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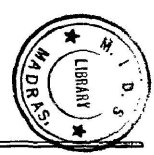

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MONTHLY BULLETIN

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SPECIAL SECTION

EDITORIAL—SOME HIGH LIGHTS

I General Economic Scene

State:

Tamil Nadu Economy and Development: The government reports a 14.7 per cent increase in foodgrains production and 4.9 per cent growth in manufacturing industry in 1977–78 resulting in a 4.7 per cent increase at constant prices of the State Domestic Product. With population increasing at 2 per cent, per capita real income in the state increased—for the first time—by 2.7 per cent. The government refers to the relatively low rate of growth of manufacturing industry but also points out that during the past 10 years, industrial growth had not exceeded 3 to 4 per cent per annum. Under the Integrated Rural Development Programme, 161 community blocks have been chosen for intensive development at a cost of Rs. 6.62 crores received as a grant from the Union government. Within this programme, the government announced in October that following the Rajasthan example and experience, in this state and in the development blocks the Antyodaya scheme will be implemented, under which five or ten of the poorest families in each village will be identified, their specific needs assessed and financial assistane given to them for self reliant development. The Integrated Rural Development Programme will cover agriculture, animal husbandry, fisheries, farm forestry and rural industry, using local materials like palm. The DPAP running in Dharmapuri and Ramanathapuram are doing well and the full allocation of Rs. 3.5 crores for this year will be used. The SFDA programmes are however not doing quite so well, as a sum of Rs. 8.3 crores remained to be used between October and March. One of the bottlenecks is the cumbersome procedures of Banks—both commercial and cooperative—in approving credits and loans. This is now being attended to by the state level committee for the programme which is chaired by the Chief Secretary. The month of October recorded some additional labour unrest in the city. There was a partial strike by the Pallavan Transport Corporation drivers and workers who wanted a higher bonus and a partly successful general strike towards the end of the month as a protest against government's law and order measures against disturbances caused by workers on strike in one factory in the city.

Power: With the good South West monsoon filling the reservoirs (see Vol VIII p 498) and careful management, the power situation in the state during the balance of the year 1978 and till the monsoon in July 1979 should be normal. As the previous 12 months passed without a power cut, so it seemed that the satisfactory power situation in October should continue during the year. In October an additional 50 MW unit in the fourth power house of the Kundah hydro electric project was commissioned. The project has been executed in 4 stages. The first two stages were carried out in 1957 and 1961 and the third in 1966, under which 16 dams, 45,500 metres of interconnecting tunnels, 14,300 metres of steel per stock pipes and 5 power stations were built. The fourth stage extension now under completion envisages the 50 MW additional unit to power house No. 4 now comissioned, over an additional 60 MW unit to power house No. 3, thereby increasing the installed capacity of the Kundah project from 425 MW to 535 MW. The total installed power generation in the state now stands at 2,400 MW (compared to 150 MW in 1951). In view of the favourable power situation, the Tamil Nadu Electricity Board announced relaxation of certain restrictions on supply of electricity to agricultural loads and urban LT industries as a trial measure for 3 months from October 1 to December 31. As a result, agricultural and rural loads get continuous power supply for 20 hours in a day instead of the previous 16 hours and urban LT industries have the prohibition from 6 a.m. to 9 a.m. lifted.

For the country as a whole also, power generation increased and the power situation improved, the government reports, so that in October power cuts were generally lifted or reduced. Power shortage which was 15 per cent in 1977–78 is now reported officially at 9 per cent. Measures taken to improve the power situation include: (a) the project renovation programme in 14 large thermal stations with 31 generating units of an aggregate capacity of 3,500 MW, (b) multidisciplinary teams comprising representatives of BHEL, State Electricity Boards, consulting engineers and the Central Electricity Authority who have identified major deficiencies in power stations and remedied them, (c) a central stocking and ready supply of spare parts—both imported and indigenous—by BHEL and (d) advise on improved maintenance and operation of thermal units and the use of modern maintenance techniques, including preventive maintenance to reduce down time on generating units. As a result the government reports that the time taken for the annual overhaul of boilers has been reduced from 69 days in 1975–76 to 37 days in 1977–78, and the time taken for annual overhaul of turbine generators has come down from 119 days in 1975–76 to 70 days in 1977–78. On individual projects, power generation from Idukki's Moolamattam station which was interrupted on October 7 recommenced from October 12 due to the quick detection of the cause of the leakage. The Planning Commision approved the import of 3 gas turbine units of 20 MW each by the West Bengal government at an estimated cost of Rs. 35.74 crores and to be installed at Haldia, Siliguri and Garnipore to go on stream from mid 1979. Rajasthan's Kota thermal plant will in its Phase I be completed by 1982 and in Phase II by 1983, generating each 200 MW. Himachal Pradesh will get 20 per cent of the 1,020 MW generated in the Naptha-Jhakri hydel

project which will be ready in 1986. Two units of the Panipet thermal station each with a 110 MW generating capacity will be commissioned in May. In addition the Union government has cleared the Rs. 200 crores, 420 MW thermal plant at Tenaughat in Bihar. Thermal plants in Uttar Pradesh at the end of October face serious coal shortage (stocks for only 2 days) and are in trouble. The Planning Commission is of the view that it is not possible to have a uniform power tariff for the entire country first because under the 1948 Electricity Act, the tariff is the responsibility of each State Electricity Board and because the resource endowments and the mix of hydel and thermal capacities vary from state to state. While for the entire country, the total installed thermal capacity is 11,750 MW and total hydel capacity is 9,400 MW, in the Northern region it is even at 2,758 MW and 2,912 MW, while in the west it is 3,760 MW and 1,596 MW, in the south 1,856 MW and 3,970 MW and in the east 3,238 MW and 845 MW. The variations in the mix are even greater as between states—Haryana has only thermal with 140 MW, Rajasthan has no thermal but 220 MW nuclear and 271 MW hydel, Uttar Pradesh has 1,765 MW of thermal and 1,068 MW of hydel, Maharashtra 1,453 MW thermal and 1,183 MW hydel plus 420 MW nuclear. In the south, Tamil Nadu has a thermal capacity of 1,140 MW and hydel of 1,224 MW, Kerala and Karnataka have only hydel of 1,011.5 MW and 1,117 MW and Andhra Pradesh has 712.5 MW and 616.7 MW. Then there are varying costs of generation depending on localizational and other factors. The pattern of electricity, consumption also varies, Maharashtra consuming 6,709 million units for industry, Uttar Pradesh 3,995, West Bengal 3,873, Gujarat 3,555, Karnataka 3,455 and Tamil Nadu 3,377, while the highest agricultural power consumer is in Uttar Pradesh (1,854 million units) and Tamil Nadu (1,694 million units). REC reports that its programme has provided electricity tor 51,000 villages (which is one tenth of the total), involving energising 3.30 lakh irrigation pumpsets and the laying of power cables over 2.5 lakh km at a total cost of Rs. 840 crores for 2,150 projects. When all projects now being executed are completed, electricity will be available to 1.16 lakh additional villages, 9.73 lakh more pumpsets will be energised and 144 lakh small agro based and other industrial units in rural areas will be provided with electricity. One negative point in the total power programme to be noted is that due to poor planning particularly because of the spurt in aluminium prices and the lack of timely action demanded by the conductor industry, the country lost Rs. 200 crores in IDA credits (from the time lapse of the credits) over the past 7 years.

Water : The inter-state conference on the sharing of the Cauvery waters was held as planned on October 9 (see last issue p 570) and ended like the last session without any agreement on the sharing of the waters. Karnataka and Kerala wanted the 1976 understanding to be the basis of the agreement, while Tamil Nadu wanted a scheme of sharing which was nearer to the 1924 agreement. The Union minister who presided overthe meeting could not find a meeting point between the two sides, and what is serious about the outcome of this meeting is the complete deadlock which has been reached in the discussions, with no decision for further negotiations.

Meanwhile the loss of time also means the holding up of projects, whose costs are raising irreversibly. The state government announced in October that by March 1979, all villages will have potable water under the emergency plan underway for rural water supply. For water supply to Madras city, the state government states that it is negotiating with the World Bank to divert the aid originally earmarked for the Veeranam scheme for the renewal of worn out water supply and drainage pipes in the city. This means that the Veeranam project on which Rs. 25 crores have been spent and another Rs. 150 crores will have to be, is likely to be abandoned. This is a questionable outcome given the long term water supply needs of Madras city. A part of this resource it is now planned will be used to replace the corroded pipelines and sewers by new ones to avoid water pollution and health hazards. The number of water fountains in the city is to be increased (from the present 7000 of which 2000 are functioning) and the water supply to the slums is to be augmented. Following rains from the third week of October, drawal from Mettur was suspended and the turn system operated. The water level in the reservoir stood at 105.55 feet with an inflow of 31,766 cusecs.

Land Reform: At the end of October, the state government issued an ordinance to revise the formula for computing the compensation to landowners for the takeover of surplus lands under the Tamil Nadu Land Reforms (Fixation of Ceiling on Land) Act of 1961. Instead of computing compensation on the basis of net annual incomes, i.e., the rent payable under the Fair Rent Act minus the land revenue, which resulted in payments of Rs. 10,000 per acre for double crop land and Rs. 7,500 for single crop which was well above market value, under the Ordinance the compensation will be a multiple of the land revenue assessment, with an annual value ceiling Rs. 350 per acre, so that the maximum will not exceeds Rs. 3,500 per acre. The old formula will apply to lands already notified as surplus, that is the 90,000 acres, of which 10,000 acres are in dispute in courts. Compensation had been paid so far for 70,000 acres amounting to Rs. 8.5 crores. The taken over land had been distributed to 50,000 persons and the government states that it will be taking over an additional 1.25 lakh acres.

Pay Panel and Satellite Banking: The state government announced that it was reviewing the anamolies in implementing the Third Pay Commission report (see last issue pp 565–566) and will soon be resolving them, in accordance with the resource situation. As part of the programme to promote rural development, savings and inculcating the banking habit among villagers, the Indian Bank started in October a satellite branch service covering Boothamangalam, Agara Padakudi, Abivirutheswaram and Advangudi villages in Thanjavur district. These work for 2 hours on certain specified days per week for acceptance of deposits and grant of jewel loans. On this basis, the Bank plans to open satellite offices in 5 villages with base at Velur (Salem), 3 villages in Pollachi (Coimbatore) and 6 villages in Arupukottai (Ramanathapuram).

Communications: Southern Railways announced that the first phase of the new suburban rail terminal in the Moore Market complex—a single platform with two lines—will be in use by the

middle of next year. The Moore Market itself is being preserved by the state government under its conservation programme, but a large concourse is being constructed to move parcel expresses from this suburban terminal to Bombay, Bangalore, Calcutta and Delhi. The Madras—Gummudipundi electrified section will be in use from April 1979 and the Madras—Trivellore electrified section in April 1979. In the Madras port, the constant arrival of steel and general cargo ships and exports of food-grains and sugar and import of fertilisers have led to congestion in the berths and with the onset of the monsoon this congestion is likely to continue into November. The delay is due to labour shortage and absenteeism and the increase of cargo from 900 tonnes per ship in 1976-77 to 1,400 tonnes today. There is need for modernising the handling equipment, particularly mobile cranes and folk lifts. The Tamil Nadu Highway and Rural Works Department will be completing the comprehensive rural roads needs survey by February 1979 it announced. The state's short term rural roads plan envisages an outlay of Rs. 80 crores. The Plan has 3 layers of road development for transport purposes,—the first which can be used for transport with a few repairs, the second to be made transport worthy with some improvement, and the third involves laying the missing links between existing roads.

Housing: The Tamil Nadu Housing Board sanctioned housing construction in various towns for a total cost of Rs.3.7 crores out of the Rs. 27 crores to be spent this year. The Board has given top priority for building slum tenements throughout the Southern part of the state in Kanyakumari, Tirunelveli, Ramanathapuram and Madurai. In Tirunelveli district 72 units will be built at a cost of Rs. 8 lakh in Tuticorin, 120 units at Koilpatti at a cost of Rs. 13.19 lakhs, in Ramanathapuram 288 units in Aruppukottai and Srivilliputtur of at a cost of Rs. 32.13 lakhs and in Madurai district, 624 units in Melavasal, Subramaniapuram and Race Course Colony at a cost of Rs. 65.67 lakhs. Neighbourhood schemes at Periakulam and Theni with 250 houses, rental housing schemes for government employees in those districts, dwelling units for 500 employees of Madurai University and loan sanctions of Rs. 2,000 per family for 10,000 harijans have been approved. Also a slum improvement programme in the Kasturba slum at Basin Bridge and in other slums in Madras city covering 30,000 families are underway and will be completed by 1979 with the Rs. 6 crores World Bank credit. In the current year, 20,600 families are being covered and next year in the last phase 6,760 families will benefit. With the help of the World Bank, a scheme for dealing with storm water drainage to provide short and long term measures of flood control is also being finalised. At Vyasarpadi, a Rs. 263.12 lakhs improvement and housing scheme has been started at the end of September to house 5,709 families of whom 3,132 are repatriates from Burma, on the basis of pooling the resources under the rehabilitation scheme and the slum improvement scheme, aided by the World Bank and directed by MMDA.

Welfare: On October 2, the state government issued an Ordinance increasing the penalties—longer jail term and larger fines—for prohibition offenders. Also audio visual aids are being increased to propagate the message of prohibition. Only Tamil Nadu and Gujarat have total prohibition. For the other states, the

Central Prohibition Committes has issued guidelines to bring about total prohibition within 4 years. The main method is by fixing and increasing the number of dry days in each week in each state. 12 states and 4 Union territories are yet to follow the guidelines. In the meanwhile, Tamil Nadu like Gujarat receives no compensation for introducing prohibition, because it is paid on the basis of 50 per cent of the excise revenue in 1977-78, when the 2 states had total prohibition and hence no revenue from the sale of alcohol. The government has asked hoteliers to reduce the price of some of food items in line with the decline and stability in the prices of rice, wheat, sugar, coffee and edible oils. There has as yet been no response to this appeal.

National :

Floods : At the beginning of October over 1.5 crores people spread over 35,000 square kilometers were still stranded due to the unprecedented floods in West Bengal. Over 600 people were officially reported killed in the floods, with millions of others living in peril in 12 out of 16 districts in the state. In this disaster, thousands of villages were wiped out, 90 per cent of the mud houses destroyed and standing crops, foodgrains, cattle and all personal belonnings lost. It was a near total destruction of the economy, the way of life and mode of living of the people in these areas. Large, medium and small industry suffered gigantic losses, 77 coal mines were flooded, and there was total dislocation of the road, railway and the general communications system. The Union government provided immediately aid of Rs. 15 crores to the West Bengal government, and Rs. 60 crores for clearing its over draft with the Reserve Bank. The Red Cross sent 30 tonnes of food, UNICEF 500 rolls of polythene sheets and assistance from all over the country was rushed to the area. The West Bengal government has requested Rs. 350 crores from the Union government to rehabilitate the 1.5 crore of people affected by the flood. The grant could be spread over 2 budgetary periods. It has also asked financial institutions to provide Rs. 130 crores to put agriculturists, artisans, craftsman and cottage industries back on their feet. It also needs 2,00,000 tonnes of foodgrain or gratituous relief and 4,50,000 tonnes of grain for the food for work programme. The Union has agreed to treat this calamity as a national calamity, has sent a 6 man team to assess the extensive damage and recommend Union action on the basis of the state government's demands.

Poverty : The Finance minister in late October released the most recent estimates about those living in poverty in the country. In 1977-78, 46 per cent of the population were living in poverty (48 per cent in rural and 41 per cent in urban areas). 280 million people did not get a monthly income of Rs.60 at current prices—which marked the poverty line. Every year 50 lakh people are added to the poverty sector and trends in the last 7 years show that only 10 to 11 per cent of the addition to the labour force obtain employment in the organised sector, the rest drifting to agriculture or informal activities with their under employment or chronic unemployment. The National Labour Institute in a survey has found that there are 23 lakhs of bonded labourers in 9 states as against the 1.5 lakh identified by official agencies so far. They form 63.5 per cent of the agricultural labour force, 84.3 per cent of whom

are SC and ST, with 84.2 per cent of their masters being caste Hindus. 50 per cent of the bonded labourers incur debts for daily needs, while only 33.6 per cent take loans for festivals and ceremonies. 62.4 per cent of bonded labour households do not possess any land, 68 per cent have no livestock, 91.4 per cent no poultry, 14 per cent no house or hut and 20 per cent no home-shed land. Utter Pradesh has the largest number (5.55 lakhs), followed by Madhya Pradesh (4.67 lakhs), Andhra Pradesh (3.25 lakhs), Tamil Nadu (2.50 lakhs), Gujarat (1.71 lakhs) Bihar (1.10 lakhs), Maharashtra (1.05 lakhs) and Rajasthan (67,000). Modern technology like pumpsets has aggrevated the conditions of agricultural labourers leading them to bondage, as seen in the districts of Medak (Andhra Pradesh), Mandya (Karnataka) and Arcot (Tamil Nadu), where bonded labourers are used to operate diesel or electric pumpsets.

Sixth Plan: At the early October meeting of the NDC working group on Centre-State fiscal relations, pending the Seventh Finance Commission Report and recommendations, discussion was concentrated on the subjects of centrally sponsored schemes and the Gadgil formula. There was general agreement that centrally sponsored schemes should be limited to 1/6 to 1/7 of the total transfer of Plan resources from the Union to the states, as agreed at the time of the Fourth Plan, that the schemes should be reviewed and some of the schemes which do not meet the high priority area criteria should be dropped, while devising some other methods to ensure that national priority schemes are fully implemented. On the Gadgil formula, there were conflicting suggestions for modification such as basing resource transfer on population, geographical size, backwardness, per capita income etc., with the feeling that the Gadgil formula might be continued for some more time. The issue of transfer of resources from the Union to states, which includes Union transfers, market borrowing limits, transfer of funds by financing institutions, public undertakings investments, the proportion of loans and grants in Central Plan and non-Plan assistance, and bank deposit-disbursement ratio, the discussion will be resumed in November after the Seventh Finance Commission Report is received. In the meanwhile, one set of figures—the credit advances and deposits received by states is available. Maharashtra leads with Rs. 2,536.48 crores as advances and Rs. 3,493.03 crores as deposits, Delhi Rs. 2,225.72 crores as advances and Rs. 1,609.30 crores as deposits and Tamil Nadu Rs. 1,062.83 crores as advances and Rs. 1,016.14 crores as deposits. Life Insurance Corporation in its 1966-67 sanction of loan assistance of Rs. 20.25 crores, gave Delhi Rs. 2.50 crores, Andhra Pradesh Rs. 1.70 crores, West Bengal Rs. 1.55 crores and Tamil Nadu Rs. 1.25 crores. IFC out of a total credit of Rs.763.83 crores in 1977-78 gave Maharashtra Rs. 139.35 crores as loans, followed by Uttar Pradesh Rs. 87.87 crores and Tamil Nadu Rs. 86.59 crores. The Planning Commission which has decided that 300 blocks should be taken up every year from 1978-79 for five years for comprehensive block level planning, in addition to the 2,000 out of the 5,000 blocks in the country taken up for intensive integrated development, has set up a working group comprising representatives of RBI commercial banks, departments of rural development, finance ministry and the Planning Commission to estimate

the institutional finances required for block level plans. The block level plans will emphasise productive schemes based on local resource endowments and needs which have maximum employment absorption capacity covering the sector of agriculture, minor irrigation, animal husbandry, fishing, forestry, cottage and small industries, housing, health and education. It will also suggest machinery to ensure smooth flow of funds for both the schemes and the disadvantaged groups and families with low resource base identified during plan preparation.

Prices and Anti-inflation: The official index number of wholesale price for September showed a decline of 0.2 per cent at 185.7 on September 30, with the largest decline in oil seeds and sugar of -2.8 per cent each, followed by electrical machinery -2.4 per cent, cereals -0.7 per cent, and cotton textiles -0.2 per cent. On the other hand, jute manufacture rose by 5.3 per cent, pulses by 3.8 per cent and cement, iron and steel and industrial chemicals by 1.3 to 1.6 per cent. In fact a Commerce Ministry survey concludes that the country has been experiencing a negative rate of inflation since February 1978. Inspite of the fact that prices normally shoot up during the lean months of May-October, wholesale prices between April and August moved up by 1.9 per cent as against 3 per cent and 9.8 per cent during the same period in 1977 and 1976. Variation in cereal prices between producing and consuming states has been sharply reduced, prices of essential commodities except pulses are lower or static in relation to the previous year's prices. Where prices rise in mass consumption goods has taken place, it has been due to increase in excise duty and in prices of coal, power and steel. Retail prices of rice, wheat, jowar, bajra, groundnuts, oil, mustard oil, vanaspathi, sugar, onion, potatoes, matches and dhoties were in first week of September in Delhi, Calcutta, Madras and Nagpur lower or stable compared to September 1977. On the negative side, money supply with the public increased by 6.1 per cent to Rs. 19,191 crores on September 15, 1978. Also the deposit accretion in banks has slowed down between April-September, with a slow down in investment but a rise in bank credit. At a meeting of the bank executives expected and called in October (see last issue p 574), it was decided to review the guidelines for differential rates of interest to ensure enlargement of credit for the weaker sections and 5 groups were set up on bank credit to agriculture (SFDA), small and cottage industry and DICs, employment promotion, sick units and weaker sections of society, and on the basis of their recommendations by the first week of November final recommendations will be made to the government. At the district level, the credit plans of the banks are to be dovetailed into development programmes of the State governments. A cost reducing measure is the decision announced by the government in October that subsidised policy now amonting to Rs. 1,050 crores for 16 different items is under review. The Union government also decided at the end of October to revise downward the salaries and commissions payable to management personnel from the present level of Rs. 90,000 a year plus 1 per cent of the profits subject to a maximum or 50 per cent of the salary to Rs. 72,000 a year of salary and commission taken together. The Union government is also drafting a model bill for regulation of Chit Funds which have became universal and popular, and which need safeguards against fraudulent

practices by the foreman or members. The government also decided at the end of October to reissue the central loan of Rs. 50 crores to replenish the holding of RBI's long dated securities which it will make available to investors at prices to be decided periodically.

Direct Taxes: The Choksi Committee on Direct Taxes (See Vol VII p 436) (Mr Choksi replaced Mr Palkivala when he became the Ambassador to US) submitted its final report in October and recommended (a) enactment of a single integrated code to cover four direct taxes on income, wealth, gift and surtax on company profits to come into effect for the assessment year 1979–80, (b) the estate duty to remain separate, (c) the rate structure of the income tax to provide for a maximum marginal rate of tax of 60 per cent applicable to incomes exceeding Rs. 2 lakhs and abolishing the surcharge on income tax, (d) no change in the base of the tax which should be income and not consumption, which would be costly, and if necessary to extend the area of saving out of income for tax relief purpose, (e) increased tax rates to be specified in a schedule to the Act and not annually in a separate Act of Parliament, (f) drop the secrecy of budget proposals, (g) impose penalty for failure to file tax returns by June 30, (h) equitable and certain taxation of non-residents on income accruing in India and for taxation under collaboration agreements, (i) making legislatively clear and specific all deductions for contributions to Defence Fund, Prime Minister's Relief Funds, Co-operative Housing Societies dues, Provident Fund and Gratuity, investmental allowances etc., and (j) the early establishment of a central tax court with all India jurisdiction to deal exclusively with litigation under the direct tax laws. The recommendations are being processed by the Finance Ministry which may introduce legislation on them at the next session of Parliament.

Gold Sales: On September 29, RBI sold at its twelfth auction 6.98 tonnes of gold to 752 bidders out of 1,009 bids, prices ranging between Rs. 751 to Rs. 761 per 10 grammes. On October 13, RBI announced its rejection of the entire lot of bids for the October 12th thirteenth auction because none of the bids came upto the reserve price. The fourteenth auction on October 23 resulted in the sale of 19,200 grammes to 21 bidders for prices ranging from Rs. 805 to 911 per 10 grammes, out of 713 bids. The price of gold was rising steeply during October, Rs. 800 on October 7, Rs. 900 on October 13, reaching Rs. 940 per 10 grammes in mid October in Bombay. International gold prices have also risen steeply. When gold auctions started, the spread between London and Bombay prices was Rs. 168 per 10 grammes but by mid October it had more than doubled to Rs. 360 per 10 grammes. London prices had increased form$ 180 to $ 225 per ounce during this period. Inview of the fact that the gold auctions have not reduced the differential between the international and domestic gold prices to act as an anti-smuggling measure, and as the second purpose of counteracting the monetary impart of the budgetary deficit has not been important, the Rs. 80 crores raised being not even one fourth of the budget deficit, on October 26 the government suspended further gold auctions pending a review of gold sales policy. In effect this is an abandonment of gold sales and this is right. It was a wrong policy to expect to influence gold prices with such small

amounts auctioned. Out of the estimated gold stock of 80 tonnes, 13 tonnes have been auctioned in 12 out of the 14 auctions—in two no sales were effected. The Indian experience here is the same as the IMF experience, whose gold auctions have not stopped gold prices from rising.

Industry: According to the index number of industrial production, the industrial growth for the first quarter April-June of 1978-79 was 7.3 per cent compared to 4.6 per cent in the previous year's quarter. But the index for June 1978 registered a fall of 2.3 per cent, railways expect a deficit of Rs. 150 crores due to a fall in freight traffic which is itself a reflection of the stagnant industrial outlook. Also raw material shortage, *labour unrest, capacity constraints* have affected steel, mines (also due to floods) and the coal based industries of tea, jute and cement. On the other hand, production has increased in power, textile, industrial machinery, transport equipment, dry cells, refregirators, razor blades and lamps. The Union government in late October announced its decision to undertake large scale manufacture of critical automobile ancillaries and lamps including fluorescent tubes in the public sector in order to break the monopoly of a few large houses, including multinational corporations in these areas, which raise prices of their products and engage in speculative activities to increase profits. HMT has been entrusted with the manufacture of lamps and fluorescent tubes and Indo-Hungarian and Indo-GDR cooperative activities are undertaking rural development and transfer of technology programmes. The Industry ministry reports that in 108 out of 258 industries full capacity has been reached and there is no further scope now for fresh capacity build up. The analysis is based on the number of licenses issued rather than actual production. But on the basis of the 1978-79 guidelines, it is clear that industry is against the creation of new capacity in these 108 industries because they have sufficient capacity to meet the growing demand till the end of the Plan and demand for these products will not increase during the 5 year period. Both these are doubtful assumptions. There is the phenomenal increase in agricultural production, there is the possible up turn in industrial production and there is effect of import liberalisation and increasing decanalisation which could result in increase in demand for the products of these industries. Also the Industry ministry in a recent document has emphasised the importance of developing heavy and basic industries in order to provide the needed support to small and rural industries as well as to agriculture and infrasturctural development. This is the point that the Bulletin has been making and now the ministry has worked out the linkages between heavy industries and various sectoral programmes on the basis of which it finds that there is such an inter-dependence between large and small industries that 80 per cent of the output of the 2 groups are interrelated, in the sense that products of one forms the input of the other. Any swing in the development of heavy industry directly affects these areas of supporting and feeding small units. This inter-linkages increase directly as the capability to engineer and set up total systems develop within the country. For instance each additional bus on the road creates employment for 10 persons in operation, maintenance, repairs and administration. Again where 10 persons are used in production 1 MW of power,

that I MW in a factory employs 400 to 500 persons. 75 per cent of the production of heavy industries during the current Plan will meet the needs of agriculture, irrigation, flood control rural development, transport and communication and the outlay on these sectors account for 70 per cent of the total Plan outlay of 70,000 crores. The doubling of the outlay in agriculture will increase the demand for tractors, power tillers, farm equipment, diesal engines, pumsets etc. The 100 per cent increase in fertilisers will increase the demand for capital equipment to produce fertilisers and pesticides. The doubling of the outlay on irrigation and flood control, will mean increased supply of construction machinery for dams and canals, earth moving equipment, pipes and tube wells. And so too are the heavy industry implications of adding 20,000 MW to our power capacity and the rural electrification programme, the doubling of the cement production and the overall development of rural areas.

Public Sector Performance: The 16 public sector units under the Department of Heavy Industry report a production of Rs. 443.48 crores during the first six months, April to September 1978–79, which was a 38 per cent increase that of the previous year's first six months. In addition the consultancy-cum-contracting unit, Engineering Project Limited, reports a turnover of Rs. 43.58 crores during these six months, which was Rs. 21.62 crores higher than last year's first six months. During September, the units produced Rs. 88.29 crores, higher than September 1977 by 28 per cent and Engineering Projects, turnover was Rs. 6.81 crores, being a similar 19 per cent increase. BHEL's production in the first six months was Rs. 256.48 crores, which was 84 per cent of its target and 34 per cent higher than last year's. HMT's production was Rs. 73.54 crores which was 97 per cent of the target and double that of last year. HEC improved with a production of Rs. 30.33 crores being a 137 per cent increase over last year and Bharat Pumps produced Rs. 6 85 crores, 153 per cent above last year.

National Production Front:

Steel: Consequent on the floods in Durgapur and Ranigunj which resulted in flooding of Durgapur steel, coal mines and railways, Durgapur is slowing steel production. In addition there have been labour troubles in Bhilai and Rourkela. Ingot steel production in all plants including TISCO was 6.36 lakh tonnes in September, against 7.32 lakh tonnes in August and saleable steel production in September was 5.30 lakh tonnes compared to 5.84 lakh tonnes in August. The Public sector steel plant produced 4.76 lakh tonnes in September compared to 5.55 lakh tonnes in August, 32,000 tonnes of ingot steel being lost in Rourkela due to labour unrest. Normal operations are being restored in Durgapur Alloy Steel which will be back to its usual rhythm by the end of October. Due to flooding of coal mines and rail distruptions all plants have taken measures to reduce their ovenpushings. Bhilai from 560 ovens per day to 500, Rourkela from 325 to 310, Bokaro from 323 to 304, IISCO from 215 to 150 and TISCO from 310 to 240. At current level of ovenpushing, the plants need 32,000 tonnes of coal per day and coal stock on October 6 stood at 1,93,000 tonnes, a short fall or 4,000 tonnes per day. If the coal movement does not

improve, ovenpushing will have to be reduced further, and the first six months, April–September fall in saleable steel production from 3.370 million tonnes of last year to 3.187 million tonnes this year will further increase. This means that the import of steel this year is likely to increased beyond the 6.25 lakh tonnes of imports already finalised, and the 1.25 lakh tonnes landed in October. This increased import of steel will continue till the expansion of Bokaro and Bhilai is completed and the Vishakapatnam plant begins production—which means another 8 to 10 years. The Union steel ministry announced that work on the integrated total steel plant at Vishakapatnam will begin early next year and a team of Soviet experts will come to India to aid in the techno-economic details of the projects. TISCO announced that its product mix will undergo significant changes when its Rs. 440 crores modernisation programme is complete by 1983-84, at which time its crude steel production will increase by 2 lakh tonnes and saleable steel capacity by 2.64 lakh tonnes. In October, a joint sector steel project — Pratap Steel Rolling Mills and Rajasthan State Industrial and Mineral Development Corporation—was inaugurated in Jaipur, for the production of 50,000 tonnes of saleable steel, with 20,000 tonnes being produced in the first stage.

Crude : ONGC announced that it will spend Rs. 1,911 crores on exploration and production during the current Plan, (Rs. 1,208 crores on offshore and Rs. 703 crores on onshore exploration). Work on Phase III B of Bombay High is to start soon at a cost of Rs. 550 crores as a result of which the rate of oil production would rise to 1,40,000 barrels a day by September 1980, equivalent to 7 million tonnes annually. The present rate is 4 million tonnes per annum and in a year will be increased to 5 million tonnes rising to 12 million tonnes in 1982–83, though only 9 million will be actually extracted. Instead of developing the North Bassein oil field which can produce 2 million tonnes a year, the South Bassein gas field is to be developed from the middle of next year, yielding 10 million cubic metres per day. The commission also plans to drill 2 offshore structures off Andaman islands in early 1979–80, start work on the results of the Godavari–Krishna offshore basin survey and take up drilling in the Kutch, Bengal and Cauvery offshore areas. On the on shore drilling, the number of rigs are to be increased from 32 to 39 during the Plan period and the production of oil from Assam is to be increased from the current 2 millions to 2 8 millions by 1982–83. The commission is floating global tenders for the supply of the huge Bombay High North Platform for pumping the larger quantity of oil and for the compression of the gas prior to its transmission through the pipeline to the shore terminals. The cost of the platform will be around Rs. 50 crores and will be met from the World Bank credit of $ 150 million (see last issue p 579). Talks between the Union Petroleum ministry and BOC for the takeover of the Assam Oil Company commenced in October with the differing valuations by the two sides and the problem of the recovery of the tax arrears of Assam Oil Company alter takeover (see Vol VIII p 507). India and UAE are negotiating collaboration in oil exporation and refining; particularly in relation to UAE's plans for building a gas liquification oil refinery and petro-chemical complex as well as a fertiliser and pharmaceutical plant in Abu Dhabi.

Coal: As noted earlier, the floods in the Damodar river and its tributaries and the release from the DVC dam inundated 47 out of 116 coal mines of the Eastern Coal Fields and 34 out of 70 BCCL mines, 7 open cast mines were turned into lakes and 25 other mines endangered. These floods have added to the difficulties faced by Coal India so that production at ECL dropped from 75,000 tonnes to 25,000 tonnes a day and at BCCL from 66,000 tonnes to 16,000 tonnes a day and Rs. 7 crores damage to equipment in the 2 companies. Paradoxically the Railways report large coal stocks at pitheads but not at rail heads, while CIL reports lack of wagons. What is a fact is that there are over 3 million tonnes of coal at different pitheads in mines under Central Coal Fields Limited, varying from 60,000 tonnes to 2.87 lakh tonnes. The coal crisis is likely to continue over a period and so the industry ministry has asked industries all over the country to reduce coal consumption and use alternative fuels like furnance oil where facilities for dual firing exist. The first priority is coal for thermal plants which are being assured and coal movements from Singereni to southern consumers are being increased by 100 to 150 wagon loads a day, in addition to the usual 800 daily wagons. This meets the coal needs of the Southern Railways and the needs of the Ennore thermal plant (Basin Bridge needs its ECL coal only in February by when ECL will, it is hoped, be functinding) and the scheduled commissioning of the Tuticorin thermal plant, which needs 1 lakh tonnes from ECL during this last quarter of the year and which will not be available, will have to be postponed. The integrated steel plants, as noted earlier have reduced their daily coke ovenpushing, which will mean a drop in their hot metal production. Against this sombre background, the Union government approved 8 new coal and lignite projects at a total cost of Rs. 274 crores Rs. 87 crores is for Neyveli increasing its output from 4 million to 6 5 million tonnes, Rs. 17.05 crores for substituting fuel oil for lignite for its fertiliser plant and the other projects are expansion of Kusunda open cast project of BCCL, the Kusunda mines and Dakna Bukbuka projects of CCL, the Durgapur open cast of WCL, the reorganisation of the North Searsole collieries and Sirka open cast mines of ECL and the opening of the New Majri open cast project of WCL. When all these projects are executed, the additional coal and lignite output will be 9 million tonnes.

Copper and Metals: MMTC reports that it will supply 75,000 tonnes of copper to users during the current year and will build a buffer stock of 30,000 tonnes. There is some difference in the monthly demand estimates which MMTC places at 10,000 to 11,000 tonnes and the national conference of copper users who place it at 7,500 tonnes. In 1976-77 24,000 tonnes were imported and in the following year 35,000 tonnes. During April-September, the Corporation sold 30,000 tonnes compared to 12,300 tonnes sold in the same period in 1977-78. The main problem is the speedy disbursal of the copper stocks, and it is to this that MMTC should pay attention, particularly to the open market price at which it is available to the small producers. Iron-ore exports are still lagging, as the largest buyers, Japan and South Korea, are not expanding their steel production and hence new markets are being developed—Yugoslavia which increased its import from 26,000 tonnes in 1976-77 to 3 lakh tonnes last year, Iraq (1 lakh tonnes), Abu Dhabi (2 lakh tonnes) and

China which started with an import of 32,000 tonnes and which will need a large amount as it plans to expand its steel production capacity from 25 million to 45 million tonnes. With the recent discovery of the East Coast bauxite deposit (see Vol VIII p 458), India emerges as the seventh largest producer with 1,600 million tonnes in addition to its 400 million tonnes. In addition, it has an additional potential of 1,000 million tonnes which will place it in the third place. This calls for a short term and long term integrated bauxite utilisation policy backed up by a large and effective R and D which is non-existent, so that aluminium extraction can be undertaken domestically and not as a captive of a few foreign transnationals. In addition its use for other purposes such as chemical and petroleum should be developed—namely in moderate heat refractory manufacture, abrasives, cement, paints steel, sugar colouring and lubricating oil. The total estimated bauxite deposits of 2,296.2 million tonnes are distributed as Andhra Pradesh (582.39 million tonnes), Bihar (44.89 million tonnes), Goa (11.46 million tonnes), Gujarat (158.03 million tonnes), Jammu and Kashmir (4.72 million tonnes), Karnataka (23.22 million tonnes), Kerala (15.02 million tonnes), Madhya Pradesh (192.77 million tonnes), Maharashtra (85.19 million tonnes), Orissa (1,163.71 million tonnes), Rajasthan (1.07 million tonnes), Tamil Nadu (10.73 million tonnes) and Uttar Pradesh (2.72 million tonnes). As against this, there are 60 bauxite mines with an annual capacity of 1.5 million tonnes, five being public sector mines producing 25 per cent of the total. The present installed capacity of alumina is 45,90,000 tonnes and aluminium is 2,75,170 tonnes which will be increased to 1 million tonnes by 1990 and which will raise per capita aluminium consumption from the current 0.4 kg to 1 kg. On October 9, the Union government abolished its dual price for aluminium, as a result of which its price dropped by Rs. 1,440 per tonne for commercial grade aluminium for making utensils and by Rs. 500 per tonne for conductor and cable manufacturers. Simultaneously the subsidy for purchase of aluminium by state electricity boards has been withdrawn and the excise adjusted.

Cotton Textiles : The Indian Cotton Development Council's sub-committee on trade and price after reviewing the 1978-79 seasón estimate of 81 to 82 lakh bales of cotton production state by state arrived at an estimate of 71 to 72 lakh bales (against 75 lakh bales forecast in the last issue p 581), comprising Punjab, Haryana and Rajasthan 20 lakhs, Gujarat 19.50 lakhs, Maharashtra 15 lakhs, Madhya Pradesh 5 lakhs, Karnataka 6 lakhs, Andhra Pradesh 3.5 lakhs and Tamil Nadu 3 lakhs. Against the fear of cotton prices falling steeply as a result of this large production, the commercial role assigned to CCI as well as the NTC identity should be of help. CCI states that it will aim at maintaining reasonable cotton prices without wide fluctuations, and for this will enter into commercial transactions and build up a buffer stock. CCI will be purchasing directly from growers and their co-operative societies. Already 82,500 quintals of kapas have been purchased through its 140 purchase units and it will be purchasing further for NTC mills. A government committee has recommended that it build a buffer stock of 15 lakh bales and the RBI which gave a credit to CCI of Rs. 120 crores during 1977-78 till December 31, 1977 and Rs. 140 crores

from January 1, 1978 plus Rs. 115 crores in temporary credit till July 31, 1978 will announce the revised credit limits for the 1978–79 season. NTC has sanctioned Rs. 115 crores for modernisation, of which schemes for Rs. 75 crores have been implemented. IDB has been requested to lend Rs. 23.5 crores for 14 of its mills and the budget provision of Rs. 20 crores for replacement of machinery is likely to be increased. Out of 103 nationalised mills, 58 had made a profit, with 37 of them earning profits throughout the year. In accordance with the plan of the co-operative spinning secter to activise the decentralised textile sector to provide 4 million jobs during the plan period, the National Co-operative Development Corporation has introduced a new scheme to assist states for increasing the share capital base of primary weavers co-operative for use as margin money for augmenting their production and marketing activities. It has also set up a co-operative storage capacity centre for 3.22 lakh tonnes in the rural areas of Rajasthan at a cost of Rs. 16 crores and for 4.625 lakh tonnes in Madhya Pradesh at a cost of Rs. 22.08 crores. In pursuance of its policy to subsidise cheap cloth for the poor through a more equitable system (see Vol VIII p 509), the Union government in an Ordinance imposed an additional excise duty of 10 per cent as a surcharge on the basic excise duty on selected products of the textile industry, from which khadi, unprocessed handlooms, silk yarn, silk fabrics and controlled cloth will be exempted from the duty. The proceeds from this duty will be used to subsidise production of cheap cloth, distribute the burden on different sectors of the textile industry on a progressive and rational basis, with no question of raising prices as a result of this duty, as the losses reported by the mills from producing cheap cloth are now removed. As implementation of the multi fibre approach of the new textile policy and introducing a certain amount of flexibility in the inter-relationship of the various sectors of the textile industry, the Union government delicensed 50,000 spindles in the cut silk spinning sector of the textile industry.

Sugar: Sugar production in August was 31,000 tonnes, bringing the total production during the first 11 months of the 1977–78 season to 64.38 lakh tonnes, compared to the previous year's 48.02 lakh tonnes. The offtake from factors in August was 3.39 lakh tonnes for domestic consumption and 25,000 tonnes for exports. The total despatches in the first 11 months in 1977–78 were 40.1 lakh tonnes for domestic consumption and 1.53 lakh tonnes for exports compared to the previous year's 11 months figures of 34.13 lakh tonnes and 3.41 lakh tonnes. The closing stock with factories on August 31 was 38.50 lakh tonnes compared to 18.78 lakh tonnes on August 31, 1977. October was the month when the effects of sugar decontrol were widely discussed by government, ISMA, sugar technologists, ecomists. There is the large stock with the factories, the high cost of the older units, their arrears to cane growers, and the non-competitive price internationally as far as exports of Indian sugar is concerned. In addition to last year's bumper sugar production, the coming season also might record a production of 60 lakh tonnes. The basic problem is for the old mills to modernise their machinery and lower their cost and expand their sales outlets, so that a domestic consumption level of 52 lakh tonnes is attained. Meanwhile the Agricultural ministry has proposed to the Union Cabinet a 4 point plan to give

immediate relief to the industry comprising : (a) revival of the system of monthly regulated releases, (b) operation by FCI of a buffer stock of 5 lakh tonnes, (c) reduction in the excise duty of high cost units and (d) export of full quota of the International Sugar Agreement, which will involve an increase of the subsidy from Rs. 30 crores to Rs. 37 crores because of our high domestic sugar prices. The Finance ministry opposes the excise relief to older mills as that will involve heavy revenue losses. It also calls attention to the mounting trade deficit which makes any further revenue loss impossible. Meanwhile there is need to review the weak factories which are situated near the strong ones, using the same cane but obtaining lower extraction. The government is also reviewing the question of expanding capacity in the sugar mill sector. Basically the industry must adjust to the consequences of decontrols.

Cement and Drugs: To increase cement production, due to power, shortage cement units which have captive thermal plants have been granted a relief of 5 paise per unit, those with captive diesel generation are granted a relief of 25 paise per unit. The relief will increase upto 120 units per tonne of production and will be for the period of power shortage notified by the State Electricity Board. Also 3 grinding units are being set up by the public sector Cement Corporation to manufacture cement from imported clinkers. Two plants located at Bombay and Haldia will have a capacity of 4 lakh tonnes each and a third at Goa with 2 lakh tonnes capacity, at a total cost of Rs. 16 crores. These 3 units plus the 3 new units, in Madhya Pradesh (2) and Andhra Pradesh (1) will increase cement production by 3.2 million tonnes by the end of 1979. The Industry ministry has also decided to increase the cement quota for sale by states taking over distribution from October 1 by 10 per cent. 11 states and 2 Union territories are taking over cement distribution to check blackmarketing and price manipulation and these states will benefit from this additional allocation. In mid October the government announced that it has drawn up a list of 40 bulk drugs which are reserved for manufacture of expansion by the public or Indian sector of the drug industry. 30 are for the public sector and 10 for the Indian sector. A separate list of 42 bulk drugs has also been drawn up and kept open for all sectors of the industry. The production target is to be raised as against the 1978–79 target of Rs. 500 crores, actual production in 1976–77 was 700 crores. The main thrust of the new policy is establishment of fresh capacities for the 42 bulk drugs manufacture. There are 124 units in the organised sector, 2,500 units in the small sector, with the public sector manufacturing 30 per cent of the bulk drugs. Foreign companies may be permitted additional capacity in low volume drugs. The government also announced that all pending cases concerning foreign companies have been taken up in light of the above policy. The retention of foreign equity beyond 40 per cent is permitted for high technology drugs as determined by a high power committee which has sent out questionnaries to the companies to furnish information about their manufacturing operations, in the absence of which the government would act on its information. All foreign companies producing formulations will have to reduce their equity holdings to 40 per cents and RBI is enforcing this provision. To implement the new drug policy, the Industries (Development and Regulation Act) is being amended.

Irrigation: According to the Indian Association of Geohydrologists, of the 55 million hectares of irrigation potential available—40 million hectares of ground-water and 15 million hectares surface water—,7 million hectares could be provided with irrigation by exploiting ground water. So far an irrigation potential of 28.4 million hectares has been created under minor irrigation and the additional potential planned includes creation of 2 million hectares of irrigated land by tapping surface water. The development of ground water involves construction of 6 lakh dug wells, 1.2 million tube wells (private) and 15,000 public tube wells during the Plan period, with maximum emphasis on Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Uttar Pradesh, Orissa and West Bengal. Thus the tapping of both ground and surface water could create irrigation of an additional 9 million hectares during the Plan period.

Agricultural Production: A recent agricultural trend study reports that the average annual growth rate of agricultural production in the country declined from 3.2 per cent in 1949–50 and 1964–65 to 2.1 per cent in the following 12 years ending 1976-77, due to the fall in the area index from 1.5 per cent to 0.4 per cent. But the production index of all crops which had touched the lowest level of 80.7 in 1966–67 recovered to the highest level of 125.5 in 1975–76 before receding to 117.1 in 1976–77, which was however the second highest point since 1949-50. Foodgrains index recorded an average annual growth rate of 3.0 per cent in the pre 1964–65 period and 2.6 per cent subsequently due to decline in the area index growth rate from 1.2 per cent in the first period to 0.4 per cent in the second period. Comparatively the performance of non-foodgrains was disappointing, falling from a growth rate of 3,9 per cent to 1.5 per cent in the 2 periods, due to the steep fall in area index growth rate from 3.1 per cent in the pre 1964–65 period to 0.3 per cent in the post 1964-65 period. The production index of foodgrain's declined by 8.4 per cent and that of non-foodgrains by 2 6 per cent in 1976–77 which together brought on overall reduction of 6.7 per cent in agricultural production. A study by Union agriculture ministry shows that while there was an increase of 13 per cent in foodgrains production in 1977–78 over the production of 1976–77, the increase in the cultivated area was only 2.2 per cent. The increased food production totalling 126 million tonnes in 1977-78 to which Madhya Pradesh, Karnataka, Tamil Nadu, West Bengal, Punjab, and Orissa made a major contribution was due in large measure to higher productivity. The 10.8 million tonnes increase in rice output totalling 52.7 million tonnes in 1977–78 was an indication of a break through in rice production. Similarly wheat production touched a record with 31.3 million tonnes as did jowar at 11 8 million tonnes. Pulses production was 11.8 million tonnes (compared to 11.4 million tonnes in 1976–77) maize and bajra declined by 1.56 million tonnes due to rain damage. The official and expert assessment for the current year is that the kharif crop will be good and could be of the order of 80 million tonnes, and on the basis of the very good monsoon, a wider coverage under HYV and improved fertiliser offtake the 1978–79 foodgrains output could be 130 million tonnes. The tentative crop outlook prepared in early October by the Agri-cultural Meteorology Directorate states that despite adverse weather in many

parts, the overall condition of kharif crop is good. The progress of kharif crop is satisfactory except in the North East Hill states, West Bengal, Sikkim, parts of Gujarat, and Marathwada where crops have been affected. Crops have been damaged by the August floods in West Bengal (and further devastated by the September end/October floods in which a third of its kharif crop was lost), Assam, Bihar, West Uttar Pradesh, Haryana and Delhi. The Union ministry makes a tentative estimate that the loss of foodgrains due to floods in the north eastern states was 2.5 to 3 million tonnes, covering an area damaged by floods of 9 million hectares. Prospects are very good in Punjab, Haryana and Madhya Pradesh and the southern states. Punjab reports prospects of a bumper kharif, harvest despite floods, achieving its target of 3 5 million tonnes, of which paddy will be 2.5 million tonnes which has been grown over 8 lakh hectares (compared to last year's 7.61 lakh hectares). The reasons for the uncertainty in kharif crops in the flooded areas are also the reasons for the expectation of a good rabi performance because of the moisture content of the soil and adequate supply of water in the irrigation net work. For instance, Haryana's rabi target of 42 lakh tonnes will be attained and even surpassed if the water logged lands are ploughed and the wheat seeds including the new strains for water logged and late sown areas are fully used. In fact the government has drawn up a plan to bring an addition 18 million hectares under HYV to attain the Sixth Plan target of 140-144 million tonnes. The seed industry in the country is being developed to cover to a gross cropped area of 200 million hectares covering all kinds of foodgrains, commercial, horticultural, plantation and fooder crops, involving 70 breeders seed institutions, 50 foundation seed agencies in the state, 360 certificate agencies, 12,000 artisans and 10,000 graduates. The national Seed Programme Phase II has been launched and with the infrastructures and commercial sector help the quality seeds needed will become available. The Union ministry also states that procurement prices of all agricultural commodities including foodgrains will henceforth be announced before the sowing season instead of at the pre harvest season. This means that the procurement price of wheat and rabi coarse grains will be announced early in November as rabi sowing takes place during the month. In fixing the prices, an integrated view of the farmer's needs should be taken covering the costs, his returns to obtain articles of daily consumption at resonable prices, as well funds for reinvestment on the land according to the ICAR. In planning for crop production for flooded areas in lands where water has receded, the farmers are advised to grow early rabi oil seeds, in lands where flood water is still being drained out, gram crops should be grown, and lands still under water Sonlika variety of wheat can be sown in December when the areas will be dry. On procurement, the permissible moiture content of paddy has been raised from 15 to 18 per cent, so that cuts in the support price of Rs. 85 per quintal will be made only if the moisture is above 18 per cent but less than 22 per cent. In the absence of drying facilities, this liberalisation will benefit the farmers. FCI reports that it expects to procure 5.2 million tonnes of rice during the 1978-79 season against 48 million tonnes procured in 1977-78 and 4.4 million tonnes in 1976-77. The foodgrains stock with the government is expected

to touch 19 million tonnes by the end of the year as a result of the kharif procurement. As at mid October, the stocks were 11 million tonnes of wheat and 6 million tonnes of rice, and after allowing for a higher level of offtake, this year the stock will be 19 million tonnes. As at the end of October, 10 lakh tonnes of rice had been procured in Punjab, Haryana and Jammu and Kashmir. Oil Seeds production in the coming season is expected to increase by 7 to 8 per cent over last year's : ground nuts at 6.5 million tonnes, soyabean in Madhya Pradesh increasing from 1.3 lakh tonnes last year to 3 lakh tonnes this year. To increase pulses production the government has developed a 4 point strategy of raising production of pulses in all irrigated-areas, improved yields in unirrigated areas, popularisation of pulses as inter crops in annual and perennial cropping patterns. A strong plea has been made by the jute industry to help the jute growers increase their productivity from 2.8 bales to 4 bales per hectare in order to reach a target of 80 lakh bales, plus building a buffer stock of 5 lakh bales of raw jute. The Union ministry of Agriculture has under study establishment of joint ventures for development of forest lands to meet the raw material needs of forest based industries in the private sector. The State Forest Departments or Forest Development Corporations which does not always have the expenditure and finances and the private sector which does not have the forest interest in view could join in such ventures as industrial plantations, industrial wood, pulp and paper etc.

Exports : As noted in the last issue (p 584), the first four months shows not only an unfavourable trade balance of Rs. 250 crores, what is really serious is the sharp deline exports during April-July 1978 to Rs. 1,634 crores compared to Rs. 1,809 crores in April-July 1977. The fall in exports during the 4 months was Rs. 175 crores or 9.7 per cent (and not 1.5 per cent as reported in the last issue). In July 1978 exports declined by Rs. 386 crores compared to July 1977, and at this rate RBI in its annual report observes that in 1978-79 exports may not reach the low growth rate of 4.4 per cent in 1977-78. Part of the explanation may be that during this period the Rupee appreciated vis-a-vis the US dollar, favouring imports. Even so, there has been a serious export setback particularly in textiles, iron and steel. In contrast imports have rapidly expaned during the four months by Rs. 329 crores or 20.8 per cent compared to April-July 1977. The liberal import policies, to which in October the liberal imports of raw materials for the cut silk and synthetic fibre industry should be added, not only aid the domestic industry to attain capacity production, they also increase industrial efficiency. The immediate problem is to expand exports and on this the report of the task forces on important products are good and useful. Agricultural items like wheat, sugar and rice are to be increasingly exported on the basis of increased production of the items. The government approved in October export of 75,000 tonnes of onions from the coming crop. Following the recommendations of the taskforce on Jewellery exports, a modest beginning with an export of Rs. 15 lakh gold jewellery to the Gulf Countries was made, and with the change in the present requirement that the minimum value added should be 33.3 per cent, which is a difficult requirement, exports of jewellery will rapidly expand. Another product export that is increasing is marine products which during the first four months of the current

year—April to July—has increased by 32 per cent in terms of quantity and 18 per cent in value over exports in the corresponding period of last year. 25,361 tonnes of marine products have been exported against the year's target of 73,780 tonnes and Rs. 69.27 crores earned against the target of Rs. 226.57 crores. In the case of cashew, the earnings increased sharply in 1977–78 by 40 per cent to Rs. 147.61 crores, while the volume declined by 20 per cent to 39,111 tonnes and a similar trend is continuing this year. So too in the case of coir and coir goods exports for 1977-78 whose earnings increased by Rs. 1.14 crores to Rs. 23.92 crores with a small decline in volume exported. But during the first five months, April to August, of the current year its export volume has fallen to 15,671 tonnes from 16,502 tonnes in the five months of last year, and income from Rs. 9.67 crores to Rs. 9.29 crores—due to non-availability of raw materials of the required quality and shipping difficulties. Another product with a good and expanding export potential is silk for which a well designed promotion compaign is being planned to expand further the earnings of Rs. 40 crores during the first five months of the current year. Also India will be supplying GDR with 5.72 lash pairs of leather shoe uppers valued at Rs. 3.94 crores, EEC is likely to import 10 per cent more of Indian textiles this year. MMTC is exploring links deals of exporting iron-ore in exchange for importing some other product, following the examples of Brazil and renezula in order to reach the target which is beyond the 5 per cent increase so far registered. Indo-Soviet trade which has been growing fast since 1964 is now facing a stalemate, because of India's continuing favourable trade balance with the Soviet Union which to date amounts cumulatively to Rs. 1,300 crores. Again engineering exports with their high growth rate potential are threatened by protectionist moves by US and EEC countries. While in 1976–77 engineering exports increased by 35 per cent, In 1977–78 it declined to 12 per cent, and in the first four months, April to July, 1978–79 it has increased by 18 per cent and the order books are full. Tariff and non-tariff barriers are increasing in the industrialised countries against Indian (and other LDC) engineering goods on grounds of growing unemployment and low prices of our goods. It is to counter those trends that India is opening a Trade Centre at Brussels, financed jointly by India and EEC, a nodal point for promoting and expanding trade between India and EEC on the basis of sectoral studies.

Aid: India and Japan signed an agreement in October under which India will receive 6 billion Yen as a commodity loan during the current financial year for import of machinery, components, spares, steel, fertilisers, and machinery and equipment for Bombay High. Also IDA announced in October a credit of $ 27 million for a new national agricultural research programme to narrow the gap between research and farmers' needs for new technology and information.

International :

Pakistan: India and Pakistan at a three day meeting in October in Islamabad reviewed the progress of trade over the last 3 years, following the trade agreement concluded in 1975 (see Vol V pp 149 and 210) and which has now expired. As a result of the October talks, it was agreed that both the public and private

sector in India could participate in the trade with Pakistan. Trade on the Pakistan side however continue to be conducted by the public sector agencies pending the conclusion of a new trade agreement. The two issues which concern Pakistan is the growing imbalance of the trade in favour of India and the quality of some of the Indian products. These have to be faced and resolved by India examining the possibility of diversifying purchases and imports from Pakistan to enlarge the import basket. India's desire to allow in the export-impot trade the private sectors on both sides will operate in favour of India, because of the wider range of the Indian private sector. One such means of avoiding widening the Pakistan deficit is India's proposal to set up in Pakistan a fertiliser factory based on Pakistan's natural gas and purchase of the product from them. This has other implications for Pakistan which wishes to examine it after the new agreement is concluded. The other issue is that Pakistain's nascent industries may be hurt by Indian competition. This is true and can be countered only by agreed action by the two governments.

China: India's negotiations with China for a large and continuing export of iron-ore has been referred to earlier. India is also interested in technical collaboration with China in silk. China stands first in silk technology in the world and India which is the fifth largest producer of silk (3,600 tonnes) could expand its product quantitatively and improve its quality with the help of Chinese technology.

World Monetary Reform: Further to the decision of the Interim Committee of IMF on the new allocation of 12 billion SDRs referred to in the last issue (see p 585), India's share of this proposed second SDR allocation is 358 million SDR or $ 447.5 million during the next 3 years. India will be adding to its foreign exchange reserve 119 million SDRs in January 1979 in the first of the 3 years, and in accord with the IMF decision for 25 per cent of the increase to be paid in SDRs, India will be paying 143 million SDRs in 1979-80. There will be a net addition to its reserve over the 3 year period of 215 million SDRs. The Interim Committee also decided on a 50 per cent increase in the total of quotas of 138 countries. In the previous (sixth) quota review, the total quotas were raised to SDR 39 billion, and now in the seventh review to SRD 58 billion. India's quota which is 2.98 per cent of the shares in total quotas and which is at present 1,145 SDRs will go up to 1,717 SDRs as a result of the 50 per cent increase. The increase in quotas will enable the member countries to have larger drawing from IMF to meet balance of payments deficits. Indian foreign exchange reserves (other than gold and SDR) was Rs. 4,640 crores on September 30, 1978. There was a net decline in the reserves in June and July because of the revaluation of the rupee, purchase of gold from IMF and repayment of IMF of the 1975 oil facility of 201 million SDR. The net increase in foreign exchange reserves in the first 6 months, April-September, 1978 was Rs. 150 crores compared to the net increase of Rs. 1,694 crores in 1977-78. On October 23, Saudi Arabia revalued its Rial against the US dollar at 3.29 Rials to the dollar (from 3.31 Rials).

World Debts: An UNCTAD experts committee from 50 countries meeting in October in Geneva agreed upon guidelines for a multilateral framework within

which the debt problems of the developing countries could be dealt with expeditiously and systamatically. This is significant because it was one of the rare occasions when both developed and developing countries agreed on 4 objectives: (a) enhancing development prospects of the developing countries should be a key consideration in debt reorganisation: (b) such debt reorganisation should be expeditious and timely: (c) should aim at restoring the debtor country's capacity to service its debt over both the short and long term run and (d) reinforce the developing country's own efforts to strengthen its underlying balance of payments and situation and should protect the interests of debtors and creditors equitably in the context to the New International Economic Order. The question of institutional arrangements, the forum for action, was not however agreed upon and will have to be dealt with by UNCTAD itself, West Germany decided in October to cancel the debt of 30 of the poorest countries, involving 4,000 million marks or Rs. 1,600 crores which is the principal and interest till 2028 AD. This decision, it is emphasised, will not involve any decrease in aid but increase the net outflow of aid from West Germany.

Technology Transfer: The other UNCTAD meeting in Geneva in October to draw up a code of conduct for the transfer of technology by the Transnational Corporations to the developing countries however ran into the usual North-South conflict from the start. The basic problems faced by the developing countries are: (a) the cost of the technology they buy which in direct costs amount to 6 to 10 per cent of their fixed capital formation totalling 10 to 15 billion dollars, and the indirect costs involoving delayed or inadequate transfers, inappropriate choices of technology under high pressure salesmanship for producing goods or low social priority and where foreign entreprises exercise total control without the nationals, acquiring any mastery of technology, all these amount to 30 to 50 billion$ a year, a sum which could increase by 5 to 8 times if the share of the developing countries to reach 25 per cent of the world's industrial production by 2000 AD is attained in accordance with Lima conference decision: (b) the strings attached to the technology transfer in the matter of exports of the manufactured products and the freedom to share the technology with other firms in the country: and (c) the freedom of the Transnationals from the local courts and laws and other stipulation in the transfer contracts of which courts and laws they will recognise. It is against the background that the developing countries were unitedly pressing for an internationally binding code of conduct for the transfer of technology by the Transnational Corporations to the developing countries. EEC countries are not opposed and the Soviet and other East European Countries have not taken a stand. But US and Switzerland which have large and strong Transnational Corporations have refused to accept even a voluntary set of guidelines and have even threatened a walk out. At the heart of the New International Economic Order is this Technological Order and both north and south know this.

GATT: As the multilateral General Agreement on Tariff and Trade (GATT) negotiations are moving towards the deadline of mid December, it has became clear that the negotiations will not be completed by that date and negotiations will have to be extended to 1979. The

main unresolved issue is the complex one of an international code on subsidies and counter vailing duties. The issue is apparently one between the US on the one side and EEC on the other, because the EEC refuses to negotiate under the threat of the US deadline which is the end of the year, when the legislation authorising and the US President to waive countervailing duties on subsidised imports into the US expires. The USA Congress rejected a bill to extend this power and so the air of crisis. But the issue concerns all countries particularly the developing ones. The US proposed a 3 tier formula: (a) prohibited subsidies which would automatically trigger countervailing duties; (b) internal subsidies which were causing material injury to foreign products and would call for countervailing duties in the importing countries; and (c) internal subsidies with minor, indirect trade effects and so not calling for countervailing action. EEC, with Japan and Canada oppose any automatic triggring of countervailing duties unilaterally and under any circumstances and propose a strict injury test, involving an evaluation of a subsidised product's penetration of a complaining country's product, and if that test is positive an evaluation of the turnover, prices, employment, profits and investment of the product in the affected industry. At bottom, there is here a division between those who believe that the market should be allowed to settle the most efficient allocation and use of resources, and those who believe, that the state must intervene to decide this because a liberal trade system assumes that states are in similar stages of development, with similar economic systems and similar competitive capabilities. This is certainly not so far the developing countries economies. Hence the need for a code on subsidies and countervailing duties with effective procedures for consultation and settlement of disputes. This involves agreement among the GATT negotiating states on (a) whether the subsidy is the principal cause of injury, (b) whether countervailing duties can be imposed automatically or only after authorisation of a special panel of GATT; (c) the extent to which the code should cater to the special needs of the developing countries; and (d) the extent to which the arrangements will apply to agriculture and primary products trade. This is one but perhaps the most important element in the trade liberalisation package being negotiated at Geneva on which the future of expanding international trade and the developing countries rests. Meanwhile the GATT Multi Fibre Agreement (MFA) concluded last year (see Vol VII p 510 and Vol VIII p 83) was reviewed at the annual meeting in London of International Federation of Cotton and Allied Textile Industries and showed that textiles remain one of the most turbulent international business sectors. The review showed that the bilateral agreements under MFA have not produced an orderly international textiles trade, the basic problem being for both the present and future that too many people are making too many textiles, and as an important employment generation source no industrialised country is willing to shift from its production. The developing countries are finding the opportunity of developing their textile industry and earning foreign exchange blocked by the developed countries. Taiwan, Hongkong, South Korea and Singapore have emerged as major exporters and are finding the doors of the industrialised countries closed to them. On the part of the latter,

until they decide to move out to more competitive and high technology industries, the present impasse of protecting their domestic textile industry will continue. What is needed is a new international division of labour, but that is still only a distant dream.

World food: FAO raised in October its estimates for this year 1978–79 of world wheat and coarse grains production from 1.01 billion tonnes to 1.14 billion tonnes, which is 48 million tonnes above last year's mainly to good weather in US, Western Europe and USSR, counteracting the lower level of production in Canada. Similarly the US Department of Agriculture estimates a record world rice production of 375 million tonnes for 1978-79 compared to 367 million tonnes in 1977–78, due to larger crops in China, India, Indonesia and Thailand which produce 2/3 of the world rice output, while Japan, Burma, Egypt, Peru and Ecuador will have lower yields.

World Copper, World Oil, and World Coffee: The October meeting of copper producing countries in Geneva could not reach agreement on an international body to monitor the world copper market. The developing countries want UNCTAD to set up and run the monitoring body. Industrialised countries want an autonomous body similar to other international commodity arrangements. EEC's compromise to link the body to UNCTAD also was not accepted by either side. The discussion will be resumed later. Crude oil which supplies 55 per cent of the world's primary energy, according to a UNIDO study, will continue to provide 50 per cent of total primary energy till 2000 AD. Given the projected size of shortages, under the high growth scenario, other fuels will have to provide 75 per cent of the energy from 2000 AD. Under the low growth scenario the absolute amount of oil shortage in 2000 AD will be 20 million barrels (which is 2/3 of OPEC production in 1976), and under the no growth scenario oil shortage is postponed to 2000 AD. If future oil demand increased only at 1.4 per cent a year, absolute oil shortage could be postponed to 2020 AD. The annual production estimate various between 10 billion and 20 billion barrels depending on the discovery of new sources and improved recovery techniques. Summarily UNIDO concludes that under the high growth scenario, the world will run out of oil two thirds of the way to the Lima target of 20 per cent of industrial production by the developing countries by 2000 AD. Under the low growth scenario it will be in 1998. Hence in view of future oil prospects, only the no growth scenario is a feasible proposition. On World coffee, producer and consumer countries meeting in London under the International Coffee Organisation in the second half of September failed to reach agreement on new coffee support prices. The price machinery, under which quota controls will come automatically into force to keep prices from falling could not be agreed upon, as the US wanted lower support prices to increase coffee consumption which it states have been reduced by high ruling price.

Child Labour: An ILO report states that at least 52 million children, many less than 7 years have to work for their living all over the world. This is reported only by 70 member states of ILO, so that there must be many more children

at work if all countries had reported. 42 million children are working on family farms for no payment. In South Asia 42 million under 15 work under difficult conditions. In 1979, the International Year of the Child, there will be 1,500 million children forming 25 per cent of world population and by 2000 AD they will be 40 percent of the world's labour force. During the year, ILO plans to see that laws to protect children are enforced.

World Energy: The Commonwealth Regional Consultative Working Group on Energy meeting in October in New Delhi dacided to establish applicable systems of renewable energy within a short time. The group comprising the 9 commonwealth states of Asia and the Pacific elected India as the coordinator to follow up the decisions. India and Australia will train commonwealth personnel in the operation of biogas solar energy and other non-conventional sources of energy and for accelerating the progress in taking energy to the rural peoples. R and D results and experience from prototype and demonstration and studies on optimisation of cost reduction will be shared among the countries. New Zealand has made progress in geothermal energy, Australia in solar and wind energy and India in biogas and solar energy. Now the task is to work out the social, economic and financial aspects of introducing these technologies as total energy systems for the rural communities and move the technologies out of the laboratory stage to the field.

ABU: The 15 day conference of the Asia-Pacific Broadcasting met with 60 delegates and observes in New Delhi in October and decided to use TV and Radio more effectively in the service of rural development. In this connection it was decided to study the problem of cost reduction in the use of satellites for education purposes. It also decided to expand the exchange of programmes between the countries which had the same common objective of fighting against poverty. The prizes awarded at the conference reflected the wide cultural and social background of the countries.

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II Agricultural Development

Paddy :

4 lakh acres in Thanjavur district are under kuruvai paddy. In Tiruchirapalli district 78,000 acres out of 84,000 acres of kuruvai have been covered with high yielding varieties like ADT-31 and IET-1722. Harvest is in full swing in the state in October. The average yield this year is 2,200 to 2,500 kg per acre compared to last year's 1,898 kg per acre. In order to identify the best new strains, trials are being conducted in 10 plots in the district with

ADT-31. AD-7486 and TKM-9, which have a duration of 100 to 110 days. Samba plantings have commenced in the district over 1 lakh acres out of the targetted 2.69 lakh acres with Ponni and IR-20 paddy. One problem thrown up in the Thanjavur district for large and small landowners as well as agricultural labourers is that despite the bumper crop expected, the possibility of their getting a remunerative price for their paddy is causing anxiety. There is the problem that even 2 paddy crops are not paying, so that an integrated programme combining a dairy or coconut plantation or multiple cropping is needed. The Union government is firm that the states should not pay more than the announced procurement price (see last issue p 590). The price of Rs. 85 per quintal is widely believed to be inadequate. On top of this, even if there are no distress sales in Thanjavur, the kuruvai paddy harvested in late October because of the rains had heavy moisture content upto 25 per cent, and therefore the price being offered is between Rs. 42 to 43 per 57 kg against the government fixed price of Rs. 48.45 per kg of 57 kilos. There is a demand for the government to open more paddy purchase centres (beyond the 43 of the States Corporation and 28 of FCI) to offset this lowering of the price. Also the returns on double cropping (one kuruvai and one thaladi) seem to be falling to Rs. 389 per acre compared to the return on a single crop estimated at Rs. 293 per acre, which may in part explain the reason for only 4 lakh hectares in Thanjavur district being under kuruvai instead of the normal 4.5 to 5 lakh acres. The state government announced at the end of September that there will be no levy on kuruvai paddy or rice movement from Thanjavur district to places outside the state until December 15, as one means of ensuring a good price for the kuruvai crop. On paddy and rice moved from other districts to places outside the state, the levy has been reduced from 50 pet cent to 20 per cent and also there will be no levy on stocks of kuruvai paddy taken to other districts from Thanjavur for milling and moved as rice to other states. The kuruvai harvest is estimated at 5 lakh tonnes of paddy.

Research Results :

Dry farming research received encouragement from the successful experiments carried out in the unirrigated black soil area of Malwa and its small farmers with their greater resources in manpower and bullock power. Developing a technology, based on crop plans for individual farmers according to soil depth, slope of fields, better management of soil and water including construction of water division bunds, grassed water ways, waste waters and sewage reclamation and use of proper seed and fertiliser, tree plantation and pasture improvement and livestock development underway. On the crop pattern in place of one crop of either kharif or rabi, the farmer was able to raise two crops—sorghum, maize or soyabeans in kharif and gram in rabi and triple his net income from Rs. 157 per hectare to Rs. 627 per hectare. Research into inadequate use of fertilisers by farmers using HYV seeds in the Pudukottai area shows some rather well known causes: inadequate land and irrigation facilities, non-availability of inputs within easy reach of the farmer; shortage of credit and product marketing problems. Once these problems are attended to in a systematic manner through weekly audit of each farmer's input and credit needs

and cooperatives and other group of farmers set up to laise with government and financial agencies to meet these needs, there was a five fold increase of fertilisers per farmer per acre and a similar spurt in crop output. Another area where research is producing the kind of break through results so far associated with wheat is in regard to paddy, where as noted earlier, the last 2 years have seen a large and sizeable expansion. Further research on the growing of paddy under various types of water availability has begun and should be pursued. For instance 10 millions of the 40 million hectares under paddy cultivation in the country are under deep (50 cm and more) water, semi-deep (30 to 50 cm) and intermediate depth (15 to 30 cm) water for which flood tolerant varieties of seeds and plants which can withstand five to eight days of submergence should be used. In the upland areas of Assam, Uttar Pradesh, Madhya Pradesh, West Bengal and Orissa where there are 4 to 6 million hectares of paddy growing land averaging 500 to 800 kg per hectare, a low input oriented technology, using 90 days duration strains and premonsoon mechanised field preparation can increase yield to 1,500 kg per hectare. Without adequate weeding, crop losses can be heavy varying from 50 to 85 per cent and use of various weedicides is recommended where labour is scarce. A good organic fertiliser for paddy lands in the state and the south generally is blue green algae which supplies the farmer with nitrogen at very low cost and is available at his own door step. Blue green algae can be made widely available to all farmers through panchayat unions, BDOs and paddy experimental stations. A capital investment of Rs. 7,000 will produce 400 kg of algae material along with a recurring cost of Rs. 500 per month, onwhich the return can be Rs. 1.200. IARI's Algae Cultural Bank is an important step in the development of this fertilising agent. The centre has developed a simple rural oriented open method for culture on large scale to apply in the paddy fields and adaptable by farmers. Another problem—fungus that attacks all harvested product from wheat and maize to jowar and groundnut has been the subject of research which has identified 8 types of fungi. The main research result is of course to harvest the crop when it is really ready and the drying to bring the moisture level down to 7 per cent in the case of groundnuts and 11 per cent in the case of cotton seeds. Then there is need to treat the product with small quantities of acetic acid or Vingar and drying it further. And again clean, dry, airy and insect free storage is needed to conserve these efforts and avoid fungal contamination. The Tamil Nadu Agricultural University is experimenting with drip irrigation for economic use of water in drought prone areas. Under this method, water is let in only at the roots of rows of plants through PVC pipes: Demonstration in farms show that it saves 60 per cent of water and prevents weed growth. The cost factor is serious as at present the laying of long lines of pipes cost of Rs. 97,000 per hectare which few farmers can afford. However using it for vegetable, fruit and other cash crops not only saves 50 to 80 per cent of water but also reduces the cost of Rs. 10,000 per hectare. For cotton and sugarcane water saving is 40 per cent and for paddy about 30 per cent without any effect on the crop.

Irrigation and Problems:

The state government proposes to undertake a Rs. 193 crores scheme to

renovate 500 irrigation tanks with the World Bank assistances. The bunds of the tanks are to be strengthened and the tanks deepended and desilted. The project is for 8 years and in the first year 1979-80, the allotment would be Rs. 19 crores employing 50,000 persons. When completed, an additional area of 1 5 lakh acres will be brought under cultivation. The government is also examining a scheme to prevent water evaporation and seepage in tanks by covering the surface with polythene sheets and laying black polythene sheets under water. In the Thanjavur district there is a serious drainage problem faced by farmers, who lose because of it 25 percent of their kuruvai paddy crop, do not use fertilisers because of the fear about its being washed away, hesitate about using HYV varieties, and prefer one samba to the kuruvai-thaladi cropping pattern. The pattern of field to filed irrigation is accentuating the drainage problem, and inundation of the crop land is a recurring fact in the tail end areas during the monsoons. The government is developing a comprehensive modernisation programme of the Cauvery delta, including the Sholagampatti vari diversion and Mudalaimuthu vari and the minor Ayyanavaram reservoir scheme to control floods and improve drainage. Also the Accelerated Repairs Programme (ARP) is constructing a barrage at Upper Anicut, strengthening regulations and improving distribution and will deal with 696 drains in the area at a cost of Rs. 12 crores. Already by providing additional outlets, submersion relief had been afforded to nearly 85,000 acres of land.

Dairy farming :

The state has 42 lakh head of cattle of different breeds, including 28 lakh cows. The average yield per animal is less than 1 litre per day and under Operation Flood II in the next five years it will be raised to 2 litres. Operation Flood I started in 1972 and finishes in 1979, its basic aim was to make available good milk in Madras, Bombay, Calcutta and Delhi. This has met with resistance particularly from the milk trade which is replaced by producers who through their cooperatives handle the procurement, processing and marketing of their milk and from the army of department extension officers are rendered superflows. Also the milk processing and conservation capacities in the hinterland rural milk sheds of the two cities were built up. In Madras the milk handling increased 3 fold, with processing facilities at Madhavaram and Ambattur. 1,000 milk cooperative societies owned by the producers operate in the state. Two major dairies—in Erode and Salem—are coming up. Its first phase has reduced dependence on milk imports which is around 1 to 1.5 per cent of total milk produced, and has stimulated the development of the indigenous dairy equipment industry. In Second phase the major instrument will be cluster federations, comprising 28 continuous milk shed areas. In Tamil Nadu 4 major dairies will come up as well as a salvage cum breeding farm as an integrated model demonstration.

Tea :

Despite the damage caused to the tea industry by floods in the West Bengal when 5 million kg of tea valued at Rs. 8 to 10 crores were lost, production trends are good. During the seven months ending July, the North Indian crop totalled 192 million kg (only 3 million kg below the corresponding period of last year), and South Indian production to the end of August amounted to 84.3

million kg (also 3 million Kg short of last year's). So the latest estimate is that in 1978 tea production will be 555 million kg (6 million below 1977). Since exports are pegged at 200 million kg, 335 million kg will be available for local consumption which may be 15 to 20 million kg in excess of actual demand. The unit value of tea is much lower now than the Rs. 25.20 per kg in 1977-78. It was Rs. 15 per kg in mid October and rose to Rs 22 by the end of October. On the assumption that prices will be around Rs. 20 per kg, tea export earnings this year will be Rs. 400 crores compared to last year's Rs. 550 crores. Kuwait has became interested in Indian tea and Indian tea exports to it this year is likely to be a large one. The Tandon Committee on the marketing of tea has recommended the retention of services of a chemist in every tea garden to ensure conformity to hygenic standards and to stop further deterrioration of quality. As far as this state is concerned, production in the various plantation industries registered an increase last year. The total tea output was 73.4 million kg against the previous year's 59 9 million kg. Prices also rose from average of Rs. 10.27 per kg leaf and Rs. 10.5 per kg dust teas to Rs. 17.20 and Rs. 12.80 which made it a good year for tea plantations.

Coffee :

Coffee production is planned to be increased by 25,000 tonnes to 1.5 lakh tonnes by 1981-82, and exports to increase from the present 70,000 to 90,000 Domestic consumption seems to be reaching a saturation point and so exports may be expanded. In regard to expansion of coffee estates in non-traditional areas, Assam announced its decision to bring 350 hectares in 1979 in addition to the existing 500 hectares, with a view to growing coffee over 4,070 hectares. Coffee production in Tamil Nadu increased from 8,590 tonnes in 1976-77 to 8,606 tonnes in 1977-78 and the price realised increased from Rs. 2,400 per quintal to Rs. 4,125.

Rubber :

In order to make up for the loss of 20,000 tonnes of rubber during the severe rains in June to August, the Rubber Board has launched an "Intensive Rubber Production Drive" to get small holders and of course the big ones to (a) apply 'Ethrel' to stimulate rubber yield, (b) apply fertiliser this season and in April and May next, (c) open all rubber trees which have attained tappable growth, (d) tap at correct depth and slope, (e) where tapping is on alternative days, one more day should be added, (f) rain gaurd the rubber trees so that they can be tapped in the rainy season also, and (g) adhere to plant protection measures. This compaign is being carried on in 150 group meetings of small holders, a special meeting of the Association for large holders and by radio. Meanwhile rubber imports started arriving, the first 3,000 tonnes as noted in the last issue arrived from Sri Lanka at September end and 14,750 tonnes expected from Malaysia and Singapore in 3 consignments. The price of natural rubber shot up Rs. 1,300 at the end of October, and the demand of the All India Rubber Industries Association which was used to a price of Rs. 6,750 per tonne was to import 50,000 tonnes. There are inexcusable delays in distributing imported rubber at Madras and Bombay and this should be eliminated.

III Industrial Development

Salem Steel and BHEL:

The Salem Steel plant's main rolling mill equipment for Rs. 10 crores was the subject of a contract signed in early October. The mill will be one of the most modern and fastest of its kind, and will have a capacity for rolling 32,000 tonnes of stainless steel sheets per year. It is to be built by Hitachi of Japan and will be commissioned by early 1981. BHEL, Tiruchirapalli has won the World Bank global tender for the supply of 500 MW boiler to the Trombay Thermal Plant. This will be the first 500 MW boiler that BHEL will be fabricating. BHEL won the global tender against lead boiler makers of the World and is a further proof of BHEL's outstanding quality.

Coal Shortage

Coal supply to Tamil Nadu industrial units was very short in October leading one cement factory to close down two of its kilns and all factories on the metre guage to live a hand to mouth existence. In regard to the Bihar Bengal coal fields which supply by sea over 1/3 of the monthly coal requirements of 1.5 lakh tonnes in the state, since mid August, there has been no shipment and a ship allotted at the end of September for transporting coal Tuticorin could not be loaded because of the floods in Eastern and Northern India. Singareni supplies have been erratic following labour troubles in August and the great demands on the colliery. There have been delays also due to the transhipment of coal from the broad to metre guage. Coal India is taking action to supply coal on an emergent basis to the railways, power and cement plants in the state. The tea factories escaped the squeeze because their coal supplies are from Chanda.

Cement:

Cement is in short supply as the installed capacity of the cement plant is 22 million tonnes and the production around 19 million tonnes, while the demand is around 22 million tonnes. In fact at the rate of demand growth of 8 per cent per year, the demand will be 30 million tonnes by the end of the plan period. If the plan target of 33 million tonnes is to be reached, the installed capacity will have to be expanded to 36 million tonnes at an additional investment of Rs. 1,000 crores. The two immediate problems facing the industry are increasing production through preventive maintenance, and holding the price line by reducing the cost of mining operations and energy consumption. In view of the rise in prices of coal, gypsum, power, spares etc., it is essential that the industry maintains its machinery at an optimum level avoiding costly repairs and break downs Also as the Tamil Nadu plants show, it is possible to achieve full utilisation of machinery, and so maximise production provided there is close coordination of the mechanical, electrical, industrial and chemical engineers in the maintenance of plants at different stages. Through adequate incentive sehemes the productivity of crushers, grinding mills, kilns, etc. can be increased and substantial cost reduction achieved. At a time

when cement is being imported, the maximum use of existing plants and capacity should be aimed at.

Sugar:

The 21 sugar mills in the state (10 private, 9 co-operative and 2 public sector) are facing a serious situation following decontrol. They are facing the dumping of Maharashtra mills sugar which is being sold at Rs. 174 per quintal in Tamil Nadu, while Tamil Nadu mills costs workout to Rs. 235 per quintal. Before decontrol, their average free market realisation came to above Rs. 247 and now they have no demand at even Rs. 190 per quintal. The Maharashtra mills, where costs are lower than those of Tamil Nadu are selling below their costs because of the huge production of 21 lakh tonnes—the largest of any state, followed by Uttar Pradesh at 19 lakh tonnes. Hence Maharashtra mills have a stock of 2.54 lakh tonnes compared to Temil Nadu mill's stock of 2.73 lakh tonnes. Maharashtra's small grain sugar E-30 is like that of Tamil Nadu and has no market in the North, where the preference is for the large grain sugar D-30. The result is that sugar is being sold in Tamil Nadu at Rs. 2.45 kg, way below the predecontrol open market price of Rs. 4 per kg, and even Diwali has not led to traders lifting stocks from the mills. The result of the large accumulation of stocks and marketing losses of the mills has led them to postpone the start of the cruhsing season which normally should start in October but did not as at the beginning of November. They will begin crushing when the condition of the cane force them to. This year, the mills are planning to crush 61 lakh tonnes against 57 lakh tonnes last year and the targetted sugar out put is a high 5.37 lakh tonnes compared to last year's 4.9 lakh tonnes. The Union government's relief decision is awiated in this state with interest.

Ashok Leyland and Rice Mills:

Ashok Leyland is awaiting the Union government's approval to raise production capacity from 10,000 trucks to 30,000 trucks a year at an investment cost of Rs. 100 crores. The first phase of increasing the capacity to 15,000 vehicles is already under execution and will be completed in 1980. Side by side with improving the quality of the trucks, there is urgent need for the company to educate the purchaser on maintenance of the trucks, which is the weak point in this country. Rice mills in the Thanjavur district are going through a crisis. The district has about 1,000 large and small mills, including 300 big mills with facilities to hull 25 tonnes of rice per day and store within godowns 1.50 lakh bags of paddy. A number of them have closed down and others are fecing closure, they state, of the government regulations on quality and outturn of the rice milled. The sickness is serious in the 300 big mills, 50 of which function for 9 months, 30 for 6 months, another for 3 months and the rest are closed down. The rice mills (see Vol I No. 11 p 9 and Vol V p 19) are said to offer serious competition to these conventional mills. One suggestion to overcome the sickness is for the major part of the foodgrains exported from the district to be in the form of rice.

Textiles:

In August 1978 the total yarn production—cotton, blended, viscose—in the 182 member mills of SIMA was 1.37 lakh bales of 180 kg each, of which the estimated cotton yarn was 1.03 lakh

bales. Allowing for consumption of yarn for production of cloth within the composite member mills, the quantity available for the decentralised sector from the August production was 83,000 bales of cotton yarn 12,500 bales of blended yarn and 19,768 bales of viscose yarn. The physical stock of cotton yarn with the mills at the end of August was 29,226 bales of which 18,897 bales were unsold stock At the end of September, the management and trade unions of the textile mills in the state reached agreement on the bonus issue under which 60,000 workers benefit and so the threatened strike was called off in both the private and NTC mills. In addition to the bonus ranging from 8.33 per cent to 20 per cent, workers received one additional amount for ensuring uninterrupted working of the mills in 1978-79.

Handlooms and Khadi:

For the first time in recent years, the primary handloom weavers' cooperative society has no accumulated stocks and Co-optex, the apex body, has brought down its stock position to Rs. 13 crores, and helps to sell Rs. 12 crores during the Diwali season. For 1978-79 Co-optex has set itself a sales target of Rs. 30 crores, (Rs. 7 crores above last year's). In 1977-78 it wiped out its piled up deficits and made a profit of Rs. 12 lakhs. The Co-optex is modernising its showrooms in the taluk headquarters and the other major towns and streamlining its retail outlets in areas like Madras there were several showrooms. The government also announced its plan to organise the over 55,000 loomless weavers in the state into industrial co-operative societies by the end of the current Plan. Already 5,000 weavers have been so organised. The Plan target for the cooperative sector's coverage in handloom industry was 60 per cent against the current 33.3 per cent. During the current festival season, Rs. 1 crore of khadi has been sold and year's sales target is Rs 5 crores. The government's recent order that its departments should buy their cloth, paper etc. from the Khadi and Village Industries Corporation was helping in sales and exports. In a gesture of solidarity, handloom readymade garment exporters diverted their export consignments of readymade garments to West Bengal to meet the cloth needs of flood victims. They have offered the garments at a 10 per cent rebate, and have forgone another 10 per cent in cash assistance and replenishment license. This also cleared the accumulation of the handloom exports and gave time for negotiations with the US to be concluded. Meanwhile there has been a steady rise of Tamil Nadu handloom exports from last year's Rs. 1 crore to the expected Rs. 3 crores this year, which will further rise to Rs. 10 crores by the end of the Plan period.

Leather:

The Leather Export Promotion Council expects to export over Rs. 300 crores this year (last year Rs. 257 crores). In April—September 1978, finished leathers exports increased by 73 per cent compared to the 6 months period in 1977. There is an urgent need, it points out, for the tanning industry to consider how prices of the raw materials can be contained to counter the high cost of raw material and the acute shortage of chemicals. Foreign buyers are resisting price increase to meet these increased costs, and the highly advanced tanning and finishing industry in Europe are resisting the attempt of the Indian

Leather Industry to penetrate their markets. Against this background, the recommendations of the government task force on leather and leather manufactures became important. It proposes a packet of measures to increase leather exports from the current Rs. 300 crores to Rs. 500 crores, which include reducing import duties to 40 per cent on chemicals exclusively used by the leather industry, reviewing the flat draw back rate of 3.6 per cent, permitting liberal imports of chemicals, component, accessories for footwear including duty free import of wet blue skins under open general license, allowing the sales made by a financed leather unit to another unit to be set off against the farmer's export obligation and taking a major initiative in exporting finished leather and leather manufactures in view of the sharp rise in the prices of American hides. It recommends that effective availability for 1978–79 should be taken as 3 crore pieces of hides and 6.2 crore peices of skin, and the export quotas on these should be so regulated that the balance of domestic availability left after meeting the finishing industry's requirement is taken as the base for refixing the quotas. These sound recommendations should be processed at an early date by the government and implemented. The West German leather industry has offered to shift certain lines of its leather production to India and train Indian technologists and workers to produce leather goods for the West German market. The labour intensive part of the industry will shift to India and West German workers would move to more productive areas as a consequence.

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IV Education, Science and Health

Educational Unrest and Education Reform :

In October, unrest in the form of strikes, violence, police lathi charges and teargassing and in some cases stabbing is reported in 18 colleges and university centres—Bombay in agitating against foundation course, Coimbatore over student elections, Madurai in quarrel with bus transport crew, Tuticorin over student admission, Thanjavur over intrastudent rivalry, Mandya, Shimoga, Mysore and Gulbarga over agitation against the Vice-Chancellor, Chingleput over security of women students, and Jumma over student admissions and bus fares. In addition colleges in Madras were closed for 10 days in advance of the Diwali holidays, because of the general strike organised in the state by the opposition parties.

On the education reform side, in higher secondary schools in the state, it was decided that there will be an internal examination at the end of class XI with common question papers at the revenue district level in order to achieve common levels of attainment. The fourth all India Mini Educational Survey was launched in Tamil Nadu in October to collect the most up-to-date base line data for the preparation of a practical realistic plan for achieving universal primary education in the state. The survey will be completed in 12 months and will involve assessment of basic minimum facilities in schools and preparation of block maps in places where new schools are opened. The 2,270 single teacher schools are to be converted into multi teacher schools. The government also announced that physically handicapped children in standards I to VIII will receive in all schools scholarship and free bus passes in 1979, which is the International Year of the Child. Madras University has decided to make Community and Social Service a separate part—part IV at the undergraduate level, with separate grading at the undergraduate and post-graduate level, and concentrate it on the first four semesters of the former and the first two semesters of the latter. UGC in October issued guidelines requiring that those who enter a postgraduate course should have also done a 3 year undergraduate course. In the case of a 2 year undergraduate course as in Uttar Pradesh and West Bengal, a one year bridge course to postgraduate education will have to be undertaken by the student. It has also provided that 20 to 25 per cent of the 3 year course should be devoted to foundation courses in humanities, social sciences, natural sciences along with projects and extension work, and the remaining time devoted to the core programme. It has suggested the updating of courses and flexibility in the combination of courses which should be broken up into smaller modules of learning. Books by Indian authors in regional languages, substitution of class room lectures by tutorials, seminar, library and self study and sessional evaluation, grading, semester system and the question banks are also provided in the guidelines. The country's first independent radio station for education went on the air in Poona University at 6 p.m. on October 10. It covers 40 kilometres and will be received by radio sets installed in several institutions.

Cultural Planning :

A working group of the Sixth Plan on Art and Culture has recommended the outlines of a cultural policy for the country aimed at ensuring that the country's rich cultural heritage is preserved and further developed in tune with the demands of contemporary society through (a) recognition of the phenomenon of natural cultural flow that existed and should be refurbished in the traditional society among different regions, social strata and faiths in the country; (b) reorientation of curricula as part of a comprehensive effort to impart cultural content in education, agriculture, tribal development, tourism and industry, giving importance to the traditional oral learning as a methodology rather than as a stage of preliterate society; (c) bridging the gap between experts in our traditional branches of knowledge and those in the western system by a system of fellowships to creative artists and writers without university qualifications and in paleography, epigraphy and numismatics and in languages like Burumji, Modi, Rajasthani, Old Bagre, and ancient Maitei in which it is difficult to find experts; (d) linking tourism

development and town planning with preservation of monuments, of development of museums and aid to preservation of manuscripts; and interstate exchange of exhibition' (e) a pilot project to highlight the contribution made by the depressed classes to the richness of our traditional arts and crafts; (f) the establishment of a National Endowment of Arts. This refreshing over view of a cultural policy for the country should now be accepted and acted upon.

Technical Education :

The need for reviewing engineering education and technical training programmes in the country in order to meet the increasing need for a cadre of interdisciplinary professionals who can recognise and tackle the problems of society in a creative way was emphasised by the Chairman of NCST in October. At the same time the conclusion of a research study on Engineering Education in the country recommends bringing Engineering education under a single technical education commission (like the UGC) to evaluate and support educational programmes and promote research. The undergraduate engineering course should be restructured and diversified, introducing electives with a credits point system. Manpower information and fore casts should be equally made available to educational and government agencies responsible for educational and professional planning. A national manpower information system should be created, the study emphasises, for the storage, updating, retrival and analysis of manpower information to assess technical education. The cost-benefit measures should be taken into consideration. At the southern Regional Committee of the All India Council for Technical Education, the State Minister of Education proposed that "the community polytechnics" suggested by the Union Education Ministry working group should be implemented with aid from the Union government. These polytechnics would involve themselves in rural development in a big way, and will serve as focal points for the transfer of technology. In each state, one or two polytechnics would be chosen for this purpose, and ensure that the advances made in science and technology be reflected in the tools used by the village artisan—the carpenter, mason, potter etc. The engineering curricula in the state is being restructured to meet the needs of industry, and the lack of polytechnic institutions in the district of Dharmapuri, Nilgiris and Pudukottai was being reviewed in light of the All India Council's view that the present intake of engineering institutions at all levels were adequate for the country's needs for the next decade. With regard to Agricultural Research, the Planning Commission has emphasised the need to establish an effective link between the research laboratory and the field, and the role of the agricultural universities in integrated rural development, involving working on command area development in agriculture in irrigated areas and water shed management in unirrigated areas. The plan to develop multi disciplinary research centres to look after fundamental work required for the region as a whole in agriculture, animal husbandry, fisheries, forestry etc. and at the same time to take care of the coordinated research projects in the region was discussed and elaborated at the meeting of the Planning Commission with the Agricultural Universities. The Union Health ministry and the Medical Council of India are discussing the question of reserving a certain percentage of seats in postgraduate courses of medical

colleges for SC and ST students and the use of regional languages as the instruction medium in medical colleges. The Union government wishes to lower the minimum marks for medical college admissions for SC and ST students which is opposed by the Medical Council on grounds of not lowering standards: the Union government also wants to move domicillary restriction for admission of SC and ST students which the states oppose because they wish that thier SC/ST students be provided this opportunity: the states and the Medical Council also oppose use of the regional languages because of the lack of texts and materials in the regional languages. This question has been remitted to a UGC study group for further review. At the October meeting of the Central Council of Health, a national policy to make medical education serve as an instrument of social justice was set forth and debated. The policy is aimed at changing medical education in the country from its present disease oriented and hospital based teaching programme to preventive, promotive, curative and rehabilitative aspects in a balanced manner as a means of providing need-based health care for the masses. This mix involves interalia urban located medical colleges using an urban slum for imparting community orientation instead of the 3 primary health centres which other colleges will use; each college will be supplied with 3 mobile clinics: admission policy should be changed in favour of rural and SC/ST candidates, and there is the question of regional languages referred to above. The policy will be finalised in light of comments from university and professional associations. It was also decided to place a practitioner of Ayurveda, Unani or Homeopathy as a third doctor in primary health centres.

Science :

As noted earlier BHEL is developing small decentralised solar power packages to take power to remote rural areas where conventional transmission networks are unlikely to be established in the next decade or two. These energy packages will harness not only solar but also wind and biogas energy and provide an optimum of electrical, thermal and mechanical energy to meet the requirements of a particular area. CECCRTI Karaikudi reports development of several products, as a result of work on devices or processes based on solid state electro-chemistry. One is luminiscent transfer paper from indigenous raw materials which transfers secretive communications invisibly and makes them visible under ultra violet light. Work on cadmium sulphide and cadmium selenide photo sensitive cells have been completed, as have preparation of luminescent panels and infrared detectors, with work starting on the feasibility of making thermo electric generators. A 13 member Department Board for the Ocean Science and Technology Agency has been set up with the Prime Minister as Chairman to plan and coordinate work relating to oceanography, the ocean atmosphere, ocean waters, oceanflow and ocean crush. This will facilitate the study of the physical, chemical, geological, environmental and related aspects of ocean science. ICAR announced in October that in 1000 out of the 2300 blocks, selected for integrated rural development, ICAR would run an intensive education programme so that by the end of 1981 there would be full employment in those blocks. For next year, the farming system of 50,000 farm families is to be improved through the introduction of the latest technology.

ICAR also announced that it is planning to start central Institutes in neglected areas like buffaloes, goats, poultry etc. It is sponsoring a number of projects for the development of agriculture and allied sectors in hill areas, such as the gene sanctuaries in Nagaland for the preservation and development of economic plants, biosphere preserves in the Himalayan region dealing with the problems of scab and codling moth in horticulture in Jammu and Kashmir and the Rs. 80 lakh research project to promote agriculture and animal husbandry in Ladakh. A new science foundation—the Decospin Research Foundation—has been started in Bombay to research into textile techniques that can meet the changing needs of the textile industry. It is now visited by many textile industrialists to get their problem solved. The Foundation advises on loomsetting and quality and efficiency in production and help in improving productivity and diversification of sorts woven on power looms and development of new designs. ATIRA announces that it is engaged in a continuing project to improve the cleaning of Indian cottons which has shown that seed coats from the major constituent trash in Indian cottons, conventional blow room machines have relatively low efficiency in removing seed coats and the flat on cards extract seed coats preferentially. In the next phase it will concentrate on design modification on gins to reduce disintegration of seed coats. India has joined with Pakistan and Sri Lanka in recommending to the preparatory committee for the UN Conference on Science and Technology for Development a United Nations Fund for Science and Technology to finance science and technology projects under a global S and T plan.

Health :

The community health workers schemes launched on Gandhi Jayanthi Day in 1977 in 721 primary health centres is proposed to be extended to 961 centres additionally from October 1978. The ministry's evaluation of the scheme states that a majority of community leaders, BDOs and Panchayat presidents feel that the scheme is the answer to problems of rural health. 59 per cent of the community health workers spend 2-3 hours a day attending to the health of the people and it is regarded as adequate. There are 54,000 primary health centres and 39,000 subcentres which give technical guidelines to the health workers. All states except Tamil Nadu Karnataka and Kerala have accepted and are implementing the scheme. A Union government team is coming to Tamil Nadu to evaluate the alternative state scheme of mobile medical teams for delivery of health services to rural areas, in response to the state's request for Union aid for its scheme. The Fifth joint Conference of the Central Council of Health and Central Family Welfare Council meeting in New Delhi in October recommended the constitution of a high level national body headed by the Prime Minister in order to have a national concensus on the birth control programme and for the introduction of effective incentives to revive the programme. It will be recalled that the Family Planning Foundation had recommended the setting up of such a National Population body and the present Conference also recommended that similar committees should be set up at the state, district and other levels. Noting with concern the dismal picture on family planning in 1977-78 and the first half of 1978-79 when the percentage of protected couples declined from 24.4. per

cent in 1976–77 to 22.5 per cent in June 1978 and population growth has increased by 0.2 per centage in this short period, the conference recommended incentives for the programme comprising monetary benefits, grants, scholarships and award of house sites. It calls for support from all political parties, setting up and meeting targets and extension of massmedia and orientation of medical education in rural areas. The special problem of the Hindi "sterilisation belt" comprising Uttar Pradesh, Madhya Pradesh, Bihar, Himachal Pradesh, Rajasthan and Haryana needs special attention. The Union ministry announced that small sterilisation camps will entitle the organisers to an additional assistance of Rs. 5 per case of vasectomy and tubectomy over and above the compensation of Rs. 120 per case of tubectomy and Rs. 100 per vasectomy. Another important population control measure is that contravention of the Child Marriage Act was made a cognisable offence from October 1. Under the Act, marriage age for girls has been raised from 15 to 18 and for boys from 18 to 21. The administrative machinery has been set up in all states. From October 16 an intensive motivation and service drive on family planning was launched in the state for a fortnight. The states target is 2.76 lakh sterilisation and mass media, cultural programmes *patti-manrams*, exhibition are being used to popularise the programme and attain the target. In Calcutta, the world second test tube baby, through the embryo transfer technique was successfully completed and the parents (the mother had her fallopian tubes blocked) are pround of their child. In the State, the mini health centres started by the Government in cooperation of voluntary organisation in rural areas have increased, 1000 families being looked after by each centre under a doctor. In October a patient monitoring system and a third operation theatre in the General Hospital Institute of Cardiology were inaugurated, adding to the excellent facilities of the hospital.

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V. Employment

The Rural Labour Enquiry 1974-75 by the Labour Bureau of the Union Labour ministry confirms the trend towards sharp rise in the number of agricultural labour households shown in the 1971 census. The estimated number of agricultural labour household in 1974–75 was 20.34 million (25.2 per cent of all rural households) compared to 15.34 million (21.8 per cent of rural households) in 1964–65 as shown by the Rural Labour Enquiry of 1963–65. In the 10

year period, the number of rural households increased by 16.6 per cent but that of agricultural labour households more than doubled to 35 per cent. Among agricultural labour households, the proportion of those with land increased sharply from 6.74 million to 10.21 million, by 51.5 per cent. The number of agricultural labour households without land rose from 8.60 million to 10.53 million by 22 per cent. This move of small peasants into the ranks of agricultural labourers was not due to increased employment opportunities. The average number of days of wage employment in agriculture for members of the agricultural labour household declined from 208 days for men, 138 days for women and 167 days for children in 1964–65 to 185 days for men, 129 days for women and 145 days for children. The average number of days of self-employment increased marginally from 30 to 33 per men, 27 to 35 for women and 62 to 78 for children. The decline in the volume of employment was not compensated by a rise in real wages. Money wages went up from Rs. 1.43 in 1964-65 to Rs. 3.24 in 1974–75 but when deflated was only Rs. 1.23. As a result while 61 per cent of agricultural labour households were in debt in 1964–65, in 1974–75 it was 66 per cent. The average debt per household increased from Rs. 244 to Rs. 584, Moneylenders were the principal source of loans and their share in total indebtedness went up from 30.6 per cent in 1964–65 to 47.8 per cent in 1974–75. The enquiry also reports that only 2 per cent of agricultural labour households were aware of the Minimum Wages Act and only 1 per cent belonged to any organisation or union. The employment perspectives before the country are awesome. The country's population is increasing at present at the rate of 33,000 a day and 1.20 crores a year, which means the creation of 35 lakh jobs every year, bearing in mind that the Planning Commissions computation is 40 lakhs entering the labour force annually. Against this, the food for work programme this year will generate an additional employment of 400 million mandays and could become a major instrument of rural development and employment. There is some doubt as to whether the Union government's decision reserving jobs carrying a monthly salary upto Rs. 800 for "sons of the soil" in all Union government undertaking is wise. It is no doubt a correction of the existing ceiling of Rs. 500 but this intervenion with labour market seems unnecessary, as the local people have a natural pull and could be left alone to execute it. The Industrial Relations Bill introduced in Parliament at the last session and being examined by the Joint Select Committee is the subject of wide ranging discussion in the country at conferences and seminars of trade unions, government Labour and Employment department, chambers of commerce and employers organisations. As of now the trade unions have come out against the Bill because of the restrictions on the right to strike in essential services, its explication of the use of unfair practices like gheraos and the intervention of government in industrial relations The national discussion is good and should result in clarification and hopefully in consensus.

VI. Other Items

Director's Section:

The Institute's Executive and Governing Councils met on Saturday, Nov. 11. The Governing Council, the supreme policy making body of the Institute consists of representatives of the Indian Council of Social Science Research and of the: State Government, the original trustees of the Institute, representatives of one of the Universities from each of the four southern States, two cooped social scientists, two senior faculty of the Institute and the Director. Dr. Malcolm S. Adisesiah is the Chairman of the Council and the Director is its Member Secretary. During the past two years the Universities represented on the Governing Council were Kerala, Madurai, Mysore and Osmania. Now Calicut, Madras, Karnataka and Sri Venkateswara Universities have their representatives on the Council. The two coopted members are Prof. M. N. Srinivas and Prof. K. N. Raj. The Executive Council is constituted by the Governing Council from among its members.

The Director's Report for the period April to October 1978 presented to the Governing Council appears eleswhere in this issue of the *Bulletin*. The Governing Council, on recommendation of the Executive Council, approved the revised budget of the Institute for 1978-79 and the budget for 1979-80. The most important decision made by the Council was to accept the recemmendation of the Executive Council that addition to the Institute's building must be taken up as a matter of top priority. Consequently the Council approved the proposal to go in for an additional building attached to the existing building on the north side with a total floor area of 772 sq. meters and to approach the ICSSR and the State Government to provide the necessary funds for the building programme. The Governing Council also gave its approval for the activities and programmes of the Institute as detailed by the Director in his Report.

University of Goree :

Goree is a small islet, one nautical mile off Dakar, Senegal and was the capital of French West Africa, with Dakar as its suburb. On Goree, the Portughese built a small house through which for over 4 centuries the 20 million slaves from all over Africa passed on their way to North and South America and the Carribbean. 200 million Africans died as part of this trade in human lives. It is in this islet of Goree, which President Senghor of Senegal termed Africa's home of anguish and pardon that he has established a new university with a view to training Africans to bring about a new synthesis of culture and development. Some 20 scholars met in Goree in October to review the plans for this historic and unusual university which will through a dialogue of the cultures of Asia, Africa and Latin America with Europe build a new cultural base for indigeneous African culture for its human and economic development. Among the faculty of the university, will be Indian Cultural specialists.

Education Futurology :

What will Education be like in the world of 2000 AD? The North would have moved to a post industrial society, with massive problems of unemployment in the industrial sector. The South would be at different stages of development, with still a large over load of poverty. In part the question is relevant because none of the futurology models—the two of the Club of Rome—Limits to Growths and Strategy for Survival, the United Nations—Future of World Economy by Leontief—with the exception of the Barniloche model has anything to say about Education. Is this in part at least due to the confused state of education? To the South the guiding star is the New International Economic Order which again is silent about the Education futures. It may also be due to the fact that unlike in agriculture or power or steel or cement or the service sector, in education the year 2000 is already now, 1978,—in the sense that those who have graduated out of our universities will be a little over 40 in middle positions, those who have completed their research degrees will be the researchers for some 15 to 20 years after the turn of the century and those who will run our schools and colleges have already been trained and will be in their middle ages. In that sense the decisions we make and put into effect now on education's structure its democratisation, its content, its employment or work orientation and relevance, its technology and humanist vocation is to determine education in the fifty years after 2000, and that is near enough. These were some of the issues that emerged at a meeting of economists and educators at the International Institute of Educational Planning, Paris which tried to outline the state of educational coverage—formal and non-formal—and its relation to employment in 2000 AD.

NAEP :

On the occasion of Gandhi Jayanthi Day, October 2, the National Adult Education Programme was formally inaugurated all over the country. In Tamil Nadu, the University of Madras orgainsed a celebration in Vannianchavadi with emphsis on use of TV in the Programme. In fact the University Department of Adult Education has helped Madras TV to prepare 52 programmes in adult literacy to be broadcast for 52 weeks during the year. The Tamil Nadu Board of Continuing Education organised a celebration in Tiruporur where its 50 animators had completed training and the emphasis there was on training the village leaders for this programme. The State Board of Adult Education also organised a massive celebration at Rajaji Hall where the emphasis was on the production of reading material. The exhibition organised on that occasion showed the richness and variety of reading materials produced by the NFE centres all over the State.

TNBCE:

The Tamil Nadu Board of Continuing Education held its triennial conference and Board meeting in mid October at which the work done by the Board during the 3 years was evaluated. The triennial report of the Board recounted the vast amount of work done by its associated agencies and itself in non-formal education, in training, in producing of materials and in research. The high-

light of the conference was the address and discussion which followed in the wake of the address by Prof. Jalaluddin, Director of the Union Government Department of Adult and Non-formal Education on the subject of the obstacles and means of overcoming in the programme of Adult Education. The Board also elected the council and the Council elected the executive committee and the officers of the Board for the next 3 years.

State Resource Centre and TISS:

A meeting of the Governing Boards of the State Resource Centre in October reviewed the ongoing programme of the centre and the additional responsibilities under NAEP. It authorised the setting up of an additional training wing in its training department to train the supervisors of NAEP and approved the revised budget of the centre for the coming year. A meeting of the Board of Governors of the Tata Institute of Social Sciences was held in Bombay in October. It reviewed the guidlines of UGC in relation to salaries, sabbatical and study leave and staff appointments and made decisions on them.

Anti-Apartheid Seminar and Meeting:

On the basis of decisions made at the State Committee on the Anti-Apartheid Year (see last issue p. 608) a two day seminar was held in Madras at which 30 economists, jurists, sociologists and political leaders discussed and arrived at conclusions for an action programme in the state on: (a) Apartheid as an illegal system of law and its political impact: (b) the economic effects of apartheid: and (c) the effect of apartheid on education, science and culture. The seminar was assisted by two leaders from the African National Congress. The declaration adopted by the seminar was the subject of a public meeting with which the 2 day meeting ended at which the Ministers of Finance and Education, the Chairman of the Legislative Council, the members of the Madras University Syndicate and the representative of the African National Congress spoke.

Rajya Sabha:

In October there was the second meeting of the Joint Select Committee of both house on the Viswa Bharathi Amendment Bill for 2 days at which the broad objectives of the university as conceived by its founder Gurudev Tagore and as subsequently developed were reviewed. There was also a meeting of the Consultative Committee of the Ministry of Eduation, Social Welfare and Culture at which the programmes of social welfare, culture and education were reviewed at a two day meeting of the committee.

November Seminar:

The paper "Eradication of Poverty", by Dr. T. S. Venkataswami, Professor of Economics, Presidency College, Madras for the November Seminar together with a summary of the discussion on the paper at the seminar presided over by Fr. A. Devasia appears as the first article.

Second Article:

The report of the Director, Madras Institute of Development Studies for the period 1st April—31st October 1978, appears as the second article.

Special Supplement:

The December Bulletin every year has a special supplement. This December Bulletin supplement consists of selected papers written for the Eigth Inter-disciplinary Research Methodology Workshop for Southern Universities held at Kottayam from May 20-23 (See Vol. VIII p. 365) The selected papers are: (1) Village Studies: Gandhian Approach to Rural Development—Parts I & II by V. N. Deshpande, Karnatak University Dharwad (2) Approaches to Rural Development by K Mathew Kurien, Indian Institute of Regional Development Studies, Kottayam (3) Biplab Dasgupta's Study of A Typology of Village Socio-Economic Systems By B Sarveswara Rao, Andhra University; and (4) Typology of Villages—A few glimpses from Anthropological Studies By N. Subba Reddy Madras University.

ERADICATION OF POVERTY

By
T. S. VENKATASWAMY
Madras.

I Introduction

During the last two decades the major preoccupation of the under developed countries has been with the initiation and acceleration of economic growth on the assumption that high growth rates will automatically lead to a more equitable distribution of income and social equity. In recent years, however, there has been a growing feeling that the high rates of growth achieved by many developing countries during the second development decade of the sixties have not been accompanied by a more equitable distribution of income and a reduction in poverty. The persistence of poverty in spite of economic growth has provoked a number of economists, policy-makers and politicians to question the validity of the conventional wisdom that economic growth will automatically ensure full employment, better distribution of income and eradication of poverty. It is now argued that high growth rates, unless followed by suitable remedial action, are likely to result in perpetuating or even deepening the existing inequalities of incomes, particularly in the early stages of development.

At the same time it is realized by most of the economists that the overwhelming and massive poverty that characterizes the developing countries cannot be abolished without generating adequate growth and increasing productivity all round, and particularly in sectors which are intimately connected with the welfare of the poor majority. It is the vast gap that exists between profession and practice and the resultant faulty planning involving irrational policies and priorities that explain the continued existence of poverty in many underdeveloped countries. It is an irony and a paradox that in the case of certain underdeveloped countries the degree of income inequality is higher in the more planned economies than in the less planned or unplanned ones. The growth of GNP and per capita GNP is not by itself identical with the growth of national welfare. If the existing institutional framework is accepted, then what is needed to establish a progressive and just society is the formulation and implementation of the kind of policy that will ensure sustained growth in favour of the poor.

II Relative and absolute poverty in different countries of the world

Although our immediate concern is the problem of poverty, we cannot ignore the wider and the closely related issue of relative income inequality. While the latter is concerned with the degree of inequality in the distribution of income embracing the whole spectrum, the latter concentrates on the lowest end of the distribution spectrum, i.e., on those people who are absolutely poor and unable to obtain the basic necessities required for subsistence. Irma Adelman and Cynthia Moriss [1] have empirically analysed the problem of inequality in 43 under developed countries on the basis of three measures: (1) the income share of the poorest sixty percent of the population, (2) the income share of the middle quintile of the population and (3) the income share of the wealthiest 5 percent. Of these three measures, the first one is by far the most important because it will indicate the extent to which the benefits of growth in the underdeveloped countries during the 50s and 60s have reached those most in need. The average share of the poorest 60 percent of the people is found to be 26 percent of the total income ranging from 2 percent in Libya to 38 percent in Israel. The Indian position is comparatively good with 36 percent of the total income going to the poorest 60 percent. The share of the top five percent of the population turns out to be 30 percent. The lowest share is 15 percent in Japan and the highest is 48 percent in Peru. In India the share of this group is 20 percent. The study reveals that economic growth has not led to a more equitable distribution of incomes; on the contrary, poorest segments of the population in most of the underdeveloped countries have been hurt rather than helped by economic development. Growth and better distribution of income are found to be positively correlated only in those countries which have achieved a high degree of development.

Dealing with the same problem, Chenery and others [2] have assembled income data for 66 countries including underdeveloped as well as developed countries, capitalist as well as communist countries, the major exceptions being the USSR and Red China The years of reference vary from country to country from 1956 to 1971. In relative terms, inequality is classified as high, moderate and low if the share of the lowest 40 per cent is less than 12 percent of the national income, more than 12 percent but less than 17 percent, and 17 percent and above, respectively. The socialist countries have the lowest degree of over all income inequality, the share of the lowest 40 percent amounting to 25 percent of the national income. In the advanced countries under capitalism, the level of income inequality is evenly divided between low and moderate levels, the share of the bottom 40 per cent being about 16 percent. Significantly the income inequality is less in the United States (the lowest 40 percent getting 19.7 percent in 1970) than in the

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1. Adelman and C. T. Morris, *Economic Growth and Social Equity in Developing Countries* (Stanford University Press)

2. Hollis Chenery and others, *Redistribution with Growth* (Oxford University Press).

United Kingdom (the same group obtaining 18 8 percent in 1968). In the underdeveloped countries the share of the lowest 40 percent is 12.5 percent; but there is considerable variation around this average. An interesting finding of the study is that, while India falls under moderate inequality with the lowest 40 percent obtaining 16 percent of the total income (i.e., one percent less to come under low inequality in 1964), Pakistan comes under the category of low inequality, the share of the bottom 40 percent being 17.5 percent in 1964.

Although the extent of relative inequality is important, it does not indicate the magnitude of absolute poverty—a term defined in terms of minimum requirements of calorie intake, clothing, housing, education and medical facilities which is the immediate concern of the policy-makers of the underdeveloped countries. Using the arbitrary figure of U. S. $50 for poverty line, the authors estimate that one-third of the population of the underdeveloped countries falls below the poverty line. Much of the poverty in countries like India, Pakistan, Bangladesh and Sri Lanka is mainly due to the low levels of per capita incomes rather than to high degrees of income inequality; since the degree of income inequalities in these countries ranges from moderate to low levels. Of course, there are other countries where the reverse is true. One of the authors, Ahluwalia, reaches the conclusion that "there is little firm empirical basis for the view that higher rates of growth inevitably generates greater income inequality", although there is some evidence for the hypothesis that inequality increases first and subsequently declines with economic development. But even in the initial stages, the share of the poor has increased in countries which have taken positive and concrete action.

The foregoing international survey indicates that the degree of income inequality in India is much less than that of many other developing countries, particularly in view of the fact that the per capita growth rate of income in India (which is 1.1 percent per annum between 1960 and 1972) is less than that of 99 countries of the world out of 124 countries with a population of one million or more.[3] India is almost at the bottom of the ladder in terms of per capita growth rate. Hence we cannot argue that high growth rate has been responsible for the mass poverty of India. It is also an undeniable fact that India, with a per capita GNP of 110 U.S. dollars (in market prices) in 1972, is the poorest of the poor countries. Only 18 countries, which are relatively insignificant, have a smaller per capita income than India. Hence a considerable degree of existing poverty should be attributed to the low level of per capita income rather than to skewed distribution.

III Dimensions of Indian Poverty

In this section we will concentrate on the Indian economy and discuss the following question : the degree of relative inequality and the magnitude of absolute poverty whether they have increased, or decreased or remained constant. There is a large and growing volume of specialised literature on poverty for the recent period 1960-61 and 1968-69. The different studies have yielded divergent results both on the magnitude of relative income inequality and of absolute

3. *World Bank Atlas*, 1974

poverty and changes in them over time. The main reasons for the different estimates are: (1) different estimates of income, consumption and minimum nutrition levels and (2) use of different price deflators. But there is enough uniformity that close to 40 per cent of the population fall below what is called poverty line.[4] The recent studies by Dandekar and Rath and others more or less confirm the couclusions of India's Income Distribution Committee headed by Mahalanobis that there has been "no significant change in the distribution of incomes although they do indicate a slight probable increase in inequality in the urban sector and some reduction in inequality in the rural sector." The estimates of Ojha-Bhatt, Ranadive, Ahmed Bhattacharya, and NCAER relating to the early 60s are essentially similar in the sense that they agree that the degree of income inequality is severe in India, their estimates of Lorenz ratio being 0.377, 0.351, 0.372 and 0.39 respectively. The studies of Vaidayanathan and Bhatty for the late 1960s show that the degree of inequality in the distribution of consumption expenditure has declined. It must however, be repeated that the Indian situation is considerably more egalitarian than that of many countries. According to the study of Adelman and Morris (op. cit.) based on a sample of 44 developing nations, India's poorest 20 percent earned 8 percent of national income (which is close to the estimates made by the above Indian writers) compared to 5.6 percent for the sample as a whole. Moreover, India's richest 20 percent had a 42 percent share of its income compared to 56 percent for the sample as a whole.

Now let us turn to the estimates concerning absolute poverty We will consider the estimates of the four major studies undertaken by Minhas, Bardhan, Dandekar and Rath and Vaidyanathan. They follow more or less similar procedures and use the NSS data; but they use different estimates of minimum level of consumption and different price deflators to arrive at the minimum income required to be above poverty line. All these studies take into account only nutrition-based minimum and ignore the other minimum needs such as clothing, housing, health and education. According to the study of Minhas the number of poor people declined form 164 million to 154 million (i. e. from 46 percent to 37 percent) in rural India between 1960-61 and 1967-68. Bardhan's estimates run counter to the findings of Minhas. He has estimated that the proportion of the people living below poverty line in the rural sector rose from 38 percent in 1960-61 to 54 percent in 1968-69. The study by Dandekar and Rath which has gained immese publicity and popularity covers both rural and urban areas. In both years 1960-61 and 1967-68 about 40 percent of the rural folk and 50 percent of the people were found to be below poverty line and, therefore, they did not find any significant change in the proportion of the people living below poverty line during the period under consideration. Vaidyanathan finds that only 15.7 per cent of the rural population are living under poverty.

4. See for good summary: Pramit Chaudhuri, *The Indian Economy Poverty and Development* (Vikas Publishing House PVT LTD)

The most recent and official estimate on the extent of poverty is the one made by the Planning Commision of India. [5] Using the norms of calorie consumption, the Commission has projected that 48 percent of the rural population are below poverty line and the urban figure is 41 percent. On the whole 46 percent of the people numbering about 290 million are below poverty line.

The differences in the incidence of poverty amongst different states revealed by various studies are so different and dissimilar that no firm and reasonable conclusions can be drawn on the regional pattern of poverty. Some of the findings are shocking and unbelievable. For instance, in the study of Dandekar and Rath Kerala leads the poor states with a staggering 90.75 percent of the rural people falling below poverty line and this is in a state which is supposed to have most sincerely and effectively implemented land reforms. Prof. P.G.K. Panikar has challenged this finding and questioned the validity of the nutritional measures used by Dandekar and Rath and the Nutrition Advisory Committee. By ignoring regional factors and using aggregated all-India estimates, they have reached wrong conclusions about the cost of a nutritionally adequate diet in Kerala and thus overestimated the numers of the poor in Kerala. This means that a nutritional minimum diet for the whole of India is not likely to be very useful in the formulation of economic policy to eradicate poverty.

All the estimates based on nutrition norms really indicate hunger or starvation line and, therefore, these figures could be possibly overestimates, if checked on the criterion of starvation deaths, if any. death rates in different age and income groups, and life expectancy. The available evidence shows that there had been no starvation deaths even during 1965-66 which witnessed a severe drought. Death rates have generally declined and life expectancy has increased. Even so, the numbers of the poor run into hundreds of million and the level of subsistence in question is a bare minimum.

IV Identification of the poor

Poverty in India is concentrated among certain occupational classes in both the rural and urban sectors. The various studies mentioned above clearly indicate that the degree of income inequality is lower in rural India than in urban India. But since around 80 percent of the total population is found in rural area and hence the bulk of the poor people are located there and their numbers are more than four times greater than the number of the urban poor. The rural poor consists of 1. land-less and submarginal farmers, 2. small farmers, 3. artisans and 4. small traders. The major group of the rural poor consists of landless labourers and submarginal farmers who have so little land that they are forced to work for wages during part of the year. About 50 percent of the agricultural labourers come from scheduled castes. The reasons for their poverty are under-employment, disguised unemployment and low wages which are at least partly due to low productivity in agriculture. The small farmers are also poor because of lack of access to facilities such as credit, HYV seeds, irrigation, marketing, etc.

5. Government of India, Planning Commission, *Draft Five Year Plan*, 1978-83

The urban poor include: 1. unemployed and underemployed workers; 2. unskilled workers; 3. recent migrants employed as casual labour; and 4. a large body of people engaged in low productivity self-employment. But workers employed in modernized industries belong to a privileged group and are well above poverty line.

V The Failure of Planning in Eradication of Poverty

From the very beginning the objectives of our plans have largely remained the same and they are all most admirable and desirable. All our plans have aimed at 1. achieving high growth rates, 2. abolishing unemployment, 3. preventing concentration of economic power, 4. ensuring equitable distribution of incomes and 5. eradication of poverty. In order to realise these objectives, our planners adopted the path of democratic socialism comprising political democracy, private and public sectors and planning. This was called the so-called golden mean between the two extremes of unbridled and acquisitive capitalism on the one hand and oppressive and totalitarian communism on the other. The different goals were always treated as complementary to each other. But in actual practice, none of them was achieved to the desired degree. As against the projected overall growth rates of 5 to 7 percent, the realized growth rate of GNP has only varied 3.2 percent and 3.8 percent. The annual growth rate of per capita income has been no more than 1.1 percent between 1960 and 1972. As we have already indicated, India continues to remain the poorest of the poor countries with a per capita GNP of 110 U.S. dollars in market prices in 1972. No doubt India has made progress and the realised growth rates of 3.3 percent and 1.1 percent respectively in NNP and per capita income represent a marked improvement over half-a-century of absolute stagnation in per capita income prior to 1947. Yet, compared to the needs of the nation or to average growth rate of 5 percent achieved by the underdeveloped countries during the second development decade of the 60s, our achievement has not been enviable. It is also to be noted that our growth rate is lower than those of the largely market-oriented unplanned economies of Malaysia, Singapore, Thailand and Taiwan and than that of China where there is total planning. One is left wondering whether our planning has inherited the best or the worst features of both capitalism and communism. If we have not been able to incorporate in our planning the best features of both, then the question arises why not we follow one of these paths?

It is true that a stagnant and dependent economy, as it was prior to independence, has been modernized and made more self-reliant with diversification and expansion of our industrial capacity and building up of social infrastructure necessary for further growth. The country has been heading towards self-sufficiency in basic commodities like steel and cement. The growth of capital goods production has been particularly impressive and India can now sustain the likely growth of many industries. But the pace and pattern of industrialization have been inadequate and inappropriate. Heavy emphasis and continued reliance on capital intensive industries whose labour absorption capacity is severely limited has resulted in unemployment, unused capacity and widening income inequality. The experience of the past 25 years has

demonstrated the patent inability of the large-scale modern sector to absorb the surplus rural population whose percentage has remained unaltered. As of today only less than 19 million are employed in this sector. The hope that the socialised industries, which are mostly found in capital-intensive modern sector, would be able to provide capital out of their profits for additional industries has not come to a pass either. Apart from the general inefficiency of the public sector undertakings, the employees of such industries have usually succeeded in pushing up wage rates to a level which has substantially cut into the surplus available for capital formation. In general capital-intensive industrialization, public enterprises which have only subserved the needs of big business, the pattern of industrial production which has been geared to the production of luxury goods, excessive and counterproductive controls which have worked in favour of the rich have all intensified the problem of unemployment, reinforced inequalities of incomes and perpetuated poverty.

On the agricultural front output has risen but slowly and haltingly. Overemphasis on industrialization led to the comparative neglect of agriculture which resulted in frequent shortages of food and industrial raw materials adversely affecting industrial growth also. Inadequate attention paid to agricultural progress was a major reason why planning failed to reduce poverty, since about 80 percent of the people are still engaged in agricultural and allied activities. Only in latter years our planners have slowly and grudgingly realised the strategic importance of agricultural development. Various attempts have been made at land reforms but the land distribution programmed failed miserably because of the wide gap between profession and practice, built-in loopholes facilitating massive evasion and ignorance and lack of organization on the part of the intended beneficiaries.

VI Alternative approaches to the problem of poverty

Since the type of planning we have had so far has failed to solve the problem of poverty, we have to think of alternative approaches to tackle the problem. The alternatives can be either conventional or radical. Under the first head we may consider the capitalist solution with social control currently prevailing in Western Europe or a modified form of our planning process. The radical solutions will require bringing about fundamental changes in the existing institutional structure. Such solutions may take different forms; but we shall confine our discussion to the structural change advocated by Professor Kurien and to the establishment of a socialistic society in its genuine form.

1. The mixed economy market solution

Nobody today would advocate the classical type of capitalism to eradicate poverty. What we mean by market solution is really a mixed economy of the British, French or Swedish type The state would provide the basic services and goods for collective consumption and run some key industries which cannot be or should not be undertaken by private enterprise. The state would control the economy only to the extent to which such controls are socially needed or desirable. But it shall abandon all

unnecessary and chocking controls and regulations in order to enable new enterprising people to enter into the industrial field freely and allow them to compete with the existing business which has become increasingly monopolistic. This view is based on the assumption that either too much or too little of state control will be harmful to the proper and efficient functioning of the economy. It does not, however, preclude state intervention designed to ensure growth with stability and to protect the interests of the poorer sections of the society. There is no prior reason why such a system could not yield better results than what we have achieved under our planning with empty socialistic slogans and with rigid and destructive controls. The major drawback of this system is that it cannot eradicate poverty within a short period of time—a feature which may not be politically appealing to people who have been fed with the ideas of pseudo by socialism people who do not have faith ingenuine socialism.

2. A modified form of Planning

The priorities and techniques of planning could be reoriented so as the benefits of growth may really reach the poor majority of the country. The pattern and content of growth would have to be directed towards specifically benefitting the poor. Achieving reasonable rate of growth of particular composition and elimination of poverty would not be incompatible. The country is so poor that it is impossible to abolish poverty without growth of the right type. Realising the fact that the modest growth we have attained in the past has increased the incomes of the rich at a faster rate than those of the poor, we must alter and specify the type goods and services that need to be produced by a growing economy. The composition of GNP should undergo a radical change so that the economy will be induced to produce those goods and services which are needed most by the poor people of the country. This will mean that the planners must accord highest priority to the production of wage goods like food, clothing, housing, elementary education and health services which are essential for eradication of poverty. The planners will encounter two major obstacles in changing the composition of the goods to be produced. The first one is the problem of compelling the producing units to produce the goods needed by the poor. Once this is solved, the second problem is that the increase in the production of such goods will not itself ensure that these goods will necessarily reach the poor. The continued production of such goods can be sustained only if there is adequate demand. Hence, while growth is directed towards increasing wage goods, the purchasing power of the poor people must be simultaneously increased to enable them to effectively demand the goods they need most. If the poor people can pay the price, the private enterprise will produce the required wage goods.

We can now proceed to spell out more specifically the nature of changes that are required to eliminate poverty. We have already seen that the bulk of the poor people are concentrated in rural India and we have also identified the rural poor. Hence any poverty oriented programme should necessarily focus first on the agricultural sector. The strategy should be so designed as to increase the productive capacity of the small farmers and of the self-employed

by providing them with the required assets and inputs. Employment opportunities must be adequately increased for the unemployed and the underemployed. Land reforms encompassing distribution of surplus lands arising out of land-ceiling acts, abolition of tenancy system and consolidation of land holdings must be effectively and faithfully implemented in a time-bound programme. But in a country like India, where the ratio of land to rural population is so low, even the most radical form of land distribution scheme cannot provide land for all the landless labourers the bulk of whom would continue to remain landless. All the agricultural workers cannot be gainfully employed on land, even if cooperative and collective farming can be successfully adopted. Of course labour-intensive cultivation based on the Japanese pattern, multiple cropping and increased irrigation facilities can help absorb a good deal of additional labour. But all these measures will have to be supplemented by the starting of agro-based industries in the rural areas to abolish unemployment, underemployment and disguised unemployment which characterize our rural economy. An all round increase in productivity is a necessary condition to support higher wages and to achieve this suitable labour-intensive but more productive technology must be evolved to suit the local conditions.

Emphasis on the rate of investment independently of the nature of investment will not help remove poverty. Hence a redistribution of public investment to increase the physical assets and human skills of the poverty groups is indispensable to reduce rural as well as urban poverty. The beneficiaries of land reforms should be promptly provided with complementary inputs such as capital, seeds, fertilizers and water. Population control is an obvious necessity to prevent the emergence of additional poverty.

At least a part of the resources required to finance rural development must be transferred from the urban to the rural people because of the concentration of the poor people in rural sector. An additional reason why this must be done is that currently too much of public money is spent in urban areas (Which contain only 20 per cent of the population) for providing various luxurious amenities for the city dwellers.

The problem of urban poverty is a much more complex phenomenon, even if the numbers of the urban poor constitute less than one-fourth of the rural poor. The main difficulty is that capital cannot be divided and distributed in the same way as surplus land can be distributed in an economically viable form. The planners will have to take some bold steps in order to reduce concentration of wealth and power that goes with former. Ceiling on urban land alone will not but touch the fringe of the problem. The government can prevent the construction of high star hotels and control the production of luxury goods, provided it has the necessary will to do so. The big industrial houses can be broken up without impairing the economically viable size of the industrial undertakings. But the assets so taken away must be efficiently used and private luxury should not be replaced by the government luxury. Appropriate fiscal and monetary policies must be evolved to reduce inequalities of wealth and income. Another well-known solution to reduce inequalities of incomes is to encourage

effectively small-scale industries. Such reorientation of planning will not only result in the transfer of resources from the rich to the poor but also curtailing the production of luxury goods and facilitating the production of goods needed by the masses.

The unemployed and underemployed of the urban areas must be fully activated by the provision of employment opportunities. A fundamental objective of planning must be to ensure full employment. The goals of full employment and eradication of poverty are complementary. The adoption of full employment as a specific target of policy would serve as a means of both more equitable distribution of income and a fuller and more widespread participation of the mass of the people in the effort as well as the fruits of economic development. Moreover, the attainment of full employment will accelerate growth of income but the reverse is not necessarily so, as the post-war experience shows.[6]

3. The Kurien Approach

In his latest book entitled "Poverty, Planning and Social Transformation", Professor Kurien has proposed a novel and radical approach to eradicate poverty. First he rules out the possibility of eradicating poverty within the existing institutional structure. According to him a fundamental restructuring of the socio-economic system is required if we are serious about abolishing poverty. Poverty, in his view, is not merely deprivation but is a "socio-economic phenomenon whereby the resources available to a society are used to satisfy the wants of the few while the many do not have even their basic needs met."

His solution to abolish poverty consists of establishing a need-based economy and dethroning the want-based economy. This dichotomy is based on the assumption that human needs are limited, whereas human wants are unlimited. If we could transform the economy into a need-based one, it is easy to abolish poverty since our limited needs could easily be satisfied with the existing resources. Since such a transformation will be resisted both covertly and overtly, what is the mechanism through which the desired transformation is to brought about? The answer of Kurien is that those who do not have a stake in the existing system should be mobilized and organized in order to achieve the transformation. There are three groups of people who do not or cannot have a stake in the preservation of the existing order and they are: 1. the landless agricultural labourers; 2. the workers in the industry and 3. the petty bourgeoist (The phraseology used by Kurien is different).

One way of bringing about a need-based economy is to establish collective forms by landless labourers who will own the land and cultivate it collectively. Another way is to organize cooperative farming by small farmers. But both groups must get rid of any acquisitive spirit and must be interested only in satisfying their basic needs. They are forbiden from wants. Their activities will be coordinated when they begin having surplus by Local Trading Agencies which, in turn, will be linked up to Regional

6. Harry T. Oshima, "Income Inequality and Economic Growth" *Malayan Economic Review* October 1970.

Planning Authorities (RPAs). The RPAs will be regulated by the Central Planning Agency—the apex body. Kurien does not say much about similar transformation in the urban areas.

The weakest point in the Kurien's analysis is the role he assigns to the state. The socio-economic transformation could be achieved, says he, with or without state power. "No matter what the attitude of state power, the responsibility for the social transformation is that of the people to be exercised through those who desire and actively work for a new direction to the course of events". It is highly doubtful whether such transformation could be effected, much less maintained, without the people capturing state power. That the establishment of collective and cooperative farming (and that too without state backing) can bring about a radical transformation of society sounds much too unrealistic.

Prof. Kurien would seemingly be satisfied with just establishing a need-based economy and he would like to keep the people away from wants. It appears that growth beyond needs is dangerous, since it "acts as a fuel to the aggressive designs . . . ". The future society envisaged by Kurien has some resemblance to the theory of Mao who hated affluence, for it will blunt the revolutionary spirit of the people and will lead to a revival of capitalism.

4. The Socialist Solution

If people would be able to organize themselves as anticipated by Kurien, then a more straightforward and effective solution would be the establishment of a socialistic society through Parliamentary means. The means of production would be owned and operated by the state for the welfare of the people and with the support of the people. The aim of the socialist society as envisaged by Marx is to ensure affluence for all the people in a classless society: from each according to ability and to each according to needs.

Summary of Discussion

The author presenting the paper said that the magnitude of poverty in India should be understood in the context of other developing nations in the world. India, with its per capita income of $ 110 (current prices) ranks 99th in the list of 144 countries in the world. However, in terms of income inequalities, India's position is much better than many other developing nations of the world. However it is the per capita income of the country rather than the income inequalities that would explain the magnitude of poverty in any country. So, there is no doubt that India is one of the poorest countries of the world. And also the relative income inequalities cannot reflect the absolute income inequalities in a country.

Referring to the recent criticisms of G N P growth rates and per capita income in eradicating poverty, he argued that the criticism of higher growth rate to solve the problem of poverty cannot be accepted, because the increase in the rate of growth of G N P with better composition of wage goods which are needed by masses is a necessary condition for the eradication of poverty.

Referring to the measurement of poverty he said that different conclusions were reached by different experts even though they had made use of the same N S S data and adopted some procedures in estimation. While Minha's estimate showed actual decline in the number of people living below poverty line from 164 million in 1960–61 to 154 million in 1967–68 (i.e. from 46% to 37%). Bardhan's estimates showed that the percentage of population who live below the poverty line, had infact increased from 38% in 1960–61 to 54% in 1968–69. But Dandekar and Rath who had also estimated the magnitude of poverty in India had come to the conclusion that percentage of population who live below the poverty line had not at all changed over the years. In both the years 1960-61 and 1967–68 about 40% of the rural population and 50% of the urban population live below the poverty line. The more recent official estimates based on calorie consumption has come to the conclusion that 48% of the rural population and 41% of the urban population are living below the poverty line i.e. on the whole 46% of the people numbering 290 million are poor. He doubted the authenticity of the estimates of Dandekar and Rath regarding Kerala where 90.75% of the rural population are seen to be living below the poverty line.

The author expressed the view that in all the estimates of poverty done by different people, there exist an element over estimation in their studies. And this he hoped can be checked by collecting information on the death rates in different age-groups and the life expectancy among different income groups in the society.

Referring to the role of planning in a mixed economy in eradicating poverty, he felt that the Indian planning has failed in this regard due to its bias towards urban oriented development. And also by imposing many controls and restrictions on the growth of private sector and trade, the government has

only increased the magnitude of poverty in India, And, he pointed out the possibility of a free economy with minimum necessary controls being able to increase production and productivity by encouraging individual talents. He also opined that land reforms by themselves cannot solve the problem of poverty and they should also be supplemented by such programmes which would generate more employment opportunities in rural areas. And hence, there is every need to encourage and start small scale and cottage industries in rural India. He also stressed the need for production of wage good like foodgrains and cloth etc. to solve the problem of poverty. So the planning body by its well planned composition and distribution of G N P can go a long way in eradicating poverty.

Referring to the Kurien's approach bringing socio-economic transformation, he doubted the practicability of his approach without state power eud its commitment in doing away with wants once the people's needs are met.

During the discussion of the paper it is pointed out that G N P being a measure of all the goods already produced and distributed in an economy, there was no possibility of its redistribution even as a hypothetical case. Regarding the author's view on the better composition of G N P it was also pointed out that it is very small group of people with power over resources, and not the planners or government, who decide the product mix in the economy. As for the author's suggestion about the lifting of all controls it was pointed out that controls would continue as long as they provided opportunities for the larger producers to use them to enrich themselves. These considerations make it necessary to understand the processes which are at work in perpetuating poverty and misery to many and affluence to a few, as the first step towards the eradication of poverty.

The discussion led to the question, as to whose responsibility it was, in the final analysis, to eradicate poverty.

In the absence of Chairman V Shanmugasundaram, the seminar was chaired by A Devisia of Loyala College, Madras. The Chairman thanked the author for the presentation of his paper and the members for the fruitful discussion.

Director's Report presented to Governing Council April to October '78

(Abstracts)

1. Introduction

The process of transition referred to in the Seventh Annual Report of the Institute presented at the time of the March, 1978 meeting of the Governing Council continued during the period under review as well. The amended Deed of Trust of the Institute as executed at Madras on 17th March, 1978 modified the principal deed dated 18th September, 1970 and outlined the scheme of management of the Institute. This was one more step in the reconstitution of the Institute as a National Institute within the framework of the Indian Council of Social Science Research, supported by the Central Government through the Indian Council of Social Science Research and by the Government of Tamil Nadu. Dr. Malcolm S. Adiseshiah, the founder Director relinquished the post as Director on July 5, 1978. Although his Membership of the Rajya Sabha keeps him busy, after he relinquished the post of the Vice-Chancellor of the Madras University at the end of July, 1978, he has been able to spend sometime at the Institute regularly. Besides being the Chairman of the Governing Council, he is also an honorary Professor of the Institute. The present Director assumed responsibility on July 6, 1978. This was a further step in the process of transition. Thirdly, the staffing pattern of the Institute was revised following the pattern approved for the reconstituted Institute. Mr. Alexander Joshua who was Deputy Director of the Institute from 1st July 1971 retired on 30th June, 1978 after very loyal and devoted service to the Institute. Mr. T. R. Ramaswami was appointed on 3rd April, 1978 as the first Administrative Oiffcer of the reconstituted Institute. Fourthly, the extension and renovation of the Institute building which was started in January 1978 has been completed. The property adjoining the Institute at No. 12, Third Main Road has been purchased and the old building there has been renovated to become the Director's residence.

2. Studies

2.1. During this period, Prof. Sarveswara Rao completed his study on "Rural Poverty and Inequalities in a Developed District". Two other studies are nearing completion, viz,

i. Dr. K. A. Zachariah: Economic Consequences of Farm Mechanisation in Tamil Nadu.

ii. Mr. V. Chandrasekara Naidu: Non-formal Education for Harijan

Agricultural Labourers in Tamil Nadu—Survey and Curriculum.

A further study has been sanctioned under the ICSSR's Advisory Committee on Rural Development's special scheme to conduct studies relating to rural problems. The study "Impact of Mechanisation in Knitting Nylon Fishing Net Industries in Manakudy" for a period of eight months has just started. It will be conducted by Mr. T. Jaya Chandran on a budget provided by the ICSSR.

2. 2 The Institute has also started publication of cyclostyled working papers giving research findings to be circulated to scholars for their comments and among other interested persons. Three working papers have already been produced:

Working paper No. 1. The Dynamics of Rural Transformation—A Case study of Tamil Nadu—C. T. Kurien.

Working paper No. 2. Mid-year appraisal of the Economy—Malcolm S. Adiseshiah

Working paper No. 3. The New Development Strategy—An Appraisal—C. T. Kurien.

A few more are under preparation.

3. Publications

3 1. During the period, the following publications have been released:

Malcolm S. Adiseshiah (Ed): Backdrop to the Learning Society, 1978.

M. Srinivasan: Rotation of Crops in Thanjavur District, 1978.

3. 2. Four completed manuscripts are in print and are expected to be released by the end of 1978. They are:

i. Alexander Joshua: Rural Primary Education and Adult Literacy in Tamil Nadu.

ii. Barbara Harriss: Paddy and Rice Marketing in Northern Tamil Nadu.

iii. N. Rajagopala Rao and V. Lakshmana Rao: Introduction to Mathematics and Statistics.

iv. B. Sarveswara Rao: A study of Rural poverty and Inequalities in a Developed district.

3. 3. The Bulletin appeared regularly during the period and the May-June issue contained the results of the Eighth Census of Social Science Research in Tamil Nadu.

4. Inter University Co-operation

4. 1. The Eighth Social Science Inter-Disciplinary Workshop on Research Methodology was held in Kottayam from May 20-23, 1978. The theme of the Workshop was village studies which was a continuation of the Seventh Workshop held in Hyderabad from May 21-24, 1977. The Workshop dealt with the unfinished work started in Hyderabad and also decided to conduct an Inter-Disciplinary Village Study. Dr. Subba Reddy, Head of the Department of Anthropology, University of Madras was requested to conduct the study with the help of the Institute.

4. 2. The Director visited the Madurai-Kamaraj University from September 11 to 13, 1978 to deliver a series of lectures on Rural Development. The occasion was made use of also to understand the nature of research work being done in the Economics Department of the University and to meet with research scholars to find out how the Institute can be of assistance to them in their research programme.

4. 3. The Eighth meeting of the Heads of Social Science Departments of Southern Universities is scheduled to be held from December 9 to 11.

5. Seminars

5. 1. Monthly seminar sessions were held in April, June, July, August, September and October on the following subjects.

	Subject	Author	Chairman	Date
1.	Elimination of Illiteracy.	Prof. M.S. Jothi	S. Nityananda	27 Apr. '78
2.	Extension of Irrigation in the Country & the State.	B. Krishna Rao	C. T. Kurien	29 June '78
3.	Small & Village Industries	T. V. Natarajan	S. Ramanathan	27 July '78
4.	Food Grain Reserves	R. Ramanujam	A. Joshua	31 Aug. '78
5.	The Population Trends	K. K. Pillay	M. Srinivasan	28 Sep. '78
6.	Power Development and Problems	C. Sanjeevi	S. Ramanathan	26. Oct. '78

5. 2. Two special seminar series have been started during the period under review. The first is the Research Scholars' Seminar to bring together Ph.D and M. Phil candidates (at the moment confined to Economics) in the city along with research guides. The idea behind the seminar is to bring together those who are working on their dissertations or about to start on them so that they will learn from one another how the research problems are formulated, how they are dealt with and how the findings are communicated. The Departmants of Economics of the Madras University, Presidencey College, Loyola College, Ethiraj College and Madras Christian College have so far agreed to co-operate in the seminar and it is hoped that one or two other departments may also join the programme. Two sessions of the seminar have been held, one on Saturday, the 19th August and the next on Saturday, the 7th October. It will now be a regular feature on the first Saturday of every month.

5. 3. The second of the special seminars is an attempt to involve a wide cross section of society in discussions relating to development issues. The first of these was a half day seminar on Chinese Development Pattern held on Saturday, the 12th August from 9.30 a.m. to 1 p.m. It was attended by about 30

invited participants who included economists, physical scientists, political scientists, medical practioners, engineers, businessmen, administrators, tradeunion workers, journalists and those directly involved in programmes of village reconstruction. The leaders of the seminar were Mr. N. Ram, Associate Editor of the Hindu and Mrs. Susan Ram who had returned after a visit to China. There was very lively participation in the seminar by those present. The Second half-day seminar was held on Saturday, October, 14 where Dr. C. T. Kurien shared his research findings on Rural Transformation in Tamil Nadu during the quarter century between 1950 and 1975. This seminar was also attended by about 25 invited participants consisting of economists, officials of the Planning Commission and of Government Departments with special responsibility for rural development, scientists, journalists and those involved in programmes of rural development There was very lively participation during this seminar also. The half-day seminars are expected to become a regular feature meeting during the second Saturday on alternate months.

5. 4. The Institute continues to collaborate with the Voluntary Health Services on their study of new patterns of health care, with the Central leather Research Institute in its review on cost benefit analysis of different technologies in leather processing, with the Tamil Nadu Board of Continuing Education, the Association of Indian Adult Education and the International Association of Adult Education. Dr. Malcolm Adiseshiah who is the Chairman of the State Committee for observing the Anti-Apartheid Year and Dr. C. T. Kurien participated in the two-day Seminar on Anti-Apartheid held in Madras in October.

6. Library and Documentation

With appointment of a full-time Librarian in April and supporting staff in July, the work of the library has picked up. From April 7, 1978 to Oct 31, 1978, 500 volumes have been added to the library. Orders have been placed for new journals; and old journals, which were complete in volumes have been sent for binding. Old books and the books which are being acquired now are being accessioned in the register. For books which have been accessioned, author cards have been prepared. New books are also being classified and the other entries (Editor, Translator, Subject cards) are also being prepared The library helps the research scholars by bringing out a list of articles from selected periodicals which are received in the library every fortnight. The library also brings out list of additions every month.

The stack rooms of the library have just been completed and books are now being arranged in them.

7. Research Guidance

Mr. K. Bharathan, Research Assistant of the Institute who is doing a part-time M. Phil Programme took his first set of examinations in May 1978 and continues his work, mainly on the M. Phil dissertation under the supervision of Dr. C. T. Kurien. Professor Josef James and Mr. Raj Kumar of the Deparment of Economics, Madras Christian College who are working on their doctoral dissertation under the faculty improvement programme of the college are using the facilities of the Institute for this purpose and doing their dissertations under the supervision of Dr. C. T. Kurien.

The Institute is now nearing the final stages of selecting candidates for the award of Ph. D. Scholarships that the Institute has budgetted for.

8 Staff

Professor Sarveswara Rao who was Fellow of the Institute completed his term on 31st May. Prof. S. K. Ekambaram and Dr. K. A. Zachariah who were consultants completed their terms on 30th June and 31st August respectively.

On the academic side the staff of the Institute now consists of Dr. C. T. Kurien, Professor and Director, Dr. Malcolm S. Adeseshiah, Honorary Professor, Mr. K. Bharathan, Research Assistant, Mr. Chandrasekhara Naidu, Research Assistant. The Selection Committee that met on September 22, 1978 has cleared the applications of those who are to be appointed as Fellows of the Institute. Dr, Narindar Singh, Associate Professor, Jawaharlal Nehru University is expected to join the Institute as a Visiting Fellow sometime in January 1979. Dr. John Harriss and Dr. (Mrs.) Barbara Harriss will join the Institute as Honorary Visiting Fellows sometime in the early part of 1979. It is hoped that a Fellow also will be appointed early in 1979.

Selection procedure for the appointment of Research Associates is in progress and appointments may be made in December 1978.

9 Finance

During April 1978—October 1978 the following grants-in-aid were received from the ICSSR and the Government of Tamil Nadu.

Recurring	Non Recurring
I.C.S.S.R. Rs. 75,000/-	Rs. 50,000/-
Govt. of Tamil Nadu Rs. 10,877/82 (4th instalment for the year 1977/78)	

10 Future Programme

The Institute has been trying to follow the programme of activities as indicated in its Sixth Five Year Plan document approved by the Governing Council at its meeting in March 1978. The following research and study schemes have already been started or are about to commence.

(a) The production of a book *The Economic Development of Tamil Nadu*: Making use of the studies conducted by the Institute and by Dr. C T Kurien in the past years on various aspects of economic change in Tamil Nadu, a comprehensive account of the economic development of the State during the two decades from 1955 to 1975 is under preparation.

(b) As soon as the appointments on the research side are made, a study on Applied Problems on the Economic Development of the State will be taken up in consultation with the State Government.

(c) The ICSSR has requested Dr. C. T. Kurien to co-ordinate State level studies on "Rural Transformation" along the lines of his own study of Rural Tamil Nadu. A workshop to discuss the procedures of the study is to be held at the Institute in collaboration with the ICSSR on December 11 and 12. These State

level studies to be conducted by participants from different states are expected to be done in 1979.

(d) The Institute has launched a long term study project on the Indian Economy to bring together once a year scholars from different parts of the country who are searching for analytical tools and conceptual frames for studying the working and problems of the Indian Economy. The first session of this study project is expected to be held in February/March 1979 and scholars from various centres in the country have already responded to the Institute's invitation.

(e) In November the Institute proposes to commence the compilation of a Manual on Data Sources. Data relating to the State and the country are available in many of the Government Departments, libraries and other organisations in the city and the neighbourhood. The attempt is to bring out an annotated list of these sources which will be of special help to research workers in the city and the state. It is hoped also that this project will become the first stage of the Unit that the Institute proposes to set up on the data base of the Tamil Nadu Economy as mentioned in the Institute's Sixth Five Year Plan.

(f) The Institute will also be collaborating with the ICSSR in the compilation of the Bibliography of Social Science Research in the State.

(g) The starting of a full time M. Phil course has been one of the objectives of the Institute. This has not been possible in the academic year 1978-79. It is proposed to commence the course in 1979-80 and speedy action is being taken to appoint senior faculty for this purpose. Attempts are also being made to see that space does not become a constraint in starting the course.

10.2 Building programme

The Building Committee of the Institute noted that the existing building of the Institute even after renovation will be just adequate for its requirements in 1978-79, and with some adjustments in 1979-80 also.

It recommended to the Executive Council that construction of an additional building to provide working space for the academic and non-academic staff of the Institute from 1980 onwards should be given the highest priority. The Executive Council at its meeting on September 22, 1978 approved these recommendations and resolved to request the ICSSR and the State Government to make available non-recurring grants to the tune of Rs. 8 lakhs in order to construct and furnish the additional building. The architects have produced the sketche to put up a four storeyed building attached to the existing building on the north side with a total floor area of 772 sq. metres costing Rs. 6.4 lakhs for construction. For furnishing and equipments another Rs. 1.6 lakhs would be required making a total of Rs. 8 lakhs. The suggestion has been to start the construction programme if possible in December 1978. With this in view, the ICSSR and the State Government have

been approached to provide an additional amount of Rs. 1 lakh each in the revised budget (non-recurring for 1978-79) and Rs. 3 lakhs each (non-recurring) in the budget proposals for 1979-80 for this purpose. In order to tide over space requirements the Executive Council has also authorised the renting of a building in the neighbourhood of the Institute at a monthly rent not exceeding Rs. 2000/- to be provided from the approved total recurring expenditure.

10.3 Formal Inauguration of the Reconstituted Institute

Dr D T Lakdawala, Deputy Chairman of the Planning Commission and Chairman of the ICSSR visiting Committee which recommended that the Institute be raised to the level of a National Institute has agreed to formally inaugurate the Reconstituted Institute on Monday, December 11, 1978.

VILLAGE STUDIES

Gandhian Approach To Rural Development

By
V. N. DESHPANDE
Karnataka University

"Exploiting of villages is itself organised violence."

(Harijan, 20-1-'40, p. 423)

"..... If Indian is not to perish we had to begin with the lowest rung of the ladder. If that was rotten, all work done at the top or at the intermediate rungs was bound ultimately to fail".

(Harijan, 13-4-'35, p. 68)

"For me I must sink or swim with the lowest of my countrymen".

(Young India, 24-7-'24, p. 246)

"And, whatever happend, I shall fight on for the economic salvation of my people and that, you will agree, is worth living for and dying for".

(Young India, 15-10-'31, p. 309) M. K Gandhi

PART ONE

INTRODUCTION

The deep, pervasive and almost universal impact of Gandhi on the social, cultural and political life of contemporary India has been so baffling, that it has rendered it difficult for most, to take a detatched look at what Gandhi said and did. What Gandhi said is so immense, that the "Collected Works" which is supposed to run into ninety volumes, is still in the process of completion. In terms of scholarship, this makes it somewhat difficult for any one to be fair to Gandhi and be thorough about Gandhi's views in any field.

2. In spite of these (and other) difficulties, efforts to understand, criticize and appraise his views are continuously made, both when he was alive and in the post Gandhian period, more so, since the Centenary Year (1969). The issue has been not so much "relevance" of Gandhi, but the very understanding of contemporary India which he so deeply influenced. Even the Indian Communists who were his unsparing critics throughout, have in recent years evaluating his views and ideas again.

3. It may be tedious to go into the methodological issues concerning Gandhian Studies—and in any case, this cannot be an occasion for it. But, I shall mention only two points. Gandhian studies, I believe, are considerably facilitated by some excellent anthologies on different aspects of Gandhi's thought. Secondly, though as social scientists we are committed to an objective understanding and assessment, the very concept can be no such thing as understanding Gandhi from a neutral stand-point. There is always a perspective, a framework and "bias" in terms of which we understand and evaluate. To be objective then, would mean to state the framework explicitly, and critically appraise the views in the context of the "bias".

With these preliminaries, I hasten to come to the main concerns of the present paper.

4. My aim in presenting the theme is a modest one:

I. To present Gandhi's views on rural development (or, what one may call rural reconstruction) in his own words. This would imply quoting him profusely. But, this seems to be the only way. It is difficult to excel Gandhi in precision and economy of expression. In presenting his views, I almost exclusively rely on the anthologies dealing with his economic views.

II. In the context of this presentation, I raise some issues in rural transformation pertinent to *our* times.

III. I check the views of some distinguished economists—viz. Prof. V. M. Dandekar, P. Brahmanda, Raj Krishna and Dr. K. N. Raj. I have referred to only one (or a few) of their writings and am severely selective. This part, I submit as a separate note.

II

GANDHI'S VIEWS

Was not village reconstruction, Gandhi's ultimate concern? Agriculture being almost the sole occupation of most of the villagers, his concern for the problems of agriculture should have been expressed more prominently in his voluminous writings. One is some what surprised to see the following in Young India. (4.2. '26, p.45).

Q. In your weeklies, you write nothing about the agriculturists, who form the bulk of the population of India.....

A. I have not been writing much about the agriculturists advisedly. For I know that it is impossible for us to do anything for them today. There are a thousand and one things that need to be done for the amelioration of the lot of the agriculturists. But so long as the reins of Government are not in the hands of agriculturists, representatives, i. e. so long as we have no Swaraj..... that amelioration is very difficult if not impossible.

2. Gandhi refers again and again to the poverty of the Indian peasant, mostly as a result of the enforced idleness and unemployment; but the references to the agrarian relations and issues are not numerous. The focus is on the village community as a whole. He speaks

of village uplift and village reorganisation, and surely, this implied eradication of the poverty of the rural poor. Gandhi speaks of the poor peasant and not so much of landless labour or peasant etc.

3. Eighty per cent of India's population live in villages. There is a huge population in relation to which the land available for cultivation is limited. Does this not huge man-power in this context a liability, a cause of our poverty? For Gandhi, our huge man-powers is a potential *resource*: "There is no other country in the world with the possible exception of China, that is potentially so rich as India with its inexhaustible, untapped resources of man-power. Tap these reserves, and you at once banish poverty from this country". (Harijan, 21.9. '34, p.253).

"We have not enough horse-power expressed through steam-engines, oil-engines or electricity, but we have an inexhaustible reservoir of man-power lying idle and pleading to be used, and essentially qualified for the purpose. Oh for a faith that would see and use this supply of living power!" (Young India, 15.3. '28, p.82)

4. We are a "continent" and except China we are the "most thickly populated." Hence, ".....the economics and civilization of a country where the pressure of population on land is greatest are and must be different from those of a country where the pressure is least." (Harijan, 11.5. '35, p.103) (Such a country is America, for instance, which is sparsely populated and has a man-land ratio which is extremely favourable.)

(A) Agriculture

In response to Jaiprakash Narain's proposal that, "land shall belong to the actual cultivator alone, and that no cultivator shall have more land than is necessary to support his family on a fair standard of living", Gandhi's response was as follows:

"Shri Jaiprakash's propositions about land may appear frightful. In reality they are not. No man should have more land than he needs for dignified sustenance. Who can dispute the fact that the grinding poverty of the masses is due to their having no land that they can call their own?"

To Jaiprakash's proposal that the distribution of land to the tiller should be effected through legislation, Gandhi said: ".....It must be realized that the (land) reform cannot be rushed. If it is to be brought about by nonviolent means, it can only be done by education both of the haves and have-nots." (Harijan, 20.4. '40,p. 96).

Much has been said about his view of trusteeship—that the zaminder should hold his land as a trust for the welfare of the peasants (the ryots); but, if the zaminder does not so behave what should the peasants do? The answer is non-cooperation. "What can the poor zaminder do when they say that they will simply not work on the land unless they are paid enough to feed and clothe and educate themselves and their children in a decent manner. In reality the toiler is the owner of what he produces. If the toilers intelligently combine they will become an irrestible power." (Harijan, 5.12.'36, p.338)

Surely, Gandhi urged that the landlords (and the capitalists) behaved as trustees, but if they failed, he said that they should be deprived of their land and capital. "I would be happy indeed if the people behaved as trustees; but if they fail, I believe, we shall have to deprive them of their possessions through the State with minimum violence . . . every vested interest must be subjected to scrutiny, and confiscation ordered if necessary with or without compensa tion as the case demanded." (N. K. Bose Interview, 1935, p.161) "A zaminder is merely a tool of the system." (Young India, 26.11.'31, p. 367 & 368). "I do not want to destroy the zaminder, but neither do I feel that the zaminder is inevitable." (Harijan, 5.12. '36, p. 337 & 338)

2. Gandhi did not seem to have suggested any particular limit to land-ceiling. But, he did visualize, I believe, fragmentation of division of land leading to uneconomic holdings. The way to increase agricultural productivity and better incomes to peasant households was hence, cooperative farming. "I firmly believe . . . that we shall not derive the full benefits of agriculture until we take to cooperative farming. Does it not stand to reason that it is far better for a hundred families in a village to cultivate their lands collectively and divide the income therefrom than to divide the land anyhow into a hundred portions?" (Harijan, 15.2.'42,p.39)

3. Was Gandhi against use of machi-nery in agriculture? "We in India have not been able to use complicated machi-nery in agriculture with profit so far. We do not exclude machinery. We are making cautious experiments. But, we have not found power-driven agricultural machinery to be necessary." (Harijan, 2-11-'34, p.301).

Gandhi's advocacy of organic manure is perhaps too well known. He insisted the utilization of vegetable and human waste (excreta) for the production and use as manure. He said: ... excreta picked up are golden manure for the village fields . . . At present, this rich manure, valued at lakhs of rupees, runs to waste every day, fouls the air and brings disease into the bargain." (Harijan, 3.2. '35, p.416) "We have not yet devised the most economic method of disposal of our evacuations and we turn our open healthy spaces into breeding grounds of disease." (Harijan, 11.5.'35, p.103)

4. Gandhi bitterly complains that, "..... only a fraction of the price paid by the consumer actually reaches the grower of food. It should be the business of the Interim Government (1946) to see that the tiller of the soil gets full value of his produce and that every pie paid by the consumer reaches the peasant's pockets or else it should get out. The interim government can never be guilty of wishing to provide cheap grains to the consumer at the expense of the grower of food. The trouble with the cultivator is not low prices but the middle man .... I would eliminate the middle-man alto-gether. It is he who today sponges the agriculturist. Otherwise, there is no reason why the peasant should starve ..... At the same time a peasant who profiteers or exploits the black-market belies his calling. He is no less an ex-ploiter than the zaminder." (Harijan, 6.10.'46, p.337 & p.338)

(B) Problem of Rural Poverty: What is the way out?

It would not be exaggeration to say that removal of rural poverty is almost an "ultimate concern" to Gandhi. His

description of rural poverty so intensely expresses his anguish: "If you went to the villages of India, you would find utter despair in the eyes of the villagers, you would find half-starved skeletons, living corpses. If India could revive them by putting life and food into them in the shape of work, India would help the world. Today India is a curse. There is a party—in my country which would sooner see an end to the lives of these half-starved millions in order that the rest may live." The degradation is due to unemployment. ....."what a calamity it must be to have 300 million unemployed, several millions becoming degraded everyday for want of employment, devoid of self-respect, devoid of faith in God?" (Young India, 15.10.'31, p.309) What is the reason of our poverty? "The reason of our poverty is the extinction of our industries and our consequent unemployment." (Harijan, 11.5. '35, p.103) The poverty is due to enforced idleness for almost half the year for our peasantry. He says: "Can any population in the world subsist while remaining idle for half the year? Even if all the water that the rains bring were captured and harnessed to irrigation it would not keep the masses alive if their enforced unemployment for the better part of the year not removed." (Harijan, 31.3.'46, p.38)

2. What is the way out? "What is the kind of services, I asked myself, that the teeming millions of India must need at the present time, that can be easily understood and appreciated by all, that is easy to perform and will at the same time enable the crores of semi-starved countrymen to live and the reply came, that it is the universalizing khadi or the spinning wheel alone, that can fulfill these conditions." (Yeravada Mandir, Chap. XVI)"I feel convinced that the revival of hand-spinning and hand-weaving will make the largest contribution to the economic and moral regeneration of India. The millions must have a simple industry to supplement agriculture. Spinning was the cottage industry years ago, and if the millions are to be saved from starvation, they must be enabled to reproduce spinning in their homes and every village must repossess its own weaver." (Harijan, 31.3. '46, p. 58) Though, he said, that khadi is the only means to save peasantry from agriculture, he spoke of it only as a *supplementary* industry to agriculture. (Young India, 16.2. '21, p. 50; Harijan 6.7. '35, p. 164).

3. Some of his writings give the impression, that he was, as if, idealizing the virtues of hand-spinning. "In hand-spinning is hidden the protection of women's virtue, the insurance against famine, and cheapening of prices. In it is hidden the secret of Swaraj. The revival of hand-spinning is the least penance we must do for the sin of our forefathers in having succumbed to the satanic influences of the foreign manufacturer," (Young India, 19.1. '21) But it appears that he was far from idealizing khadi. "The moment when these millions can have better substitute, they are at liberty to give up the spinning-wheel, and no one would be more glad than I to see those millions possess a better substitute." (Young India, 21.11.'29, p.381) "Khadi is the only true economic proposition in terms of the millions of villagers until such time if ever, a better system of supplying work and adequate ways for every able bodied person above the age of sixteen is found for his village, cottage or even factory in every one of the villages in India."

(Harijan, 20.6. '36, p.145). Then again, cottage-spinning has a place only for those who have no other paying employment, and that "too, during the hours of unemployment." And then he said, "there are only two classes of people who are expected to spin, those who would spin for hire . . . . . and the thinking part of India who should spin for sacrifice by way of example and in order to cheapen khaddar." (Young India, 22.10. '25, p.361) He clearly said that hand-spinning is only the first step towards economic self-reliance. "It is a delusion to suppose that the duty of Swadeshi begins and ends with merely spinning some yarn anyhow and wearing khadi made from it. Khadi is the first indispensable step towards the discharge of Swadeshi dharma."

4. Surely, Gandhi was concerned not only with the manufacture of cloth by hand-spinning and hand-weaving but with all the necessary articles consumed or used by the villager. To concretize his views on the cottage industries manufacturing these, we can consider very briefly two other, viz. (a) production of gud or jaggery and (b) tanning.

(a) The importance of gud manufacturer is next only to that of textile. This follows from the fact that "the largest major industry next to the textiles is that of manufacture of sugar." He strongly advocated the replacement of sugar by jaggery. "The production of jaggery is becoming a thing of the past. It is admittedly superior to refined sugar in nutritive value." (July 1934, "A New Orientation") "If the consumption of gud increases and the consumption of sugar decreases, it would be a blessing for India, because medical testimony goes to show that gud is superior to sugar in nutritive value."(Harijan, 8.2.'35, p. 422) He further makes the claim, that gud has a mild laxative effect sugar certainly has not this effect, (Harijan, 13.4. '35, p.68) Hence, he says: "It is this cottage industry that cries out for your help. This by itself furnishes large scope for research and substantial help. We have to find ways and means to keep it alive." (July, 1934).

(b) Let us take another cottage industry—tanning. In one of the interesting articles "Village Tanning and Its Possibilities" in the Harijan (7.9. '34, p.236), Gandhi states the case of tanning as a cottage industry. "Village tanning is as ancient as India itself. No one can say when tanning became a degraded calling .. We know today that one of the most useful and indispensable industries has consigned probably a million people to hereditary untouchability." Gandhi pleads for the revival of this industry both on the grounds of economic self-reliance and the uplift of the harijans. "It is estimated that rupees nine crores worth of raw hide is annually exported from India and that much of it is returned to her in the shape of manufactured articles. This means not only a material, but also an intellectual drain. We miss the training we should receive in tanning and preparing the innumerable articles of leather we need for daily use." The development of tanning as a cottage industry implies two things: (i) the uplift of harijans and (ii) the development of tanning research appropriate as a cottage industry.

(i) "One is the uplift of Harijans living in the villages and eking out a bare subsistence, living in filth and degradation and consigned to the village ghetto, isolated and

away from the village proper. This way means part reorganisation of villages and taking art, education, cleanliness, prosperity and dignity to them."

(ii) "This also means the application of chemical talent to village uplift. Tanning chemists have to discover improved methods of tanning. He has to learn and understand the crude village tanning, which is still in existence but which is fast dying owing to neglect, not to say want of support. But the crude method may not be summarily scrapped, at least not before a sympathetic examination. It has served well for centuries. It would not have done so, if it had no merit."

This brief consideration of Gandhi's views on khadi, gud and village tanning is illustrative of the way he considered the issue of dealing with one of our greatest economic challenges—the problem of providing employment the rural unemployed as a means of mitigating their poverty. It may be tedious and unnecessary perhaps to go on to consider the other cottage industries—paper making, soap, oil pressing (ghani), ink, etc., with which Gandhi was concerned. (Gandhi's concern embraced all the possible industries that would produce consumer articles/goods required *primarily* for village use.)

(C) Views on Machinery

Cottage or village industry implied use of simple machines and simple technique. But, the entire thrust in developing the cottage industries for Gandhi being the removal of rural unemployment and attaining economic self-reliance to the extent possible, he was not committed to opposing the big machine and complex/sophisticated technology *as such*. He quite often protested against the critics who said that he was opposed to machinery as such. "I am not against machinery as such, but I am totally opposed to it when it masters us." (Harijan, 27.2. '37, p. 17 & 18) "Men 'save labour' until thousands of them are without work and die of hunger on the streets. I want to secure employment and livelihood not only to part of the human race but for all. I will not have the enrichment of a few at the expense of the community. At present, the machine is helping a small minority to live on the exploitation of the masses. The motive force of this minority is not humanity and love of their kind but greed and avarice." (*Lead Kindly Light* by Vincent Sheean, Chap. IV., p.65 & p.171) The question of mechanisation need to be viewed in the context of our situational logic in the countryside. The challenge before us is: How and what work we provide for those who are without work at all and for those who are idle for six months? "Mechanization is good when the hands are too few for the work intended to be accomplished. It is an evil when there are more hands than required for the work, as in the case of India. We may not use a plough for digging a few square yards of a plot of land. The problem for us is not how to find leisure for the teeming millions inhabiting our villages. The problem is how to utilize their idle hours, which are equal to the working days of six months in a year" (Harijan, 16 11. '34, p.316) The central issue for Gandhi was:" ... . how best to devise practical means of alleviating India's wretchedness and misery. No scheme of irrigation or other

agricultural improvement that human ingenuity conceive can deal with the vastly scattered population of India or provide work for masses of mankind who are constantly thrown out of employment. Imagine a nation working only for five hours a day on average, and this not by choice but by force of circumstances, and you have a realistic picture of India." (Young India, 3.11. '21, p.350)

The problem being providing work for the rural unemployed, Gandhi had no hesitation in saying: "I would favour the use of the most elaborate machinery, *if thereby India's pauperism and resulting* idleness be avoided." (Young India, 3.11. '21, p.350). He surely favoured improvements in the spinning wheel but only in the context of its use in the cottage industry. ".....I would love to secure the engineering talent of the West to give me a village wheel which will beat the existing wheels, though deep down in me I have the belief that the improvements that indigenous talent has made are by no means to be despised." (Harijan, 25.2. '39, p.25).

2. Gandhi realized the limitations of "man power" and had no hesitation whatsoever in advocating the use of electric power to run the machines in the production of goods by the cottage industries: "To run cottage industries with man-power exclusively, has not much prospect of survival in this age of machinery. We may try to canalize economic trends, we may not run against them in a head-on collison.If we could run cottage industries with the help of cheap electricity for instance, they would be able to hold their own without losing their essential character." (Harijan, 25.8. '46, p. 277) "If we could have electricity in every village home, I should not mind villagers playing their implements and tools with the help of electricity., (Harijan, 22.6, '36, p.146).

3. Was Gandhi a revivalist? Was he advocating a return to the primitive technology? He himself raises this question: "Do I want to put back the hand of the clock of progress? Do I want to replace the railway by the country cart? Do I want to destroy machinery altogether? .....My answer is: I would not weep over the disappearance of machinery or consider it a calamity. But I have no design upon machinery as such. What I want to do at present is to *supplement* the production of yarn and cloth through our mills, save the millions we send out of India and distribute them in our cottages." (Italics mine) (Young India, 19.1. '21, p.20).

(D) Planning for Rural Development

The main criterion of planning for development consisted in the utilisation of man-power resources essentially of rural India with a view to create conditions for greater equality. "*Real* planning consisted in the best utilisation of the whole man-power of India and the distribution of the raw products of India in her numerous villages instead of sending them outside and rebuying finished articles at fabulous prices." (italics mine) "Any plan which exploited the raw materials of a country and neglected the potentially more powerful man-power was lop-sided and could never tend to establish human equality."

2. What sort of steps, Gandhi thought, were necessary for planning at the grass-root, i.e. at the village level? "The village will be surveyed and a list prepared of things that can be manufactured locally

with little or no help and which may be required for village use or sale outside, such for instance, as ghani-pressed oil and cakes, burning oil prepared through ghanis, hand-pounded rice, tadgud, honey, toys, mats, hand-made paper, village-soap. If enough care is thus taken the villages, most of them as good as dying, will hum with life and exhibit the immense possibilities they have of supplying most of their wants themselves and of the cities and towns of India." (Harijan, 28.4. '46, p.104)

3. Gandhi suggests the following to someone who desires to take up village work:

> "Each person can examine all the articles of food, clothing and other things that he used form day to day and replace foreign makes or city makes, by those produced by the villages in their homes or fields with the simple inexpensive tools they can easily handle or mend. This replacement itself will be an education of great value and a solid beginning. The next step will be opened out to him itself." (Harijan, 1.2. '35, p.408)

4. As to the educated and intelligensia-medical men and students—can deal with the problem successfully, if they would conscientiously, intelligently and zealously and regularly do the work in the villages. Attention to personal and corporate hygiene is the beginning of all education. The things to attend to in the villages are cleaning tanks and wells and keeping them clean, getting rid of dung heaps ... Lanes and streets have to be cleaned of all, the rubbish, which should be classified. There are portions which have simply to be buried, and portions which can be directly turned into wealth. Every one picked up is valuable raw material from which useful articles can be made of which can be crushed into rich manure. Rags and waste-paper can be turned into paper, and excreta picked up are golden manure for the village fields." (Harijan, 3.2. '35, p 416).

5. For Gandhi real research primarily was research that would benefit the rural poor. Addressing the researchers in laboratories he said: "If we are to meet the villagers and to explain to them how we are utilizing their money on buildings and plants which will never benefit them, but perhaps benefit their posterity, they will not understand it. They will turn a cold shoulder.... Just as some of the experiments in your laboratories go on for all the twenty four hours, let the big corner of your heart remain perpetually warm for the benefit of the poor millions .....Unless all the discoveries that you make have the welfare of the poor as the end in view, all your workshops will be really no better than Satan's workshop." (Young India, 21.7. '27, p. 235). "It is not a tragedy", he says, "that no scientist should be able to give me the chemical analysis of such a simple article as gud? The reason is we have not thought of the villager..... What kinds of laboratory research shall we have to go in for? We shall need a number of scientists and chemists prepared to lay not only their expert knowledge at our disposal but to sit down in our laboratories and to devote hours of time, free of charge, to experiments in the directions I have indicated." (Harijan 7.12. '34, p.340).

Much has been said recently about the issue of small-scale versus large-scale industry in relation to the planning for rural development. The very formulation of the issue is somewhat misleading when one considers Gandhi's views on this issue. To this, I shall now turn though very briefly.

(E) Scale of Production

Consider the following:

Questions: "Are you against large-scale production?"

Gandhi: I never said that; this belief is one of the many superstitions about me. Half of my time goes in answering such things... Your questions is based on loose newspaper reports and the like. What I am against is large-scale production of things villagers can produce without difficulty." (Harijan, 28.1. '39, p.438).

Question: "Do you think that cottage industries and big industries can be harmonized?"

Gandhi: "Yes, if they are planned so as to help the villages, key industries which the nation needs, may be *centralized*. But then I would not choose anything as a "key industry" *that can be taken by the villages with little planning*." (italics mine) (Harijan, 28.1. '39, p.438)

The concept of centralization is not clear. But on another occasion, he spoke of both centralization and nationalization of large-scale production. "Heavy industries will *necessarily* be centralized and nationalized. But they will occupy *the least part of the vast national activity* in the villages." (italics mine) (Constructive Programme, 1941, ed., p.8)

2. Gandhi's opposition to the large-scale industry was in regard to the exploitation of the masses and its anti-rural bias leading to the impoverishment of the countryside. ".... (Let) indigenous *mills suffer, if need be, for the sake of* those on whose poverty their fortunes are *built. If an enterprising baker puts up cheap bakeries in our villages so as to* help household kitchens, the whole nation, I hope, will rise against such an enterprise. The reason for the opposition would be the same as the reason for my opposition to the mills when they come *in conflict* with the interest of the masses." (Young India, 17.7. '24, p. 240).

3. In so far as the "mill industry" participates in the impoverishment and exploitation of the rural masses, Gandhi's opposition to the Indian industry was as severe as his opposition to foreign mills. "*The great mill industry may* generally be claimed to be an Indian industry. But, in spite of its ability to compete with Japan and Lancashire, it is an industry that exploits the masses and deepens their poverty in exact proportion to its success over khadi." (Harijan, 23.10. '31, p. 311).

4. As early as 1931, when Gandhi met the Lancashire employers and working people, the following question was put to him. His response is worth noting:

Question : "Whatever you may say, you are in for more political power, which you are bound to get, and as soon as you get it, these mill-owners, in the unscrupulousness of their greed, will build huge tariff walls and be a graver danger to your villagers, than even the Lancashire cotton trade."

Gandhi : "If I am still living then, and if such a catastrophe happens, I make myself bold to say that the mills will be destroyed in the process. And, with real political power, universal adult suffrage will come and it will be impossible for the moneyed class to crush the interests of the poor villagers." (Young India, 15.10. '31, p. 309)

5. Did Gandhi conceive a contradiction between small scale/minor and large-scale production? "The minor industries I conceive will not replace the major ones, but will *supplement* them." (italics, mine) (Harijan, 10.8. '34, p.204). Gandhi had said in 1921 : "The mills do not and cannot immediately manufacture all the cloth we want. The reader may not know that, even at the present moment, the weavers weave more cloth than the mills. But the latter weave five crore yards of fine foreign counts, equal to forty crore yards of coarser counts.... The mill-owners should work their mills not for their profits but as a national trust and therefore cease to spin finer counts, and weave only for the home market." (Young India, 19.1. '21, p. 20) In 1924, he said : "I do not dread the home mill competition with khaddar, for I know that our mills are today not in a position to supply India's requirements. But supposing they do, I should not hesitate for the sake of protecting the masses, to protect khaddar against our mills, as I would protect them against foreign competition." (Young India, 24.7. '24) p. 246)

6. Gandhi did not say that existing mills e.g. the textile mills should be dismantled, but surely, he was opposed to establishing new textile mills. Gandhi advised the provincial governments in 1946 that, "if they were serious about making khadi universal they should not erect new textile mills nor permit them to be erected." (Harijan, 20.10. '46, p.365)

(F) Trade

Gandhi's attitude towards trade-protectionism against free trade, and restrictions on foreign imports is wholly influenced in relation to its consequence on village economy.

2. It follows, from what is said earlier, that Gandhi was a protectionist and against free trade. "I would tolerate, welcome indeed, plead for a stiff protective duty upon foreign goods..... England has sinned against India by forcing free trade upon her. It may have been food for her, but it has been poison for this country." (Speeches and Writings of Mahatma Gandhi, G.A. Natesan & Co., Madras, 4th edition, p.336)

3. Gandhi's attitude to foreign trade *other than cloth* is brought out in the following : "I am more or less indifferent with regard to trade in foreign goods other than cloth. I have never been an

advocate of prohibition of all things foreign because they are foreign. My economic creed is a complete taboo in respect of all commodities whose importation is likely to prove harmful to our indigenous interest. This means, that we may not in any circumstances import a commodity that can be adequately supplied from our own country. For instance, I would regard it as a sin to import Australian wheat on the score of its better quality, but I would not have the slightest hesitation in importing oat meal from Scotland, if an absolute necessity for it is made out, because we do not grow oats in India ..... Or take up a reverse case. India produces a sufficient quantity of leather; it is my duty therefore to wear shoes made out of Indian leather only, even if it is comparatively dearer and of an inferior quality in preference to cheaper and superior quality foreign leather shoes." (Young India, 15.11. '28, p.382).

The question for Gandhi was not merely whether to prefer indigenous articles to foreign ones, but one as to how the porduction and trade will affect the village artisan and the rural poor. "Any article is Swadeshi, if it subserves the interests of the millions, even though the capital and talent are foreign but under effective Indian control.... Bata's rubber or other shoes would be foreign though the labour employed may be all Indian and the capital also found by India. The manufacture ..... will oust the village tanner mostly and the village *mochi* always... The Bata shoe... will mean the death of our village shoemaker and tanner." (Harijan, 25.2. '39, p.35).

(G) The Minimum Living Wage

The problem of the rural poor dominated Gandhi's views on economic development in general and the rural reconstruction in particular. It would be of some interest to consider what was Gandhi's views on the minimum wage for workers, especially the wage of workers employed in cottage industries. About the minimum wage for cottage spinner Gandhi said in 1935: "... The spinning wage has been the worst of all the wages for any form of labour: There is no reason why a spinner in Bihar should get less than her sister in Gujarat. There is no reason why the price of one hour's labour in spinning should be less than one in weaving. There is more skill in spinning than in simple weaving. Simple weaving is a purely mechanical process. Simplest spinning requires the cunning of the hand. Yet the spinner get one pie per hour against the weaver's minimum of six. The carder too does better, almost as well as the weaver... The time has come for the Association (All India Village Industries and Spinner's Association) to equalize, if not also to stabilize, the prices of all labour regulated by it .. Let the villages occupied in the various industries organized by them get the minimum wage that may be fixed by the Association." (Harijan, 6.7. '35, p.164) "If we find that it is not possible to pay this minimum living wage, we had better close our shop. We should see that in any industry that we handle, the wage covers a reasonable maintenance allowance." (Harijan, 31.8. '35, p.227) What is minimum wage? "... A wage which would give them a reasonably balanced diet. That this diet may cost an anna and a half in Bihar and four annas in Gujarat and six in Bombay was a difference question, though even there one could live on a stale loaf or an

unleavened bread and a pinch of salt. Those things were not the minimum to keep a man fit to put in a normal quota of work all the year round. It was hence agreed that a balanced diet must be devised for every province, taking good care that the workman or work-woman got a sufficient allowance of milk and ghee and vitamins in his diet or her diet." (Harijan, 31.8. '35, p.277).

(H) "We Have Ignored the Proletariat!"

Gandhi declared: "We have ignored the proletariat for centuries, and whilst we have arrogated to ourselves the right of commanding their labour, the thought had never crossed us that they have a right to dictate their wage, that labour is as much their capital as money is ours. It is time to think in terms of their needs, their hours of work and leisure and their standard of living." (Harijan, 14.9. '35, p. 242).

How do we bring about economic equality? "Working for economic equality means abolishing the eternal conflict between capital and labour. It means the levelling down of the few rich in whose hands is concentrated the luck of the nation's wealth on the one hand, and a levelling up of the semi-starved naked millions on the other..... A non-violent system of government is clearly an impossibility so long as the wide gulf between the rich and the hungry millions persists. The contrast between the places of New Delhi and the miserable hovels of the poor labouring class cannot last one day in free India in which the poor will enjoy the same power as the richest in the land. A violent and bloody revolution is a certainty one day unless there is a voluntary abdication of riches and the power that riches give and sharing them for common good." (Constructive Programme, 1941 ed., p. 18).

(I) Exploitation by the Cities

Exploitation of the villages by cities is often referred to by Gandhi. "The poor villagers are exploited by the foreign government and also by their own countrymen, the city dwellers. They produce the food and go hungry. They produce milk and their children have to go without it." (Harijan, 31.3. '46, p. 63).

The city-dweller is so totally alienated from the rural universe. "For the city-dweller, the villages have become untouchable. He does not know them, he will not live in them, and if he finds himself in a village he will want to reproduce the city-life there. This would be tolerable if we could bring into being, cities which would accommodate 30 crores of human beings. This is much more impossible than the one of reviving the village industries and stopping the progressive poverty, which is due as much to enforced unemployment as to any other cause." (Harijan, 30.11. '34, p. 332).

Gandhi argues: "The revival of the village is possible only when it is no more exploited. Industrialization on a mass scale will necessarily lead to a passive or active exploitation of the villagers, as the problem of marketing and competition comes in. Therefore, we have to concentrate on the village being self-contained manufacturing mainly for use; provided this character of the village industry is maintained there would be no objection to the villages using even modern machines and tools they can

make and can afford to use. *Only they should not be used as a means of exploitation of others.*" (italics mine) (Harijan, 29.8. '36, p. 225 & 226)

(J) Swaraj For Whom?

"It is the masses who have to attain Swaraj. It is neither the sole concern of the moneyed men nor that of the educated classes. Both must subserve their interest in any scheme of Swaraj." (Young India, 20.4. '21, p. 124) What is real Swaraj? 'I hope to demonstrate that real Swaraj will come not by the acquisition of authority by a few but by the acquisition of the capacity by all to resist authority when abused. In other words, Swaraj is to be attained by educating the masses to a sense of their capacity to regulate and control authority." (Young India 29.1. '25, p. 40-41)

(K) Gandhi's Conception of Village Swaraj

"My idea of village Swaraj is that it is a complete republic, independent of its neighbours for its own vital wants, and yet interdependent for many others in which dependence is a necessity. Thus every village's first concern will be to grow its own food crops and cotton for its cloth. It should have a reserve for its cattle, recreation and playground for adults and children. Then if there is more land available, it will grow *useful* money crops, thus excluding ganja, tobacco, and opium of the like. The village will maintain a village theatre, school and public hall. It will have its own water works ensuring clean water supply. This can be done through controlled wells or tanks. Education will be compulsory up to the final basic course. As far as possible every activity will be no castes such as we have today with their graded untouchability. Non-violence with its technique Satyagraha and non-cooperation will be the sanction of the village community. There will be a compulsory service of village guards who will be selected by rotation from the register maintained by the village. Government of the village will be conducted by the *Panchayat* of five persons annually elected by the adult villagers, male and female possessing prescribed qualifications. These will have all the authority and jurisdiction required." (Harijan, 26.7. '42, p. 238).

GANDHIAN APPROACH TO VILLAGE STUDIES

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PART TWO

SOME REMARKS AND THE ISSUES

In the first part, I have presented Gandhi's views in his own words, on certain aspects of rural development.

It would be necessary to be *selective* in presenting the views in a short paper of this kind for anyone and selection implies a certain bias. This bias expresses itself in highlighting *some* aspects rather than others. Bias need not mean distortion, but would imply selectivity in the context of an implicit framework.

In this part, I shall draw attention to some features of Gandhi's views on the aspects/themes outlined earlier, by way of very brief remarks and try to formulate the sort of issues that his views might raise. Raising the issues, is a hazardous task; I just have no background of economics and what I say will be only remarks having limited value as lay economic views. I should be forgiven, if I appear naive. The purpose would be served if this raises some issues which could be fruitfully discussed.

A. AGRICULTURE

Gandhi has said so little about agrarian issues; land ceiling restructuring of agrarian relations; rural indebtedness, destitute wages for landless labour and poor peasants, the practising of usury in different forms, the problem of rural credit etc. When someone asked why he was writing 'nothing' he said that he did not write much advisedly:..... so long as the reins of Government are not in the hands of agriculturists' representative .... that amelioration (of the lot of agriculturists) is very difficult if not impossible".

Gandhi speaks of the poor peasents or village masses and not in terms of a rural community differentiated into landless labour, poor, middle and rich peasants and the landlord. As I said earlier, his approach was to consider village community as a whole rather than a socially (class) and cultural (caste) structured unit. I am merely pointing out the perspective, rather than imply a criticism.

2. May I suggest that unlike some others, Gandhi perhaps did not believe that Indian's poverty is primarily due to its huge population? He speaks of the "potentially so rich.... untapped resources of man-power" in India. The problem is how to "tap these resources".

3. Unlike the affluent west (USA Britain) Indian (and China's) economic situation are so different (we are a continent with a huge population and we so poor); we should refuse to follow their path of development.

4. To Jaiprakash's proposals regarding land reforms, though Gandhi agreed in principle that the tiller should own the land, he should be brought by non-violent means and this can only be done by education both of the haves and have-nots".

But, Gandhi does not stop there. If the zaminders do not behave, he said the peasents should resort to action non violent non-cooperation struggle. In reality the toiler is the owner of what he produces. If the toilers intelligently combine they will become an irresistible power". He also advocated state intervention in case, the landlords did not behave as trustees. "If they fail, we shall have to deprive them of their possession through the state with minimum violence.... .... every vested interest must be subjected to scrutiny, and confiscation ordered necessary with or without violence".

5. Gandhi proposal that the toilers should unite and resort to action did not imply that they should be mobilized into permanant kisan organisations. His reservations for such mobilization of the peasantry under the aegis of a movement .....there is a fear as ugly competition to use kisans for power politics; I consider it to be contrary to the non-violent method. Those who know my method of organising kisans may profitably study the kisan movement in Kheda, Bardoli and Borsad. The secret of success lies in a refusal to exploit the kisans for political purposes outside their own personal and felt grievances. Organization round a specific wrong they would understand" (Constructive Programme. (1941 Edition), chap III, p 20).

Question: "The Communist Party has successfully organized Sweepers' union and help them to secure their rights through *hartals* etc. But the Harijan Sevak Sangh's activities are confined mostly to welfare work..... Don't you think that in view of this the Harijan Sevak Sangh ought to alter its policy and method of work.

Gandhi: If the Harijan Sevak Sangh is conviced that it is working on the right line, it will keep on to it, regardless of what on the right line it will keep on to it, regardless of what others might or might not do. Thus we may organize unions or even induce hartals, not from political motives or for such purposes but for bettering the social or economic position of Harijans" (Harijan, 21.7.'46, p. 229).

Gandhi categorically discouraged the mobilization of peasantry on an all India basis lest the politicization of kisan movement may not remain non-violent; and also that the kisan power may be used for ends other than the immediate aim of redressal of the wrongs and grievances. Thus, I suggest, that he opted out for a slow process of change to be brought about by non-violent action, through education of both the exploiters and the exploited. He believed that this was possible.

Clearly, Gandhi's views on this are so much at various variance with the Marxist position: that every economic struggle is at the same time a political struggle: that without restructuring of social relations exploitation cannot be ended; and that the issue of violence and non-violence cannot be ended; and that the issue of violence and non-violence is not a moral but a structural phenomenon—violence is inbuilt in a class society and then change implying structural change is not possible except through the mobilized action of the exploited against the exploiters. I have made the points simplistically. But the point is to see the difference, in perspective rather sharply.

6. Gandhi's view on use of machinery in agriculture are pragmatic. "We do not exclude machinery" he said. But given the huge man-power resources deployed in agriculture it has limited use.

7. He did speak of cooperative farming; but what he said is so broad and lacked detailed concretization.

8. The cooperative farming of the kind had in mind presuposed "the village community model" the sort of model that underlies community development programme and also the thing of Gandhians who can be equated with the Russian Norndniks: (India in Asian Context, *Mainstream*, January 1978, p 30)

9. The utilization of vegetable and human waste (excreta) as organic manure was stressed by Gandhi but for no avail. After independence we went in for artificial/synthetic manure in a big way. This situation can be contrasted with China where optimal utilization of the waste as organic manure is attempted with enormous benefit both in regard to relating the fertility of the soil and increasing agricultural production.

10. Gandhi bitterly complained against the middle-man. "I would eliminate the middle man altogether. It is he today who sponges on the agriculturist".

Then the question is how do we ensure reasonable price to the pesant for his produce? To whom should he sell? If the middle man has to go then what institutional arrangements? This is in respect of the producer.

The related question is a reasonable price to the consumer. If the middle man is not to exploit the consumer then how do we ensure this, without a public distribution system?

(B) Problems of Rural Poverty

Much of Gandhi's thought and activity is concerned with the issue of tackling rural unemployment. Did Gandhi think that the problem of rural poverty could be mitigated through development of cottage industries, in a sense independent of the issue of land reforms

and or restructuring of the agrarian relations? His unceasing effort to develop khadi and other cottage industries and comparative silence (?) on agrarian issues proper (for which he gave reasons) makes one feel that he believed that this was so or this could be the first step. If rural poverty is primarily due to exploitative agrarian social structure resulting in rural unemployment how can the latter be tackled without tackling the other (i.e., the restructuring of the agrarian social structure on a non-exploitative basis)

2. (i) Was Gandhi idealizing hand-spinning, and the production of khadhi and cottage industries in general? Was he a revivalist? Could we say that his views imply perpetuation of cottage (small scale) industries? The several statements listed in Part I clearly seem to show, that this was not so. Again and again he said that hand spinning and khadi is a supplementary industry. The moment when these millions can have better substitute, they are at liberty to give up the spinning wheel. Cottage-spinning has a place only for those who have no other paying employment and that too during the hours of unemployment.

(ii) His proposal for replacing sugar by jaggery is based on nutritional considerations besides the reason that revival of gud industry will gainfully employ many ruralites.

(iii) The development of tanning as a cottage industry as Gandhi envisaged it, is far from a return to traditional techniques. He calls upon the chemists to discover improved methods of tanning.

(C) Views on Machinery

That Gandhi's views do not represent going back, could also be seen from his views on machinery. He is not opposed to big machines and sophisticated technology as such. "I am not against machinery as such, but I am totally opposed to it when it masters us." "I would favour the use of the most elaborate machinery if there by India's pauperism and resulting idleness be avoided. I would love to secure the engineering talent of the west to give me a village wheel which will beat the existing wheels....."

Gandhi advocated the use of electricity to run cottage industries. "If we could run cottage industries with the help of cheep electricity.... They would be able to hold their own without losing their essential character".

The question of appropriate/intermediate technology has attracted much attention of planners, economists and technologist in recent times. But not much progress is still made in the development of the kind of technology appropriate for cottage and small industries (examples of such technological innovations are usually given in terms of gobar gas plant and perhaps the 12 apindle Cherkha run by electric power. But such innovations are not numerous).

(D) Planning for Rural Development

His approch to planning, I would say, is not structural-related to the differentiation of the village communities in terms of class and caste groups. His stress being on manufacture of consumer goods to be produced primarily for local consumption through cottage industries, rural planning primarily for him, seems to mean planning for establisment of cottage industries.

He insisted that scientific research and technology should be rural oriented. "Is it not a tragedy that no scientist should able to give the chemical analysis of such a simple article as gud?.....What kinds of laboratory research shall we have to go in for? We shall need a number of scientists and chemists prepared to lay.....their expert knowledge after disposal".

(E) Scale of Production

Gandhi denied that he was against large scale production. "What I am against is large scale production of things villagers can produce without difficulty." But then what are the things which villagers can produce *without difficulty?* He also said that cottage and big industries can be *harmonized* if they are planned to help the villages. But then he advocated on one occasion centralizations/nationalization of key/big industries. Presuppositions and implications of what Gandhi says here, are not clear to me. But on quite a few occasions, he categorically said that if the mill industry continues to participate in the improverishment and exploitation of the masses, he would be opposed to them.

He continued to say that cottage/small industry is supplementary and there need not be any opposition between the two. But then, if the cottage industry—say khadi—is to survive, then it needs to be protected from the competition form the big mills—say the textile mills. Thought he did not advocate dismantling of the existing mills, he was opposed to erection of new mills. The question of protecting cottage industry from the competition of big industry bothered him and except appealing to the big industrialists and mill owners that they should behave as trustees, and pleading that the big industries should not manufacture at the expense of the cottage industry, he did not go much further than that. What if the industrialists did not behave? What sanctions? He spoke of nationalization of key industries. But he also said that we should not use force. I do not know, how these things can be reconciled.

(F) Trade

In respects of foreign trade,Gandhi was a protectionist; and he was against free trade which helped the imperialists to exploit the colonies. But here also his approach is flexible, "I have never been an advocate of prohibition of all things foreign because they are foreign. My economic creed is a complete taboo in respect of all commodities whose importation is likely to prove harmful to our indigenous interest."

The question of trade, he viewed, primarily in terms of its impact, one may say on village economy.

(G) The Minimum Wage

Gandhi's dilemma in respect of implementation on minimum wage has been highlighted by Prof. V M Dandekar (Gandhian Economic system: A Path to Non-economic Goals-1, Zakir Hussain Memorial Lecture, 1978, *Mainstream*, March 18, 1978).

Gandhi's formula regarding minimum wage (which sounds almost utopian—the wage which covers balanced diet,plus sufficient allowance of milk, ghee and vitamins etc) has any chance of being implemented given the existing socio-economic structure? Many states have legislated minimum wage for agricultural workers. But except in Kerala and west Bengal they are nowhere implemented. Also Gandhi was concerned with organizations like the Khadi Board which are run on a voluntary basis. Given the productive potential, quality of produce and competition from the mill produced goods, the workers in the cottage industries can never hope to secure any decent wage. What the worker in any cottage spinning industry gets today is destitute wages (Rs. 1.50 to Rs. 2/-) for eight hours of spinning. The implementation of the minimum wage, given the present economic set-up seems to be a far cry.

(H) Gandhi said that to bring greater economic equality means "the levelling down of the few rich in whose hands is concentrated the nations luck, and a levelling up of the semi starved millions on the other....." But how is this to be brought about? Not by mobilization of the workers and peasantry with a view to capture political power. If not this way, how?

(I) Exploitation by the Cities

Gandhi stressed the fact of rural exploitation by the city dwellers. He also pointed out the alienation of the urban elites and the anglicised educated middle classes from the rural universe.

How to end the exploitation of the villages by cities? Do not the urban elite and the anglicised middle class constitute vested interest? Can their life styles and standards of living be sustained without the exploitation of the country side?

(J) Gandhi said that Swaraj is for the masses and all other classes must subserve their insterest. How do we actualize such a consummation of Swaraj in institutional terms?

(K) Gandhi's concept of village Swaraj seems almost utopian today, given the growing economic crisis leading to continuous impoverishment of the rural poor some 250 million of them are said to be below the poverty line.

APPROACHES TO RURAL DEVELOPMENT

By

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"Rural Development" is a term which has acquired different and often conflicting meanings. Under this term practicably all aspects of rural life are attempted to be covered by scholars who write on the subject and policy-makers who are in charge of implementing programmes for rural uplift.

The ambivelence and equivocation about the nature and content of rural development are not far to seek. During the last 31 years after independence both the central and state governments have experimented with a large variety of projects including pilot projects, all of which have attempted only partial solutions to a complex and multi-dimensional problem. The people, not to speak of social scientists and other experts, are disenchanted with all the slogans and catchy phrase shown up by successive rural development programmes such as "Community Development" "Panchayati Raj", special programmes for small farmers, and marginal farmers, "Crash Programmes" for employment creation, "Integrated Rural Development" and so on.

Rural Development embraces, naturally, all aspects of rural life including agriculture, rural industries, health and sanitation, water supply, education, transport and communications and other infrastructural facilities. The objectives of rural development has invariably been to solve the massive problems of poverty and unemployment and to create productive assets for the rural poor. However, despite a plethora of projects with the above lofty aims, rural development, whether integrated or non-integrated, has not really taken off. It is not surprising, therefore, that there is again renewed interest in the formulation of new strategies for achieving rural development.

There are different approaches to rural development. These can be classified under two broad categories, namely, (a) reformist and (b) radical approaches. Apparently there may be schemes which have combinations of both; but we should be able to classify each approach into these two categories based on its thrust. The reformist approach can be defined as one in which the emphasis is to make reforms within the

existing socio-economic and political order, that is, trying to introduce changes at the micro level or in particular sectors without attempting to alter the overall correlation of social forces and the basic structure of the socio-economic and political power. On the contrary, the radical approach has, as its kernel, the objective of radically altering the power structure, socio-economic and political, and using the struggles for reform as part of the struggle for overall change of the structure. In other words, the distinction is not in terms of reform or no reform, but between reform within the existing system versus total change (using the struggle for reform wherever necessary).

Many of the reformist approaches to rural development invariably place their focus of attention on the rural poor. Even "integrated rural development" developing countries like India have been defined as

> "a strategy to improve the economic and social life of the rural poor and the rural weak in the overall spectrum of development and growth. It is not only important to raise the agricultural productivity, and rate of overall economic growth in the rural areas, but it is also to be ensured that the poor and weaker sections share the benefits"[1]

Today there are very few social scientists and development experts who would not swear by the faith in more egalitarian social structure and by their commitment to the rural poor. But very often these expressions of faith in the rural poor are mere platitudes devoid of any serious content. It has become a fashion, a ceremonial outfit, which every social scientist and planner in the underdeveloped countries is expected to wear.

The history of rural developmental effort undertaken under the leadership of the government indicate kaleidoscopic changes from time to time. Different reformist approaches have been tried from one plan period to another; and there are even instances where horses have been changed in midstream!

Multi-purpose Approach :

The Community Development Programme was started in 1951 with a lot of fanfare. It was hailed by official spokesmen as well as foreign agencies such as the World Bank as the single penesia for all the ills of Indian rural life. It was based on a multi-purpose approach with the lofty aim of developing material and human resources of each area (community development block) to the fullest extent through co-operative effort and the creative participation of people. It aimed at attacking the problems of all sectors of rural life considering them as an organic whole covering agriculture, poultry, animal husbandry, other subsidiary occupations, irrigation, cooperation, village and small scale industries, housing, communication, education, health and sanitation. It was hoped that with a multipurpose project it will be possible to raise the standard of living of the rural people eradicate poverty and unemployment, ensure social justice, promote

1. S. K. Sharma, S. L. Malhotra, *Integrated Rural Development: Approach, Strategy and Perspectives*, Abhinav Publications, New Delhi, 1977 p. 17.

co-operation and community outlook and democratic organizational structure at the local life.

The community development programme showed a substantial progress in terms of the number of blocks and the area covered by the programme.

However, despite all the lofty ideals incorporated in the original proposals relating to community development a number of serious deficiencies were noticed as the programme was executed. The whole programme became bureaucratized, all important decisions being taken from higher levels without involving the local people. The report ot the programme evaluation teams of the Planning Commission brought out the serious deficiencies of the community development programme. It was clear that the economically backward people were not benefited to any significant extent. In fact, the economically dominant sections and classes of the people became the main beneficiaries. The Balwant Rai Mehta Committee made the following caustic comment:

> "Admittedly, one of the least successful aspects of the C D and NES is its attempt to evoke popular initiative through the formation of ad-hoc bodies mostly with the nominated personnel and invariably advisory in character. These bodies have so far given no indication of durable strength nor the leadership necessary to provide the motive force for continuing the improvement of economic and social conditions in rural areas. So long as we do not discover or create a representative and democratic institution which will supply the local interest, supervision and care necessary to ensure that the expenditure of money upon local objects confirms with the needs and wishes of the locality, invest it with adequate power and assign to it appropriate finances, we will never be able to evoke local interest and excite local initiative in the field of development."

The experience of community development, however, has been very disheartening. Once the initial enthusiasm and the publicity build up was over, the people got disenchanted with Community Development Programmes—the scheme did not even touch the fringe of the problem which it promised to tackle. Apart from the bureaucratic way of tackling problems at the local level, the inability of the political leadership, and bureaucracy to transfer power and resources to the local level, the continued hold of landlords, money lenders and other vested interests on the day to day life of the people prevented Community Development Programme from getting any roots in the Indian soil.

In the scheme of things suggested by Gandhiji, particularly in achieving Swaraj, Panchayati Raj institutions were given a pride of place. The administration of the village was to be conducted by the panchayat through elected representatives of the people. His concept of democracy was based on the effective functioning of panchayat institutions. According to the democracy could be built only by strengthening local institutions from below. According to Gandhiji :

"Public opinion will do what violence can never do. The present power of the zamindars, the capitalists and the rajas can hold sway only so long as the common people do not realize their own strength. If the people non-cooperated with the evil of zamindari and capitalism it must die of inanition. In panchayat raj only the panchayat will be obeyed and the panchayat can only work through the law of their making".

The panchayat raj was conceived by Gandhiji as one of the effective measures for bridging the gaps between urban and rural centres. If panchayat raj institution became effective as local governments, according to Gandhiji the concentration of political power in the urban centres would be broken.

Target Group Approach

The green revolution strategy has been discredited. It continues; but in terms of publicity and focus of attention new approaches have come to the forefront. One of the new approaches adopted by the government was the target group approach.

Under this approach specific groups of people are classified as potential beneficiaries and developmental programmes and schemes are evolved with special emphasis on the solution of the problems of these groups. The Minimum Needs Programme adopted by the government may be classified under this head. In the target group approach the professed emphasis is in selected groups, particularly weaker sections.

The Gandhian concept of Antyodaya can be described, in a sense as a target group approach because the emphasis here is that "the last man should be the first to benefit".

National Programme of Minimum Needs was evolved with the objective of supplying all the essential goods and services to the poorer sections of the people. It was felt that even if schemes for employment creation were successful the poor people could reap the benefits of such employment only if they could purchase essential goods at reasonable prices so that their minimum standards of living were improved. The Minimum Needs Programme, therefore, attempted to lay down norms according to minimum levels of goods and services such as drinking water, health and sanitation, house sites for landless labour, roads, electricity, education etc. Similarly Minimum Needs Programmes were evolved for woman and children.

The Gandhian Approach

Gandhian thought has, no doubt, played a partial but important role in inviting our attention to the vital role of rural development in the overall advancement and progress of Indian Society. The slogan of "back to the village" has had a stirring influence on many people who are well-meaning and who have genuine interest in the service of the people. But the overall philosophical or ideological position of Gandhism has been so defective that instead of directly attacking the root cause of rural poverty and hunger, it has helped in diverting our attention from a radical approach to reformist approach.

Protogonists of the Gandhian mode of rural reconstruction complain that they have not been given a fair trial by those who are in political and bureaucratic power—and elite which is the product of western elitist education. Those who effectively oppose the Gandhian concept of village swaraj do not aggressively oppose it or openly reject it; but they bypass it conveniently.

The attempt to bypass or circumvent Gandhian thought or to keep it on a high pedestal and treading the western capitalist path of development is not an honest or effective approach.

The Gandhian solution to the problem of land monopoly has been to persuade owners of big lands to surrender part of their possession for distribution among landless. The attempt to solve the problem of maldistribution of rural assets by making appeals to human conscience, relying on the values of compasion, love etc has so far proved to be a non starter. There is a need for an intense and thorough going dialogue with those who believe in the Gandhian approach in order to harness their concern for the rural poor into more radical channels.

It must be admitted that the Gandhian approach to rural development is basically reformist in content while exposing its negative features.

Special Target Group Programmes

SFDA/MFAL

The All India Rural Credit Review Committee had recommended in 1969 that pilot projects should be evolved to give assistance to small farmers having holdings between one and two hectares. During the Fourth Plan the Small Farmers Development Agencies (SFDA) were formed to identify the problem of small farmers, to formulate developmental programmes and make available inputs, credit, etc and to evaluate the progress of developmental schemes from time to time.

During the Fourth Five Year Plan about Rs. 30 crores were set apart for the creation of 46 SFDAs. But the progress so far has been disappointing.

The SFDAs were required to promote intensive agriculture including double cropping on dry farms and tripple cropping on irrigated lands through appropriated crop potential hand and through the full utilisation of natural resources, the application of technology and other infrastructure in package form.

A field study conducted by the Reserve Bank of India in 1972-73 observed that

> "these farm production plans were not implemented in any of the selected districts as extension effort at village level was found unequal to the task. There were many deficiencies in the farm plans also. The farm plans were prepared without the involvement of credit agencies and hence, these were not supported by a credit plan. The emphasis was more on irrigated agriculture."

Another pilot project, Marginal Farmers and Agricultural Labourers (MFAL) development scheme were started. 87 such projects were started with the total outlay of Rs. 1.58 crores during the Fourth Plan.

A number of other programmes such as Crash programme for employment creation, Pilot Intensive Rural Employment Project (PIREP). Applied Nutrition Programme, Drought Prone Areas Project and so on have been tried, but with little success.

Target Sector Approach

After the realization that the Community Development Programmes had failed the government formulated another approach which may be called the target sector approach which is popularly known as the minimum package approach or the green revolution approach. The strategy adopted by the government was to select particular segments or sectors of the rural economy and tackle one or more problems at a time in depth. The green revolution strategy, for example, was to supply a package of inputs, high yielding varieties of seed, fertilizers pesticide etc in selected area. Along with estimates of monetary outlays physical targets were set. The physical targets, in most cases, however notional are based on inadequate information and far removed from reality.

The experience of the green revolution strategy has clearly indicated that instead of solving the problem of poverty and unemployment of the vast sections of the rural poor, the strategy has helped the rural rich in becoming richer.

The protagonists of green revolution argue that the above phenomenon was anticipated by them and that the process of rich becoming richer was inherent in the strategy of giving inputs and other facilities to selected areas with irrigation and to classes and sections of the people who have the highest growth potential, mainly the rich and economically advanced sections. They expected that the fruits of development which would initially be concentrated in uppercastes would gradually *percolate down*.

The above theory of percolation was to be operative with the help of various supportive measures such as progressive taxation, subsidies for the rural poor and so on.

A critical study of the green revolution strategy clearly indicates that it produced the disastrous effect of widening the gap between rural poor and rural rich. Technology was introduced into an unequal and oppressive socio-economic and political structure. In the absence of radical land reforms, the unequal asset structure in the rural areas continued and only the economically advanced sections, that is, the landlords and rich peasants took advantage of the supply of package of inputs given on a selective basis.

Integrated Rural Development :

The term "integration" has caused considerable damage to the process of clear thinking on problems of rural development. Many interpretations are given to the term to justify its use by government and social scientists. A pathological fact remains, however, that the term "integration" has been loosely used by policy-makers to imply a new level of integration of multi-dimensional functions having a bearing on rural people while, in fact, it is used as smokescreen for a non-existent new approach.

In its simplest meaning, integration refers to a system of inter-relationship between different activities in which rural masses are engaged in or are concerned with, such as agriculture, industry, education, health and so on. Some people use the term to denote some sort of a special programme or a chain of activities linked with the diverse sectoral programms relating to rural life so that the optimum results are achieved through an identification of key sectors and priorities.

(Integrated rural development, thus, as a synergistic approach aims at total development of the area and the people by bringing about the necessary institutional and attitudinal changes and by delivering a package of services through extension methods to encompass not only the economic field, eg., development of agriculture and rural industries, etc, but also the establishment of the required special infrastructure and services in the area of health and nutrition, education and literacy, basic civic-amenities, improving the quality of life in the rural areas.[2]

The experience of the last 31 years of rural development, and indeed development in all sectors of economic activity in India has amply shown that the objective of solving poverty, unemployment is still a far cry. There is increasing awareness that partial and segmented approaches to the development of rural areas will create further imbalances and social tensions. The fuller utilization of local resources particularly human resources cannot be achieved by a purely economic and technocratic approach to rural development. The social, cultural, political and other dimensions of the rural problem have been identified as important in solving the problems of the rural poor. Hence it is not surprising that many well-meaning scholars have become ardent supporters of 'integrated rural development". They see the need for a comprehensive and multidimensional approach for solving the massive problems of poverty and unemployment in the rural areas which implies the integration of functions of the various governmental departments and agencies.

The crucial problem, however, is not whether we should have integration or non-integration per se; the crucial problem is whether within the present socio-economic and political power structure any scheme for development, whether integrated or otherwise, can succeed in solving the problems of rural poor. If the experience of the last three decades has only lesson for us it is this: within the present structure of society as obtains in India—a structure in which a microscopic minority of landlords, money lenders and big capitalists, in collaboration with international finance capital are trying to control the destiny of the Indian people—all developmental schemes including fully integrated ones will operate for the benefit of these classes and not in the interests of rural poor. The important task, therefore, is to break the monopoly of the above classes on productive assets and to enable the rural poor (along with all other oppressed people in the urban areas) to become masters of their own destiny.

2. S. K. Sharma, S. L. Malhotra, *Integrated Rural Development: Approach, Strategy and Perspectives*, Abhinav Publications, New Delhi, 1977, pp 16-17.

Big Business House Approach

Big industrial and business houses, mostly monopoly houses, have been evincing great interest in rural development in recent years.

The Mafatlal Group of companies has promoted an agency registered under the Bombay Public Trust Act 1956 called Bharathiya Agro-Industries Foundation (BAIF). Through the BAIF the technology of the crossbred cow is attempted to be disseminated to the rural areas. The scheme include artificial insemination, health care of animals, assistance in the production of fodder, setting up of gobar gas-plants and so on. The salient features of the developmental programmes undertaken by the Mafatlal Group are: development of relevent technology; motivating rural people who are adopting new technology; transfer of technology to rural people and the managements there of; promoting local level agencies; and providing management input for rural development projects.

Though the apparent stimulus came from the central government's decision to give incentives to big business houses in adapting villages and in undertaking schemes for rural development, the motivation of the monopoly houses in entering the rural areas in the name of "development" must be seen as part of the dynamics of a bigger phenomenon, as part of the attempts by big business to enlarge and develop not only the sources of supply of agricultural raw materials but also to develop the market for industrial goods for rural areas.

M L Dantwala argues that ;

> "Involvement of business houses in rural development should be demonstratably motivated by the concern for the poor... Concern for the poor is an intensely personal value and not simply an imposed responsibility, a compensatory action, or an atoning ritual" [3]

Despite the pious hope and wish that business houses should be charged with social concern and responsibility, the fact remains that the major motivation of these houses for entertaining the rural areas is to extend their spheres of exploitation and to intensify them in newer and newer forms. Dantwala's hope that "the human value which inspires our involvement in rural development would also be reflected in and personal style of living and in the functioning of our business concern" is in vain. His arguement that a business house can certainly help to remove the exploitative element from the functioning of the credit and marketing institutions .. (and) to loosen even the structural constrains [5] is based on a wrong understanding of the nature and style of functioning of big industrialists and the motivation for their participation in activities under the guise of "rural development".

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3. M. L. Dantwala "Options in Rural Developments" Rural Development: *Role of Voluntary Agencies and Business Houses*, Indian Merchants Chamber, Economic Training and Research Foundation, Bombay, July 1977 p 1.

4. Ibid.

5. Ibid., p 2.

The protagonists of big business argue that the entry of such houses into rural development will introduce technical and managerial efficiency into agricultural operation, help in undertaking massive schemes for the supply of inputs, marketing, technical training and for creating supplementary occupations including rural industry.

Adoption of Villages

Many business houses have started "adopting" villages. Most of these remain as showpieces which cannot be replicated on a large scale because the schemes involve substantial investments by these houses. What is happening is that certain big industrial houses are concentrating their resources, financial and managerial, in a few selected villages, trying to beautify the place and to dabble with all aspects of rural life. Such a showpiece approach to the problem of village adoption is in fact creating new social tensions, increasing the social distance between village distorting indigenous developmental effort.

In certain cases efforts by business houses to pump in their sources for certain types of developmental activities such as the utilization of underground water can be disastrous to the balanced development of the region. Concentration of effort in one village or a group of villages to tap ground water through modern technology may create a situation in which nearby villages are deprived of their potential sources of water.

In order to overcome the resistance from the village folk to the big business programmes for rural development, special efforts are being made for collaboration between them and official as well as voluntary agencies at the local level. Such collaboration may degenerate into a system of dependence of local agencies on the big business houses. As the old saying goes. "Those who control the purse control the strings".

A detailed evaluation of the various schemes for rural development in India in the past will show the great limitations, and indeed the utter futility of all the reformist approaches of the official agencies. All schemes—even the most well conceived and logically consistent ones— ended up in forced abortion.

The lesson to be drawn from our past experience is that we have to make a substantive reversal policies hitherto adopted and the adoption of radical strategies for rural transformation.

Problems of rural development, and indeed of development in general cannot be discussed except against the backdrop of the legacy of neglect by the British imperial power and continued neglect by planners and political leaders for the past three decades of independence.

If we analyse the progress of rural developmental schemes during the Five Year Plans and the Annual Plans (during the period of plan holiday) it will be seen that in absolute terms the indicators of growth, such as the number of schools and hospitals, the extent of road transport and communications, production and productivity of major crops, etc have gone up. But, paradoxically enough, poverty, unemployment, inequality and various forms of oppression of the rural poor

have increased. A reversal of this position would, therefore, imply a radical change in the asset structure, increased social participation and elimination of all hierarchical structures in the society which hamper development of the people.

It must be realized that the rural areas are increasingly being integrated into the capitalist system of production relations, superimposed, as it is, on feudal and semifeudal relations and based on increasing collaboration with imperialist powers through the investment of multinational corporotions and through unequal trade. Rural development, therefore, can be studied only against the all-India and, indeed, the international setting.

Modes of Production—Production Relations

one of the most neglected fields of enquiry relating to rural development is the institutional structure of rural societies, the ownership pattern of productive assets, particularly land. Related to this basic issue is the question of changes in *modes of production* and the transformation of *production relations* which are conducive to the material and cultural development should encompass programmes for not only raising agricultural productivity but also creating egalitarian social institutions, modernization of cultural values and a high sense of self-reliance among the rural population and their willing participation in all decision making processes.

Most of the programmes and projects prepared by the Planning Commission and various expert bodies of the government so far have been blind to the basic socio-economic and political reality in rural India, that the major proportion of productive assets, particularly, land has been concentrated in the hands of a very small minority of landlords while the vast majority of rural population have been living below subsistence level because of their alienation from land or because of their meagre possessions. The traditional approach of the planners and their assumption that "growth" of output and incomes through an intensive application of technology will automatically lead to changes in improvement in the employment consumption levels of the poor has now been virtually discredited. But idealistic approaches, assuming away the institutional rigidities and the systemic deficiencies of the present society, continue to have their grip over policy-makers. This is clear from the fact that even in the recent renewed debate on rural development we see really no new light.

No social scientist can view the rural scene in isolation from its sorroundings. Development of the rural areas has, of course, its own specifics; we may have to focus our attention on the endogenous factors and the inter-relationship between various sectors within rural society. But, at the same time, we must not lose sight or the exogenous forces which interact with rural society, modify and reshape it, and lead the destiny of rural areas in certain new directions. For example, while studying the intricate mechanism by which the products of the cultivators are marketed in the villages and the creation and circulation of surpluses within the rural areas, we have to see their linkages with the rest of the world, particularly the interconnection with the growing and expanding *capitalist commodity production* and the increasing linkages between

rural and urban centres through the supply and demand of products in exchange.

A consequence of the influx of capitalist mode of production relations into the rural area is the development of new forms of appropriation of the surplus value, emergence and strengthening of absentee landlord classes, the dominance of the rural rich using new technology and the oppressive character of the moneylender–trader combine. The motive force for productive activities, which was traditionally the collective needs of the village folk,gets replaced by the irrational drive for profit supported by the value systems of private greed and possessiveness. Working people tend to become passive elements in the productive process as "objects" of development rather than "subjects" with powers to shape their destiny.

Appropriate Technology

In the discussions on rural development, the problem of appropriate technology has assumed a good deal of significance. Though the term "appropriate technology" has been borrowed from the West with its bad connotation of importing second–rate or intermediate technology which the Western capitalist countries have discarded, it is upto us to give the term a new meaning and vitality.

The term "appropriate technology" in this paper is used to mean technology which works in the interest of the people, that is, *not* in the interest of a narrow stratum of those who own productive assets.

It should be emphasised that technology is not neutral in its impact on different socio–economic systems. The efforts to transfer technology into the rural economy will depend largely upon the given mode of production and the nature of distribution of land and capital assests.

There are a number of technological innovations which can be fruitfully employed in rural areas provided care is taken to ensure that the application of these new technology are by the people and for the people and *not* for the benefits of a narrow stratum of urban and rural rich. We give below certain examples based on research development already undertaken by various agencies.[6]

Hay Press:

Pressed hay or grass retains its quality longer than stacked hay. A simple device enables three workers to produce 5 bales/hour. It is a wooden device consisting of a bale mould in two sections (17 x 33 x 110 cm) with arrangement for wiring, in which the pressing platform works by leverage and a system of holes in the rod working the press plate along which the pin is moved to get more and more hay pressed. Finally, when the mould is filled, the wires are tied under pressure, the locks of the two sections of

6. These examples are taken from an inventory prepared by the Centre of Science for the Villages, Magan Sangrahalaya, Wardha, in their publication entitled *Techniques Appropriate* for the Villages—some Examples, 30 June 1977.

the mould are opened and the pressed bale removed. (Source: Agricultural Engineering Institute, Govt. of Israel, the Volvani Centre, Bet Dagan, P O B 6, Israel).

Hard Boards

Millions of tons of agro-wastes of various types are annually available in the villages. These can be used to prepare particle boards. Several types of boards have been made which are fairly strong and durable, look very attractive and can be used as partition material. The R R L of the CSIR at Jammu-Srinagar has worked in this line. At R R L Jorhat a process of binding the particles without any adhesive, by heating the fibre to a temparature where some tar is released and pressing it then, makes the boards water-proof. (Source: Regional Research Laboratory, CSIR, Jorhat—6)

Chemical Seasoning of Bamboo in the round for handicrafts

The Forest Research Institute, Dehara-Dun has evolved a simple process for making the round bamboo treated against cracking splitting, fungal, discolouration or insect attack by giving it an anti-shrink cum anti-septic treatment, to the process offers the possibility for handicrafts manufactures to utilize bamboos, in forms hither to little used, to produce new forms, designs and articles a part from existing range. The process consists in giving a soaking treatment to portions of the required length from green, perferably freshly cut, culms of bamboo in a tank containing a water solution of polythene glycol (PEG Mol wt 600) to which a suitable preservation has been added followed by air or kiln seasoning in the mormal manner. During soaking treatment the chemical diffuses into the green wood, replacing moisture in the cell wells and thereby preventing their shrinkage in subsequent seasoning. (source: Forest Research Institute, Dehar Dun)

Non-erodable Plaster for Mud-walls:

The common mud plaster applied to cover the mud walls of a village gets eroded during monsoons, Experiments made at CBRI, Roorkee have found out a method to make this plaster non-erodable and water-proof. This technique if taken to the Village will help the poor very much and also give some of them a source of employment. It will solve the present problem where mud houses fall down due to excessive rains and the outer wall hit directly by rains is to be plastered again and again requiring much time and energy – which tells upon the earning of the hut dwellers. This is done by the following process which gives 5—7 years of life to the water-proof exterior of the mud wall at an extra cost of Rs. 6 to 10 for 100 sq. ft. area.

The mud plaster is made, as is usual in the villages, with proper portion of clay and sand content of soil and kneaded with Bhusa or such grassy material which acts as blinder and kept for 10-12 days to mature. To this is to be added a preparation of bitumen. This preparation is made by melting 100 lbs of bitumen and dissolving it in 20 lbs. of kerosene oil and mixing with it one lb of molten wax. For every 1 cu. ft. soil used in preparing the plaster 4 lbs. (by weight) of this bitumen preparation is to be added and well kneaded before applying to the upper

surface of the cleaned mud wall. This solution can also be sprayed directly on the walls by insecticide spray pumps used by the agriculturists.

This process is simple and 1 sq. meter of surface can be covered at a cost of Rs. 1. 50. Its application can be very wide in the country and the results very satisfying for the dwellers behind mud walls. (source: Central Building Research Institute, Roorkee, U. P.)

Fungi Treatment and Fire Protection for Thatch Roof

The main drawbacks of a thatch roof are its short life, high fire risk and harbouring of insects and vermins. Investigations have shown that the life of the thatch can be increased from usual 2–3 years to 15–20 years by suitable preservative treatments. The preservative chemical consists of a solution of 4 kg copper sulphate, 4 kg sodium chromate and 0.35 kg acetic acid dissolved in 100 litres of water. Thatch grass dried to a moisture content of 12 to 15% is dipped in this solution turned over for complete wetting and kept submerged for six hours Then it is removed, drained and dried. The cost, through this treatment is increased by double that of untreated thatch, thus treated, does not harbour insects and vermin. For cheaper approach two other methods are there, (i) Fungi treated grass, as stated in the first process, is compressed under slight pressure of 0.01 kg/cm^2 and tied between split bamboo into slabs. These slabs can be used for roofing as shingles are used. (ii) A surface coating of cement or mud on the thatch from inside and outside-Inside ceiling is plastered with bitumen stabilized mud plaster and the same is thinned to a consistency of a whitewash by addition of water and is applied on the roof in two coats.

Untold number of thatched dwellings are destroyed by fire every year in the country. In Vijayawada city of Andhra Pradesh alone there were nearly hundred fire incidents in 1968. It is, therefore, desirable to apply a fire protection coat on the thatched roofs. However, such a treatment suitable for wide use must be based on readily available material and the level of skill required in its use should be as low as possible. Keeping these requirements in view the bitumen mud plaster mentioned before is used to seal the lower surface of thatch roofs.

Clay silo for storing grains:

To arrest wastage in storage at the farmer's house, improved storage silos, which are simple and cheap for the farmer have been designed. A one ton silo costing Rs. 200 or so can be made in a 15 cm. thick wall made of 3.1 cm thick pre-cast clay inner rings with a split bamboo reinforcement bitumen layer vapour barrier, and given a in situ clay outer layer finish like mud walls. This is effective in preserving food grains against vermins, insects, external heat, moisture etc.

The technique has wide application and has been tested and tried. (source: Central Building Research Institute, Roorkee, U P–Technical note No 10)

Replacement of Cement by Fly-Ash:

15–20% cement can be replaced by weight by fly ash—an industrial waste, by admixture either at the Cement Factory

or at site, without in any way affecting its strength. This helps in utilization of the waste, saving of the Cement and increase the workability of concerte in lean mixtures and not saving equal to cost of the cement replaced. Cement concrete laid by this method must be vibrated or water reducing admixture (0.2% by weight) added. (Source: CBRI Technical note No 20)

Bamboo Concrete:

Bamboo can be safely used as reinforcement upto 4.25 metres span. Mixture of white lead and 10% varnish brushed on Bamboo strips or Gloass oil has been found excellent inhibiter against any shrinkage and squelling effects due to absorption of moisture by bamboo strips when embodied in green concrete. Economy of Bamboo reinforced roofs slab upto 4.5 m. as compared to steel reinforced roof slab is 33% taking Rs. 864/ ton as cost of steel. Lintels, sunshadow, cantile vered porticoo pionic sheds, T teams, fence posts etc can also be made. A load bearing beam of 4 metre span with bamboo reinforcement takes 745 kg/metre length of load, Bamboo can be effectively used as reinforcement in cast-insitu or precast structural component with considerable economy. Bamboo of $2\frac{1}{2}$ years to 4 years maturity is recommended for reinforcement. (Source: Director, Forest Products Research Timber Engg., Branch, Forest Research Institute, Dehradun U P).

Paddy Husk Ash Bricks:

Paddy husk ash bricks can be used for constuction purposes like burnt clay bricks —the process perfected at R R L Jorhat.

The process of making cement by admixture of slake lime with paddy husk Ash and pulversing it in a ball mill for 4 to 6 hours can be easily installed in the villages to make them self-sufficient for their need in cement. This process has been designed at the IIT, Kanpur and is being successfully applied at the village Atarra in dist. Banda of UP by a scientist—rural social worker Dr Bharatendu Prakash.

The Apparent Apathy of the Rural Masses

It may appear that the rural masses are apathetic to change. Many social scientists come to the disappointing conclusion that very little can be done to organise the rural people for sustained developmental effort. However, those who have worked with the rural people and have made serious attempts to organise them realize that the rural population including the poor cultivators and agricultural labourers, have a very high sense of sensitivity to their surroundings and are capable of inculcating new ideas and taking initiative for sustained developmental efforts and for radical social transformation.

One of the reason for the low level of social creativity in many parts of rural India today is the fact that the rural poor have been kept under subjugation, exploitation and cronic scarcities. Moreover, villages are subjected to irrational dictation from bosses sitting in urban centres who are completely oblivious of rural realities. All kinds of vested interests have successfully insulated the rural poor from the mainstream of social life. All the benefits of governmental patronage,

subsidies etc are reaped by these vested interests and they prevent such benefits from flowing to these who are expected to be the beneficiaries. What is needed is the organisation of the rural masses and creation of physical and psychological environment wherein human personality of the rural poor can blossom into creative activities.

The Way Out

Rural areas are characterised by appressive power structures, though they may often manifest themselves in subtle forms. In regions where feudal and semi-feudal relations (share-cropping, conceaded tenancy and the like) prevail, exploitation is accomplished mainly through appropriation of rent. Exploitation by traders and money lenders through usury and price manipulation continue unabated. Capitalist mode of production has been superimposed on this backward and retrogade system.

Rural development of the type have in mind takes an entirely different course. Rural development means the advance of the material, cultural and moral levels of of the people, in short, the quality of their life, through the struggle of the rural poor and dispossessed, asserting their rights for their own self-determination and participation in social production and in the distribution of benefits therefrom. This involves the building up of a *countervailing power structure* of the organised rural poor, which, in turn, calls for struggles against all forms of oppression and exploitation in the rural areas. It further involves the unleashing of the creative energies of the rural people, developing their self-reliance, sense of mutual cooperation and participation in all decision-making at the local level. Rural development means the destruction of all obstacles of development, namely, the stranglehold of imperialism monopoly capital, land-lordism, money lending and other forms of oppression.

Conclusion

Rural development in India covers a wide range of socio-economic and cultural activities of the village people with a view to attaining a higher quality of life based on social justice. Such a multi-dimensional development of rural areas cannot be achieved by merely steping up financial allocation for agriculture, industry and other economic activities. Centuries-old neglect and consequent backwardness of the villages in India can be retraced only by a complete reversal of the socio-economic and political policies of the central and state governments and struggles by the people for social transformation so that they are liberated from the clutches of oppressing classes.

Creation and mobilization of surpluses in the interests of the peeple requires radical changes in the ownership pattern of assets both in agriculture, industry and other sectors. The participatory role of the rural poor in developmental activities is the only guarantee for the success of planning and development.

BIPLAB DASGUPTA'S STUDY OF A TYPOLOGY OF VILLAGE SOCIO-ECONOMIC SYSTEMS—A COMMENT

By

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Biplab Dasgupta's typological study of Indian village socio-economic systems[1] is a highly significant and valuable contribution to empirical typological methodology[2] for generating and testing hypotheses concerning some dynamic aspects of the Indian rural structure and development. His attempt to develop a simplified typology of village socio-economic systems based on a small set of key variables and to examine how far the typology would help understand the dynamic aspects of village labour utilisation in the context of the socio-political set up in India, deserves to be carefully studied. The object of this brief note is to draw attention to some major features and conclusions of this study and to raise a few issues for further consideration

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1. A Typology of Village Socio-Economic Systems, by Biplab Dasguta; Economic and Political Weekly; Vol. X, Nos. 33–35, Special Number, August 1975.

2. Typological methods form an important part of the methodology of scientific investigation and research. Formulation of types of social entities and systems has a long tradition. Types are created by noting homogeneous attributes in heterogeneous phenomena, and are formulated for the purpose of discovering systems. In the Social Sciences, especially in sociology, theoretically derived types (ideal or heuristic) have been extensively used as research tools. There are also important examples of empirical typologies, though they are not extensively used. The advent of the computer in recent times has fecilitated more extensive use of empirical typologies. Broadly speaking, classification of any kind of phenomena with a plurality of correlated attributes or characteristics according to a conceptualised scheme yields theoretical or constructed types, and identification of empirical objects according to an established classification leads to concrete and extracted types. All types derived from descriptive analysis of data or through statistical analysis of data may be considered as extracted or empirical types. Robert Winch, referring to these typologies, says that the ideal or heuristic type is deduced from theory, it is

Dasgupta's study is based on data pertaining to 126 village studies, completed by the A.E.R. Centres in India. He has selected a set of 14 key socio-economic variables, representing the major aspects of village life and for which the coverage of data is adequate in the 126 village studies. Employing multi-variate statistical techniques (principal component analysis and discriminant analysis), the villages are ranked on the basis of the general characteristics of selected set of variables and then classified into three types according to their individual rank values. The resulting three types of villages—each representing 42 villages—are designed as Type 'A' (the top group), Type 'B' (the bottom group) and the type 'AB' (intermediate group). The 14 key variables cover almost all the important variable types such as demographic, occupation and

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constructed for the purpose of enhancing the vision of the researcher (i.e. by facilitating the statement of hypotheses, the conception of testing situations, the ordering of observations), and it represents a voluntary distortion of empirical phenomenon by positing extreme forms of relevant characteristics. In contrast, the empirical typology is derived primarily from data rather than from theory, it functions to summarise observations rather than to enhance vision or to illustrate the existence of essences, and it describes modal rather than extreme characteristics. Robert Winch also says that empirical typologies derived by means of sufficiently powerful techniques can correct errors in heuristic types, reveal types where none has been posited or suspected, and provide a basis for integrating various disciplines. Kenneth Bailey regards this dichotomy as over-simplified and considers the 'Classical' and 'Reduced classical' typologies as being both conceptual and empirical and as more useful. The comparative study of social systems in the hands of economists and sociologists in the past has led to the conceptualisation of theoretical models and fundamental types of social systems such as the polar or dichotomous types which have firmly established the notion of social continuum and by means of which attempts are made to comprehend the processes of change or inter-mediate structural forms. The conceptualisation of stages of economic development (Friedrich List, Bucher, Sombart, Marx and Rostow) and the parallel construction of ideal types of social entities and social systems, placing the primitive folk society at one extreme and the modern urban society at the other extreme of the social continuum (Tonnies, Max Weber Daniel Lerner Talcott Parsons) these are all important milestones in the development of typologies for the analysis of social systems. See (1) Robert Winch, Heuristic and Empirical Typologies: A Job for Factor Analysis: American Sociological Review, Vol. 12,No. 1, Feb. 1947, (2) Kenneth D. Bailey; Monothetic and Polythetic Typologies and their Rela-

Cont.

work participation, availability and productivity of land, agricultural inputs, cropping pattern commercialization of agriculture, concentration of land holdings and landlessness, access by road and rail, and education. As Type 'A' villages are strongly associated with high crop yields, double cropping, commercialisation of agriculture, access and literacy, these are described as more advanced or modern villages. Type 'B' villages constituting the bottom group according to the values of the principal component are described as less advanced (backward) or less modern. Type 'AB' villages constitute the intermediate category villages and occupy the middle position in the continuum from 'A' to 'B'. The averages and dispersion of the 14 key variables in the 3 types of villages are shown in the following table:

The significance of the classification of the villages into the 3 types is also examined with reference to the large number of variables not contained in the principal component. It was found that the results obtained on the basis of the 14 key variables applied consistently to a much larger set of variables.

The significant contrast between the socio-economic systems represented by type 'A' and type 'B' can be summarized in the following way:

TYPE 'A'	TYPE 'B'
Large in size	Small in size
More complex and diverse in Occupational pattern and crop mix and consumption	Simpler in Occupational composition and pattern of life
Commercialized agriculture, good proportion of land under cash crops	Non-commercialised, food and subsistence-orinted.
Higher level of technology, intensive cultivation and higher productivity	Low level of technology, extensive cultivation, and low productivity
Considerable degree of landlessness and highly skewed distribution of land	Less acute landlessness and less skewed land distribution
More accessible by road and rail	Less accesible by road and rail

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tion to conceptualisation, Measurement and Scaling. American Sociological Review, Vol. 38, No. 1, February 1973. (3) J. C. Mckinney, Constructive Typology and Social Theory. Appleton Century, New York, 1966 (Chapters 2-5). (4) International Encyclopedia of Social Sciences; Articles on 'Typologies'.

Some significant conclusions have been drawn on the basis of this simplified typology about the degree and pattern of labour utilisation in the two types of villages.

Based on the above typology some interesting and significant hypotheses are also formulated regarding the consequences of modernisation.

One possible consequence of the process of socio-economic advance or modernization of the relatively backward Indian village will be proletarisation of the poor peasants, increase in the number of landless labourers and concentration of economic resources and power among a smaller number of households. Dasgupta finds that this hypothesis is confirmed by the data. It is also suggested that the process of modernization will not reduce the demand for labour, might even increase it, but that it would adversely affect the participation of the village's population in workforce; the same amount of work will be now undertaken by a smaller number of hired workers who work longer hours.

It is also possible to set up hypotheses about the factors which initiate the process of modernisation, for example, technological change and advancement of agriculture. Proximity to a large urban area may induce immigration, commercialisation of agriculture, intensive cultivation, etc. Introduction of irrigation and other kinds of technology may also initiate the process of modernisation. The data-base of the typological study made by Dasgupta is perhaps not found to be adequate to confirm any specific hypothesis regarding the causes of modernisation. It is however recognised that the process of agricultural modernisation in India is selective, and areas more favourably endowed with resources and richer ones among the farmers get priority. Hence the adverse consequences of *modernization of agriculture* become inevitable in the Indian situation.

Dasgupta's study of the Indian village types has demonstrated the utility of empirically extracted types without prior conceptualisation. Derived primarily from data rather than theory, the typology serves the purpose of meaningfully summarising observations on the basis of average characteristics of the villages. It is also found fruitful in generating valuable hypotheses concerning the structural differentiation and dynamics of the Indian village. However, it must be noted that the meaning and significance of the specific typology—its usefulness for interpretation of change and prediction—depends on the validity of of the underlying assumptions and the nature of hypotheses formulated.

(1) It is assumed that the Indian village is a behavioural unit suitable for socio-economic analysis. This is a controversial issue. Perhaps most social scientists would defend the validity of taking the village as the basic unit of investigation in view of its known socio-economic characteristics. As pointed out in one of the I. D. S. studies under the Village Studies Programme, analysing the village as a behavioural unit does not entail any assumptions about the the existence of village decision-making procedures. "It is merely posited that in peasant societies (where the characteristic mode of production is that of the small farm producing largely for self-consumption but also to meet obligations to holders of economic and

political power) individuals tend to behave in a similar fashion in a given type of situation; similar villages contain similar proportions of different kinds of people in similar relations to one another; and the aggregate behaviour of one collection of sub-groups will resemble that of a similar collection in another village. Villages only appear to act. The central assumption of VSP—that generalisations about types of villages are posible and useful—requires neither village decisions nor village 'independence' (which scarcely exists any more), but only village autonomy."[3] This approach and the assumption seems to be realistic and tenable.

2) The typological procedure adopted by Dasgupta makes the implied assumption that the socio-economic system of the village is largely a closed system. In-migration (out-migration) does not appear as one of the key variables on which the three village types are based. Percentage of 'out-migrating households', is however included as one of the variables in the household occupations variables set and the mean values of this variable for the type 'A' and type 'B' villages are found to be significantly different, the propensities to work outside the village or permanently outmigrate, being much higher in type 'A' villages. Commercialisation of agriculture and diversified cropping pattern and consumption pattern—these variables may also be considered to reflect indirectly the open ness of the village economic system. Still the openness of the village economic system remains essentially unexplored to the extent that the flow of investible resources or economic surpluses (village to village, village to town, town to village) and the flow of enterprise and skills are not taken into account as relevant variables. The adverse effects of the modernization process cannot be explained satisfactorily without considering the forces of interaction between the villages and towns. In a closed village economic system, the economic surplus generated through modernisation and commercialisation of agriculture cannot leave the non-agricultural sectors and the labour market uneffected, and the adverse consequences of the agricultural modernisation for the small peasants and the landless should be much less or negligible. In an open economy, on the other hand, the exportation of economic surplus for investment purpose and the importation of consumer goods in exchange for agricultural exports can lead to such adverse effects.

3. In the interpretation of the typology Dasgupta has apparently considered the variables reflecting technological improvement and commercialisation of agriculture, and modernisation of village society (literacy and access) as cause variables, and variables reflecting changes in the structure of landholdings (concentration and landlessness) as effect variables. The interpretative and predictive statements made by Dasgupta on the basis of the dichotomy are logically valid, but do not help in understanding the true and deeper aspects of the cause-effect relationships in a dynamic setting. Why and how the A type villages have become more advanced in contrast with B type villages? What are the types of response to technological opportunities in agriculture? To what extent the forces of modernisation are endogenous or exogenous to the village or the rural society? Analysis has to be focussed on these questions and

3. J. connell M. Lipton; Assessing Village labour situations in Developing Countries: O. UP., Delhi, 1977, P. 3

TABLE

AVERAGES AND DISPERSION OF 14 KEY VARIABLES IN THREE VILLAGE TYPES

Variable No.	Variable	Variable Type	Averages			Standard Deviations			Statistics of difference between Averages A & B
			A	AB	B	A	AB	B	
1	2	3	4	5	6	7	8	9	10
VI	Population size	Demographic	1194.50	753.80	546.60	826.10	377.80	231.80	4.89*
VII	Per cent of self-employed agriculturist households	Occupation	33.73	51.81	69.23	13.88	14.02	18.40	—9.90*
V 41	Overall participation rate	Participation	37.65	42.09	48.65	9.96	9.33	9.95	—4.84*
V 70	Number of days worked by casual agricultural labourers	Duration	177.59	157.23	122.35	47.16	37.31	67.51	3.20*
VIII	Ratio of total village cultivated land to adult males (in hectares)	Availability and productivity of land	0.94	1.15	1.86	0.62	0.61	1.50	—3.64*
V 128	Value of yield per hectare of main subsistence crop (in hectares)	Availability and Productivity of land	440.84	317.00	220.76	164.86	151.80	173.77	4.84*
V 132	Percentage of irrigated cultivated land	Agricultural inputs	52.20	46.72	22.25	36.96	35.17	28.16	3.87*
V 152	Percentage of cultivated land under cash crop	Cropping pattern & commercialisation of Agriculture	37.24	19.39	21.16	26.75	15.65	19.73	2.60*
V 153	Percentage of village produce sold	Cropping pattern & Commercialisation of Agriculture	49.42	35.89	24.83	16.26	16.88	14.96	6.45*
V 158	Percentage of land owned by top 25 per cent of households	Concentration of land-holdings and landlessness	91.27	78.60	62.68	8.51	9.66	10.05	13.38*
V 166	Percentage of landless households	Concentration of land-holdings and landlessness	60.32	41.38	19.92	16.30	15.13	13.00	12.25*
V 188	Distance of the main road (in kilometers)	Access	1.67	1.85	5.19	3.02	2.49	8.18	—2.62*
V 189	Distance of the railway station/halt (in kilometres)	Access	7.38	9.59	27.45	9.74	9.02	43.16	—2.94*
V 205	Crude literacy rate	Education	31.03	18.21	13.28	12.52	6.88	6.87	7.16*

Note: Significant at 1 per cent level of confidence.

Source: Biplab Dasgupta, A Typology of Village Socio-Economic Systems from Indian Villages Studies, Op. cit, p.p. 1399 – 1400. Table A and Table B.

further empirical work is needed to throw light on them and the mechanisms of change in the village society.

4. The choice of variables reflecting the major aspects of village life is an important matter in empirical typological work. The omission of a crucial variable or variables may seriously limit the utility of the derived types. And in the typology of socio-economic systems, the omission of important cultural variables may also seriously limit the utility of the derived types. In Dasgupta's study, the set of variables considered is a large and comprehensive set, though the set of 14 key variables does not include any variable from 'social and cultural', and consumption categories. Some refinement in the set of social and cultural variables is perhaps needed to make the typology more useful for interpretation and prediction purpose.

5. Finally, it may be pointed out that the concept of 'more modern' or 'more advanced' village used by Dasgupta has turned out to be essentially an economic concept, based on the level of agricultural technology and productivity. The advanced and the backward types cannot be therefore identified with the modern and traditional types of social systems generally referred to by sociologists and which are used by them in social systems analysis. The sociological and political aspects of modernisation cannot be totally ignored in a typology of socio-economic systems. If variables reflecting these aspects of modernisation are found to be unassociated or uncorrelated with economic variables in an empirical typology scheme, it raises serious questions concerning the interdependence of economic and non-economic phenomena.

TYPOLOGY OF VILLAGES

A Few glimpses from Anthropological Studies

By

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When the Seminar held in Hyderabad last summer adopted the proposal that the subject of Typology of Villages should be taken up by a study group, it was taken to mean that a wholetime project should commence with some research assistants working under directors drawn from different disciplines. This is too big a task to be covered by a few papers done by individual social scientists in their off-time. But some beginning has to be made and some discussions has to commence to help reach a concensus on the procedures to be followed for a fuller work.

The essence of formulating a typology is to identify major attributes each of which entails or is entailed by certain other attributes. There are a number of key attributes of Indian villages on the basis of which their typologies can be formulated. In this paper I have looked at a few of these dimensions and covered a very small fractions of the existing literature. This attempt is to be understood as a minuscule forerunner of a much larger effort that has to follow.

1. Dimension of Topography and Settlement Pattern

From the point of view of settlement pattern, villages in India can be grouped into two polar types, the nucleated and the dispersed, with some intermediate varieties combining the two characteristics in different degrees. In most parts of India, one comes across nucleated villages in which the houses are closely clustered together with agricultural fields lying out side the habitation. The unity of the village comes out prominently in the very topography and the geographical pattern of the dwellings in the village.

In contrast to these nucleated villages, one finds dispersed habitation in certain regions of the country. In Kerala and Konkan, homesteads are structure out in a linear pattern, with no obvious physical demarcation between one village and another. Palakkara studied by Gough and Mayur studies by Aiyappan are of such villages, (Gough 1970; Aiyappan 1965). The general picture of North Kerala villages presented by Miller also

conforms to the same pattern (Miller 1955). An obvious implication of this dimension is that a village with dispersed dwellings may not have the same facility for interpersonal communication, community organisation and corporate action as a nucleated village. As segment of houses officially included in one village may have more dealings with adjacent homesteads officially included in another village.

On the social implications of this kind of settlement pattern, different views have been expressed by social scientists. Dr. Aiyappan thinks that a Kerala village represents a sociological unity, but he does not set about demonstrating how the village studied by him represents a unified system of social action. In Mayur, most of the land is held by outsiders and the most important industry, Coir processing is also managed by outsiders Dr. Aiyappan ends with a rather apologetic observation : "Though lacking in cohesion and though without leadership it will not be correct to say that Mayur village is a geographical fiction" (Aiyappan 1965 : 32)-

As against this we have the views of Miller: "We see therefore that village unity in North Kerala is somewhat nebulous conception. A physical territorial unit may exist, but it is often not obvious because of scattered settlement. Close neighbours belong to different Desams... Thus although any sociological investigator in Kerala may provisionally take the modern Desam as a suitable unit for study he must examine the scale of social relations of all kinds over a wider area. Whatsoever internal self-subsistence there may have been in the Desams of 18th century, it is very difficult now-a-days in Kerala to point to any unit as a clearly, demarcated, coherent, independent village community" (Miller 1955:50).

Dispersed habitations also occur in certain deltaic parts of West Bengal. Mandelbaum quotes from Nicholas two passages presenting the contrast between a nucleated village and a linear village with houses perched on the higher grounds along the edges of waters. The former village called Chandipur (Midnapore District) has one hundred sixty houses and one thousand people crowded in about five acres of living space. The latter village called Radhanagar has about one hundred houses along a sprawling stretch extending over some miles. The contrast in the community organisation between the two villages is striking. In Chandipur, there is a single headman who arbitrates on all matters in the village with supreme authority. In Radhanagar no collective decision can be taken without gathering a number of representatives from different sections of the settlement which is a long-drawn process (Mandelbaum 1972 : 339).

In the Himalayan foothills and in the highlands of Gujarat and Maharashtra, (Satpura mountains), habitations are found scattered in small clusters of two or three dwellings generally belonging to close relatives (Karve 1958A; 76-82).

Dr. Aiyappan tries to explain the dispersed nature of villages in Kerala in terms of lack of necessity for collective action to conserve water for irrigation purposes (Aiyappan 1965). However my own observation of scattered homesteads in certain deltaic parts of East Godavari District (Andhra Pradesh)

where coconut groves abound, leads me to see a close correlation between orchard economy and dispersed homesteads.

In Kaira District (Gujarat) a village called Radhvanaj is partly nucleated and partly dispersed. A. M. Shah, who has studied the village, observes: "It is interesting to find dispersed settlements along with nucleated ones. Such a situation occurs in some other villages also". The explanation offered by the villagers themselves is that the people who have mango and other fruit orchards choose to live in their own groves in order to tend them from close quarters (Shah 1956 : 163).

In large parts of India, villages present a picture of a tight cluster of houses. But it should be noted that this clustering allows for clear gaps of space between discrete segments of the village community. This feature of village topography reflects some important aspects of social organisation in rural India. The Harijan quarters are always set a little apart from the main village. And where the untouchables are divided among themselves to the point of mutual segregation as in Maharashtra and Andhra, there are two distinct satellite hamlets attached to every village (Karve 1958B : 137; Reddy 1950 : 11-12). In villages like Sripuram and Kumbapettai in Tanjore District which come under the category of Agraharam villagers there is an additional settlement exclusively inhabited by the Brahmin landholders apart from the quarters of non-brahmins and untouchables, (Beteille 1966; Gough 1955).

The sketch given by Nandi and Tyagi for the clustered village of Arsani in Farukkabad District of U.P. shows the distinct location of houses belonging to different casts, the physical distance between them reflecting the social distance involved (Nandi and Tyagi 1961:5). Particularly striking in this context is the case of Lalithadrapura, a village situated only a few miles off Mysore city. When the people lived in the old village there was no spatial separation of castes except in the case of Harijans. But when they reconstructed the village on a new site they marked off sections for different caste groups (Venkatarayappa 1973:7). It has to be noted however that different loci for different castes may not be the case in all villages particularly where it involves castes of equal rank whose houses may often be found interspersed to some extent.

The nature of terriarn, the kind of agricultural economy, considerations of security, ideas of ritual purity and pollution obtaining between different social groups and the nature of kinship ties are all the variables that should be taken into consideration in constructing finer typologies along the dimension of physical form and settlement pattern.

II. ETHNIC DIMENSION

A. Villages with nebulous caste groups

The villages along the sub-Himalayan regions have nebulous caste groups. Some of them are uni-caste villages while others have a preponderance of one caste with a few households, belonging to other castes. An upper Ravi village studied by Newelli is an instant case. Brahmaur Tahsil in the Chamba District of Himachal Pradesh has 105 nucleated settlements each having 43 households on an average. 80% of

the population belong to Gaddi caste, 10% are Brahmins, 3% belong to Sipi caste and 2% belong to other lower castes. In the upper valley, one finds villages with the combined populations of Brahmins and Gaddies. Intermarriages between them are permitted. Every caste is like every other caste in matters of dress, occupation etc. They have no priests, and priests are brought from outside on ceremonial occasions. Peculiarly, differentiation between Brahmins and Gaddis seems to be a recent process set into motion under the impact of contracts with governmental agencies (Newelli 1970:42-55).

Srikanda, a Pahari village of Tehrigarhwal, also comes under this type. Rajputs and Brahmins are preponderant in this region and the lower castes make up barely a 10% of the population. High caste people can enter the low caste house even though the reverse does not happen. Hence if a community drinking or other convivial gathering has to take place it is usually arranged in a lower caste home (Berreman 1970 : 88-89).

B. Frontier villages with a preponderance of immigrant settlers

The village of Bisipara in Kondmals of Orissa studied by Bailey belongs to this type. The Rajas of Boad from the plains sent expeditions in 19th Century to colonize and control the hills inhabited by tribal people. In this process, a compliment of castes like Warriors, Boad distillers Boad outcaster Ganjam distillers, Ganjam outcastes and washermen became the residents of this village. Because of the physical teriran and the unique circumstances which put highest premium on distillation caste and economy took unique and distinct forms. The Warriors who owned all the land in the 19th century, now came to possess only 28% of the cultivated land. The two distiller castes who had ascended in the economic scale, bought most of the lands belonging to the Warriors. One section amongst them the Boad distillers, began to sanskritize their ways of life and claim upper caste status (Bailey 1955 : 125).

C. Mixed Villages of Tribes and Castes (with the predominance of the former)

The village Dewara in Adilabad District of Andhra Pradesh studied by S.C. Dube comes under this category. This is a heterogeneous village with three tribal groups, twelve Telugu speaking castes and five Marati speaking castes. The most preponderant group amongst them is that of Rajgonds with 330 persons distributed among 58 families. This is an area where Rajgonds appear to be the sons of the soil, possessing much of the cultivable land. The other castes and tribes have woven themselves into the fabric of economic and social life of the community. Thus even though the Brahmin does not have any formal relations with the Rajgonds, other castes such as the goldsmith, blacksmith, barber, watchmen and leather worker do figure prominently in their socio-religious life. "As a concession to the needs of the local situation none of the individuals regards Rajgonds or any other tribe, who sacrifices cows and eats beef as depressed or untouchable. In fact with the exception of the Brahmin and the Padmasali, men from the other castes do not hesitate in accepting water at their hands; and the lower castes even

accept food from them. Leadership in the village affairs is in the hands of Rajgonds" (Dube 1955a : 190)

D. Villages where minorities figure prominently in the community structure

In the U.P. Village of Rajpur studied by Elder, (Elder 1970 : 106) many of the occupational services are provided by Muslim castes. There are Muslim Barhais (carpenters), Muslim Lohars (blacksmiths), Muslim Nais, (Barbers), Muslim Telis (oilpressers), and Muslim Dhunas (cotton carders).

In the Kerala village of Palakara, the population is divided into four hierarchical stratar. While Nambutiris and Nayars occupy the first rank, the Roman Catholics, who constitute 17% of population, occupy the second rank. The third place is taken by the artisans and service castes and last rank by the Harijans (Gough 1970 : 133).

Miller also refers to predominantly Muslim villages and Syrian Christian villages in Kerala. (Miller 1955 : 31). Muslim villages are also known to exist in other parts of the country, but detailed studies of such villages are lacking. They are likely to fill important gaps in the typology of Indian villages.

III. Dimension of Kinship

A. Villages segmented on the basis of Agnatic ties

In North Indian villages, agnatic ties play an exceedingly important role. Lineages of land-owning castes are even territorially differentiated within the village. This has its roots in the Mahalvari system of land tenure introduced by the British in 1820 which recognised the division of lands only in terms of the largest possible lineage groups and made them collectively responsible for tax collection (Mariott 1955 : 184). The village Senapur in Jaunpur District of U.P. is divided into six wards each associate with a lineage of the landowning Thakur caste (Opler and Singh 1948: 468 - 469).

In the village Rampur near Delhi, the Jat lineages and clans are grouped into units locally known as Thollas and Panas. The village is divided almost equally into two Panas, and each of them consists of two Thollas (Lewis 1965 : 23). In the Punjab village studied by Smith, the Sikhs who are mainly Jats, associate the four quarters of the village divided by roads with the pattis or lineages. Villagers are well aware of this association, even though families belonging to division A may be living in division B because of circumstances such as overcrowding etc. The situation is dramatically summed up by Smith : "I have been told that even dogs know the boundaries of pattis to which they belong and do not allow canine tresspassers" (Smith 1955 : 146).

B. Kinship Network

It is known that no village is completely isolated and that economic and social ties spread beyond the boundaries of any particular village. Kinship networks take totally divergent patterns in the two broad cultural regions of India, i.e. South India and North India. In North India, a village is an exogamous unit and marriages between members of a village are proscribed. But in the whole of

Dravidian speaking South India, and also Maharashtra and parts of Gujarat, not only marriages within the village are permitted but mating with close relatives like cross cousins are preferred. From the point of view of social networks and communication processes this makes material different in the life of the villages.

In the village of Kishan Ghari in Aligarh District of U. P., studied by Marriott, the marital ties of the villagers ramify to over 300 other villages. Not only the village of Kishan Garhi but a cluster of eleven villages around it forms a local exogamous unit. The average distance at which a marriage is contracted is twelve miles, but some extend to places 40 miles away (Marriott 1955: 101). In Rampur near Delhi, Oscar Lewis finds that the 266 married women in the village come from 200 different villages at distances of upto 40 miles, with the average distance falling between 12 and 13 miles. In the case of daughters who marry out of the village, 220 girls of this village are married into about 200 villages. Thus the village has marital contacts with 400 villages (Lewis 1965: 161).

Marriott also points out how exchange of brides takes place in a single irreversible direction: "The family and the village to which one gives a daughter becomes respected and high and the family and the village from which one receives a wife becomes low. The economic effects of this patterning of marriages are considerable. Lavish hospitality must be offered and gifts made to the husband of a girl. Quantities of goods follow the woman by the same path. Over a quarter of all milk animals are obtained as gifts from marital relatives and about one quarter of debt is incurred to fulfil marriage demands" (Marriott 1955: 101—102).

Speaking of the Sikh villages of Punjab, Smith notes that two-thirds of the marriages have taken place with villages between 4 and 12 miles, with the greatest number of clustering around a radius of 8 miles. Less than one-sixth of the marriages link villages lying at a distance of more than 16 miles (Smith 1955: 57).

In South India quite a large proportion of marriages take place within the same village. In the Karnataka village of Haripura, out of a total of 297 marriages, 68 are intra-village matches (Dhillon 1955 : 74).

Further, marriages between cross-cousins are common in the Dravidian speaking states as well as Maharashtra and Gujarat, while such a thing would be considered incest in the north. In the village Bogadi in Karnataka, Karve finds that out of a total of 294 marriages, 89 are between kin. In another Karnataka village, Pannikaranhalli, Karve finds that out of a total of 259 marriages, 146 are between kin. In these two villages taken together, 46.25% of the total marriages are contracted between close kin (Karve 1970: 18).

In South India, marriages serve the funtion of reinforcing the existing bonds between close kinsmen who live in the same village or neighbourhood, whereas in the north, marriages have the function of forging new ties with hitherto unrelated castemen of far off places. From the point of view of communication process this difference is of vital significance.

It has been noted by many authors that the importance given to agnatic kin groups in North India has led to a strong linkage between land and lineage. This is also responsible for the existence in the North of elaborate genealogies recited by specialist castes of bards, which phonomenon is absent in the South (Shah and Shroff 1958).

Marriott cites an observation of Gadgil regarding an important implication of the different patterns of kinship networks in the North and the South (including Maharashtra and Gujarat). Where kinship ties of castes are spread out as in the North, supra-local caste councils are well developed, which it is not so in the South (Marriott 1956 : 62).

Looking at the day to day scene within the village, it has to be noted that the situation in North India provides for more intensive interaction between agnatic kin, unrelieved by interactions with other kin. It is only a rite de passage, a crisis in life, a fair or festival that brings a man into face-to-face contact with a maternal or affinal kin. The situation is different in South Indian villages where agnatic ties are counter-balanced by affinal ties. A person in the South has to delicately balance the claims of different kinds of kinsmen on his loyalty. Failure to recognise this difference has led some North Indian Social Scientists to make a lopsided analysis of factions in the South on the basis of agnatic ties alone (Dhillion 1955).

IV Dimension of Traditional Economic Relations

In many parts of India, the economic relations in the village community take the form of hereditary ties between performers of service and receivers of service. This goes by the name of jajmani system in North India, Baluta system in Maharashtra, Aya system in Karnataka etc.

Essential Features of the System

In the exchange of goods and services in the village community, a group pursuing a particular occupation (incidentally a caste in India) and the receivers of the products of its labour are bound by hereditary relations based on traditionally prescribed mutual rights and obligations. Inheritable rights and complementary obligations form the essence of the system. There is a traditionally prescribed quantum of work expected from an artisan or servant which itself is related to the assessed needs of the patron. In many cases, a worker offering an economic service is also expected to offer a ritual service on a ceremonial occasion. Based on such factors, payments and gifts are also prescribed in traditional forms.

There is no pretence to equality in the system. It is possible that in the remote past when the system began, each group of workers or artisans assessed the total quantum of work in the village in their particular speciality and divided it equally among the existing families. But then, the share of work assigned to each family had become a heirloom, inherited by the descendants. If a family multiplied faster, the shares of work, through subdivision, became smaller, while a family which did not multiply retained its share of work undivided.

It is a recognised principle in the system that there is no contract between an individual worker and individual pattern. A patron who is dissatisfied with a worker has no right to arbitrarily replace him. Similarly a worker cannot leave his job under a patron at his will. There can only be a exchange of workers and patrons with the consent of all the parties concerned.

The ideology that a group of workers are collectively responsible for accomplishing the total quantum of work in the village has different manifestations. If a worker falls ill, a fellow casteman substitutes for him. If it is for a long duration, the substitute may receive a part of the remuneration of the entitled workers, but if it is for a short duration he may not be recompensed for his voluntary work except that he can expect similar help in return when he is in a difficult situation. In the case of a permanent disability or the departure of a worker, his share of work can be leased out or even permanently transferred to another worker on terms mutually agreed upon. But the consent of the larger community is a precondition for all such changes.

Where a service specifically pertains to agricultural economy, the workers' right of service comes to be attached to the land and is assessed in terms of the size of the holding. In some villages this is given explicit recognisition. In the village Geon, near Pune, the workers apportion work in relation to the land in the village. "If a landowner looses his land, he also looses the services of the Balutedar attached to it. The reverse is the case if man acquires land." (Orenstein 1965: 216). In the context of the rarity of land transactions in the past,the working of this system has come to mean that a particular worker family is attached to a particular patron family and that the ties continue for generations.

In the upland villages of Andhra Pradesh and in the villages of Eastern U.P. the quantum of service rendered and remuneration received is related to the size of the landholding of a patron calculated in terms of yokes of cultivation that is what can be cultivated with a pair of bullocks (Reddy 1955 : 130; 1952 : 75.)

A mutual transfer of workers and patrons on the basis of a general concensus of the village community is well within the system. And it only makes explicit the underlying ideology that the workers are collectively responsible for carrying out the total work in the village. In the village Singanapalli in Udayagiri Taluk of Nellore District (A.P.), where the entire agricultural operations are carried out through jajmani relations, the Madiga workers reallocate their patrons once in a few years, of course, safeguarding the individuals' shares of work as inherited by them (Reddy 1952 : 77). This kind of rotation of jajmans by the workers is reported to have occured each generation in the U.P. village of Kishan Garhi (Marriott 1955 : 98).

It has to be noted that even in regions where the jajmani system prevails all the work in the village is not subsumed under the system. Tradition seems to prescribe certain kinds of jobs to be done through jajmani relations and certain kinds of jobs to be done through contractual relations, leaving a certain elbow room for the individual initiative and private enterprise of the worker.

Villages in India can be arranged along the scale with those in which the jajmani system is still going strong at one end and those in which it is completely absent at the other end.

A. Villages with a viable Jajmani systems

Gaon in Maharahtra, Senapur aud Sharurpur in U. P.. Shamirpet and Singanapalli in Andhra Pradesh and Wangala in South Karnataka represent the type of villages where jajmani system exists in a functioning fitness.

A.1. Gaon

In Gaon, the priests, goldsmiths, blacksmiths, carpenters, watercarriers, barbers, washermen, sweepers, rope-makers and Muslim butchers carry on their work under a traditional arrangement locally known as baluta system. In this village the artisans and service castes maintain jajmani type of relations with segments of the village rather than with the individual families. Some families of workers have a right to serve those who have lands in a particular section of the village.

About the working of the baluta system in Gaon, Orenstein writes as follows: "Land owners should not change capriciously workers assigned to them. Changes can be effected with the consent of all. When one person wanted to change his potter it was discussed among the potters and they exchanged their landowners. Balutedars can mortage their preprogatives or even sell them to some one of their lineage" (Orenstein : 1965 : 217).

The conjoint rendering of services by the balutedars on the occasion of a marriage in patron's house is. graphically described by Orenstein. Before marriage, the barber distributes invitations and shaves the groom. The goldsmith cleans the images of households deities. The incoming party is met by the water-carrier who pours water at their feet. The party is stopped by ropemaker to ensure good luck. On the night before the ceremony, the wife of the washerman annoints the bride with turmeric paste. As the groom moves towards the canopy, the washerman spreads a cloth for him to walk upon. The horse on which the groom rides to the temple is led by the barber. New shoes to be worn by the groom on the occasion are supplied by the leather-worker. The washerman draws a design on the ground. The potter supplies specially prepared pots to be arranged in rows on the dais at the venue. The potter also helps in the preparation of food while the water carrier goes on supplying water. The main ceremony is conducted by the Brahmin (Orenstein: 1965 : 219-20).

The system of payments in Gaon is flexible to some extent. In years of good crops, the land owners dole out liberal amounts of baluta, while in lean years they curtail their quantum. According to Orenstein, the baluta system as it existed in 1954-55 worked in favour of artisans and service castes. "Detailed figures were taken from 37 landowners regarding their payments to their balutedars. In general it can be said that workers received more in baluta than they would have received outside the system" (Orenstein 1965 : 225).

A.2. Senapur

In Senapur, (Jaunpur Dt. U.P.), the potters, carpenters, blacksmiths, barbers, goldsmiths, water-carriers, betel-leaf

distributors and leather workers carry on their occupations within the traditional jajmani system (Opler and Singh 1950 ; Cohn : 1955; Reddy : 1955).

The working of the system can be understood with reference to one of the artisan castes. The Lohars in this village work both as carpenters and blacksmiths. The traditionally defined work available in the village is divided amongst them according to hereditary shares. Each family has an exclusive and inalienable right over its share of work which is not encroached upon by others. The land-holders who receive their services are governed by this arrangement. When a Lohar family multiplies and divides the work, each share comes to comprise lesser quantum of work belonging to fewer agriculturists unless the latter also multiply and acquire more lands.The right of work is considered as a heirloom. As in other kinds of property there is an un-even distribution of this right of work among the Lohars. The existing disparities can be guaged by the fact that while one artisan family has 36 units of work another artisan family has only 6 units of work.

But at the same time, the system allows of a certain flexibility. Should one family have more clients than it can handle, a part of its work, is transferred to some other worker possessing lesser share of work, of course, with the consent of the caste council. No jajman can replace a worker by himself without having that arrangement agreed to by the workers' Panchayat. Falling within the system of jajmani work are well defined items like making and repairing of ploughs and smaller agricultural implements, repair of domestic equipment etc. But major items like making a bullock cart, work connected with the construction of a new house etc. fall outside the system and separate contractual arrangements are entered into in respect of them.

The flux of changing events and innovations do create stresses and strains calling for readjustments in the system. For instance, the repair of the hand chaff-cutter used by the cultivator is a part of the traditionally prescribed work within the jajmani system But when a mechanical chaff-cutter is acquired by a landowner, the question arises as to whether its repair should become a part of the jajmani work under the same old system of traditional payments. Some adjustments are already being made in such cases though not without some friction. In some cases, the landowners are making extra payments keeping in view the additional labour involved in the repair of new items, and thus the new items are being incorporated into the roster of jajmani items. But in some cases the landowners are inclined to treat the mechanical chaff-cutters and as mere substitutes for the hand chaff-cutter, and are hence unwilling to make additional payments which the workers are pressing for (Reddy 1955 : 129-140).

A. 3 Sharurpur

In Sharurpur (Fizabad Dt., U. P.), six castes function within the jajmani system. Gould computed the extent of their work within jajmani system. The washermen have 77% of their work within the traditional system. Carpenters and blacksmiths have 69% and 67% respectively of their work within the traditional system. The barbers render 62% of their services on the conventional basis. The Brahmins have 70% of their work within

the jajmani system. Even the untouchables have 43% of their dealings through jajmani arrangements, Incomewise, the washermen receive lowest average remuneration, the barbers, next lowest and the carpenters and blacksmiths the highest. Gould is of the view that the system has been working well without undue stresses and strains (Gould 1964: 19).

A. 4. Wangala

In Wangala, (Mandya Dt., Karnataka State), artisans and Harijans workers, excepting the goldsmiths and the potters, maintain hereditary relations with the farmers. They are paid annually in kind for doing certain defined jobs through the year. For any extra work outside the defined category, they are paid in cash.

One of the four blacksmiths in the village started making iron ploughs needed for sugarcane cultivation. He chose to give up the traditional work, but the village council decided against it and forced him to find a substitute if he wanted to free himself from his jajmans. He had to bring his cousin from a neighbouring village to attend to all the traditional work of the peasant families coming under his hereditary share.

Even though many households have begun to wash their clothes with soap, still they require the services of washerman on the ritual occasions. Hence the economic relations with the washerman continue in the same old way. The barber who serves the peasant families, retains both his ritual and economic ties intact.

The patron-worker relationship between the peasants and the untouchables regulates the labour supply in an orderly fashion. It helps to allocate the labour during the rush period, and it also ensures a fair distribution of employment in slack season. A straight forward competition is thus avoided. The structure of indebtedness also reveals the patron worker ties.

The traditional organisation of work has an inhibiting influence on innovations. The existing arrangement obliges the peasants to provide the workers with minimum subsistence whatever may be the number of days for which they are employed. Therefore a labour-saving device has no relevance in the existing situation. Even a weeding rake which is a small cheap implement but saves considerable amount of labour is rejected by the Wangala farmers. An attempt to introduce the Japanese method of rice cultivation has proved abortive. The new method of spacing upsets the old mode of transplantation to which the famale labourers are accustomed. According to the prevailing practice, 10 or 12 women of the workers' families form a team and work during the time of transplantation, weeding and harvesting. These teams are reluctant to change over to the tedious way of transplanting in rows. The new method takes longer time, and as the team's traditional remuneration is related to the job done on a certain extent of land and not on how it is done, the workers are reluctant to adopt the new experiment in the absence of an assurance of higher remuneration (Epstein 1972: 37–39 & 73–79).

1. E. Shamirpet

In Shamirpet (Telangana, A. P.), the Brahmin, the potter,the carpenter, the blacksmith, the washerman, the barber, and the leatherworker carry on their occupations within the jajmani system. According to Dube, the system retains some of its traditional strength. "It is not easy for an agriculturist to remove a family attached to his household and secure service from another. In the course of our investigations we recorded three cases of protracted antagonism between a group of employing families and the occupational caste families employed. In one of them the dissatisfied employer agreed to retain the family on its promise of doing better work in the future. In another case the people arrived at an amicable settlement by attaching another family to the employer and attaching the dismissed caste member to a newly settled family in the village. In the third case the caste agreed to give a substitute" (Dube 1955b : 60–61)

1. F. Singanapalli

In Singanapalli (Udayagiri Tk., Nellore Dt, A.P.)., there is a system of arrangement by which the untouchable Madiga workers exercise a collective responsibility not only to carry out all the jobs connected with agriculture but also to supply shoes and leather buckets for irrigation and perform certain community services like keeping a watch over the village, clearing away the dead animal, sacrificing animals at the festival of the village Goddess etc. The work in the village, is divided into seven main shares, distributed among seven lineages of the Madigas. Some lineages are big and some lineages are small and hence there is no equitable distribution of work. But every one sticks to one's share of work inherited by the family. When one family has more work than it can handle and another family is underemployed, the former employs members of the latter on certain agreed terms. In this village the Madiga workers change their jajmans once in every two years, of course, maintaining the shares of work of individual families (Reddy 1952–76–80).

B. Villages with jajmani system in transition

Even wiser who made the classical study of Hindu jajmani system has indicated that the system may have to yield to the impact of commercial forces (Wiser 1936 : 126). In some villages, the traditional relations under the jajmani system have already weakened. Some castes have gone out of the system altogether while some castes carry on their work within the system with some reservations. Rampur, near Delhi, Rajpur, in U. P. Rampura in Karnataka represent the type of villages where the jajmani system is in the decline.

B. 1. Rampur

Oscar Lewis observes that the jajmani system worked well 30 or 40 years ago, but has undergone a lot of change in the later years. At the time he studied the village, only one out of the four carpenters carried on his traditional work. During the famine of 1944–45, the landowners decided to reduce their payments to a half, but the carpenters and blacksmiths did not agree to it. Thus a rift came about between the carpenters and the landowners. There was a single blacksmith in Rampur. With a large family, he found it very difficult to make both ends meet and finally left the village

transferring his custom to a fellow member of his caste from a neighbouring village.

Out of the 4 washermen families, two are carrying on their traditional work with 21 jajmans inside the village. All the three barbers have found work outside, but on Sundays they come back to the village and give service to the remaining jajmans. Of the seven potters, six are still carrying on their work within the jajmani system. Of the 10 sweeper families, 5 work for their jajmans and 5 work in Delhi. All the four Brahmin families gave up their traditional work, so also all the untouchables (chamars) of the village.

Summing up the situation Oscar Lewis writes : "The system is still functioning in Rampur, a village close to Delhi, the capital of India. Despite modern improvements, technological changes, the influence of reformist movements and political ideologies, the system is not yet dead. However changes are taking place" (Oscar Lewis, 1965 : 78).

B. 2. A West Rajasthan Village

In a village in Barmer District of Western Rajasthan, studied by Bose and Jodha, a series of changes has taken place since the abolition of princely states. The work relations within the village have become voluntary, and some families of workers have opted for contractual type of employment. But some workers still continue to maintain jajmani relations.

A sample study of 126 households has revealed that 75% of the patrons maintain jajmani ties with leather workers and 60% maintain ties with carpenters. Inspite of the caste council's rulling that the degrading traditional work should be given up, four of the families of leather-workers continue to engage themselves in their hereditary occupation. Both the blacksmith families in the village maintain their jajmani ties but are getting much lesser income from their occupation.

Some ritual services are still carried on within the jajmani framework. Majority of the people have expressed themselves in favour of the jajmani system. Of the 129 patrons interviewed, 126 expressed the view that the jajmani system is useful in providing cheap and dependable labour. 111 persons think that it provides cheap and assured ritual services. Of the 14 workers who have been interviewed, 12 are satisfied that the system provides an assured income and 10 point to the benefits of gifts and other concessions. Most respondents agree that payments in kind give better returns to the workers (Bose and Jodha 1965:105-120).

B. 3. Rajpur

A study of Rajpur in U.P., brings out the changes that have occured in the village during a span of thirty years between 1927 and 1957 (Elder 1970 : 105-116). The potters have given up their work because the patrons are preferring to buy metal vessels in the place of earthen ones. Chamars have completely given up their leatherwork, and the dead cattle are now taken away by some Muslim contractors. The chamars are mostly engaged in wage labour. With the advent of hand pumps, the water-carriers have lost their occupation and they are no longer within the jajmani system.

Even among the carpenters only 8 out of 14 families are carrying on their traditional occupation within the jajmani system. One carpenter has set up a shop in front of a nearby sugar mill. He has been followed by another who has distributed his jajmans among other castemen. Only one among the 13 barbers is engaged in his traditional occupation full-time. 6 of them cultivate their own lands and four work in the sugar mill. The latter did barbering in their free time. Only the brahmins and the sweepers are all working within the jajmani system.

B. 4. Rampura

A similar picture of transition emerges from Srinivas' study of Rampura near Mysore. Long standing relationships still exist between bigger landowners and workers, and periodical doles of grain still constitute the mode of payment. But the system does not seem to retain its strength any longer. If a landowner dismisses his barber, washerman or smith, the latter can only appeal to the village elders who may arbitrate in the matter, but the elders of the workers' caste do not seem to have any say in the matter) (Srinivas 1976 : 212).

B. 5. Gaon in 1961

In the reassessment of the situation in Gaon after a gap of 6 or 7 years, Orenstein found that the baluta system which had been showing signs of decline even in 1954-55 with 28% of the landowners already out of the traditional arrangements, came to be further weakened in 1961. With the spread of commercial crops and the inroads made by market economy the land owners were less inclined to pay their workers in kind. Only a few of the wealthy villages continued their old mode of payments. Others gave smaller payments just to recompense the balutedars for their ritual services (Orenstein 1965:293). But Orenstein notes that in distant villages without irrigation, the jajmani system continues to be strong.

C. Villages without jajmani system

The village Sripuram in Tanjore District studied by Beteillee (Beteillee, 1966) and the village Kumbapettai of the same district studied by Gough (Gough : 1955) are without any traces of jajmani type of relations between landowners on the one hand and the artisans and service castes on the other. Also the village Mayura in Kerala studied by Aiyyapan does not reveal any traces of jajmani system (Aiyappan, 1965).

A major flux in the pattern of landownership and land management seems to have been responsible for the disappearance of the jajmani system in these villages. As the jajmani system centres round agrarian economy, it can be sustained only when there is a class of landowners fully participating in the life of the village community. In the absence of the lafter, the system does not seem to endure. As the Brahmin landowners in Tanjore District have lost interest in agriculture, it is possible that the necessary organizational focus for sustaining the jajmani system has ceased to exist there.

Regarding the position obtainig at the time of his study of Sripuram, Beteillee notes : "Traditional economy of land and grain embraced certain village crafts and services. But the relations between artisans and servicing castes on the one hand and the agricultural castes on the other, have tended to acquire contractual character" (Beteillee 1966 : 103).

Again with reference to the major changes occuring in the village he notes: "In the course of the last few decades some land has passed out of the hands of the (Brahmin) Mirasdar class and the process seems to have acquired momentum over the last ten years" (Beteille 1966: 113).

Regarding the village of Kumbapettai, Gough notes a now extinct system called *adimai* in which the Konar and Adi Dravidas worked by hereditary right for Brahmin families. "This word (adimai) is now seldom heard" (Gough 1955: 84). She again averts to the causes of change: "For, obviously, the economic basis of the system has been fundamentally upset within the last fifty to seventy years.....Most important (reason) is the departure to urban work of a large number of Brahmin families and individuals (Gough 1955: 90-91).

In the Kerala village of Mayur, the traditionally landowning castes have become indigent and uprooted. The lands and the processing industry are managed by people who do not live in the village. As Dr. Aiyappan observes the village, organisation has lacked coherence and leadership (Aiyappan 1965: 32).

Concomitant variables of the system

In villages where the jajmani system is very strong, one finds that most of the land is held by the traditionally landowning castes who are actively involved in their cultivation as well as in the running of the village affairs. In Senapur the Thakurs who constitute approximately onethird of the total population, own 82% of the cultivable land and are not only hardly cultivators but tough leaders of the village community. The landowners of Shorurpur occupy a similar position vis a vis the rest of the village community.

In Wangala, the peasants belonging to the Vokkaliga caste constitute a little over 50% of the total population and own nearly 90% of the agricultural lands in the village. Most of them are middle or small peasants actively interested in the cultivation of their own plots of land and in the round of activities within the traditional framework of village life.

In Shamirpet, there is concentration of land in the hands of traditionally landowning castes, one of the landowners having 800 acres and eight others having 100 acres each. In Singanapalli, the land is held by the middle and small peasants belonging to the traditionally landowning caste engaged wholetime in agricultural activities.

In Gaon, most of the land is owned by the Marathas and Sagar Rajputs who comprise a little over 50 of the total number of families in the village. But there is already an indication that the Marathas are becoming indifferent to village affairs and are not staking any claim for village leadership. And proximity to the city of Pune must have been a significant factor that has contributed to the weakening of the baluta system in Gaon.

In Rampur the proximity of Delhi must have been a strongest factor sapping the strength of the jajmani system which should have been otherwise expected to retain all its vigour with Jats constituting 60%of the population and monopolysing all the cultivable land in the village.

Rajpur represents a village where much of the land is not held by the traditionally landowning castes. The jats who constitute 16% of the population own only 13% of the cultivable lands. 23% of the lands are held by outsiders. This factor coupled with the installation of the sugar factory in the neighbourhood must have been responsible for the changes in the jajmani system.

The growth of commercial spirit in agriculture and the progress of market economy do not conduce to the continuance of the jajmani system. As the factory-produced articles replace the products of traditional crafts, the artisans are thrown out of job and the jajmani ties become redundant except in the ritual sphere. Urban influence and the location of a village very close to a city draw many workers out of the village, disturbing the working of the jajmani system, besides inducing changes in the basic attitudes of the people. Also the proximate installation of industrial establishments like sugar mills has a corroding effect on the system. This is what has happened in Rajpur and also in Dhanela, another village in Karnataka studied by Epstein.

Another factor closely connected with the phenomenon of jajmani system is the intra-caste organisations amongst the workers and artisans. Where these organisations are strong as among the Lohars of Senapur, the jajmani system is likely to be strong. It is also worth noting that certain castes like the Madiga who have a penchant for community-based organisation of work provide strength to the system in areas where they are numerically preponderant. The different forms of jajmani system and the different levels at which it operates are likely to depend on different combinations of the above mentioned factors such as the types of land management, degree of commercialism, intra-caste organisations and inter-caste relations proximity of urban centres and industrial establishments, reformist movements and modern ideologies. A more finite typology of villages along this dimension can be reconstructed from a more detailed study of such factors in a larger number of villages.

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