assistance programme, which is extended free of charge. The biggest programme in this category is the Indian Institute of Technology in Madras.

Prototype Production Centre, Delhi



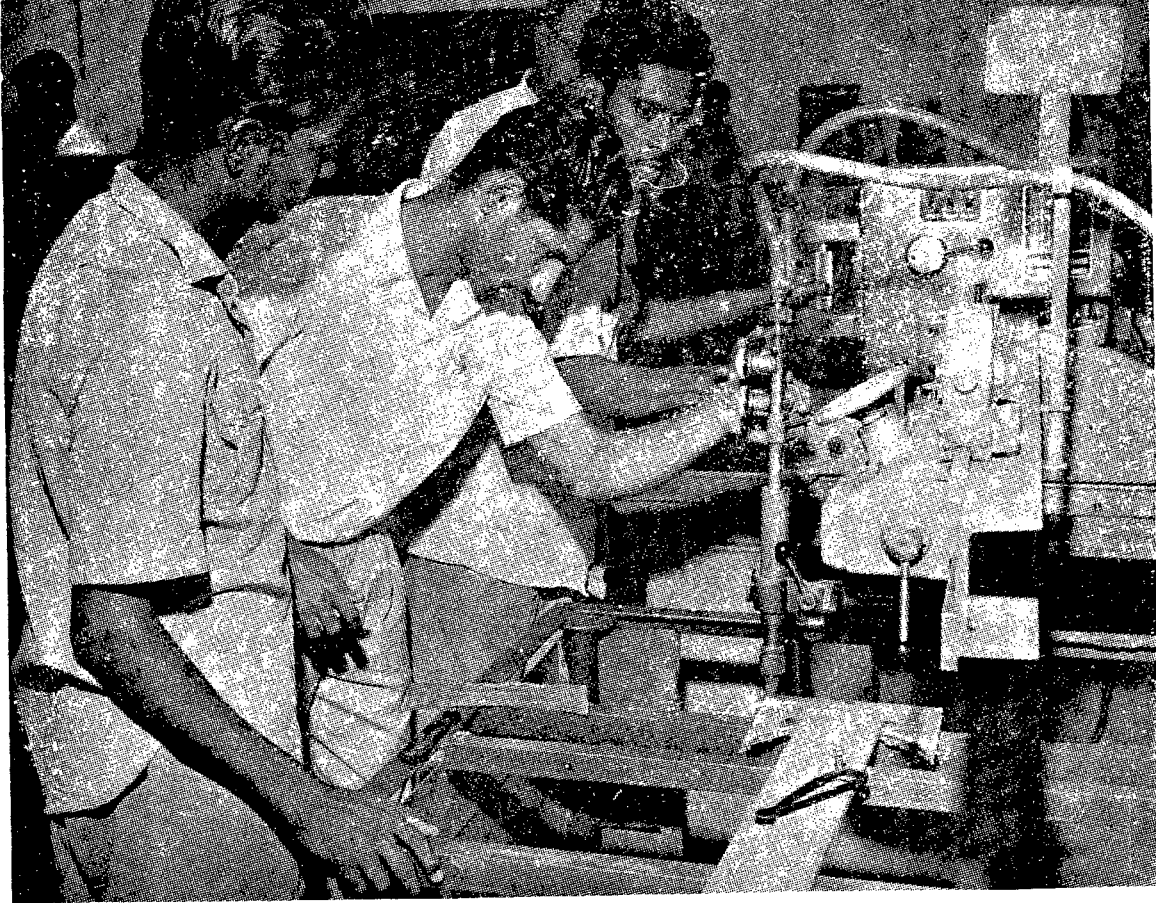
Run with a joint staff of Indian and German teachers and scientists, the institute is developing into one of the finest places of higher technical studies in the country. The Prototype, Production and Training Centre in Okhla near Delhi, the planned Central Staff Training and Research Institute at Calcutta, and the proposed school for Master Craftsmen at Bangalore are other centres for technical training which will eventually play an important role in promoting India's industrial development.

In the field of agriculture, the Package Programme at Mandi in Himachal Pradesh, is already bearing fruit. A few German agricultural experts working with Indian specialists, have succeeded in increasing agricultural output in the district by about 40% turning a food deficit into a surplus area in less than three years. The success of the project has encouraged India and Germany to extend it to the neighbouring Kangra, Sirmur and Kulu districts and to launch a similar programme in the Nilgiris.

ROURKELA CAPS IT ALL

WEST Germany's active participation in India's economic development began in 1958 with the signing of a loan agreement of Rupees 79 crore (at the then rate of exchange) to help finance the Rourkela Steel Works which were already under construction by a group of German firms. Although like any major industrial venture Rourkela had to go through a number of teething troubles and avoidable maladies in its earlier years, it has now grown into a wholesome industrial complex earning the highest profit among all the public sector steel plants. After being expanded from its original 1 million to an annual capacity of 1.8 million tons of steel, it is awaiting a further expansion to 2.5 million. According to the recent Mahatab Committee Report, it has the lowest operating costs per ton of steel ingot, the lowest steel conversion costs and the highest yield in the steel-melting shops, of the entire Indian steel industry. It has already saved the country foreign exchange to the tune of Rs. 250 crore.

A special feature of Rourkela is its large fertiliser plant, which



Young trainees at the Indian Institute of Technology, Madras

uses the nitrogen released in the production of oxygen for the LD-process of the steel works.

BHADRAVATI—FROM VISION TO MIGHTY REALITY

The Bhadravati Alloy Steel Plant in Mysore is another shining example of Indo-German collaboration. The factory, a major producer of alloy steels, has a romantic past. In 1923, the Maharajah of Mysore, on the advice of Sir Visvesvaraya, ordered the erection of a wood distillation by-product plant for the coking of wood from the Malnad forests near Bhadravati. Sir Visvesvaraya, aware of the unexploited iron ore deposits in Kemangundi, in the Bababudan Hills and of the possibility of using charcoal for iron-melting, got a small blast furnace included in the projects. This proved to be a farsighted decision. The initial output of this plant was a modest 60 tons a day, or 20,000 tons of pig iron a year. But even this small quantity was more than the need of the country at that time. A ready market for the surplus was found in the USA. The

[capacity of the furnace was soon expanded to 80 tons a day and a foundry for the casting of pipes was added.

In 1936 the German firm of DEMAG was given the contract for the expansion and conversion of the 13-year old iron works into a modern steel works with an annual capacity of 30,000 tons. For this purpose two 25-ton open hearth furnaces, a rolling mill and a cement mill were added to the plant. Further expansion and diversification followed. In 1942 the company was the first in India to take up the production of ferro-silicon.

In 1960 the company's second major expansion programme began. The capacity of the works was to be increased by more than four times—to 130,000 tons per annum. While the work was under way, a new plan was proposed. The steel works was to be converted into an alloy steel plant utilising the entire new steel capacity for

the production of 70,000 tons of high grade and alloy steels a year.

Thus, it was felt, the country would have its first major producer of alloy steels, much before the completion of the planned special steel works of Durgapur. The Bhadravati plant would help the country achieve its target of independence from alloy steel imports by 1970.

In November 1963 a consultancy and licence agreement was concluded with the world renowned pioneers and makers of special steels, Messrs. Boehler & Company of Austria. The execution of the programme was again entrusted to DEMAG as general contractor.

Alloy steels are playing an increasingly important role in modern technology. From building to electronics, mechanical to nuclear engineering, automotive to aeronautical technology, special steels have become indispensable. It is estimated that a technically developed country needs high-grade steels in the amount of 6 to 10% of its consumption of ordinary steel. By 1970-71 India hopes to

achieve self-sufficiency in alloy steel. The annual production is then expected to reach half a million tons.

To meet the cost of expanding the steel plant's capacity from 30 to 130,000 tons the German Government enabled the Government of India to utilise a share of 13.8 million DM from a non project loan of 107 million DM. Later another 60 million DM credit was given by the German Government for converting it to an alloy steel plant. When early in 1965 additional plans for the expansion of the pig iron capacity of the works came up, the German Government sanctioned an additional credit of 13 million rupees for the purpose.

NEYVELI—A SUCCOUR TO HOUSEWIVES

THE Neyveli Lignite Corporation is yet another living monument to international technical co-operation between India and West Germany. The vast German experience in the exploitation of lignite deposits has found effective application in lignite mining project of Neyveli.

The extensive lignite deposits of the South Arcot district of Madras, some 200 miles south west of Madras, estimated at two billion tonnes of lignite, will supply the fuel-scarce Madras with energy for generations to come. The lignite lies at a depth of 56 meters, covered by earth. This layer of earth has first to be removed by excavators. The layer of lignite itself is about 16.2 metres thick. Beneath the lignite deposit lies water at a pressure of six atmospheres. This water fills up the mine unless 200,000 cubic metres of water are pumped out every day by a gallery of wells.

The West German Government sent a team of experts under the Technical Assistance Programme to advice the Corporation on the overall development of the mine. West German firms supplied and assembled the fully mechanised system of continuous mining.

While the bulk of the lignite is fed into the Soviet-built thermal power plant which delivers electricity into the Madras State grid, roughly one third of the mines'

output is earmarked for processing into carbonised briquettes. Another eight per cent of the lignite supplies is used as raw material for producing fertiliser. In the development of both plants, West Germany played a leading role. A 9.8 million DM project loan of the West German Government helped finance the briquetting and carbonisation plant. It was commissioned in 1965 and has an annual rated capacity of 3.8 lakh tonnes of briquettes.

Briquettes made from lignite are a German speciality. Shaped like eggs, or like small bricks with rounded edges, they are economical to transport, easy to handle and have a high heating value. In the hard days following the last war, lignite briquettes were looked upon as little treasures. One or two of them would keep a stove going overnight or produce a warm meal, and in winter, cinemas would demand a briquette, along with a ticket, for admission.

India Had A German Nawab

In the 18th century, a German carpenter, Walter Balthazar Reinhard, came over to India. First he fought in the service of the French. His loyalties, then shifted to the English and later to various Hindu Rajas. With each change of allegiance, he rose in rank and power.

When, as General under Shah Alam II, he helped throw back the Maharattas who were besieging the capital, the emperor bestowed on him the principality of Sardhana, East of Delhi. He assumed the impressive name Nawab Walter Reinhard Sumru. He lived in pomp and splendour until his death in 1778.

Happily this German 'colonial phase' in India ended with this freak Nawab.

Largest of its kind in India, the fertiliser factory, which began full production in 1966, was built in collaboration by a German and an Italian firm. It has an annual output of 1.52 lakh tonnes of urea.

The West German Government gave a sizeable credit for the Neyveli unit. The scope of the Neyveli Project, now in its twelfth year, has greatly increased. The output of the mine has been raised from an initial 1.2 million tons a year to 3.8 million tons. Project reports are being studied to open up a second mine and duplicate the power plant with another 600 MW of installed capacity.

OKHLA MAKES MACHINES AND MACHINE MEN

THE training and prototype production centre at Okhla near Delhi is one of the earliest of the Indo-German projects. It is one of the major centres in India for training skilled personnel and producing special types of machines for small industries.

Housed in a complex of modern buildings spread out in a 25-acre area near the well-known Okhla Industrial Estate the centre functions in an imposing complex of workshops and laboratories. It has five main departments: training, production, design, development, and planning. Facilities for all major phases of metalwork, including such ancillary jobs like pattern-making, galvanising and painting, have been provided in 14 individual workshops.

One of the major achievements of the centre is that it has independently designed and built a number of prototypes of new machines, tools and appliances. One of these, a "Universal Radial Drilling Machine" will now be transferred to a private enterprise in the small-scale sector, which will take up its serial production. One by one, all the items currently in the design, development, prototype or production-stage, will be transferred to individual enterprises for continued production, leaving the centre free for more pioneering work.

The training programme of the centre has been steadily gaining in

scope and importance. Today there are training facilities for 400 apprentices and trainees in every sphere of activity at the centre, ranging from carpentry to stores handling, from data processing to the designing of machine tools. Some 1,500 have already completed their training and are employed in industrial enterprises throughout the country. The centre runs three-year courses for apprentices in the metal-working trades, two and one-year courses for workers from small-scale industries and graduates from technical training institutes, as well as courses for advanced technical draughtsmen, engineering college graduates, and supervisory personnel from small-scale industries. There are also courses for trainees from neighbouring countries under the provisions of the Colombo Plan.

One of the centre's popular units is its "common facilities service" for the use of small industries. Whether it is in the fields of design, testing and inspection, the making of tools, dies and other production aids, or in the execution of jobs relating to final products, the centre is ready to help wherever they are facing difficulties due to lack of machines, processing equipment and know-how.

While the Government of India financed and furnished all local facilities at the centre, the German Government provided the entire technical equipment. When the centre started operating in 1961, Germans worked together with Indians to establish the many courses and programmes and get the project off to a good start. There were 23 Germans on the staff. Their strength was then gradually reduced. From October 1966 only 3 German engineers remain.

Future plans of the centre envisage an expansion of the design and prototype activities and a speed-up of the work of the transfer scheme. The training facilities would also be further expanded.

PARTNERS IN PLOUGHING

LIKE many friendly nations, West Germany considers India's agricultural improvement to be of vital importance to her prosperity,

in fact of equal importance, if not greater than industrial development. The help that she has rendered to India in this field has been in the form of the services of experts and of the supply of agricultural inputs and implements. She participated in the Intensive Agricultural District Programme which includes the setting up of a number of agricultural pilot projects in which a concentrated effort of agricultural improvement is undertaken.

The projects make available through village co-operatives all requisites of production, especially: high quality seeds, fertilisers, plant pesticides, veterinary services and agricultural implements and machinery, provide adequate productive credits to all farmers through co-operative banks, and ensure a market for agricultural products through the co-operatives. The projects also provide intensive education to farmers by specially trained staff and by means of demonstration experiments on model farms.

The most fruitful example of West German participation in the programme is the Indo-German agricultural project in Mandi district in Himachal Pradesh. An Agricultural Advisory Centre was set up in Sundernagar, a place of some 6,000 inhabitants. It was equipped with modern technical facilities like a soil-testing laboratory, a processing plant for fruit and vegetables, a refrigeration plant, and a training and repair shop for agricultural implements and machinery. The centre today covers a farming population of 54,000, representing about 90% of the total population of the district. The services are extended at the village and block level (a block comprises 100 villages) and also incorporate the training of future Indian village advisers.

Today 37,000 farmers, corresponding to about 60% of the total, are members of the newly founded co-operatives. New and improved methods and techniques have been readily accepted. Food production and agricultural incomes have risen appreciably. Last year's grain imports into the district, for instance, amounted to only 3,000

tons as against 16,000 tons in 1963-64. The project's success has prompted its extension to neighbouring districts and to other States. Thus centres have been opened now in Kangra, Sirmur and Kulu Districts and in the Nilgiris in the South. At Nilgiris, apart from the growing of potatoes, temperate-zone vegetables, and fruits, the German experts will also be able to give advice on the cultivation of tropical crops like paddy, tapioca and cocoa. A special feature will be the introduction of power-tillers in the potato cultivation of the district. The compact, German-built machine is a kind of miniature tractor and can be operated even on the small terraced fields found in the Nilgiris. The usefulness of the machines will be demonstrated on the State seed farms and they will then be made available to interested farmers on a hire-purchase basis.

PRIVATE COLLABORATION'S MANY LARGE INDUSTRIES

IN the last two or three decades, Indo-German joint ventures have contributed in a large way to the industrialisation of India. Heavy and medium industrial plant, machinery and equipment, including the steel industry, account for the overwhelming bulk of the joint ventures. Among other industries are motors, chemicals, electrical equipment and textiles. Apart from these are agricultural implements and machinery, wood-processing, and some consumer goods industries. An illustration of Indo-German co-operation in the heavy industry field is the Utkal Machinery Ltd in Orissa founded by three German industrial concerns in collaboration with Larsen & Toubro. With an authorised capital of Rs. 5 crore and a paid-up capital of Rs. 3.1 crore, this firm represents one of the largest single investments of private German capital in India.

In chemicals and pharmaceuticals, Bayer and Hoechst and other big firms have entered into collaboration with several Indian firms to form a number of joint ventures. Their production ranges from basic industrial raw materials to the most sophisticated chemical

compounds and drugs. These firms earn substantial foreign exchange. In the electrical industry, Siemens, A. E. G. and its electronics subsidiary Telefunken, have been in the country for several years now. In collaboration with the State Government of Mysore, A.E.G. has set up the New Government Electrical Factory (MGEF) in Bangalore, which is already the second largest heavy electricals manufacturer in India.

In the automobile sector there are dozens of items which are produced in Indo-German firms or under licence agreements, ball bearings, piston rings and shock absorbers, dashboard instruments, fuel-injection pumps and complete engines. Apart from this, three major types of vehicles are built in the country. MAN, the German manufacturers of heavy vehicles, collaborated with the Government of India in building the 3-ton multifuel truck "Shaktiman" for the Armed Forces. The Tata-Mercedes Benz collaboration has been well-known in the truck and bus field. Five Indian undertakings work together with MAN in producing diesel motors, steel cranes, railway wagons and trucks.

The Indian Government, on its part, is giving active encouragement to new ventures through various fiscal incentives. These include a five-year tax-holiday for new industrial enterprises, liberal depreciation allowances, a 35% development rebate in priority industries and many others. The German Government sees the joint ventures in the context of its overall aid-policy and gives them direct and indirect assistance in many ways.

A NERVE CENTRE OF HIGHER TECHNOLOGY

TECHNICAL education is one of the important fields to which West Germany has made a worthy contribution.

The Indian Institute of Technology in Madras is, in fact, the largest item in the West German Technical Assistance Programme. The Institute, which offers courses leading to Bachelor and Masters Degree in various fields of technology and science, was established in 1959. It

has a joint body of Indian and German teachers and scientists, and is headed by an Indian director. Together with similar institutes built with the help of the U. S. A., the Soviet Union and Great Britain, it forms a nerve centre of India's higher study and research in engineering.

An area in which the immediate demand for fresh recruits is even greater, is that of skilled technicians. In this also the help of West Germany, which has a great tradition of meticulous and systematic technical training, has proved valuable to India's numerous apprentice training institutes and industrial training centres started since independence.

West Germany sent several experts under the Technical Assistance Programme. At the present stage two useful institutions in this line are taking shape—a Central Staff Training and Research Institute for vocational training in Calcutta and a School for Master Craftsmen and shop foremen in Bangalore. The Bangalore School will be set up with assistance from the Land Baden-Wuerttemberg, one of the States in the Federal Republic of Germany. Baden Wuerttemberg has perhaps the richest tradition in the training of generations of master craftsmen especially in the technical field. After the Ruhr Heavy Industry area, it is West Germany's second biggest industrial centre. Its peculiar feature is the relative small-scale character of most of its industries.

The Bangalore School will be the first of its kind in India.

INDO-German trade has been always to the advantage of the Federal Republic of Germany. The balance of trade has been fluctuating between DM 500 and DM 800 millions a year against India.

This unfavourable balance against India is due to many reasons. India buys heavy machinery and other modern engineering goods from Federal German firms and sells in return mostly agricultural commodities and products. The main difficulty is in the limited scope for marketing of Indian products in West Germany. To bal-

ance the cost of a single automatic tool machine, huge quantities of textiles, hemp and agricultural products are necessary. Efforts are now being made to bridge the trade gap. India's participation in many exhibitions and fairs organised in the Federal Republic is gaining her markets for her exports. The high quality and standard of 'Made in India' goods have brought many buyers. The market for Indian tea is gradually widening in West Germany as a result of publicity campaigns launched in T. V. and on billboards. Detailed studies of the German market are being vigorously undertaken to explore the possibilities for exporting India's engineering goods and components.

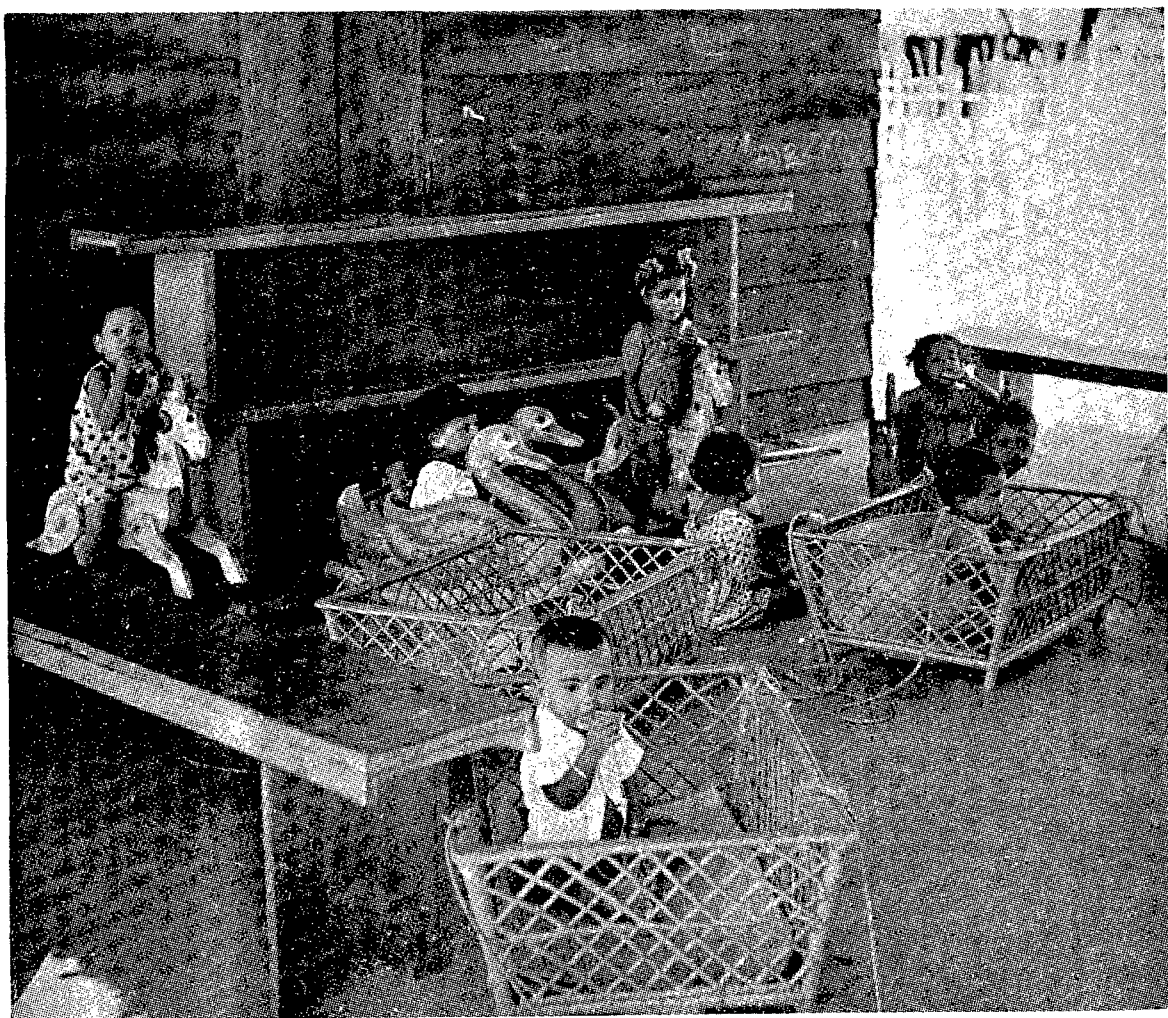
LOOKING BACK

Yojana, December 1, 1957

The first "Convicts and Ex-Convicts Conference" in the world was held recently at Lucknow. It was attended by nearly 300 delegates representing various social organisations. It had also 70 representatives of ex-convicts, convicts—both male and female—undergoing long-term imprisonment for grave offences and probationers. There was no provision of escort or guard of any sort. The prisoners returned to their respective jails at the end of the conference. The Chief Minister of U.P. announced one month's remission in the term of imprisonment of all prisoners in U. P. jails to commemorate the first Convicts and Ex-Convicts Conference.

During the conference, Ganga Devi, a convict of Nari Niketan, appealed that female convicts should be treated on par with male convicts in respect of facilities given to prisoners in U.P. jails. She said that the male convicts attending the conference went to take bath in the Gomti and saw the museum and the zoo but the women prisoners were not allowed to do so.

The State Government thereupon announced that 33 convicts including 10 female prisoners were granted one day's parole (in addition to five days already granted to attend the conference), for sight-seeing. The Government made arrangements for the female convicts to be taken to the zoo, the museum and various historical places in Lucknow.



CHILD CARE BEGINS AT HOME

A NEW PROGRAMME LAUNCHED

An integrated programme of family and child welfare was launched on November 14 by the Central Social Welfare Board, with assistance from the United Nations International Children's Emergency Fund (UNICEF). The scheme continues in a co-ordinated manner the various programmes sponsored by the Board for the welfare of women and children since 1954.

The programme begins with 17 projects in selected areas in 15 States in the country. By the end of this year, 50 projects will have been started. Subsequently 150 additional projects will be launched every year, so that in the course of five years, there will be 650 projects all over the country.

Mid-day meals at a Balwadi



Below : Mothers watching a baby being bathed by a worker at a welfare centre in Orissa



THE Family and Child Welfare Programme is primarily based upon the work already done in the previous three Plans for the welfare of rural women and children. At present there are the Welfare Extension Projects co-ordinated with Community Development blocks, centres of the Welfare Extension Projects run by Mahila Mandals and voluntary organisations, a few Integrated Child Welfare Projects and the usual activities for women and children in the C.D. blocks.

The main features of the programme are :

- (i) Provision of integrated social services to children in the villages, specially to pre-school children;
- (ii) Provision of basic training to women and to young girls in homecraft, health education, nutrition and child care of the essential health and maternity service for women;
- (iii) Assisting women in the villages, through Mahila Mandals and specially established centres as well as existing agencies, in obtaining supplementary work and income and thus augmenting family welfare and, more generally, for promoting economic activities; and
- (iv) Promoting cultural, educational and recreational activities for women and children.

At the block and village levels, the Family and Child Welfare Programme calls for:

- (i) Co-operation of Panchayati Raj institutions and agencies engaged in providing development services, including schools and primary health centres;
- (ii) Participation of voluntary workers, both from within and outside the block; and
- (iii) Active involvement on the part of, and assumption of

responsibility by, the local community and its leaders working through Panchayats, co-operatives and voluntary associations.

The co-operation of these various institutions is also essential at the district level and the State level, and, indeed, at the national level.

Co-ordinated Activities

The projects under the new programme will be significantly different from the existing ones in the following four respects:

(1) Family is envisaged as the basic constituent unit of the community. Accordingly a composite approach will replace the earlier fragmentary activities organised separately for each group like women and children. The Family and Welfare Projects will provide direct services for parents, specially mothers and children, both jointly and separately, and enrich the broader programme of community development so as to draw all members of the family within its beneficent influence more effectively.

(2) The new projects will provide an institutional base at the main centre so that various activities relating to family and child welfare will converge on and radiate from it. While the full-time salaried staff borne directly on the project budget will constitute the nucleus, it is envisaged that other functionaries in the block, such as staff connected with primary health centres, maternity and infant centres, the applied nutrition programme, family planning, women teachers, and social education organisers, will all together constitute a much bigger team working in concert and mutually reinforcing each other.

(3) In entrusting the organisational responsibility to a composite, jointly representative functional committee of the Panchayat Samiti and the State Social Welfare Board, the project will benefit from the support of the Panchayati Raj institutions on the one hand and the State Social Welfare Board on the other.

(4) With the closer and continuous involvement of the local

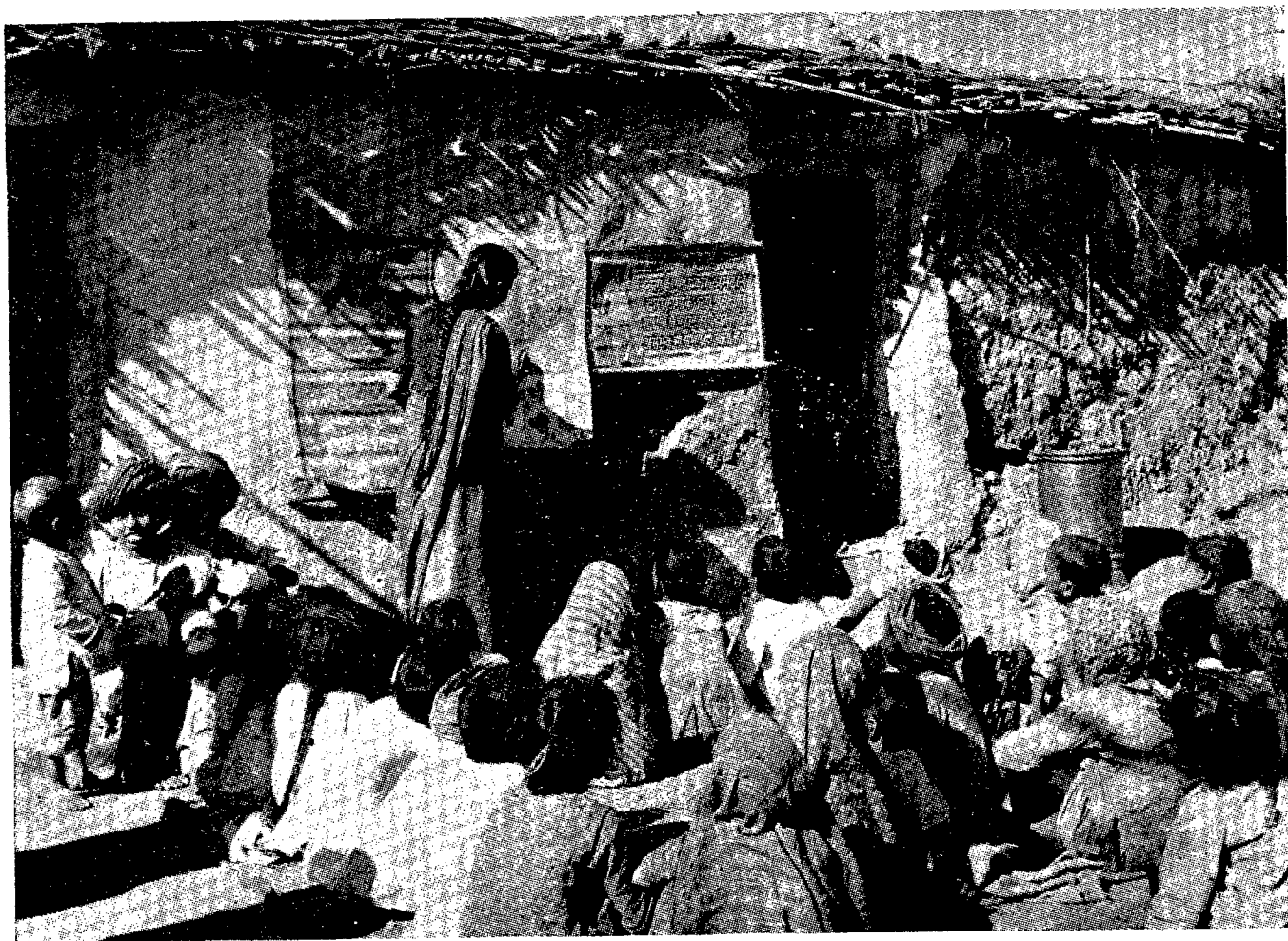
people in the organisational machinery and with need-based programme organised in co-operation with each other, it is expected that the project will take roots in the local soil, draw sustenance from it and grow on its own strength.

Child and Home

The Family and Child Welfare Project will consist of one main centre at the block headquarters and five sub-centres in selected villages. In addition, in villages

successive batches of 15 each, residential quarters for the Sevikas, and a campus in which outdoor activities can be organised. The Mukhya Sevika will have to make her own arrangements for stay in the village. Each centre and sub-centre will work in two shifts, one mainly for children in the morning and the other working mainly for parents, specially mothers, in the afternoon. In other words, each centre or sub-centre will have a Bal Vikas Kendra and a Griha

at the command of the project, greater attention will be given to the foundational group of 0-6 and, next in priority, to the age-group 6-11 years. Services dealing with health, nutrition, education, recreation and welfare will be implemented in a co-ordinated manner. The combination of services and the emphasis will differ for successive age-groups depending upon their specific needs. For the age group 0-2½ years, the programme includes post-natal



where local Mahila Samitis and Panchayats are keen to initiate, with their own voluntary effort, a limited welfare programme, the Central Social Welfare Board will provide financial aid and the project staff will provide organisational support and supervision.

The main centre will house a Balvikas Kendra, a model kitchen for the Griha Kalyan Kendra, a dormitory for village women trainees who would stay there in

A pre-primary class at a Balwadi in Rajasthan

Kalyan Kendra, the former functioning in the morning and the latter in the afternoon.

The programme has two wings—child welfare and family welfare.

While child welfare programmes in the project will normally cater to the age-group 0-16 years, with the limited staff and resources

care, immunisation, nutrition and physical care. For the age-group 2½-6, the services comprise informal education while playing, providing smooth transition from home to school, development of senses and habits and supplementary nutrition. For the age-group 7-11, apart from primary school education, the services include mid-day meals, school health facilities, group games based on local game lore and promotion of hobbies.

The family welfare programme comprises homecraft and home management, mothercraft and child development, family nutrition, needs and methods, clothing and other requirements.

The Bal Vikas Kendra will include a creche or a day care centre to look after about 10 infants while their mothers are busy on the farm or in the home. The trained Kendra-Sahayak (Gram-Lakshmi) will look after this part of the Kendra under the supervision of the Balsevika. There will also be a Balwadi or a pre-school for about 30 to 40 children, wherein the Balsevika, with the assistance of the active members of the local Mahila Samiti, will attend to the personal cleanliness of children and organise simple educational activities with the help of songs, stories, and games. She will also serve the mid-day meal prepared by the local Mahila Samiti from out of the project contribution and local community effort. Outside the hours of the Balwadis, the Balsevika will visit the villagers and maintain liaison with village school, maternity and infant health centres in order to ensure that all necessary services available in the block are fully utilised for the benefit of children.

The Griha Kalyan Kendra will serve as a demonstration-cum-training unit for batches of about 15 young mothers and leading village women each. Activities will include education in personal hygiene, health and sanitation, homecraft and home management, mothercraft and child development, family nutrition and feeding, family relationship, domestic budgeting, preparation of children's and other family clothing, family planning and citizenship education. The Griha Sevika, with the assistance of the other Kendra Sahayak (Gram Lakshmi) and members of the local Mahila Samiti, will organise these activities in the afternoon.

Training Facilities

Women trainees will be drawn from the main village, and such other villages in the block as will have the sub-centres or where Mahila Samitis could be organised or energised. Facilities for their stay will be provided in the dormi-

tory. A provision for food at the rate of Rs 2 per head per day has been made in the budget for 10 batches of 15 each for a year. Half the time of the 15-day training will be devoted to simple, informative talks and the remaining half for practicals in cooking, laundry, food preservation, tailoring, embroidery and child care. The daily cooking of meals for the women trainees will itself be utilised, under the guidance of trained staff, to serve as a demonstration-cum-training programme in cooking, nutrition, home-management etc. In organising talks and demonstrations, the Griha Sevika will seek the co-operation of her colleagues in the primary health centres, maternity centres, applied nutrition centres, family planning centres, social education centres, craft centres etc.

Wherever possible, suitable craft training facilities will be provided in the premises of the centre for supplementing family income. This activity may, however, be dovetailed, for purposes of additional staff and budget, with the appropriate programme in community development or other departmental programmes.

In organising cultural activities for women and children, full use will be made of the fund of folk-lore the older villagers, especially women, know. The traditional ways of transmitting cultural heritage from generation to generation could thus be institutionalised.

Sub-Centres

While the main centre will serve as a model of family and child welfare activities in the block, its activities will be extended to five sub-centres in a phased manner. The sub-centres will be more modestly organised, possibly with a hall for indoor activities, an attached room for the Balsevika and some open ground for out-door activities. Each sub-centre will be run by a trained Balsevika assisted by a Kendra Sahayika duly oriented for the purpose.

The main activities at the sub-centre will be similar to those at the Bal Vikas Kendra of the main centre. In addition, the Mukhya Sevika and other staff of the Griha Kalyan Kendra at the main centre will also use extension methods to propagate women's programmes. Firstly, they will either strengthen the

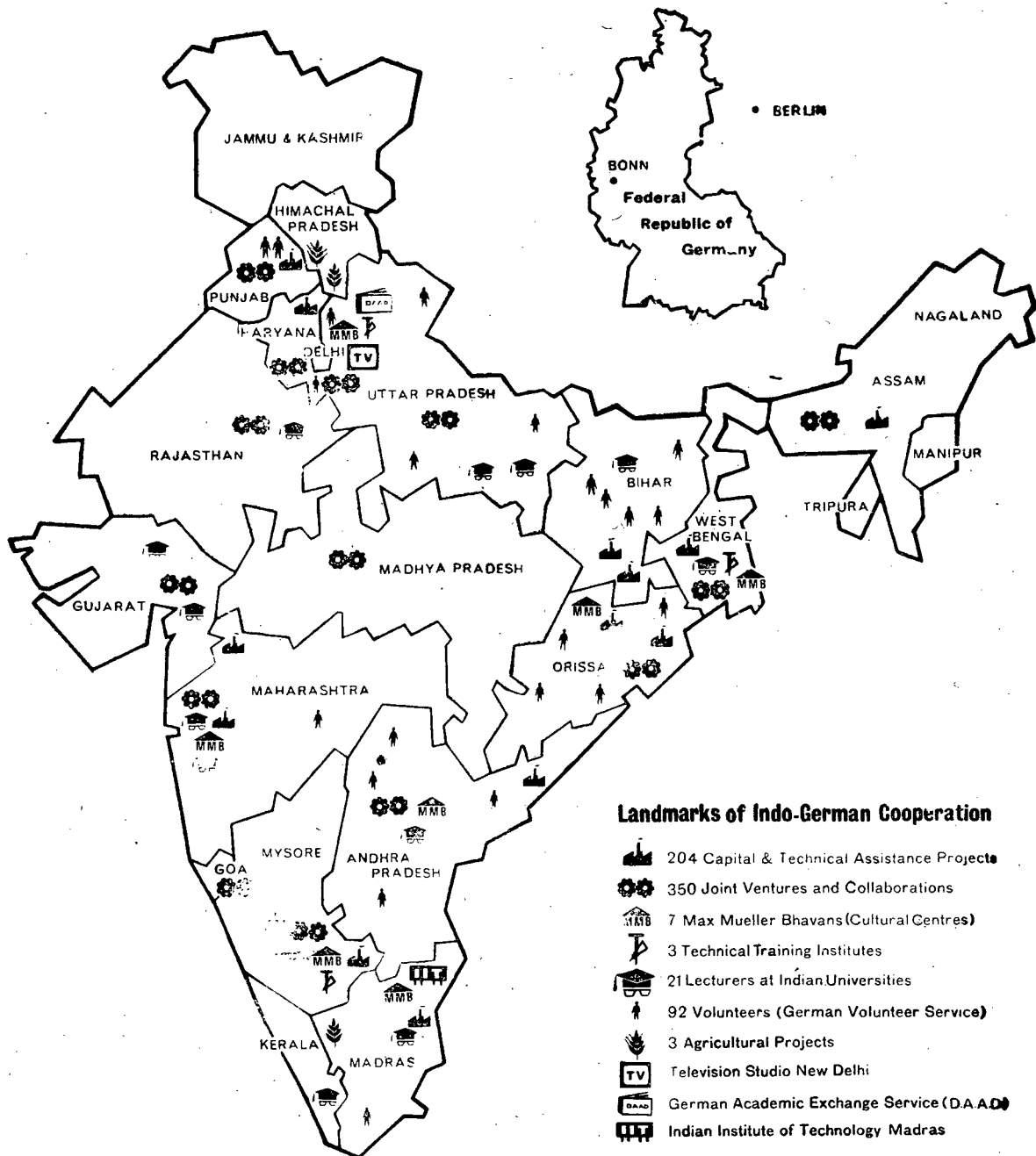
local Mahila Samiti if one exists or sponsor one in the village. Secondly, some of the leading and active village women from the sub-centre will be selected for training at the main centre in successive batches round the year. Thirdly, separate programmes of literacy, social education, family planning and applied nutrition will be organised by holding periodical meetings of the village women under the auspices of the Mahila Samiti. In the extension of these activities the project staff will seek the co-operation of other members of the extension team on the block staff. The local Balsevika will consolidate these activities by assisting the Mahila Samiti, visiting individual homes and holding meeting of mothers. In propagating women's activities, the Balsevika will be assisted by the second Kendra Sahayak or Gram Lakshmi.

Voluntary Effort

In addition to the concentrated efforts at the main centre and modest but regular activities at the sub-centres, the project staff and other colleagues in the extension team will also stimulate voluntary effort in the surrounding villages. This will be done mainly in two ways. Firstly, the village women who have received the training at the main centre can be mobilised for this purpose. Secondly, an effort will be made to organise Mahila Samiti in these villages which, with modest financial assistance from the Central Social Welfare Board and with the organisational and supervisory support from the project staff, will organise aided centres to conduct selected activities of the main centre depending upon the local needs and resources.

A contract for the supply of Soviet generators and turbines for the Lower Silera Project in Andhra Pradesh was signed in New Delhi. The Soviet Union will supply two turbines and generators with a capacity of one lakh kilowatt each in 1969-70 for the first stage of the six lakh kilowatt project. The equipment is valued about Rs. 2.75 crore. The subsequent stages of the project would be equipped with turbines and generators produced at the Hardwar Heavy Electricals which is a Soviet-aided establishment.

A Survey of Friendship



India and Germany – Partners in Progress

Science
in
India

SPREADING THE TEMPER

THE dominating feature of the contemporary world is the immense cultivation of science on a large scale and its application to meet a country's requirements. It is this which, for the first time in man's history, has given to the common man in countries advanced in science a standard of living and social and cultural amenities which were once confined to a very small privileged minority of the population. Science has developed at an ever-increasing pace since the beginning of the century, so that the gap between the advanced and the backward countries has widened more and more. It is only by adopting the most vigorous measures and by putting forward our utmost effort into the development of science that we can bridge the gap. It is an inherent obligation of a great country like India with its tradition of scholarship, and original thinking and its great cultural heritage to participate fully in the march of science which is probably mankind's greatest enterprise today."

These words were uttered not by any individual now but by the Government of India in 1958. Having said this, and something more, in the preamble to its Science Policy Resolution the Government had pledged itself "to foster, promote and sustain, by all appropriate means, the cultivation of science and scientific research in all its aspects—pure, applied and educational; to ensure an adequate supply, within the country, of research scientists of the highest quality and to recognise their work as an important component of the strength of the nation; to encourage and initiate with all possible speed,

B.S. PADMANABHAN

programmes for the training of scientific and technical personnel on a scale adequate to fulfil the country's needs in science and education, agriculture and industry and defence; to ensure that the creative talent of men and women is encouraged and finds full scope in scientific activity; to encourage individual initiative for the acquisition and dissemination of knowledge in an atmosphere of economic freedom; and in general to secure for the

SOME PROBLEMS

people of the country all the benefits that can accrue from the acquisition and application of scientific knowledge. The resolution also expressed Government's decision to pursue and accomplish these aims by offering good conditions of service to scientists and according them an honoured position and by associating scientists with the formulation of policies.

LITTLE IMPACT

Has this pledge been fulfilled? A sincere beginning was made to foster cultivation of science on a large scale and the chain of national laboratories is evidence of this. But the direction in which scientific

activity has developed has not given satisfaction. There is widespread feeling that science policy had not worked effectively, in the sense that what it sought to accomplish has not been accomplished. The national laboratories and the university research departments failed to make the impact expected of them. The reason is not far to seek. In getting for scientists good conditions of service and in associating them with formulation of policies much remains to be done.

This aspect was brought home by a number of participants at the Round Table of Scientists convened by the Prime Minister recently. Mrs Gandhi told the Round Table: "Under the inspiration of Jawaharlal Nehru, the Government had adopted the Science Policy Resolution in 1958 and there we have stopped."

There are many factors responsible for this. More than one participant at the Round Table said there was no dearth of skilled personnel but there was lack of proper utilisation of existing scientists. It is not always that the best man is selected for a job. Extraneous considerations come in while choosing a man for the job. There is a feeling that good work is not appreciated and scientists are not encouraged to take up consultancy work. In fact, there is a deliberate policy of discouraging scientists in Government establishments from taking up private consultancy work.

There is a lot of frustration among young research workers. Their environment is such that they feel insecure unless they show a large number of publications to

their credit. They take up problems which yield quick papers in preference to projects which may be of importance to the country but may not result in a paper being produced quickly. Another point mentioned is that the young scientist is forced by circumstances to work on a project in which he has no heart, just because the head of the department is interested in it.

NEED FOR MOBILITY

All this has led to the view that if we are to draw the best out of our scientists it should be ensured that quality of work and not number of papers will be the criterion for promotion of scientists. It is also urged that the scientist should have the freedom to take up a project of his own choice within the framework of overall national priorities.

Scientists also feel the need for mobility from one department to another. Now this is not easy. The departmental head is reluctant to forward a scientist's application for a better post elsewhere. The result is frustration.

There may be force on the argument that a developing country like India, with so many demands on its meagre resources, cannot afford the colossal expenditure involved in providing facilities for research for the sake of research. But even without much spending, research can be encouraged if the administrative and procedural fetters are removed.

The Education Commission said, "It should be the major task of national research policy and policies of the universities to provide a climate conducive to research, and to prevent and eliminate through energetic and public measures all dangers of infringement of autonomy and freedom of action in research". This freedom should not mean allowing scientists to run wild with pet schemes. There should be a stimulus and at the same time a proper direction for science to grow.

TRADITION BARRIER

There is no doubt that the attitude of research scientists is determined by the social environment in which he works. In science-

conscious countries science has made a deep impact on society and is part of the social life of the people. Nobody questions investment on scientific and technological research. Only the magnitude of this investment is discussed. A child at school, at an early stage gets a reasonable idea of what science is about. He is encouraged to experiment and to extend his understanding. In a developing society like ours beliefs and traditions flourish. There is not adequate acceptance of the scientific method.

There is need of preparing a sound base for science to flourish through proper educational methods

in schools. This has been a neglected field so far. A foreign scientist has written to the Prime Minister Mrs. Gandhi after visiting India about the plight of scientific education in schools and colleges. There is realisation in the administration that the basic defect of science education is the emphasis on "wonders" of science rather than on methodology of science. The present system does not help the student to imbibe the spirit of enquiry or initiative, but only makes his mind a storehouse of memorised scientific facts. Attempts have been made to reverse this trend by the National Council of Educational Research and Training but its impact has been slow.

QUOTATION BOX

While reading your "The Viability of Video" (Oct. 20), I was reminded of the following story: A professor finding that his time was too valuable to merely lecture, would prepare a full week's lectures over the weekend and tape them. Each day of the week he would have an assistant set the recorder up in the classroom. The professor, of course, was delighted at the system which afforded him much free time. After his taped lectures had been playing for several months, he decided to visit one of his classes himself. As he opened the door he saw his recorder on the front desk, merrily lecturing to 65 small tape recorders, one on each desk of the deserted classroom.

—A letter to the Editor in "Time"

Several products including transistors, sewing machines and cameras (sold on the Bombay pavements) bear the imprint "Made in USA".

What did that stand for? our colleague asked an informant accompanying him on a train journey from Poona to Bombay. "It stands for Ulhasnagar Sales Association," the informant replied as the train sped past Ulhasnagar.

—From "The Times of India"

Dravida Munnetra Kazhagam & Annadurai are all Sanskrit words.

—The heading of an article in "Organiser"

The present writer personally knows of a case in which a file dealing with a Rs 3 lakh scheme for a brick factory made a 3 years' journey, in the course of which 51 officers of 5 departments made notings but none expressed an opinion on the merits of the scheme.

—Mr K. M. Purkayastha in "Swarajya"

The Americans are here so that the Vietnamese can develop their own country in their own way.

—Mr Hubert Humphrey, American Vice-President in S. Vietnam

According to the latest Delhi Telephone Directory there is no such person of the name of Dr. Zakir Husain in Delhi!

—From a letter in "The Statesman"

Almost the only Englishmen left in the world today are Indians.

—Mr. Malcolm Muggeridge

The two massive volumes (on Kennedy) by Sorenson and Schlesinger he (Malcolm Muggeridge) dismisses as "the most outstanding literary follies since Beatrice and Sidney Webb produced their *Soviet Communism: A New Civilization* in the late thirties." In his view, the legend, as Sorenson and others purvey it, "slays the late President as effectually as Oswald's bullets did."

—From a review in "Weekend Review" on a book by Malcolm Muggeridge

If Dr. Chandrasekhar, Minister of State for Health and Family Planning, had his way, the people preparing *rasam*, a South Indian dish, would have to undergo rigorous imprisonment for seven years.

—Report in "The Hindustan Times"

It appears that a small boy approached Mrs. Sarojini Naidu for her autograph. While obliging him, the poetess asked whether he knew who she was?

"Sure," replied the lad. "You are the wife of C.K. Nayudu."

From "Blitz"



FIFTEEN YEARS OF DEVELOPMENT

JAMMU & Kashmir, in the last 15 years, has broken its long tradition of isolation and backwardness, mainly as a result of planned economic development programmes. The State, which had lagged behind others, largely because of limitations imposed by nature, is catching up with the rest of the country and of late, its economy has shown a distinct buoyancy. Earnest efforts to develop the State's rich resources are beginning to bear fruit.

The outlays in the successive Five Year Plans have progressively increased and the provision for the five year period beginning with 1966-67 is Rs. 126 crore, about ten times that for the First Plan. In the current Plan period the emphasis, laid in the earlier three Plans on construction works and social amenities, has been switched to vital wealth producing sectors of the economy. The strategy of development has been to firmly establish infrastructures of growth so that further development can

MAKES THE ECONOMY VIBRANT

take place in a sustained manner.

However in the last five years extraordinary conditions have plagued the economy of the State, Jammu & Kashmir, unlike other States, has had to bear the brunt of external aggressions, from China and Pakistan, and an internal unrest, caused by the holy relic agitation, in the last five years. By 1966-67, however, the State has again rallied to the road of peaceful reconstruction and development. During that year the State Government, with assistance from the Centre, had rehabilitated at a cost of more

than Rs.8 crore about one lakh refugees who were displaced during the war with Pakistan. The economy has now been put on the rails, and, in fact, is gaining momentum.

In the last two years of the Third Plan the rate of annual utilisation of funds rose markedly from about Rs. 11 crore to Rs. 17 crore, in spite of abnormal social and political conditions. In 1966-67 the anticipated utilisation is Rs. 20.04 crore as against a provision of Rs. 19.04 crore. During the current year, however, because of the extremely tight resources position, it has not been possible to provide for any substantial step-up in investment.

Among the programmes in the State's Plans, agricultural production has been receiving the highest priority. Not only larger funds have been provided but the utilisation has also continued to improve, specially after 1963-64. The amount spent on agricultural programmes rose from Rs. 81.44 lakh in

1961-62 to Rs. 268 lakh in 1966-67. In the current year's Plan Rs. 356 lakh have been provided for this purpose.

In the agricultural sector the State now appears to be on the brink of a major breakthrough largely because of the adoption of radically new measures. Most important among these has been the Intensive Agricultural District Programme. The main feature of this programme is the intensive application of material inputs and improved agricultural practices. The programme is now in full swing in Jammu and Anantnag districts and is expected to increase production in these two areas by about 100 per cent by 1970-71.

During Kharif this year, 83,000 acres in Anantnag and 42,000 acres in Jammu were sown with improved and high-yielding varieties like Taichung Native 1 paddy and China paddy - 1039 and hybrid maize. The Co-operative Department gave a total crop loan of Rs. 3 crore. The consumption of fertilisers has also gone up. Against a total of only 30,000 tonnes con-

sumed during the entire Third Plan period, in 1966-67 alone 16,000 tonnes were utilised. In 1967-68 the total offtake is expected to be about one lakh tonnes. In the Rabi season the Agricultural Department's programme includes the sowing of Mexican wheat over an area of one lakh acres and other improved varieties over an area of 80,000 acres. Oilseeds will be sown on 1.2 lakh acres.

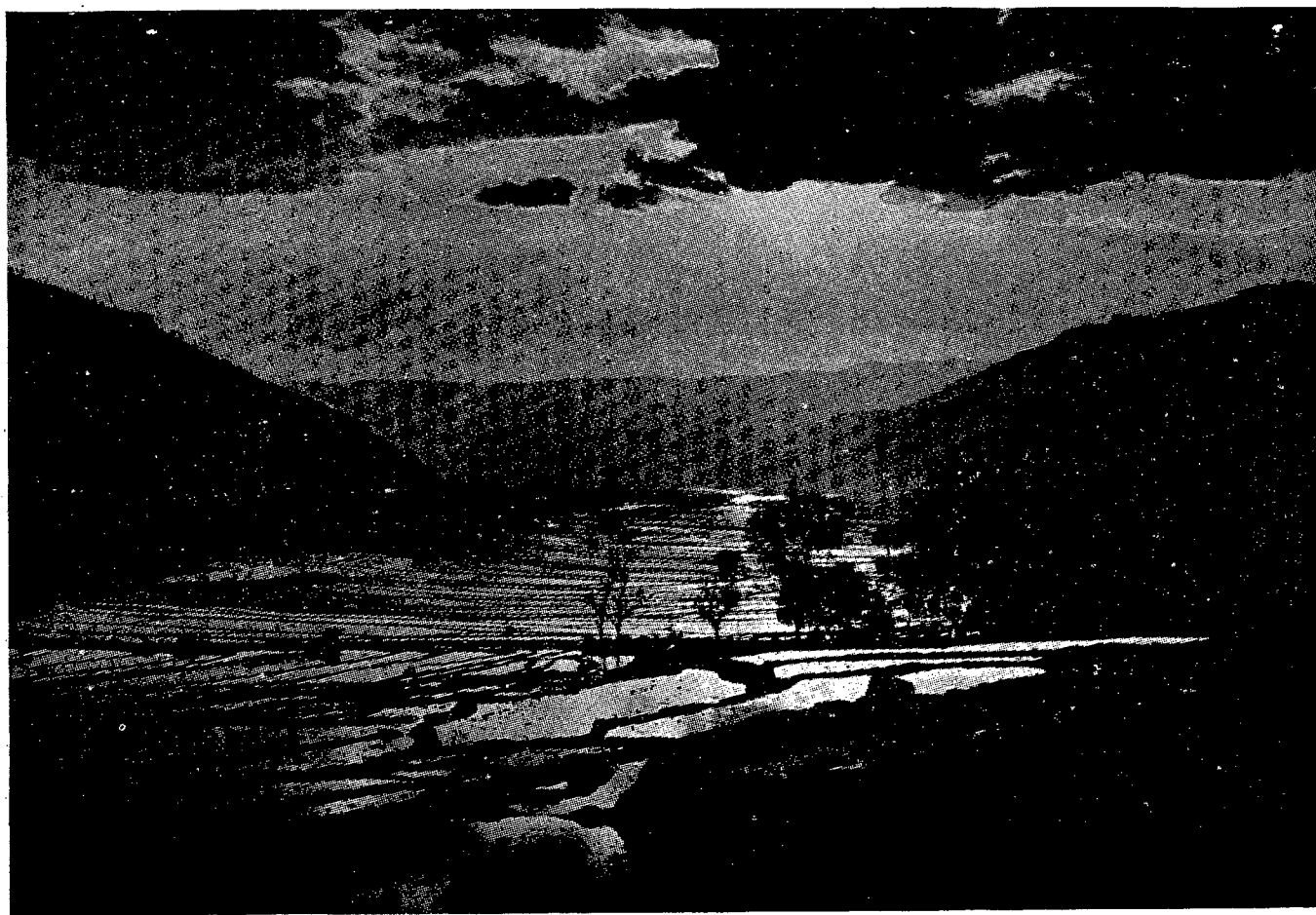
Due to peculiar climatic conditions the State is largely restricted to a one crop economy. For the first time this year it is proposed to introduce multiple cropping. In co-ordination with the Indian Council of Agricultural Research, an elaborate programme of agricultural experimentation has been formulated to put the State's agriculture on a more scientific and progressive footing.

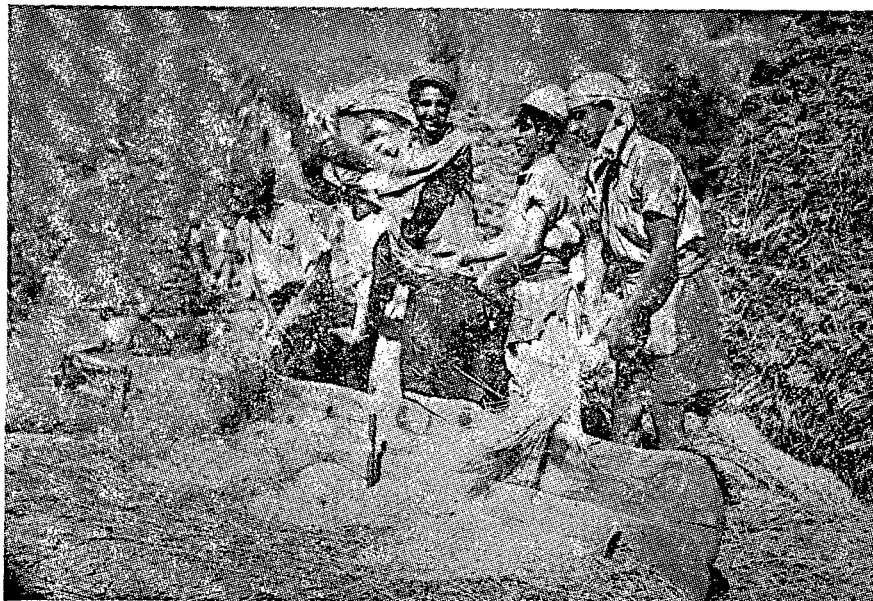
Related sectors of agriculture have also received adequate attention in recent years. New orchards are to be started on 7,500 acres, and a sum of Rs. 75 lakh has been earmarked for loans to orchardists. Production of vegetables is propos-

ed to be taken up on 2,560 acres of land. There is a programme to develop sheep breeding and cattle rearing on a scientific basis.

For the first time in the State a well-devised programme of irrigation has been introduced. In Jammu province last year 24 tubewells were completed and 50 more are expected to be completed this year. The State Government has recently launched a scheme for providing financial assistance to private farmers for sinking percolation wells and installing persian wheels and pumping sets. A phased programme for renovating minor irrigation channels has also been taken up.

The State has suffered from a lack of adequate power supply. But in recent years the Plan provision for electricity has been increasing considerably and in 1967-68 the provision claims almost one-fourth of the total Plan outlay. By March this year the power available in the State was about 37,000 kilowatts. With the completion of the Kalakote thermal station and the installation of diesel sets at





Srinagar, the availability will go up by another 97,000 kilowatts.

Rural electrification has also made some headway. By March 1967, 675 villages had been electrified, whereas the number was only 397 three years ago.

INDUSTRIAL HORIZON

The industrial horizon in the State, which has been bleak for many years because of power and transport bottlenecks and of almost total dependence on indigenous raw materials, has begun to brighten. A number of factories, started in the public sector in the past, were generally in poor economic health and suffered from over-capitalisation and other defects. In 1963 a Government undertaking, the J & K Industries, was formed and it took over these factories. Recently, the company has begun to show good results. In 1966-67 industrial production and sales registered record increases. A large-scale modernisation of the factories has also been taken up.

The contribution of private industry has been rather limited.

To attract private investment, an Industrial Development Corporation, with a share capital of Rs. 75 lakh, is to be floated shortly and a package of incentives is to be provided to entrepreneurs. Investigations are being made to find out the possibility of setting up a rayon grade pulp/yarn factory in the Valley and a large cement factory in Jammu.

The local handicrafts industry has begun to look up after the recession of 1965. It, however, depends to a large extent on imported wool tops of finer counts, which are not

easily available. The sericulture industry has shown remarkable progress. A programme of self-sufficiency in the production of silk worm seed is being implemented. The export of raw silk has continued to rise. Last year hides valued at nearly Rs. 20 lakh were exported to the USSR.

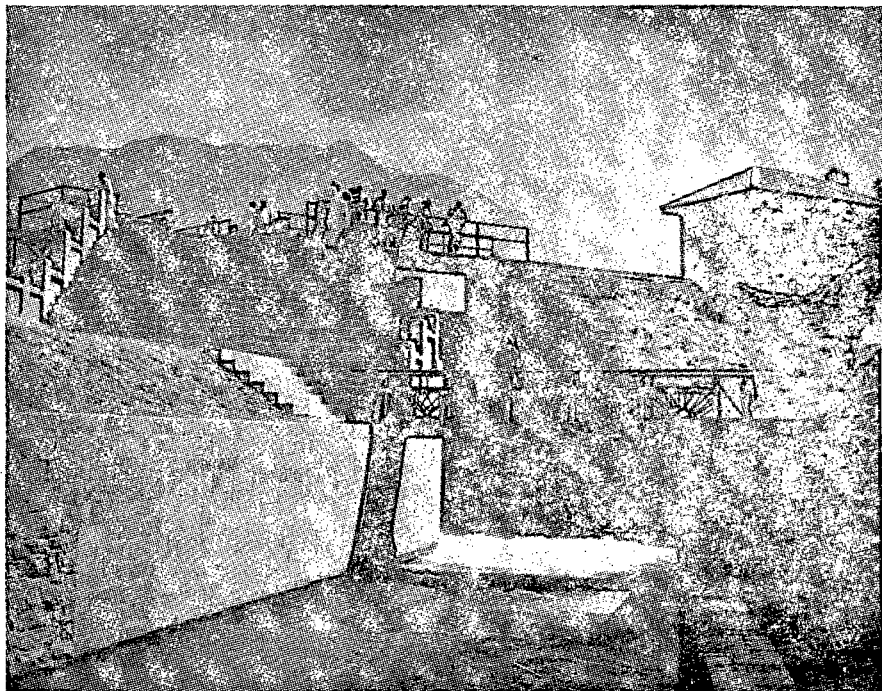
Mineral investigation in the State with a view to commercial exploitation has gone on unabated.

A major source of the State's revenue from outside is the fruits grown in the valley. To help in marketing the fruits a cold storage plant with a capacity of about 450 tonnes is being opened in Srinagar and another plant with 1,800 tonne capacity is proposed to be constructed in Delhi.

TRANSPORT MAKES HEADWAY

In Jammu & Kashmir one of the major handicaps inhibiting industrial development has been the high cost of road transport over a long and tortuous route. Recently the Central Government decided to extend the railway line from Khatwa to Jammu as a Plan project and work on it has already begun. This will go a long way in accelerating economic growth and also promoting greater social intercourse between the people of the State and the rest of the country.

In view of the importance of road transport, the Government



Left—Paddy fields

Top—Threshing

Right—Canal water for the fields

has set up a survey team to draw up a long-term road transport plan. In the past road planning was so haphazard that every year many roads were taken up simultaneously without adequate financial provision and were left incomplete over long periods. This approach has now been given up and the attempt now is to complete as soon as possible the schemes in hand. In the five year period beginning from 1966-67 a sum of Rs. 18 crore is to be spent on road construction as against only Rs. 9.5 crore during the Third Plan.

The State Transport Undertaking has shown record profits in 1965-66 as a result of the bifurcation of its commercial and non-commercial spheres. It has now 1,100 vehicles.

RECORD NUMBER OF TOURISTS

Tourism is a major industry in the State on which a large number of people depend for their livelihood. The State Government, therefore, has given high priority to tourism and is making every effort to provide facilities to visiting tourists. A large modern hotel is to be con-

structed shortly. Last year saw a record number of one lakh tourists and about 2,25,000 Pilgrims visited the Vaishno Devi shrine. To attract tourists during winter months a Winter Sports Festival is organised at Gulmarg.

In the field of social services, the State has made considerable headway. The aim of the Government has been not only to improve and increase medical facilities but also to extend them to the remote areas. The number of district hospitals, primary health centres, and dispensaries has gone up to 1,219 in 1965-66. A 100-bed women's hospital has been opened in Srinagar. To the two major hospitals in Jammu and Srinagar 100 beds have been added and their number was 1,250 in 1965-66. Family planning programmes have been given special emphasis.

The State has shown sizeable progress in the field of education. New schools have been opened even in remote and inaccessible areas. Existing schools have been upgraded and improved. Last year about 3,500 students from the State

were assisted by the Government to receive post-graduate training in engineering, agriculture, medicine and other professional studies in and outside the State. Last year in the rural areas the school health scheme and the applied nutrition schemes were launched for the first time. The social education programme was further extended.

REMOTE AREAS MOVE FORWARD

The development of remote and backward areas like Ladakh has been given high priority in the State Government's programme. Ladakh's utilisation of Plan funds has gone up in the last few years, specially after 1964-65. While in 1961-62 the amount spent was only Rs. 9.93 lakh, in 1965-66 it rose by about six times to Rs. 56.75 lakh. In the current five year period, a



sum of Rs. 327 lakh has been provided for the development of the region. Special emphasis has been laid on providing electricity, irrigation and communications. At Leh and Kargil two generators of 20 KVA have been installed. It is proposed to instal two more 90 KVA generators in Leh and one 90 KVA set in Kargil during the current year.

A special programme for border blocks has been taken up. In 1966-67 a provision of Rs. 60 lakh was made. The remote area of Tangdhar has been provided with electricity for the first time. Certain pockets in the State, specially in the hilly and backward regions, have not received any benefits of economic development so far. For such places a provision of Rs. 70 lakh has been made in the current five year period.

With the exception of the National Highway including the Jawahar Tunnel at Banihal and the extension of the railway line up to Khatwa, the Centre's investment in the development of Jammu & Kashmir has not been considerable. However, air services and telecommunication systems have been extended to the State inabig way. Landing facilities for aircraft have been improved. Direct trunk telephone dialling between Jammu and Delhi and between Srinagar and Delhi has already been commissioned. Microwave systems are being established to improve the efficiency of the telephone services.

In spite of the social and political stresses and strains, the Government has maintained an uninterrupted flow of essential supplies of food within the State. The needs of even the remotest corners of the State in respect of foodgrains have been fully met. Out of a total population of about 39 lakhs, 30 lakhs was covered by rationing in 1966-67. However, with the improvement in the food situation this number has now been reduced to 17 lakhs.

Departmental stores and consumer co-operative stores have been set up all over the State to sell essential commodities at reasonable rates. This has had a beneficial effect on the market.

GROUNDNUT RECLAIMS JAMMU LANDS

SURAJ SARAF

"I had given about six kanals of my land for cultivation to a tenant who paid me nothing except allowing my goats to graze, because the soil is sandy and grew nothing. But last year, the same tenant paid me six hundred rupees," said an old woman whom I met.

"Till two years ago I could hardly earn 30 rupees per acre from my poor land but last year I earned 3,000 rupees by putting five acres of the land under groundnut. This year I have put all the eleven acres under groundnut and it is doing splendidly well," told another septuagenarian peasant with a glee of delight.

One comes across many such exciting stories from enthusiastic peasants as one travels along the sandy tracts, about 16 miles south of Jammu, downward of Jammu-Pathankot road near Pakistan border

These stories speak of the transformation brought about in the hitherto hard life of hundreds of peasants in this area. The same transformation is heralded in many areas in the Jammu province.

This transformation has been brought about by three factors: (1) ingenuity and efforts made by the officers of the State Agricultural Department, (2) the response given by farmers in taking to new ideas and (3) businessmen who advanced loans to farmers.

The crop has done exceedingly well proving a gold-mine for the farmers.

Some four years ago, the State Agriculture Department experimented with groundnut cultivation in its nursery. Next year it was

carried to the field but its vast potentialities remained unrealised. Last year it was cultivated only in about eighty kanals. But this year it has taken a big leap bringing 1,700 acres under groundnut. It will yield crop worth Rs. 12 to Rs. 17 lakhs. The cultivators have been assured a minimum price of Rs. 100 (last year the price was Rs. 150) per quintal through co-operative agencies. It is also proposed to set up a grinder in the area for extraction of oil from groundnut. The yield last year was six to nine quintals per acre and is expected to be more this year on account of the various improvement measures. It is said to be the highest yield anywhere in India.

A thorough survey is already under way for extending the crop in new areas next year: a target of 9,000 acres has been fixed.

Traders from Amritsar (in Punjab) and Jammu city are already visiting the area to bargain with the farmers in advance. The crop is now ready for harvesting.

Tens of thousands of acres of such sandy lands which have been lying fallow for generations all over the Jammu province can grow this highly profitable crop.

Authorities told this writer that possibilities are already being explored for setting up a plant for manufacturing vegetable ghee from groundnut at Jammu.

Besides being a good cash crop, groundnut is also said to be a natural agent for reclaiming sandy soil for cultivation. After three or four years of groundnut crop, the poor soil is enriched to grow wheat and other crops.

Who earns Rs. 14 crores foreign exchange after such cables are received ?

Brooke Bond !

This cable is one of the many helping Brooke Bond earn the country valuable foreign exchange by exporting tea to all parts of the world.

In fact, Brooke Bond are not only one of the largest single exporters of tea, but one of the biggest foreign exchange earners for India.

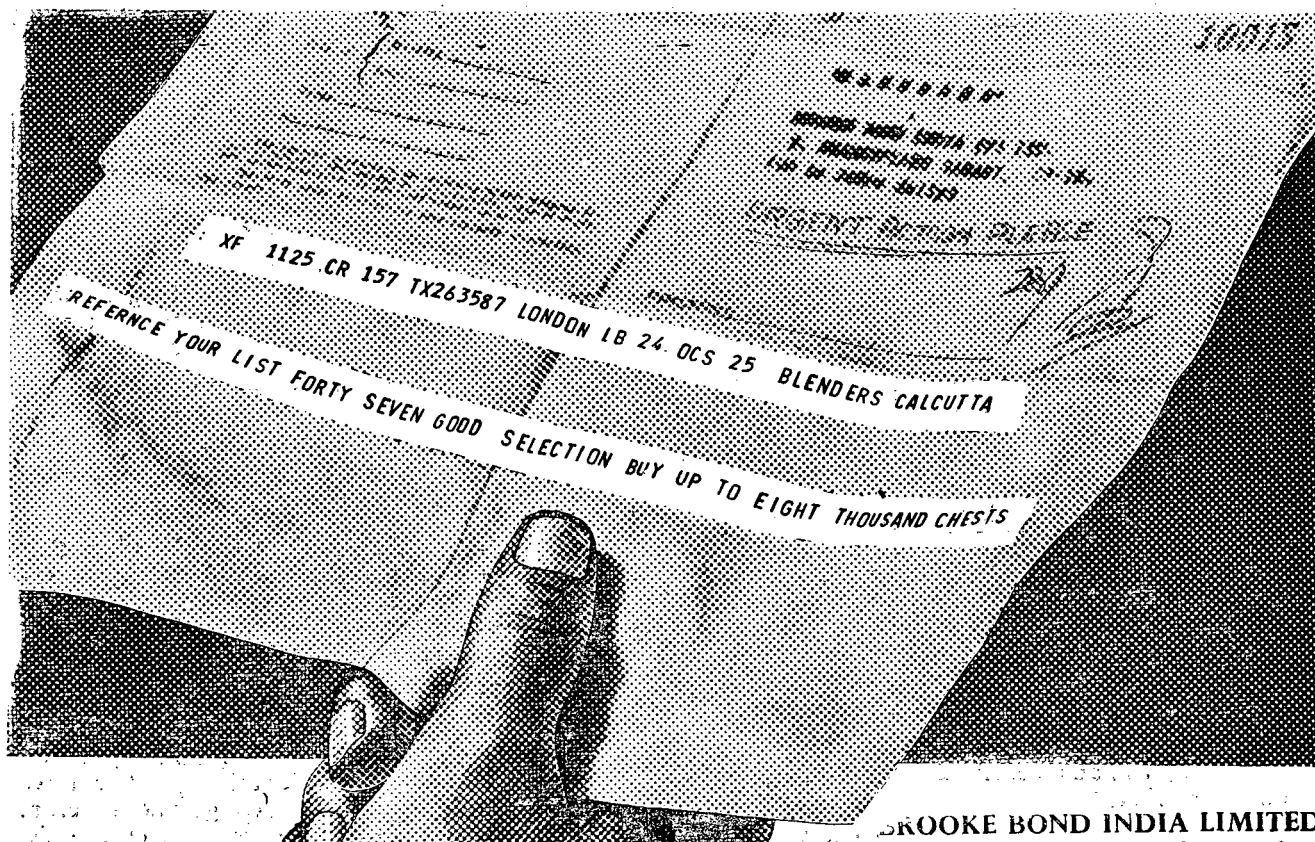
This is possible because Brooke Bond have experience, expertise and an intimate knowledge of international markets.

Here is an example of their attention to detail : Brooke Bond Buyers regularly visit most of the tea markets abroad to discuss with clients exactly what

they require. That's because tea drinkers in different countries have their own individual requirements. And with many years of experience in the skills of tasting and purchasing teas, Brooke Bond Buyers are able to meet their requirements. All this has resulted in satisfied customers—and an evergrowing demand overseas for Brooke Bond tea.

Through their network of overseas Agents, and from their clients abroad, Brooke Bond receive a steady stream of orders for their tea. This has, over the last 5 years, made them one of India's leading foreign exchange earners.

This cable from an overseas client placing an order for our tea, is one of the hundreds we receive.



BROOKE BOND INDIA LIMITED
9, Shakespeare Sarani, Calcutta-16.

THIS INDIA

YOJANA invites contributions to this feature from its readers all over the country. Each anecdote must be true to life, of less than two hundred words, capturing something significant of India's rich and varied life. Each published anecdote will be paid for.

We were in Agra. We wanted to visit the famous places and hired a tonga. The tongawala was a perfect guide and showed us the beautiful places in the city—the roads, the tall buildings and everything. After visiting the Taj, the tongawala took a different route to take us back to the railway station. On the way, he drew our attention to the slums. We asked him to hurry-up. Instead, he continued, "Well, boys, that was the beauty and these are the slums. The ministers and foreigners use those roads and no one cares to look after us in these slums. Perhaps these are one of the worst slums in India."

We asked him: "Do you show these slums to everybody? To foreigners?"

He replied, "Never. We are proud of our motherland. But I pray, you don't neglect us."

On arriving at the station, we paid him the amount that was settled. But he demanded more, and argued. While he haggled with us, one of us discovered that we were short of money required to purchase the railway tickets. Immediately, the tongawala returned the money we had given him and, in addition, gave more. We had to accept it.

His name is Raju Tongawala.

Kolhapur V. R. Ramtirthkar

I was standing in the queue for my sugar ration. In front of me was a well-dressed young man having about seven or eight ration cards. He said that he was collecting sugar for his friends and neighbours. He was excitedly talking on the evil of black-marketing and wanted those who indulged in it to be severely punished.

After buying my ration I got into the nearby restaurant. The same "crusader" against black-marketing was there too near the counter. While I sat in a corner and was

sipping coffee, the man gave all the sugar that he collected from the ration shop to the hotel-keeper and walked away.

The hotel keeper later told me that the man had procured about twenty ration cards in the names of his relatives and also of fictitious persons by bribing the rationing authorities and had been a regular supplier of black-market sugar and rice to the hotel.

Madras C.R. Thiagaraja Varma

My friend Abdul Rehman went to the famous Guruvayur temple in Kerala for his marriage with an Ezhava girl. The chief priest categorically refused to allow them inside the temple, let alone consecrate the marriage on the plea that non-Hindus had no right to enter. He said indignantly, "You may do what you like outside the four walls of the temple." Abdul Rehman secretly passed into the hands of the priest a few ten rupee notes. No sooner had this been done than the priest

raised his hands in blessing and conducted them into the temple precincts for the marriage ceremony.

Cannanore Karuna J. Nambiar

We were arranging a show of publicity films in a Kerala village. Everything was ready for starting the show. We played a few film records as the operator waited for a little more darkness. An audience of a few hundred villagers was already there and more people were coming.

Being in charge of the show, I was chatting with the village leaders on organising effective people's participation in publicity programmes. Suddenly we saw an old villager running towards the show-spot. I had a feeling of appreciation for the old man's eagerness to be in time for the film show.

But instead of settling down in front of the screen, he rushed towards us and cried out. "Sir, will you ask your man to stop the generator? My cow has gone wild and I cannot control her. If you stop its roaring for two minutes, I can take her home and tie her!"

Alleppey R. Krishnan Nair

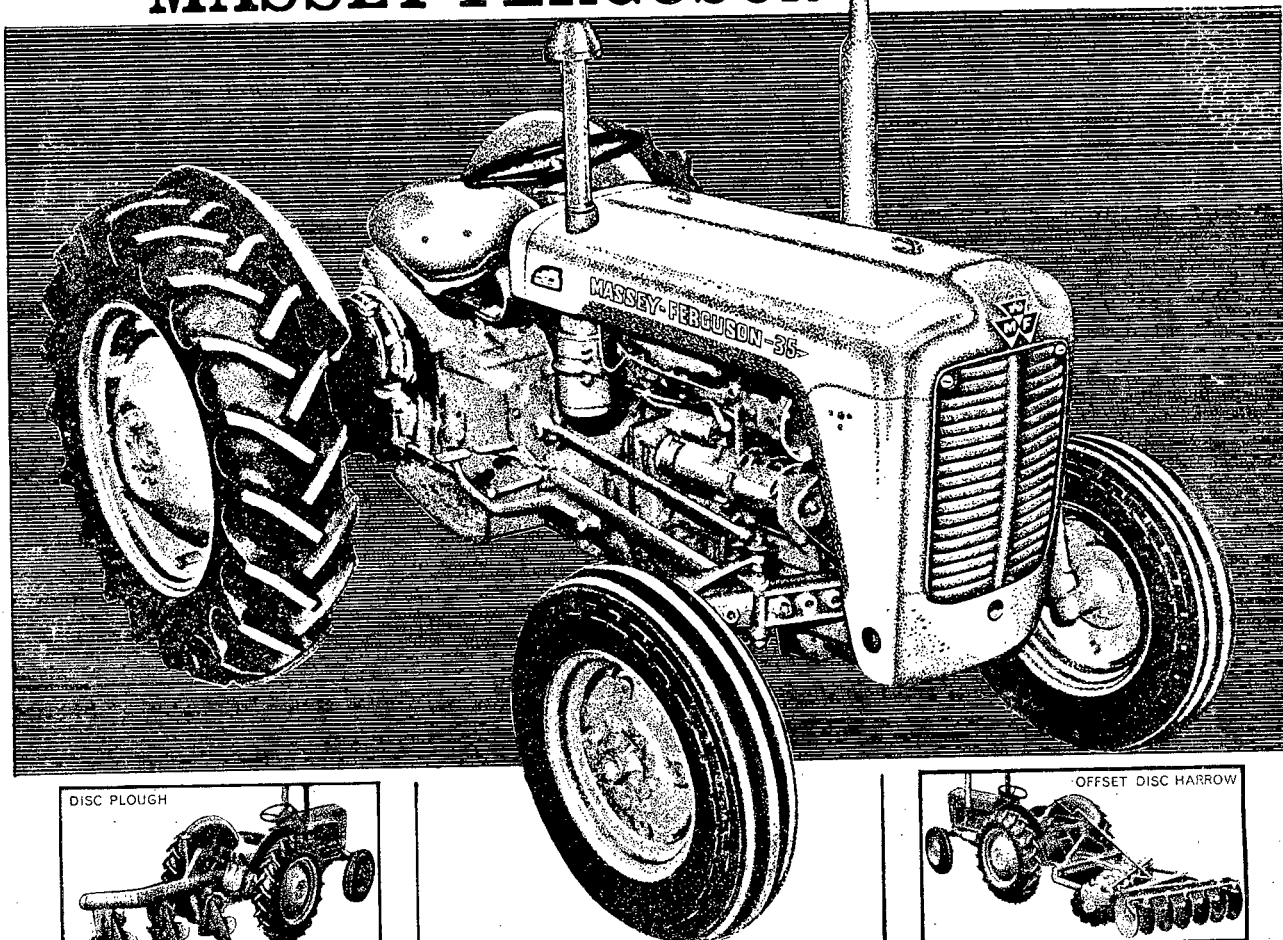
One night a thief entered the house of a very poor man in our village. The villager woke up hearing the noise of his box being opened and found the thief. He immediately fell at the thief's feet and wailed: "Sir, I am a very poor man and my family is half starved. You will not find a single rupee in my house. Please go away."

The thief quietly went out. Next morning the owner was surprised to find one ten rupee note in his room wrapped in a piece of paper, with the following words:

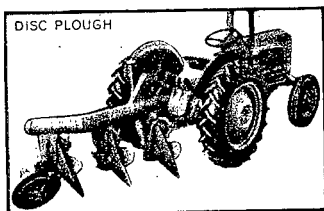
"I am really sorry; kindly accept this small amount."

Jorhat Shantiprava Saikia

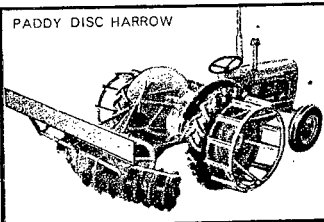
STAY FIRST WITH MASSEY-FERGUSON



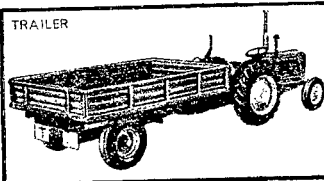
DISC PLOUGH



PADDY DISC HARROW



TRAILER



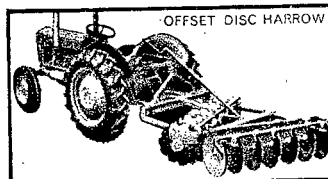
Here is the Massey-Ferguson 1035 Tractor.
More farmers in India prefer
the Massey-Ferguson 1035 to any other tractor.
Why? Because it gives greater output,
greater economy and greater
versatility than any other tractor.
It is the only tractor with the world-famous
Ferguson System.

The Massey-Ferguson 1035 tractor and
implements are backed by the largest dealer
network in the country fully equipped to provide
the most comprehensive after-sales service.

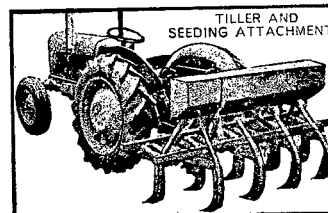


Tractors and Farm Equipment Limited
Madras

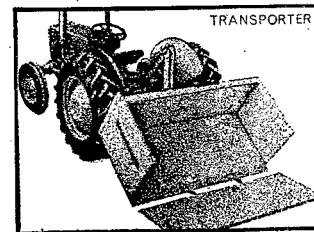
OFFSET DISC HARROW



TILLER AND
SEEDING ATTACHMENT



TRANSPORTER



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Books

Impact of Development

All India Consumer Expenditure Survey Volume II. Published by National Council of Applied Economic Research, New Delhi, 1967. XII+162 pages. Price Rs. 15.

M. R. Kulkarni

THIS is the second volume of the All India Consumer Expenditure Survey undertaken by the National Council of Applied Economic Research during 1964-65. Volume I on methodology was published in 1966. A brief account of the methodology adopted for the purpose of the survey can also be found in Chapter II of the present volume.

The main purpose of the Survey was to assess the changes in consumption pattern as a result of economic development. A distinction was made between the areas most exposed to development and others which were not so exposed. As an off-shoot of the main purpose, an attempt has also been made to work out the aggregate demand projections of some of the agricultural commodities for 1970-71, through the use of income inelasticities based on the findings of this Survey. These estimates assume considerable significance in view of the conflicting views on the total requirements of foodgrains in the years to come.

The line of distinction between "developmental" areas and "non-developmental" areas cannot but be arbitrary to a degree, but it is necessary to make it as general and unexceptionable as possible.

The tests applied to different sets of areas for the Survey were not exactly uniform. Moreover, development can be conceived in terms of expansion of primary sectors, as is done in the case of the places with less than 10,000 population. Thirdly, the developmental areas so described in the

present Survey have not all been exposed to development only in recent years. Metropolitan areas like Bombay have experienced development for over a century. This particular fact naturally loads the dice heavily against the non-developmental areas when one considers the various indicators of growth for the two sets of areas. It would have been more appropriate and significant if the impact of growth on the areas which have been exposed to development only during the last 10 or 15 years was assessed.

Coming to the findings of the survey, some of them are just well-known tendencies which get reinforced in the process of economic development. These are, for example, the shift towards secondary and tertiary sectors in the occupational structure, changes in employees' status (that is, reduction in self-employment), improving educational status, greater concentration of incomes, shift away from cereals in family budgets, and so on. The utility of a survey in regard to such tendencies is to quantify them precisely and so help the formulation of more rational policies.

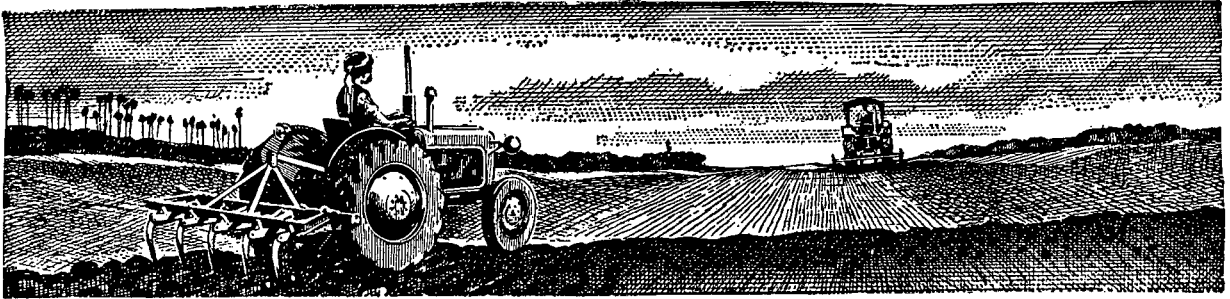
Among the interesting findings of the Survey a remarkable one is that development had negligible impact on joint family as also size of a family. Ignorance about the Plans was widespread and a large majority of the people thought that there was no improvement in their incomes.

The findings of the Survey on the disposal of family incomes are particularly important to the formulation of developmental policies. In regard to the nature of the disposal of extra income, the highest priority was given to the improvement of standards of living. Investment in houses in developmental areas, and in lands in the non-developmental areas, took the

second place. No more than 25 per cent, even in developmental areas, would like to deposit their savings in banks and co-operative societies or invest in shares and securities. There was thus no strong motivation for saving, nor for investment in gold and jewellery.

As should be naturally expected, the income levels in the developmental areas were uniformly higher than in non-developmental areas, but the comparison is vitiated in the absence of adjustments for difference in the price levels prevailing in the two areas.

How are the food habits of the people affected by development? The answers to this question provided by the Survey are very significant. It was found that development in itself provided a certain solution to our food problem. The well-known shift from cereals in the process of economic growth itself would partly alleviate the food problem. More significant, however, was the impact of development on the relative demand for rice and wheat. For, along with the overall shortage of foodgrains in the country there was a relative shortage of rice; and if development led to preference for wheat, the pressure on rice could be partly relieved. The Survey found that there were two conflicting tendencies working on the demand for rice in the course of development. Average per capita expenditure on rice in non-developmental areas was higher by 40 per cent than in developmental areas, irrespective of the lower incomes in the former. This may be expected to decline with development. On the other hand, with the diminution in the size of the family, per capita consumption of rice tended to increase. The income elasticity of demand for rice was higher than for any other cereal in developmental areas. The report is not categorical but concludes that decrease in demand for rice due to changing preferences seemed to outweigh increase due to rise in incomes. There will, however, be a distinct preference for finer varieties in developmental areas. Unlike rice, the demand for wheat increased with development and rice in incomes (though the latter relationship is not consistent).



breaking new ground... Dunlop is at the root of this modern agriculture

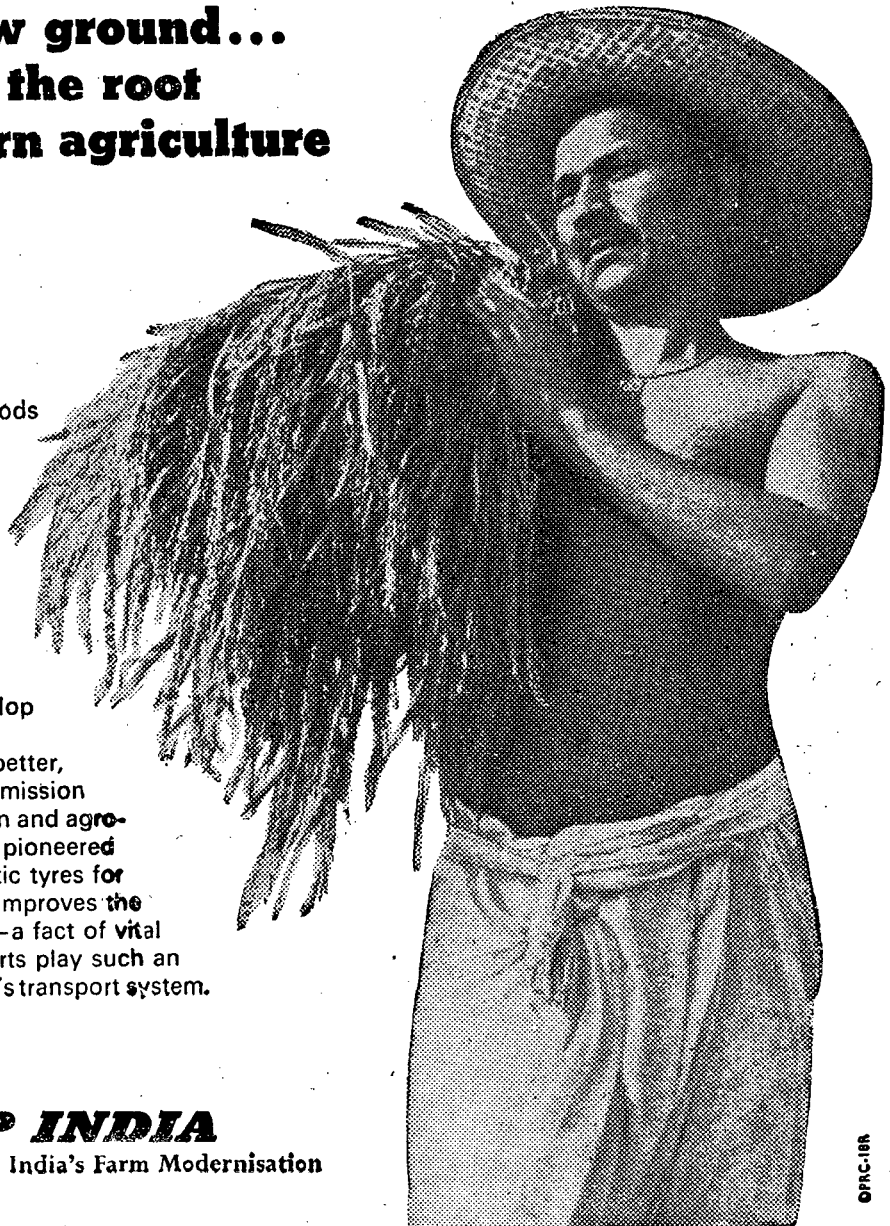
As the old agricultural methods gradually give way to the new, mechanised and scientific farming helps the Indian farmer to cover much more ground and produce a greater yield per acre than was possible before.

In this drive for more food-grains and other crops, Dunlop is helping in a fundamental way—with tractor tyres for better, faster ploughing, with Transmission and Vee belts for lift irrigation and agro-industries. And Dunlop also pioneered the manufacture of pneumatic tyres for bullock carts which greatly improves the efficiency of these vehicles—a fact of vital importance since bullock carts play such an important role in the country's transport system.



DUNLOP INDIA

—keeping pace with India's Farm Modernisation



OPRC-18A

The second aspect of the Survey, namely projection of demand for certain agricultural commodities for 1970-71, assumes certain significance both for policy decisions as well as for the fact that there are so many projections already made which are not quite consistent with each other. Though the projections of the NCAER take account of the changes in expenditure pattern etc. in recent years, the underlying assumptions are static. They do not take into account changes in tastes, availability of substitutes, or changes in relative prices in the intervening years.

Broadly the commodities in question can be divided into three categories depending upon their income elasticities for demand in developmental and non-developmental areas. In regard to wheat, all cereals, edible oils and tobacco, the elasticities were almost the same. They were higher in the developmental areas for durable and semi-durable goods but lower in respect of vanaspati, milk products, nylon, rayon, silk etc. In the aggregate, demand for pulses would increase faster than any other cereals, particularly rice. The estimates of demand for foodgrains in 1970 made by NCAER on the basis of income elasticities vary between 98 million tonnes and 100 million tonnes against their own earlier estimate of 86 million tonnes. The estimate implicit in the Third Plan Outline was 103 million tonnes while the rate of growth of income etc. projected by the Perspective Planning Division would imply a figure of 107 million tonnes. It is significant that the NCAER itself is not very dogmatic about its projections. It admits that there is uncertainty in regard to every estimate and the actual figure one arrives at depends upon the model that is used for evaluating income elasticities etc. Moreover, the NCAER's income elasticities are based on conditions of restricted availability which fact might tend to underestimate the effective demand. But the value of any such survey lies in how far it helps to fill the gaps in our information and on that account alone the Survey is immensely rewarding.

REPORT ON PLYWOOD

Plywood and other wood-based Panels, issued by Food and Agriculture Organisation of the United Nations', Rome, 1966, Pages xiii+233, —Price not indicated.

R. K. Patil

FROM time to time, the Food and Agriculture Organisation organises international consultations on the technological changes, production, consumption and trade trends relating to commodities which come under its purview. A report based on these consultations is then brought out. The present publication is a sequel to the International Consultation held four years ago in Rome on Plywood and other wood-based panel products.

World demand for sheet materials for building, construction, furniture and other industries has been expanding quite rapidly. Consumption of plywood alone has gone up by 600 per cent during the last 20 years. As the raw materials needed for plywood and allied products some primarily from forests, it was only proper that FAO should have given special consideration to the economics and technology of these products.

In this concise report, availability of manufacturing processes, properties and uses of the different products and economics of production have been discussed.

It is not easy to project the demands for such products owing to their substitution possibilities and the difficulty in assessing the technological changes in manufacturing industries of plywood and substitute products. However, this report has undertaken the task. The reader is told about the difficulties and yet plausible and explicit assumptions have been made. Thus a discriminating reader could exercise the judgement about the assumptions and arrive at a set of figures consistent with the assessment.

This is a very good reference book for those interested in forest-

based industries. Its usefulness is enhanced by the bibliography given at the end of each chapter.

PUBLICATIONS RECEIVED

Social Aspects of Savings edited by V. R. Mutalik Desai. Pages 187. Rs. 24.
The Finances of the Mysore State edited by S. P. Kher. Pages 259. Rs. 28.
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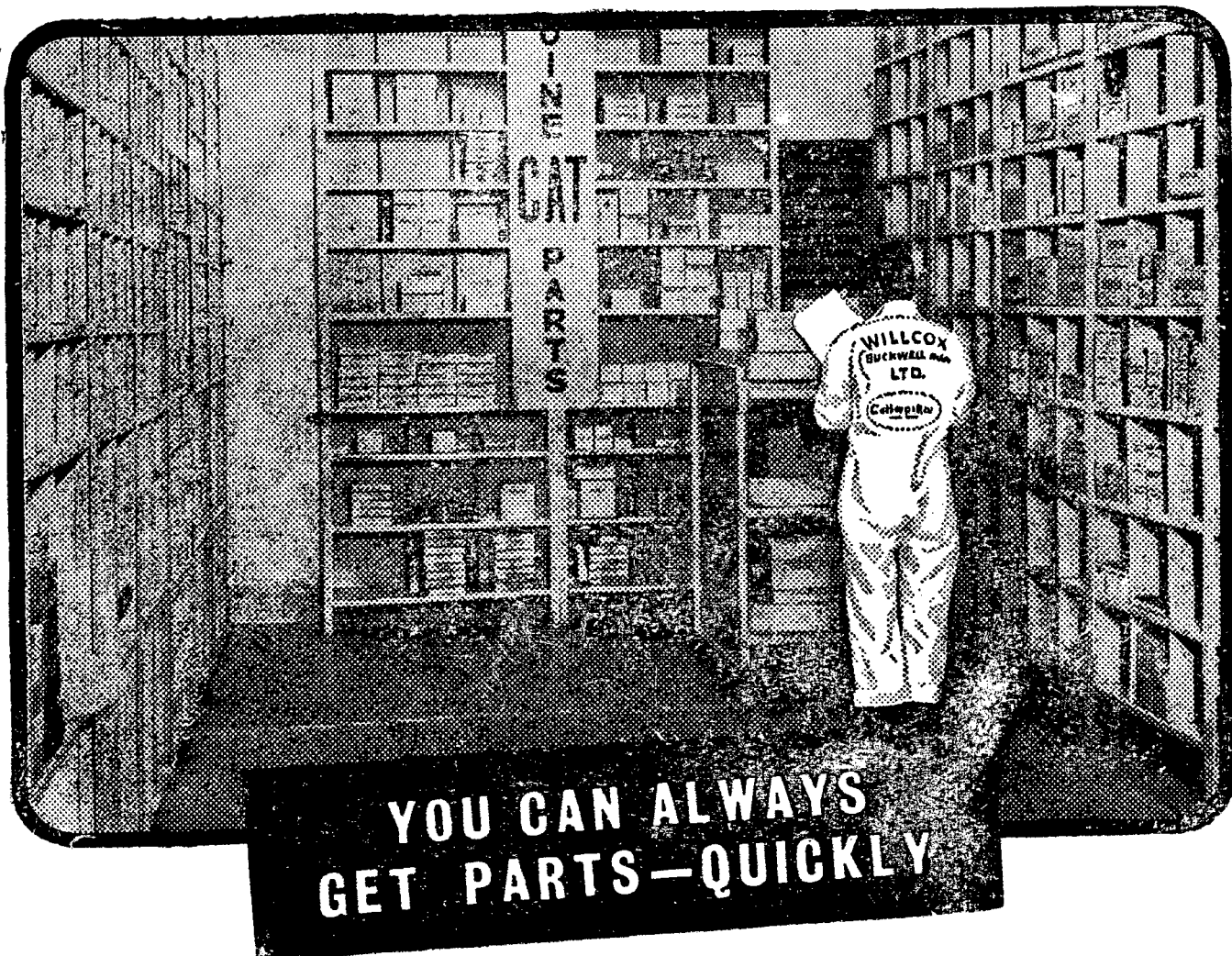
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AYURVEDA CAN HELP FAMILY PLANNING

SURYA PRAKASH

ONE difficulty in taking the family planning programme to the people, especially in the villages, has been that the programme is confined to allopathic medical system for which facilities available are not adequate and with which the people are not well acquainted. Even three hundred years after its introduction in India, the western systems of medicine serve only a limited population. For their ailments, people generally use their traditional and indigenous medicines. These indigenous medicines are simple, cheap, easily available and people have built a faith in them after using them for generations. They are often prepared at home from herbs available in the field or market in any village. It is therefore desirable that the family planning programme should take the advantage of the traditional systems to reach the illiterate and tradition-bound people.

The traditional systems prevailing in the country are mainly two—Ayurvedic and Unani, both having common theory and practice.

CHEAP AND SIMPLE

Although the Ayurvedic system was evolved centuries ago when there was no need to control population, it suggests medicines which can help to restrict child birth. It is for the first time that attention is being given to this aspect of the system and a detailed study can help in evolving a check list of the various methods and medicines for birth control. One such list has been prepared by me. It covers most of the known methods for preventing conception.

Some of the items on the list are so simple, non-toxic and cheap that even the sophisticated classes might prefer them to the costly and complicated allopathic doses or appliances. A few examples from this list are given below :-

1. If *Pippali* (piper longum), *Vidanga* (*Embelia ribes*) and *tanka* (borax) are taken all in equal quantities for 3 to 5 days at menstrual time, there is little likelihood of fertilisation during the ensuing month. (cf. Bhavaprakasa Sanhita).
2. *Talispatra* and *Gairika* taken together for a week after menstruation helps in checking the fertilisation. (cf. Yoga-Ratnakar)
3. *Palasa* seeds (*butea monosperma*) taken during menstruation restrict the fertilisation in the ensuing month. (cf. Yoga-Ratnakar).
4. A piece or powder of *Saindhava Lavana* (rock salt) wrapped in a piece of cloth, immersed in oil and inserted in the vagina before coitus acts as a safeguard against conception. (cf. Yoga-Ratnakar).
5. A little powder of *palasa* seeds (*butea monosperma*) mixed in ghee and honey and applied in the vagina before coitus checks fertilisation. (c.f. Yoga-Tarangini)

These examples show that the medicines are simple, and can be prepared even by the most illiterate women themselves. They have been tested and are being used by the people for generations in one form or the other.

For the family planning programme all information on family planning should be collected from

the available books and other sources on Ayurvedic, Unani and Siddha systems. Each medicine, process or compound should be experimented in the research centres, laboratories, hospitals, institutions and subsequently in the field. After experimentation, a list of a few simple medicines for oral use and for external application should be sent to all family planning clinics which should distribute them and maintain records on selected families.

Unfortunately, the Ayurvedic system had been ignored by the Government in the past and consequently it lagged behind as a scientific system. It needs research and experimentation. Recently the Government has realised the need to develop the indigenous systems and research in these ancient systems is being encouraged. It is hoped that the Ayurvedic system will be thoroughly investigated to serve the purpose of family planning and that its birth control methods will be experimented in the field.

The study of the available Ayurvedic material shows that the medicines and processes suggested are comprehensive and cover oral medicines, medicines for external use and even dietary regulations. There are also medicines inducing abortion without any complications.

If abortion is legalised, as is being envisaged now, Ayurvedic system may prove to be more useful than any other. The literature contains valuable prescriptions for abortion which are simple, non-toxic and do not have harmful after-effects.

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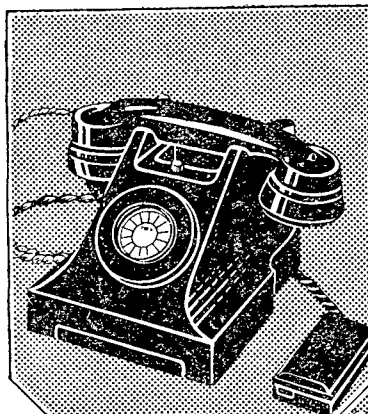
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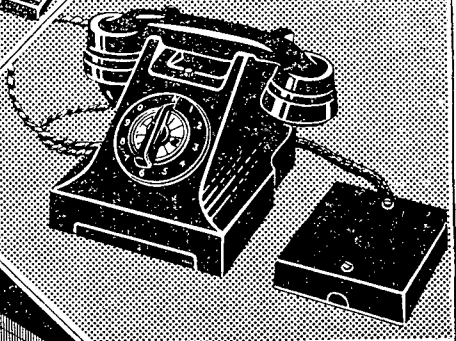
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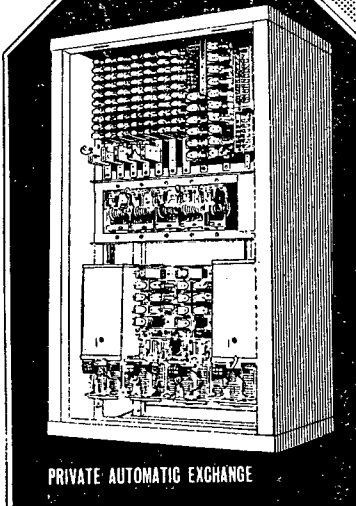
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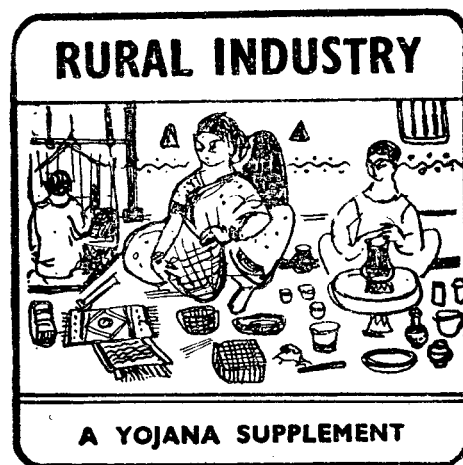
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Alongside the growing awareness of the need of removing weaknesses in agriculture has come the realisation that more has to be done to develop a network of non-farming occupations.



DEVELOPMENT OF INDUSTRIES IN RURAL AREAS A BIG IMPERATIVE OF PLANNING

R. VENKATARAMAN

FOCUS ON RURAL AREAS

FIVE years have passed since the first Orientation Course was held at Delhi, and during this period, by the normal process of transfers, promotions and replacements, the responsibility for implementation of the programme at the project level has passed in many places into the hands of new officers. The programme itself is new and in some respects difficult and challenging. The greater the awareness on the part of project personnel of the nature of problems to be encountered at the field level and the better the preparation to face and solve them, the larger would be the chances of the programme making a headway. It is, therefore, only appropriate that this Orientation Course should have been organised to enable the Project Officers and Planning-cum-Survey Officers to share at first hand in the wider knowledge and experience of those who have been connected with this programme in various capacities, to bring up their doubts and questions, to exchange ideas and generally to get their bearings fixed up more firmly.

**Excerpts from the inaugural address of the Member (Industry), Planning Commission at the Orientation Course for Project Officers at Hyderabad.*

It seems almost certain that in the coming five or ten years, a considerable part of the planning and developmental activity will be focussed in the rural areas. We are on the eve of profound economic and social changes in the villages, although the process may be slow in some parts and fast in others. The lessons of the two bad years of drought through which we have passed have been well learnt both by the Government and the people. Programmes for increasing agricultural production are being strengthened and extended. It is recognised all round that the results of scientific and technological research should be utilised extensively for increasing the productivity of land. *Alongside this growing awareness of the need of removing the weaknesses in agriculture has also come the realisation that more has to be done to develop a network of non-farming occupations* in order to provide a wider base for the rural economy and to lighten the pressure on land. Therefore, in the near future and also in the long term perspective, development of industries in the rural areas is one of the big imper-

atives of planning. Quite a number of these industries will have to be closely dovetailed with agriculture as producers of agricultural inputs and processors of agricultural produce. There will also be industries producing consumer goods to meet the changing requirements of the rural consumer.

STUPENDOUS TASK

Advance along these lines will be needed not only to evolve a balanced structure of rural economy, but also from the wider stand-point of providing on a massive scale opportunities of work and income in or near the villages. Unless this is done, the trend for persons to migrate from the rural areas to the cities and for the villages to get denuded of the more intelligent and enterprising sections of their population will not only continue but will get accentuated. Already there is a large backlog of unemployment and under-employment in the rural areas. In another 10 years, 52.5 million people will be added to the labour force, and more than three-fourth of them would be in the rural areas. It is, therefore, a stupendous problem that we are up against, and one of the means by which we can tackle it is to attempt inten-

sive development of small industries in the rural areas.

A MODEST BEGINNING

It is in this context, that in April, 1962 the Government of India constituted a high-powered Rural Industries Planning Committee, which drew up a scheme for Rural Industries Projects to be taken up in selected areas in all the States and some of the Union Territories. To start with, 45 areas were selected and later on four more areas, near large-scale projects of Durgapur, Bhilai, Bhadravati and Ranchi, were added in 1965. Following the criteria suggested by the Planning Commission, areas under different sets of conditions were selected with a view to gain experience in working the programme under different conditions so that the lessons could be drawn for a wider application.

Of the five years since the Planning Commission sponsored the programme in 1962, more than a year and a half was taken up by preliminary work including surveys, formulation and approval of programmes and recruitment of staff, etc. The programme, therefore, is in effective implementation for a little over three years. This period is not adequate for assessing the success or otherwise of such a difficult and complicated programme. However, some lessons can be drawn even from the limited experience of this short period.

MODICUM OF SUCCESS

Broadly speaking, during this period the range of activities covered by the programme has widened and the techniques and methods for implementation have been steadily improved in the light of growing experience. At the same time, new difficulties and problems have arisen with every thrust into what is largely an unexplored and uncharted field. Since the nature of problems itself varies from one project area to another, the progress achieved in different areas also varies. Very largely this was inherent in the programme which was originally drawn up to gain experience under different sets of conditions. Accordingly progress in some project areas placed in favourable conditions, such as Kozhikode in Kerala, Malerkotla

in the Punjab and Ghazipur in U.P., has been very encouraging; in others, less favourably situated, it has fallen short of even modest expectations. In terms of physical achievements, the progress can be termed as satisfactory taking into consideration the very limited coverage of the programme. Establishment of about 4,000 new industrial units and expansion of the capacity of another 3,700 units has generated 49,000 job opportunities. Substantial improvement has also been made in the wages and incomes of artisans through technological improvement, and provision of fuller employment.

In regard to traditional industries which have a fair chance of survival effort will have to be directed towards improving skills, techniques and designs and rendering the necessary assistance for marketing the goods. The so-called traditional industries should be gradually brought out of their shell of traditionalism, so that they not only get more attuned to the changing conditions of markets and the consumer habits and tastes but also adopt improved tools and small machines with a view to increasing output and reducing cost.

TRAINING : TWIN OBJECTIVES

This limited experiment has also brought to light some problems and difficulties which require consideration for solution. One of the problems is the provision of adequate training facilities. Almost all the projects have organised training programmes relating to one industry or the other. It has a dual purpose: firstly, it aims at improving the skill of the existing artisans by teaching them the use of improved tools and equipment and adopting improved techniques of production. This will raise their earning capacity. The second objective is to train new entrants to labour force. In the first cate-

gory, care has to be taken that the quality of training is of high order. For the second type, a judicious selection of trades has to be made, taking into consideration the potential and possibilities of developing that industry in the area. Further, mere provision of training facilities is not enough. It is equally essential to pursue vigorously a follow-up programme for settlement of ex-trainees. I would, therefore, suggest that before you launch any training programme in your respective project area, you should draw up a plan for absorption of trainees in different trades.

PROCEDURAL DELAYS

Another problem which has come to light is the persistence of delays in implementing programmes on account of administrative and financial procedures. These delays are not confined to this programme, but other developmental activities also suffer in varying measure from this disadvantage. At the inception of the Rural Industries Projects Programme, it was suggested that these delays could be eliminated if two Committees, one at the State level and the other at the Project level, were delegated adequate administrative and financial powers. This has not been possible for various reasons, including constitutional propriety. However, I feel that a way out can be found to ensure that these delays are eliminated.

PROPER PLANNING

Proper and adequate planning of programmes is yet another problem which can not be neglected. It has been observed that a number of projects have not taken adequate care to draw up well-thought-out programmes, with the result that progress in such areas has not been satisfactory. Similarly, technical and technological problems require urgent solution. In this age of rapidly developing technology, one cannot afford to be static. *We have to move with the time and replace traditional technologies by more sophisticated and productive ones in order to ensure saleability of products and payment of reasonable wage to the worker.* Further, day-to-day technical problems of various units have to be attended to

INTENSIVE DEVELOPMENT PROGRAMME FOR SMALL INDUSTRIES IN THE PROJECT AREA DOES NOT IMPLY THAT THE AREA HAS TO BE TREATED AS A KIND OF CLOSED ECONOMY.

and for this, adequate competent technical personnel has to be recruited. These are some of the problems which come to my mind immediately.

PIONEERING WORK

Intensive development of small industries in rural areas is pioneering work calling for detailed knowledge of the area in which one has to operate, patient exploration of the possibilities of starting new industries and improving the existing ones. It also requires considerable perseverance, grit and drive to see each scheme through its various stages before it is put on the ground. There are often no clear guidelines and it may be necessary to think out different alternatives, select one or two and make a start. In several small areas where there was hardly any industry, except the few traditional cottage industries, some years ago, it has been found possible to promote a few new industries. In Madras, much useful work has been done in this direction during the

last five years. I also know of similar successful efforts in other States. Therefore, the first maxim that I would suggest to a Project Officer about to enter upon his new duties is to start with a strong faith that the thing can be done.

TWO FOLD APPROACH

At the same time, I would like to warn that faith alone may not be enough. The conditions of each area have to be studied with special reference to the availability of raw materials, skills and markets and a programme prepared to foster only those industries which will have a fair chance of survival. There should be a two-fold approach. In regard to traditional industries which have a fair chance of survival, effort will have to be directed towards improving skills, techniques and designs and rendering the necessary assistance for marketing the goods. The so-called traditional industries should be gradually brought out of their shell of traditionalism, so that they not only get more attuned to the changing con-

ditions of markets and the consumer habits and tastes but also adopt improved tools and small machines with a view to increasing out-put and reducing cost. In regard to the mechanised industries, generally known as the small-scale industries, the approach should be to try to develop those for which skills and enterprise are locally available. There should be no objection, at any rate at the early stage of developmental effort, to promoting a few industries even with enterprise and skills coming from outside the project area. Such industries may in course of time transmit the skills to local people and also have a demonstration effect. Once the skills and enterprise are developed, the markets for the products can, where necessary, be sought outside the project area. Intensive development programme for small industries in the project area does not imply that the area has to be treated as a kind of closed economy. It has to be developed alongside the other neighbouring areas and in free communication with them.

DEPARTMENTAL UNITS IN NALGONDA PROJECT

In view of the dearth of entrepreneurs and difficult conditions prevailing in the Nalgonda Project area, it was decided to utilise certain local resources and diversify the range of industrial activity by setting up a few departmental units. Besides creating employment opportunities these units were expected to train people in different trades, offer servicing facilities and serve as inducement to entrepreneurs. Six such units have either been completed or are in the process of completion.

The general engineering workshop at Nalgonda, a comprehensive all-purpose unit set up at a

cost of Rs. 3.05 lakh, has been in full production since November, 1966. It comprises seven sections (carpentry, blacksmithy, machine shop, welding, moulding and casting, automobile repairs and painting) and gives employment to 30 persons.

Pochampalli village, known for its handloom tie and dye products, has a big concentration of traditional handloom workers. To help these workers with modern designs, a design extension centre has been set up here at an investment of over Rs. 50,000. The centre has so far supplied 156 designs, 60 of which have found wide acceptance.

It also trains young artisans not only in tie and dye weaving but also in Banaras and Himroo type weaving.

Two common facility centres in carpentry have been set up—one at Kanchanpelly and the other at Alair—to serve the local carpenters. Sixteen carpenters are regularly taking advantage of the Kanchanpelly centre established in November, 1965, for their own work as well as for executing the orders received by the centre. The average annual outturn of the centre is nearly Rs. 20,000. The other centre started functioning only recently.

(Contd. on page 32)

A PUNJABI ENTREPRENEUR IN NAXALBARI

J. L. SAAZ

FROM Ludhiana, the home and hub of small-scale industrial activity in Punjab, to Naxalbari, a small sleepy town in the Darjeeling district of West Bengal which has been much in news in recent months, is a far cry. There against the backdrop of thickly forested slopes of Nepal—for Naxalbari lies just on the Indo-Nepal border—stood a tall, grey-bearded Sikh entrepreneur reminiscing on his yester years. The entrepreneur, S. Lal Singh, 65, belongs to the generation of farming pioneers of Doaba (the area situated between the Sutlej and Beas rivers) who went over to colonise the newly canal-irrigated virgin lands of Lyallpur and Montgomery districts (now in W. Pakistan) at the turn of the century. S. Lal Singh set up a saw mill in Lyallpur in 1935-36. After a few years—in 1942—his restless nature brought him to Ranchi where he lived till 1946, running a saw mill. In 1948, he took a big contract from a tobacco company to prepare wood packing boxes, and moved to Kishanganj. Then, in the winter of 1950, 'I came over to Naxalbari and started this saw mill which has been shifted to its present site, about two furlongs from the Naxalbari station, only recently'. "Where do you propose to move next," I just made a casual query. To this he gave a rather nostalgic reply, "To Ludhiana, my hometown", and then hastened to add, "not because of disturbed conditions here, only because of humid climate which no longer agrees with my constitution—in fact, it never did, but then who bothered in those days when you could work 20 hours a day." And pointing to his drooping shoulders, he made a counter-query. "Don't you think it's time to call it a day."

Although S. Lal Singh seemed to be yearning to return amidst his near and dear ones, yet there is no prospect of his retiring early. He has four daughters and five sons, all well settled in different parts of the country. And since none of his sons is in a position to move to Naxalbari and take over the business, he has perforce to run it himself.

The entrepreneur who received a loan of Rs. 10,000 from the Project funds, has made a total investment of over Rs. 30,000. He has both horizontal and vertical saws, (a huller too) and there is no dearth of work; the mill which saws about 2500 cft. of wood per month employs nine persons, besides the owner. "I could certainly have probed some new lines, had the place been electrified and had one of my sons joined me in my enterprise," observed the old man with a keenness which spoke of his zeal of younger days, as we took leave of him and as he patted his black murrha buffalo which he had brought all the way from Ludhiana.

NALGONDA PROJECT

(Contd. from page 31)

A paints and varnishes unit has been set up at Bhongir at a cost of nearly Rs. one lakh, to utilise the locally available castor oil, and the tobacco seed oil of the neighbouring Guntur district. The unit is expected to produce paints and varnishes worth Rs. 1.5 lakh every year.

The dehydrated castor oil after processing serves as the chief raw material in paints production. A dehydration castor oil unit is being established at Bhongir as a complementary unit to the paints unit. In fact, there is a proposal to incorporate these schemes in a chemical complex which would include allied processing and production units like the synthetic resins.

Twenty five workers are employed in the safety match production unit at Ramannapet which is producing 60 gross of match boxes per day. The quality of the product is sufficiently high, and it is getting popular in the district. So far the unit has produced 3000 gross of match boxes, and sold 2000 gross worth about Rs. 18,000.

PROMOTIONAL EFFORTS IN DARJEELING PROJECT

Darjeeling project has laid great emphasis on training programmes. More than 50 percent—Rs. 3.53 lakh—of the total expenditure of Rs. 7.01 lakh incurred on various promotional efforts is accounted for by the training programmes. Sixteen training centres in 10 trades (carpentry, bristle dressing, tanning, wool-knitting, tile making, brick making, basketry, sericulture and floriculture and bee-keeping) were started at various suitable places. They have in all trained 311 persons out of which 282 have been absorbed in the same trades in which they received training with much better wage levels. Most of these trainees were given loans and subsidies to enable them to settle in their respective trades. Twelve of the training centres are still carrying on their courses.

An amount of Rs. 1.73 lakh—25 percent of the total expenditure—has been advanced as loans to 224 units and individuals.

Common service facilities include the construction of work-sheds for the benefit of milk-men of the interior areas, setting up of a cooperative sales emporium at Darjeeling, and the establishment of a service-cum-marketing industrial cooperative society for procuring raw materials and marketing finished products of industrial cooperatives and artisans.

Subsidies amounting to Rs. 28,000 were granted—Rs. 12,000 for provision of improved tools and equipment to 140 artisans, and Rs. 16,000 as managerial and technical assistance to 10 cooperative societies and registered institutions.

TIES OF CULTURE

ON a May afternoon in 1966 in London, Swami Vivekananda, the great pilgrim, made a pilgrimage to visit Professor Max Muller. Later, the Swami, writing about his first meeting with the 70-year old German Indologist, said: "It was neither the philosopher nor the scholar that I saw, but a soul that is every day realising its oneness with the *Brahman*, a heart that is expanding every moment to reach oneness with the Universal..." The two talked about India and Indian philosophy and Swami Vivekananda had this to say: "And what love he bears towards India! I wish I had a hundredth part of that love for my own motherland... He has lived and moved in the world of Indian thought for 50 years or more, and watched the sharp interchange of light and shade in the interminable forest of Sanskrit literature with deep interest and heart-felt love, till they have all sunk into his very soul..."

These words from the great savant of India, Swami Vivekananda, provide the clue to the reason for the cultural bonds between India and Germany, which began many years before the birth of Prof Max Muller. The first Sanskrit grammar compiled by a European was the work of a German, Pater Heinrich Roth, who died in Agra in 1661. The second European grammar of Sanskrit was also by a German, who passed away in Southern India in 1732. One other German, Friedrich von Schlegel, was the first to learn Sanskrit; while his elder brother, August Wilhelm von Schlegel, became the first professor of Sanskrit at Bonn University in 1818. Wilhelm von Schlegel translated and published a number of works of Indian thought, including an Indian bibliography. A German diplomat, Wilhelm von Humboldt studied Indian philosophy and wrote about the emotions he had felt on reading the *Bhagavadgita*, which he described as "the

most profound and sublime work that the world has to show."

There are many more who have contributed to Indo-German exchange in the field of culture, literature and philosophy. The cultural relations between the two countries are rooted in the depths of the soul and range back to the centuries past; but are as fresh today as in the first years of their birth.

Immortal Cricketer

C. K. Nayudu was one of the immortals of Indian cricket, whose death on November 14, 1967, marks the end of a great and glorious innings. Nature had endowed him with all the attributes of a blue-blooded sportsman—commanding height suppleness of body, a strong build and the eyes of a hawk. He made full use of these qualities to lend grace and enchantment to a game which he played to perfection.

Cricket to him was a joy for ever, and he played it with verve and enthusiasm. His memorable innings of 153 runs in 100 minutes against Arthur Gilligan's visiting M.C.C. team in Bombay (1926) was typical of the man. He was the supreme artist, for whom cricket was a sport and not a grim battle for survival. Technique and the accepted rules of batsmanship had no meaning for him. He was, in every sense of the word, a non-conformist in whose batting there was beauty and passion, grandeur and oriental splendour.

The nation honoured him by making him Captain of the first Indian team to play in an official test match, which was against England at Lords in 1932. The world of cricket recognised his merit, when he was named one of the five Cricketers of the Year by Wisden in 1933. The record books bear eloquent testimony to his skill as a cricketer. But, as has been well said, the 'Score Board' is an ass; and it does not reflect the full glory and greatness of a cricketer who was one of the finest in the game. More than a cricketer, C.K. Nayudu was a true sportsman and a great gentleman.



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Soccer Amazons

IN a game, known for its rough and tumble requiring hardy men, there is normally little room for women. But, it is typical of the new West Germany that is being born out of the ashes of the old, the fair sex has literally invaded the field. The country has yet to have women's football, but there are about 30 women referees of the game. Though prohibited by the rules to supervise matches played by adults, these Amazons of the soccer field supervise matches between teams of boys ranging from 16 to 18 years. Among the more well-known women referees in West Germany is 26-year old Miss Brigitte Dutschmann. A sports journalist by profession, Miss Dutschmann qualified as a referee just about four years ago. Her interest in soccer began when she joined a journal devoted to football only and she has, since then, supervised many important games. Theoretically, she could act as a referee in the National League, but the rules prevent her from doing so, and she must wait for the time when the equality of the sexes is fully established.



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