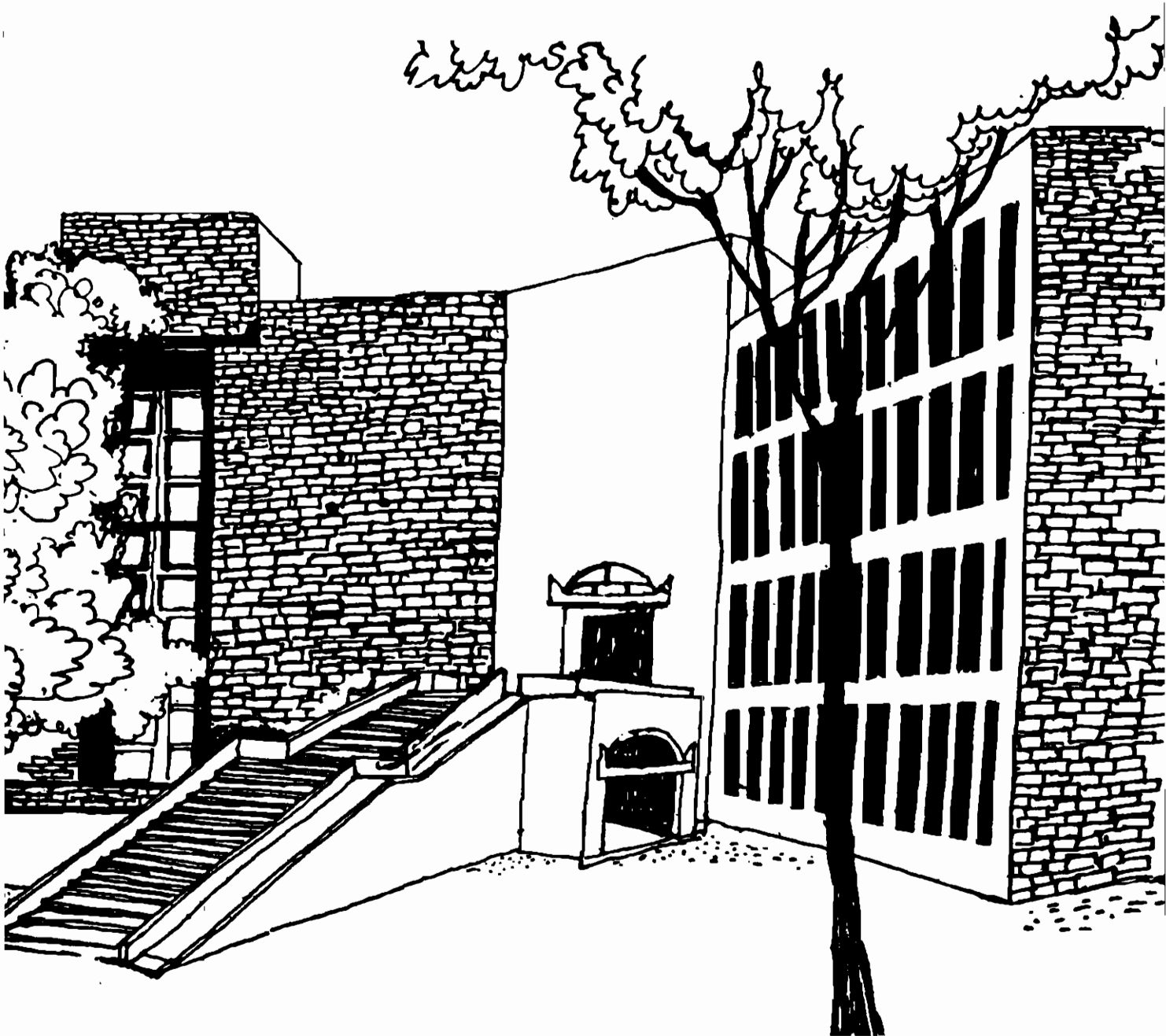




Working Paper



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PUBLIC SYSTEMS GROUP: A REVIEW OF RESEARCH

By

S. Manikutty

WP 1112
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and build on them. Quite often the faculty themselves had lost track of the work done by them. Many of the faculty members who were here in the late seventies and eighties were no longer in the Institute. Thus I felt that an effort of locating the various works done in PSG and consolidating them would be very useful not only as a record but also as a ready means of locating the previous research.

This working paper is the result of this felt need. It gives a review of the work done in different fields of PSG over the years till early 1993. The first part of the paper is the review itself which gives a flavour of the kind and variety of work done and explores where PSG could now move in its programme of research. This is followed by a summary of the various books, monographs, working papers and publications including the doctoral dissertations done by students of PSG. These are summaries and not interpretative commentaries and are given in the hope that a researcher can quickly get an idea of what the work contains before he or she decides to spend further time in reading it. These summaries are in 8 sections: (1) Public Policy, Public Management and Policy Analysis; (2) Population Management, Family Planning and Family Welfare; (3) Health Management; (4) Poverty Alleviation, Development Programmes, Decentralization and Empowerment; (5) Education; (6) Energy; (7) Transportation; and (8) Miscellaneous.

At the end is an author-subject index which gives instant reference to the authors and subjects.

I realise that there would be many flaws in this working paper. The summaries may not be accurate; many papers published may not have been included and there could be typographical errors. I request my colleagues to inform me of the deficiencies noticed, so that I can correct them. If any papers are to be included, a summary of the paper (in about a page) with full referencing may please be sent to me. After incorporating these changes, it is intended to publish this as a monograph for future reference.

Research assistance for this work was mostly done by Mr. Raj Mohan Menon who painstakingly collected the various materials and went through the task of summarising them. Towards the end of the project, Ms. Rathi Mathur also provided research support. The typing was done by Pauli and Uma Maheswari, who cheerfully put in the long hours needed, and in fact who retyped some portions of the manuscript when the computer "crashed" one fine day. K.S. Menon and Peter of the PSG Office also lent their help. The Research and Publications Division helped in locating and making available a large number of working papers. I place in record my gratitude to all the above persons.

The project was financially supported by the Research and Publications Division of the Indian Institute of Management, Ahmedabad. I am grateful to them for their support.

I earnestly look forward to the reactions from my colleagues.

S. MANIKUTTY

Ahmedabad
May, 1993

SECTION I

REVIEW OF RESEARCH

PUBLIC SYSTEMS GROUP: A REVIEW OF RESEARCH

Since its inception in 1975, the Public Systems Group has been engaged in research (apart from teaching/training and consultancy work) in a variety of areas. By and large, these could be grouped into seven sectors or areas: (1) Public Policy, Public Management and Policy Analysis; (2) Population Management; (3) Health; (4) Poverty Alleviation, Development Programmes, Decentralization and Empowerment and work on voluntary agencies; (5) Education; (6) Energy; and (7) Transportation. The first is really an omnibus section dealing with public policy issues at a general level transcending sectors, and the fourth covers a wide range of work that has been grouped for convenience and compactness.

In a sense, items 2 to 7 are "sectoral" studies, even though most of the studies are multidisciplinary. In a few cases the studies are intersectoral also; but most of the work seems to have been done in specific sectors.

Accordingly, the review, and the subsequent summaries of papers are organised into the above seven sections, with an eighth "miscellaneous" section that puts together the work that cannot be put in any specific sector.

Before we give a sectorwise review, a few general remarks may be in order. It is seen that the bulk of the work done has been between about 1978 and 1985. This was the "golden period" of PSG, which had as many as 11 primary members at one stage. After

that, there had been a steady reduction in the faculty strength, which is reflected in the number of publications. Also, the sectorwise break up also reveals that while some sectors like health, population and decentralization / development programmes / voluntary sector have shown a consistent output, others like energy and urban management have shown vast fluctuations, depending on the faculty strength available. The following table gives the break up of publications over the years:

Table showing the break up of publications over the years

Sector/ Area	Years					
	<1977	1977-79	1980-82	1983-85	1986-88	1989-93
1	0	12	7	14	0	1
2	7	8	4	5	0	1
3	2	5	8	6	3	2
4	1	3	13	2	6	2
5	6	10	12	2	3	2
6	0	2	3	4	0	0
7	1	1	1	2	2	0
8	2	3	3	4	4	19
Total	19	44	51	39	18	27

- Legend:
- Sector 1: Public Policy, Public Management and Public Policy (including urban management)
 - Sector 2: Population Management, Family Planning and Family Welfare
 - Sector 3: Health Management
 - Sector 4: Poverty Alleviation, Development Programmes, Decentralization and Empowerment (including work on Voluntary Agencies)
 - Sector 5: Education
 - Sector 6: Energy
 - Sector 7: Transportation
 - Sector 8: Miscellaneous

Now we present below a sectorwise review.

Public Policy, Public Management and Policy Analysis: Research on urban management has concerned itself with studying and designing training programmes for city managers like municipal administrators and other personnel, urban development and communities and development of frameworks for study of urbanization. Anil Bhatt (1977) gives the results of a pilot study of the administrative problems encountered in urban decentralization in the city of Baroda. Issac Akkanad (1978) presents a blue print for the design of a human settlement in the city of Ahmedabad. Anil Bhatt, in three papers [1978 (a), 1978 (b), and (1979)] assesses the extent and content of training given to municipal administrators. These were the part of a larger project on the training activities of municipal administrations conducted by the author. Samuel Paul (1983) discusses the evolution of training in government, and presents the results of a survey conducted in different aspects of training. The picture that emerges is, on the whole, encouraging, if only because of the low expectations many would start with. Anil Bhatt and Ravindra Dholakia (1989) present a training plan for municipal administrator based on a project done by them. This was subsequently used by the authors in an action project.

Monappa, Bhatt and Subramanian (1980) look at some issues in municipal management and the problems involved. The study finds major lacunae in the systems of control, personnel practices and manpower planning. Giridhar (1982) raises questions about the patterns of growth in cities, although he does not get into an analysis of policy alternatives. In an interesting study on the

urban communities' perceptions of the development programmes in the city, Bhatt, Giridhar and Monappa (1985) find that the Urban Community Development (UCD) project in Ahmedabad "made its presence felt" in the communities. But, like many such activities, these tend to become "administration oriented" rather than "development oriented". Giridhar (1979) studies how urbanisation is related to other factors like fertility and mortality differentials between rural and urban areas. It raises the interesting question as to whether it will not be preferable to see whether there could be an "optimal" or "threshold" size for cities in order that they could efficiently perform different functions. Ganapathy (1983) critiques the conventional approach the development of small towns in India and presents an alternative (perhaps an idealistic) frame work.

On specific problems on urban areas, little systematic work seems to have been done. Shishir Mukherjee and Ashok Mehta (1978) present a linear programming (LP) model for optimal water transmission in a city while Ganapathy and Padmanabhan (1984) develop a framework, through a case study, for optimising the energy consumption in a city taking into account the different ethnic groups and their habits. Ganapathy (1983) discusses the problems posed by urban agriculture and in a later paper (1984) discusses its impact on land use pattern and the issues on planning involved.

On public policy and public management, several fields have been covered. Bhandari, Dholakia, Khurana and Vora (1978) outline an approach to formulating a policy for public distribution systems,

while Dholalia and Khurana (1979) present a number of papers on the evolution and evaluation of PDS. In the area of public finance, Mishra and Jayaram (1979) provide a methodology for evaluating the performance of tax administration on the basis of available data on effort and achievement variables over a number of years. These variables have been identified through a case study in Gujarat. Mishra (1982) has tried to evaluate the effectiveness of government expenditure and the relationship between budgets and actual expenditures. It finds, as would be expected, that the budgeting process is extremely unsatisfactory and inefficient as a mode of control. Vyas and Khanna (1982) show that the extent of relief expenditure does not have a direct relationship to the benefits populations receive in drought prone areas. In fact, drought relief measures seem to be short term, fire fighting operations that do not find long term solutions. Mishra (1985) discusses alternative methods of forecasting the yields of state level taxes through econometric models. Oscar Barros (1989), in his doctoral dissertation, examines the impact of government policies on the performance of three industries: the detergent industry, the electric motor industry and the electronic switching equipment industry. He finds that in a liberal policy environment, R & D in the industries decline; and the nature of technology imports vary with the policies on foreign collaborations. Satia and Cowlagi (1991) discuss what should be the role of State Governments in industrial development in the context of liberalisation.

What has been the impact of external aid on state level finance?

Is it a blessing or a problem? Inderjit Khanna [1982(a), 1982(b)] raises this question. Studying the impact of foreign aid on the State of Rajasthan, Khanna shows that due to the conditionalities that foreign aid for projects involve, the State Government had to put up its own finance on a scale much higher than what it received as assistance for the projects from the Central Government, thus leading to a pressure on its finances. Besides, this resulted in a preemption of finances from other areas which could be high priority (at least from the State's point of view). Finally, it also distorted the placement patterns and created new bureaucracies that were difficult to wind up once the project was over.

Ganesh, Murari and Neeva Shethi (1983) recount the experiences of introducing management by objectives (MBO) in a state government and summarise the lessons. Manu Shroff (1984) examines another component of public financial system: the banks. He argues that it is not so much the structure of the banks or their powers that are vital as the strength and commitment of social and political systems to the economic and social objectives of the banking system.

On the subject of policy analysis itself, there is little work done. Paul (1979) discusses the issues on industrial policy with reference to transnational corporations and shows how policies with clear objectives can generate many options for LDCs in their dealing with transnationals. Shekhar Chaudhuri (1984) discusses the implications of government policies for management

of technology in the manufacturing sector while Ganapathy (1983) discusses the philosophical underpinnings of methodologies of policy analysis. Ganapathy, Ganesh, Maru, Paul and Ram Mohan Rao (1985), in their edited book, present papers on different aspects of policy analysis and case studies on policies on different fields like education, health and technology. However, these papers are more narrative than analytical.

Why has policy studies been so sparse? A wider literature scan done by us indicate that at least in India, rigorous work on policy analysis is quite difficult to find, at least in published form. There could be several difficulties faced by researchers: lack of and inaccessibility to data; lack of tools to analyse them in the Indian context; perhaps the fact that many major decisions are made not as a result of policy analysis but based on their political impact. Policy analysis also has gone out of favour in U.S. itself, at least as compared to what it was like in the McNamara era.

But public management, as a discipline, also has been researched inadequately. Public finance has been looked at some what, but other areas, especially policy formulation and implementation need to be looked at. A broader framework in public management needs to emerge.

Population Management, Family Planning and Family Welfare: Conceptual work in this area include Uday Pareek and T.V. Rao (1974) in which they discuss how behavioural sciences can contribute in this field; and Satia and Rangarajan (1974) in which a way to

arrive at the optimal targets for the family planning programme through a process of cost-benefit analysis is discussed.

Research on the role of media on family planning / population control include Mittal (1976 A) which is a study on how the potential of media like TV can be utilized and T.V. Rao (1975) who studies how mass media programmes can be used to influence family planning decisions. The picture that emerges out of these studies (which are, needless to say, quite old) is that the much of the media potential were not fully utilized, and there was a need to train personnel on the use of these media.

Some work has been done at the village level, especially regarding the village level workers (VLWs) of the programme. V.K. Gupta and Shingi (1976) survey the attitudes, knowledge and skills of VLWs with a view to decide on their training needs. T.V. Rao (1977) studies the capability of family planning workers to transact and communicate with people and influence them on the family planning decisions. Here again the need for training emerges as a dominant theme. Prasad Verma and T.V. Rao (1973) have, in an interesting study, investigated the effect of training on the attitude and effectiveness of training on executives involved in family planning work and found significant differences between the experimental (trained) and control (untrained) executives. T.V. Rao and Satia (1978) give a self learning manual for managing FP activities at the clinical level. But while external training and self training are important in enhancing the effectiveness of VLWs. Satia (1976) argues that changing attitudes family planning workers are absolutely vital.

for the success of any programme. Here dissemination of information is not enough.

Physicians often tend to do exactly this and see their task as mere dispensers of methods of family planning. Manendra Mohan (1981) points out the dangers in approach and pleads for a more active involvement of physicians with the target groups.

A great deal of work has been done on introducing managerial techniques in the family planning work, especially in Management Information Systems (MIS). Indian Institute of Management, Ahmedabad was chosen by the World Bank to involve itself in the India Population Project in the state of Uttar Pradesh and many of the writings are the outcome of this project. Nirmala Murthy (1977) describes a system for monitoring performance of maternity homes and urban family welfare centres of Lucknow. George Simmons (1979) discusses the various measures of inputs into family planning and discuss how they can be quantified. In another paper George Simmons, Ruth Simmons, Misra and Ashraf Ali () take a systems view and relate the results of a family planning programme to a number of variables through developing a model. Giridhar (1979) discusses the relationships between population programmes and development.

Mittal (1976 B) presents the results of a survey of family planning programme in Lucknow city. Among many points, he highlights the role of women.

Maru, Murthy and Satia (1982) recount the experiences of manage-

ment interventions in the India Population Project. Satia and Maru (1982), building on the theme, identify areas where management interventions could be most effective: training, logistics, MIS and organization restructuring. Maru, Murthy and Satia (1985) give the evaluation of the project and this work contains a number of insightful observations. Giridhar, Satia and Ashok Subramanian (1985) give a detailed account of the evolution of health policy in India.

Satia (1984), in his book which is a collection of papers reviewing the India Population Project, identifies the areas for further research: Accessibility and utilisation of health services, family planning performance analysis, implications of fertility related findings to programme management and infant and child mortality. Other experiences are also presented.

What about the incentives offered by the government for acceptors? Satia and Maru (1984) study the extent of awareness regarding these incentives and find that most people are fully aware of them. In a more important finding, incentives were seen to increase the number of acceptors and had no adverse effect on their quality. Thus incentives play a positive role in the family planning work, though the authors point out, incentives alone are not enough. A more encompassing system of motivation is also needed.

Thus over a period of time, a number of important issues in population management have been tackled. It should be kept in mind that many of the papers above were the outcome of projects

whose objectives were to show results through action interventions rather than passive research. This undoubtedly has contributed to the practicality and the richness of the findings although the long term impact of the suggestions is unclear.

It may be seen that many of the studies above assume a "management" framework of development, where programmes are "managed" and "management interventions" are thought to increase the efficiency of management of such programmes. What about the alternative of demand being created by the community and their impact on the effectiveness of the programmes? Some work is cited in another section on decentralization and empowerment but on the whole, the emphasis, at least from IIMA side, has been on the managerial interventions.

Health: Over a period of time, a great deal of work has been done in the field of health, study of rural, primary and community health centres, village level workers and the role of voluntary organizations in the field of health care. As in the case of population management, the general thrust has been towards seeing how management interventions can improve the health systems, especially in villages. But in the field of health, some work has also been done in the role of community participation and voluntary organisations.

Among the conceptual papers, the paper by T.V. Rao (1978) discusses the information needs of different classes of people engaged in health and family welfare. Ramaiah (1980) discusses the planning and implementation problems of health, family plan-

ning and nutritional services, while Subramanian (1981) gives his ideas on the Health-for-All strategy.

There have been studies on the health system, taking a systems view. These deal with a variety of areas. Bhatnagar, Maslekar and Satia (1977) have studied the medicine and drug procurement and distribution systems and make a number of recommendations for their improvement. Bhatnagar and Sengupta (1980) report the result of an experiment conducted by them in activity planning in CHCs through interventions. Major improvements were noticed in immunisation and family planning. Murthy, Satia and Sengupta (1984) conducted a study of drug supplies to PHCs and they identify a number of problems. They also give a methodology for assessing medicine needs. Giridhar (1986 A & B) gives some ideas on how to improve the programme management of rural health services through interventions. Dipti Sathi (1989) studies the Integrated Child Development Services from the perspective of organisation theory, especially on interorganisational coordination, and comes out with some propositions.

In the area of Management Information Systems, a great deal of intervention work has been done over the years. Murthy and Satia (1976) propose a Management Information and Evaluation System (MIES) which could overcome the major problems encountered generally in MIS: timeliness, reliability of data, and the complexity of the system. Sathi (1978) presents a monitoring system for Primary Health Centres (PHCs) which she had actually put to use. Ramaiah (1980) presents the results of a cost benefit evaluation of malaria control programme and finds it effective.

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tive.

Village Level Workers were studied by Maru, Murthy and Satia (1976) in the context of the Multi Purpose Worker Scheme (MPW). This study is an evaluation of a pilot implementation of a multi purpose worker health scheme in a PHC. They report some favourable gains but no major improvements in performance and they attribute this to the existence of many factors other than worker performance which effect the over all results. Murthy and Maru (1977) study the medicine distribution to inaccessible villages through MPWs and find very limited success, for a number of reasons. Bhatt, Maru and Prabhakar (1981) discuss the criteria for selection of CHVs and compare them with the reality.

Training has been studied in a limited way, by Murthy (1977) who studied the impact of training on imparting multi skills. She reports substantial improvements.

The role of voluntary sector has been studied by Ashok Subramanian (1981 and 1983). He studied the innovation made by VOs in the health sector and identifies the new roles given by these organisations. There were two interesting roles: one, the professionally trained non medical manager, and two, a coordinator manager of the OP service. He reviews the role of coordinating mechanisms in the light of these studies. Subramanian and Mona Mehta (1984 A) present a study of health agencies in Gujarat and show the need for linkages between CHCs and VOs. The same authors (1984 B) argue that over emphasis on self sufficiency in Community Health Programme on the part of VOs can be counter productive,

affecting their major role as empowering agencies. Anil Bhatt, ~~Bhatt~~,^{Desai} Maru and Subramanian (1984) describe the element of community participation through case studies and analysis.

Rapid appraisal has been emerging as a major tool in social science research. The technique was earlier confined to agriculture and certain aspects of rural development. Satia, Mavalankar and Bharthi Sharma (19) develop a methodology of rapid assessment for PHCs. (For development of a rapid appraisal technique in the field of education, see Bhatt, Manikutty and Srinivasan (1992).

Thus in the field of health, models and systems have been developed for MIS, monitoring and evaluation and implemented. The resounding message that comes through is that these improvements work. But, one wonders, for how long? There are no follow-up studies that answer this question. The effects may be transient and highly dependent on the executives in charge and their long term impact has not been studied.

It is clear that community involvement and involvement of NGOs can enhance the quality of health care. Can this be a more long lasting solution? It is in this area, and on how effective work sharing and development of partnership between VOs, government agencies and the communities can lead to better and more long lasting solutions, that research seems to be badly needed.

Poverty Alleviation, Development Programmes, Decentralization and Empowerment: These encompass a fairly wide range of topics. The

topics, however, are interrelated, and it may not be sound to treat them separately. Thus many, though not all, development programmes are really concerned with poverty alleviation, and many voluntary organizations, at least those which have been studied by IIMA, are actively involved in poverty alleviation and developmental work. Hence the coverage of these different topics under a single heading.

In the field of management of development programmes, considerable work has been done. Dholakia (1978) examines the relationships between developmental administration and social marketing. He shows how the ideas of social marketing can be effectively used for development. Bhandari (1978) describes an approach and methodology to use social marketing concepts in development programmes. Paul (1980) presents a framework for studying development programmes in a strategic management perspective. He brings out the ability of top management of these programmes to exercise strategic choice - the choice of strategy, beneficiaries and the sequencing of the programmes. Murthy and Singhvi (1981) evaluate the TRYSEM (Training for Rural Youth for Self Employment) Programme and find that the implementation of the programmes, which was supposed to be different from other employment generation programmes, was not really that much different. The lack of facilities at the institutes that were imparting training to these youth has been commented upon by the authors. Paul (1981 A) analyses the success of six development programmes from different countries and argues that resources, leadership, political support and commitment are not enough; congruence of inter-

ventions was needed. Paul (1981 B) explores the above programmes in greater depth and develops his theme further, outlining the elements of congruence. This has been developed later into a book (1982)¹.

Development programmes often work well on a pilot scale but come against difficulties at the stage of replication. Subramanian (1982) identifies the elements of the process of replication of development programmes. Satia (1985) gives the case of child survival programmes and draws the lessons for replication. Dipti Sethi (1988) reviews a pilot project (Project Linkage) that seeks to link rural and urban development and examines the question of its replication.

Kuldeep Mathur and Anil Gupta (1982) give their experiences in interventions at micro level planning in a district and find their experiences not so rewarding.

Specifically on poverty alleviation, Anand Gupta and T.V. Rao (1980) study the incidence of poverty and conditions in the Valsad District, Gujarat. They identify the set of actions required on different fronts. Anil Bhatt (1988; 1990) studies the rehabilitation of tribals through BAIF's² Tribal Development Project Vansda. He finds that poverty alleviation is a long term affair but is perfectly feasible with proper management, and with "not too unfavourable" a social and political situation.

1. Samuel Paul, Strategic Management of Development Programmes: Lessons of Success.

2. Bharatiya Agro Industries Foundation

Murthy, Hirway, Panchmuki and Satia (1990) ask the question: "How well do India's social service programmes serve the poor?" and give their reply: very unsatisfactorily. The policy reforms needed are identified as: closer linkages with income generation, closer interagency coordination, involvement of the poor and a bigger role for NGOs. Differentiated thrusts for different groups are shown as vital. Khanna and Subramanian (1982) study the Antyodaya Programme of Rajasthan, a programme specifically targetted at the poorest of the poor. The programme started with a narrow focus and scope, but soon it encompassed other groups and its scope was enlarged. But its ability to deliver such a variety of services was doubtful. Hence, argue the authors, there is a vital need to assess the administrative capabilities before enlarging the scope. Paul and Subramanian (1982) show further how strategies make a difference in antipoverty programmes also, just as they do in development programmes. The lessons are clear: needs of the weaker sections are to be taken care of; design of linkages is vital; and clear identification of beneficiaries and sources has to be done. Roughly similar conclusions are reached by other literature also in the area of development programmes. Bhatt (1985) discusses the efforts made in the development of most disadvantaged groups in South Asia.

Voluntary organizations have been studied and written about profusely; yet few concern themselves with their management. PSG's studies have concentrated on the management. T.V. Rao (1978) shares his experience in offering process consultation to a voluntary service agency, introducing change in an organisa-

tion. Chattopadhyaya (1981) tries to understand the issues involved in the OD of a voluntary organisation and develops a design for OD.

Subramanian (1981) examines the issues involved in relating community service organizations to their environment. He finds them poor in planning and environment matching. In a later work (1982), he looks at the strategic responses of voluntary organizations vis-a-vis the larger proximate systems and the significance of organisational processes is discussed. Again, the need for focussed attention comes through as important.

In the area of decentralization, some work has been done. Vyas, Bhatt and Shah (1985) study decentralized planning in the government and the NGO sector. Decentralization was not matched by competence at different levels, and the barriers to participation have been identified in the paper. The paper's main conclusion is that to make participation more meaningful, income augmentation is essential; and the effort must be aimed specifically at smaller groups. Bhatt (1987 A) overviews the South Asian experiences in decentralization in rural development and argues that strengthening and empowerment of the poor is essential. The highest strata in the political and administrative set up must take action to empower the lowest strata. Bhatt (1987 B) reviews the Indian experience in Panchyati Raj and comes to a similar conclusion.

Lately, two doctoral dissertations have been completed on social movements. Maithreyi (1992) studies ecological movements as

mechanisms for conflict resolution and finds that destructive conflicts need not always accompany ecological movements. By understanding the nature of these movements, the government can reduce the conflict. Indranil Chakraborti (1993) studies a social movement and examines how they can be seen as organisation.

Thus the overall research findings are clear: concentration of effort, orchestrating the congruence of actions and specific aiming of programmes at the lowest levels are vital for the success of development programmes. However, while some of the authors have emphasized the management of the programmes, others seem to have been advocating the empowerment of the poor as the key to effectiveness. In a sense, it is a "top-down" versus "bottom-up" point of view, but clearly these are complimentary actions. To establish the way in which this complementarity can be established could be the subject of further research.

Education: The field of education is another area in which much work has been done. Research has been in the areas of adult education, educational innovations, study of institutions, study of students and education policies.

The Adult Education Programme in Rajasthan was studied in detail and evaluated over four years. The appraisal of this NAEF was done in four stages, each one looking at a different aspect. The first appraisal was done in 1979 by T.V. Rao, Bhatt and Rama Rao (1979; 1980) and this looks at the State Resource Centre, the learning centres, MIS and the drop outs. The second appraisal,

also done in 1979 by Pestonjee, Laharia and Dixit (1979) look at other centres not covered by the first study. The third appraisal was done in 1981 in two districts by Harihar and T.V. Rao (1982 A, B) who examine the supervisory systems, profile of the institutions and the learners. The net conclusion after these appraisals is that the Adult Education Programme has a vast potential to help the rural masses in developing themselves, if the programmes are handled imaginatively and with determination. But Subramanian, Khanna, Bhatt and Anil Singh (1983) who conducted the fourth appraisal found that planning in NAEP left much to be desired.

Bhatt and Srinivasan (1991) study the management of Jina Shikshan Nilayams, the centres for continuing adult education especially neo literates. They give a number of suggestions for designing the structure and systems of this network. Bhatt, Srinivasan and Manikutty (1992) evaluate the JSNs in Gujarat and find that JSNs, while far from satisfactory in their functioning, still serve a very useful purpose for continuing adult education.

While work on adult education has been primarily on evaluation of programmes, that on rural education has been through action research. Many of the published work are thus in the nature of recounting experiences in these projects. Ranjit Gupta, Ravi Mathai, Moulik and Arbinda Tripathy (1981) present their experiences of the famous Jawaja experiment where participative learning in a rural setting was tried out in an innovative way. Mathai (1995) gives a more detailed account of this experiment.

T.V. Rao and Uday Pareek (1981) present five case studies to give an idea of the efforts made in India in education as a means of improving the condition of the underprivileged. Other work on educational innovations include T.V. Rao (1978) which gives his experiences in an action research project in educational innovations and B.B. Agarwal, Maru and Subramanian (1985) wherein innovations at the elementary school level are looked at.

In the earlier years, educational institutions - of different kinds - have been studied extensively. The Education Systems Group (1976) of IIMA analyses the decision making strategies and organisational health in a new multicampus agricultural university, and finds it poor. Ravi Mathai, Uday Pareek and T.V. Rao (1978) diagnose the organisational health and decision making strategies in two agricultural universities and give recommendations for the design of organisation structure and systems.

IITs and IIMs have always had a degree of controversy about them. On the one hand, they are recognised as centres of excellence, but are also perceived as elitist and even irrelevant to the needs of society. Paul (1970) applying the technique of cost benefit analysis to management education institutions, finds that even under the most pessimistic assumptions, they are cost effective. Ganesh (1981), however, finds that IITs, through their sorting procedures in selecting students, end up with isolating the elites from the realities. This is a build up on his earlier study (1980) in which he found that the concept of IITs have enough contradictions that make it difficult for them to serve as the centres of excellence they are supposed to be.

Institutions of course cannot be studied separately from their students. T.V. Rao and Sarupriya (1975) study the perceptions of medical students towards campus climate, work values and professional aspirations. They find that final year students have less favourable perceptions of the above as compared to first year students, thus raising the question whether their education has had in fact a negative impact. T.V. Rao and Vijayashree (1976) study the motivational patterns and psychosocial maturity of management students. T.V. Rao (1978) studies the student orientation attitudes, values etc. from different professions. Pareek and T.V. Rao (1980) present a hand book for trainers engaged in planning and management of education, covering a wide range of topics in training design. Pestonjee and A.K. Singh (1980) find through a comparative study of students in denominational and nondenominational schools, that the students in the former tend to be more dogmatic and insecure. Ganesh (1982) studies the aspirations of IIT students at the time of their entry and at the end of each year.

A very limited amount of work has been done in the field of management systems in education. Rama Rao, T.V. Rao and Singhvi (1978) give a computer model for teacher transfers, while Rama Rao and Inderjit Khanna (1982) give a computer model for location of schools.

There has been one work on involving field workers in evaluation of educational programmes (Bhatt and Subramanian, 1983; 1984) who argue for involving them at every stage. This was done later in

the evaluation of JSNs through a rapid appraisal methodology (Bhatt, Manikutty and Srinivasan, 1992).

Dipti Sethi's work (1988) is interesting because she looks at the educational efforts required in other development fields: family planning and the Community Health Worker Scheme to achieve greater effectiveness in these programmes. She also presents a conceptual model for the educational strategy for the development programmes, thus bringing an intersectoral perspective. In a later work (1985), she discusses the educational tasks in development programmes as a whole.

Thus work in education has been considerable. But not much work that has been done in community involvement has found its way into this field, nor have the interlinkages of education with other areas like health and even economic development explored (except Dipti Sethi's work quoted above). Perhaps education has been seen more as a separate field than as a part of an overall development programme.

Energy: In energy, only a little work seems to have been done by PSG, largely due to lack of faculty members with interests in this field.

Ramesh Gupta and Abnash Singh (1980) study empirically the cost behaviour and financial performance of State Electricity Boards (SEBs). They find that financial management and skill development in SEBs are quite unsatisfactory. In another work (1980), Ramesh Gupta discusses the effect of tariff policies on the

finances of SEBs and advocates a standard-costing system.

Ganapathy (1984A) discusses the various issues in energy policy in this edited work. This covers a wide variety of issues. In another work (1984 B), he reviews the nature of energy planning in India and suggests a framework to make energy planning more effective. Shishir Mukherjee (1979) discusses the energy sector planning in India and outlines an approach for integrated energy-economic planning.

In the area of nonconventional energy sources, U.K. Srivastava (1981) recounts the experience of nonconventional energy projects. Availability of technology is only a necessary condition. Understanding of the user environment is also needed. A similar argument is made by Moulik (1983). Ganapathy (1984) reviews the complexity of interdependence and structural and systemic features of the renewable energy system and argues for a comprehensive policy.

There has not been much work applying OR / IT techniques to the energy sector. Shishir Mukherjee's work (1978) which develops a network planning model for power generation and transmission system is the only one we could find.

Transportation: Transport was taken up as an activity in PSG only in mid eighties. In the limited period since then, however, there has been considerable work done. Work on the transportation has been largely in the rail sector, some on the road sector and a little on inter modal transport, transport policies etc. Also the work that has been done seems to have been strong-

ly oriented towards quantitative (OR) and computer based techniques.

In Railways, Ramani and Raghuram (1979, 1980) analyze the linking patterns of coaching rakes and suggest how a better linking can be done through a computer model. The study shows that 35 coaches could be saved in the Western Railway alone. Raghuram (1986; 1987) identifies three constraints in the way of improving coach utilization: (1) composition requirements (2) maintenance requirements and (3) traffic delays. A methodology is suggested to attain optimality. In his later paper (1986), Raghuram describes a methodology to minimize crew requirements (AD sequence methodology) which can evaluate the efficiency of a crew link. Raghuram and Venkata Rao (1991) describe a crew scheduling software developed by them which can generate convenient outputs and enable better managerial control, and the same authors (1989) discuss a decision support system for improving line capacity. Manikutty, Raghuram and Venkata Rao (1992) describe a simulation model developed by them which can evaluate the benefits of twin single line working vis-a-vis conventional double line working. In an earlier paper, Rekha Jain, Raghuram and Shobhana (1990) present solutions to certain transport problems through centre point route network design.

On a broader level, Ganesh (1983) discusses an appropriate organizational structure for the Indian Railways. Raghuram (1991) discusses the question of wagon utilization of Indian Railways in terms of the inputs and concludes that unless Indian Railways

make a proactive effort, the rail movement of commodities is not likely to go up since the roads are ready to take up this share of transportation. Manikutty (1990) argues that the investment needs of the Railways are so high and the ability to raise finances through raising of fares so low that unless they really devise innovative cost effective ways to manage, they can never be financially comfortable on a sustainable basis. Ramani (1991) discusses the impact of computerisation in the Railways, while Rekha Jain and Raghuram (1992) examine the Passenger Reservation System of the IR and draw lessons for the management of large IT projects. The latter authors (1991) also see the computers and communication systems in Railways as large projects and from their implementation, draw lessons for implementing such large projects.

In road transport, Nitin Patel (1976) gives a method for measuring load factors in segments of different trips in an RTC. Ankolekar, Patel and Saha (1980) discuss the construction of a model to minimize the fleet size required to operate a time table subject to a maintenance constraint and propose an algorithm. Patel and Madhavan (1984) give an interactive Decision Support System for planning rural roads in one district in India and explore the possibility of minimizing the road KMs. Raghuram (1991) gives an algorithm based on a network and L.P formulation to take optional decisions for purchasing fuel in road transport undertakings so as to minimize the fuel cost. Raghuram and Shobana (1991) develop a model for itinerary planning in transportation systems.

Privatization of passenger road transport has been done to some extent in India. Raghuram and Manikutty (1991), after examining the experiences of privatisation of road transport in India and other countries, find that, on the whole, the experience has been negative, and unless proper planning is done, all that results is a return to the chaotic state of affairs which led to nationalisation in the first place.

Safety, especially, in road transport, has rarely been studied systematically. Chhokar and Gopalakrishnan (1989) study the reasons for variation in accident rates between TRCs and give recommendations on how to improve the safety record.

Thus much ground needs to be covered in road transport and transport policy. While some work is done by CIRT, Pune, on road transport, no institute in India seems to be doing any work on transport policy. This seems to be a major opportunity to work in for the Public Systems Group.

Conclusion: Thus on the whole, the work done so far by PSG has been impressive. Much of the work has been multi disciplinary and management oriented, though in some respects the studies have not been as deep as those of some Institutes which do research only in one sector. Also the work output, naturally has depended a great deal on faculty availability and their interests from time to time.

But what long term impact these researches have had is difficult to assess. Some of the work like in the fields of health and

population have been focussed, action oriented and sustained over a long period. The results reported clearly show that some changes could be brought about. But were these changes sustainable? One has his doubts.

PUBLIC POLICY, PUBLIC MANAGEMENT AND POLICY ANALYSIS

WP 1112

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Bhatt, Anil. "Baroda's Experiment in Urban Decentralization: A Study of Some Administrative Aspects". Ahmedabad: Indian Institute of Management, 1977 (IIMA Working Paper No.179) (mimeo).

This is an exploratory study of some of the administrative problems of urban decentralization in the city of Baroda. It is an empirical study based on open and unstructured but indepth interviews with corporation officials, elected councillors, local journalists and some other leading citizens. This is supplemented by a collection of data from the corporation records.

This study is carried out with a view to help locate some significant issues, and provide some clues for further studies. This is only a pilot study, and the report is formulated in such a way that it can be read and used as a finished and independent study. The report has at the end a section on overall evaluation.

Mukherjee, Shishir K.; and Mehta, Ashok. "A Linear Programming Model for Optimal Water Transmission System: A Case Study for Ahmedabad". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.196) (mimeo).

This paper presents a methodology for the optimal design of a water transmission system, given a source of supply and demand valves for water from various zonal divisions in the city. The linear programming model developed considers the detailed design of the water transmission system including the choice of pipe lengths and diameters, and the computation of pressure losses due to friction and pumping head required to meet minimum allowable discharge pressure at each demand centre.

Akkanad, Issac M. "Blueprint for the Design of a Human Settlement in Ahmedabad City". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.219) (mimeo).

This paper presents a blue print for developing an integrated human settlement in the city of Ahmedabad in a stretch of land on the east side of the Sabarmati river and measuring approximately 3000 acres. The design specifications included provisions for constructing nearly one lakh dwellings of which at least half were to be for the benefit of the economically weaker sections.

Consequently this project was to have been an important step towards the resettlement of slum dwellers in a major segment of the city area and would serve as a preventive measure with regard to the problems of proliferation of slums, substandard living and urban poverty facing Ahmedabad city. Steps are recommended in this paper which would provide an opportunity for the continued improvement of the quality of life of the slum population through the creation of income generating possibilities. The paper recommends that a mix of esthetic aspects of the city life, besides making the project economically viable (within a time span of 5-10 years) should be planned in this new settlement. Organizational pre-requisites for the successful implementation of the project are also discussed.

Bhandari, Labdhi R.; Dholakia, Nikhilesh; Khurana, Rakesh; and Vora, M.N. "Formulating Public Policy For Distribution Of Essential Goods: An Analytical Approach". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.225) (mimeo).

Public Policy concerning distribution of essential goods of mass consumption has announced critical importance in several developing countries. This paper presents a comprehensive, detailed, explicit and yet simple approach for formulating a consistent and potentially effective public distribution policy. A systemic model of distribution policy is presented in which starting from the consumption needs of society, the mix of policy instruments, (both structural and non-structural) likely to achieve the policy objectives most effectively can be derived.

The model outlines relationship between consumption needs, elements of the distribution system, commodities and their characteristics, policy instruments and policy objectives. The approach begins with analysis of consumption, production and product characteristics of relevant commodities on the one hand and identification of possible policy instruments on the other. An analysis of the characteristics of commodities enables one to examine the relevance of various policy objectives for these commodities. By matching policy instruments with policy objectives, the degree of effectiveness of policy instruments for the given objectives is established. By this analysis, it becomes feasible to derive the potentially effective mix of instruments for each commodity. The approach also helps in identifying the need for modifying instruments and for commodity characteristics for achieving policy objectives.

The approach was tested on four policy makers belonging to different ministries of the Government of India and its agencies using commodities like wheat, pulses, edible oil and soap. The approach could be used by policy makers without difficulty. It was found to be more useful with commodities like pulses and

soaps, which were relatively new for policy interventions. Policy makers felt that it was also a potentially useful training device for officers taking assignments in these areas.

Bhatt, Anil. "Management Training for Municipal Administration". Ahmedabad: Indian Institute of Management, 1978 (A) (IIMA Working Paper No.233) (mimeo).

This study has tried, with the help of some empirical data collected from a municipal corporation, to discuss some of the questions pertaining to management training. The study is a part of a larger research project that had been carried out in the corporation which included, besides a survey, indepth interviewing and a few indepth case studies.

The sample of the larger study which included the question on the training consisted of all class I & II officers of the corporation. The total number consisted of 72 officers but one had left the corporation before he could be interviewed. So the effective sample covered 71 officers.

About 55 percent of these officers had undergone some training in modern management, while 45 percent had not undergone any formal training. This high percentage was due to the fact mentioned earlier that the commissioner had organized a short three day modern management orientation programme.

Bhatt, Anil. "Management Training for Municipal Administration". Ahmedabad: Indian Institute of Management, 1978 (B) (IIMA Working Paper No.235) (B) (mimeo).

This study has tried, with the help of some empirical data collected from a municipal corporation, to discuss some of the questions pertaining to the management training. The study is a part of a larger research project that had been carried out in this corporation which included, besides a survey, indepth interviewing and a few indepth case studies.

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Bhatt, Anil. "Management Training for Municipal Administration", Management in Government, 11(1) (April-June, 1979).

In this paper, an attempt has been made with the help of some empirical data collected from a municipal corporation to discuss some of the questions pertaining to management training: (1) What are the attitudes of the corporation officers towards modern management concepts, tools and techniques? (2) How receptive are they to the idea of training the municipal officers? (3) What, according to them, are the chances of improvement and what problems do they see? (4) How do they perceive the overall environment? (5) What type of training should it be? (6) What kind of rethinking and preparation would it call for on the part of management consultants and educators?

This study is a part of larger research project that had been carried out in this Corporation, which includes, besides a survey, indepth interviewing and a few case studies. The larger study included questions on training of all class I and II officers of the Corporation. The total number consisted of 72 officers, but one had left the corporation before he could be interviewed, so the effective sample covered 71 officers.

Mishra, P.N.; and Jayaram, T.K. "Performance Evaluation of Sales Tax Administration: A Case Study of Gujarat, India". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.270) (mimeo).

This paper provides a methodology of evaluating the performance of tax administrations on the basis of available data on effort and achievement variables over a number of years. A case study of sales tax administration in Gujarat state is made to identify the achievements and effort variables. Improvement in total tax potential and realisation of tax revenue and reduction in the level of unrealised revenue are found to be achievement variables. Relatively enforcement expenditure is found to provide more profitable contribution to State revenue in comparison to expenditure on training but several other considerations lead to suggest to work out optimal solutions for both the efforts varia-

bles in relations to chosen objective of tax administration.

Giridhar, G. "Spatial Overview of Urban Systems". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.280) (mimeo).

This paper attempts to see how the phenomenon of urbanisation is related to interact with and is influenced by a host of other factors which determine fertility, mortality and migration differentials between urban and non-urban areas at both micro and macro levels of analysis. Among these five parameters, however, it is the migration component that has received least attention in the past. Therefore, it is on this component that focussed attention is given in this paper.

Rather than studying the concept of optimal size, it can be more productive to undertake research on threshold city sizes for cities performing different functions - rural service centres, manufacturing towns, growth centres, regional metropolises etc. For this, it is necessary to know what types of city size distribution offer the best compromise between the hierarchy needed for the production and distribution of goods and services and that required for the transition and continuation of growth impulses and innovation. Since the last four Five - Year Plans have given clear attention to the growth of cities and the polarisation such a growth can create in the national economy, a study can be based on the realisation of such policy orientation. More focus is needed to identify particular problems of implementation of policies. Study of urban settlement patterns might indicate the role of rural to urban migration in the proliferation of slums and squatter settlements. This has relevance to the capacity of urban / municipal finance and revenue generation since these settlements use the municipal services but do not pay for them.

Kaul, Mohan. "Frame Work for Organising District Information Services Centres (DISC)". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.283) (mimeo).

In order to strengthen district level administration for implementing various developmental schemes, it would be necessary to develop proper information systems at the district level. A framework for developing and organising District Information Service Centres has been developed. These Information Systems are suggested to be developed using a mini or micro computer.

The nature of computer based information systems and the organizational set up needed to develop the District Information Service Centres, are also discussed.

Paul, Samuel. "Transnational Corporations and Development Countries: Some Issues in Industrial Policy". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.293) (mimeo).

A variety of efforts are under way at the international level to strengthen the capability of developing countries in dealing with transnational corporations which are global sources of technology capital and management. It is argued in this paper that while international proposals such as the adoption of a code of conduct for TNCs are desirable, the crucial determinant of the effectiveness of host governments in dealing with TNCs will be their ability to formulate and implement deliberate and carefully worked out strategies in relation to TNCs, both at the policy and negotiating levels. Some of the first order policy issues which deserve to be considered by developing countries which already have proposals to have transactions with TNCs in order to develop the industrial base, are also discussed.

This analysis shows, firstly, that policies towards TNCs which are based on uniform treatment for all or on conventional criteria such as import substitution and export promotion are inadequate, and that there is a need to consciously take into account the types of technology being imported. Secondly, most developing countries may be able to widen the options available to them in the choice of TNCs, increase national control and improve their capacity for technology absorption if their development strategy is designed to meet the needs of the masses rather than to augment elitist consumption.

Dholakia, Nikhilesh; and Khurana, Rakesh. Public Distribution Systems: Evolution, Evaluation And Prospects. New Delhi: Oxford, 1979.

The book is a collection of papers presented at a Seminar in Public Distribution Systems held at Indian Institute of Management, Ahmedabad in August 1976. It is organized into four sections: Introduction, Evolution, Evaluation and Prospects. The introductory section contains two papers, one by Nikhilesh Dholakia and Rakesh Khurana; and one by K.K. Viswanathan. In the section on Evolution, there are papers on the role of consumer

cooperatives in the distribution of consumer goods; kerosene distribution system and the role of private trade in PDS. In the section on Evaluation, fair-price shops, cooperative outlets and the role of Food Corporation of India as a supplier to PDS are discussed. In the final section "Prospects", the problems of administering PDS at the state level; role of PDS on control of prices and availability of essential commodities; a possible public sector marketing corporation to meet the consumption needs of masses; National Distribution Policy etc. are discussed in different papers.

Bhatt, Anil; Monappa, Arun; and Subramanian, Ashok. City Management: A Study of Some Aspects of Municipal Administration in Ahmedabad And Baroda. Ahmedabad: Indian Institute of Management, 1980 (PSG Monograph No. 21).

The present study looks at some major issues in municipal management and some problems of municipal management peculiar to Gujarat, namely, problems of management of functions like health, construction of roads and personnel.

Local bodies are outposts of democracy. It is here that people learn participation in public affairs. Urbanization is growing very rapidly because of growth of technology, industrialization etc. This results in migration from rural to urban areas. This urban growth has created more and more complex problems and it is the local-government which has to solve them. This study is an exploratory investigation into the management of cities with an ultimate view to the identification of the deficiencies and suggesting measures of improvement for more effective urban management. The study includes two cities: Ahmedabad and Baroda. Both are municipal corporations and are governed by the Bombay Provincial Municipal Corporation Act of 1949.

The empirical part of this study begins with the discussion of this Act as it formulates the structure of the Municipal Corporation and lays down an overall frame work within which the two corporations under study are managed. Finance and Personnel cut across all aspects of management. Resources - material and human - are essential components of any management. Both Finance and Personnel provide the basic supportive structures for any line functions. The other two aspects selected for more detailed analysis are Roads and Health. Both are line functions but roads in case of cities is primarily a maintenance function while health is primarily a developmental function.

The major questions asked are what is being done? Who is doing it? and with what consequences?

The conclusions drawn are:

1) the number of people with different skills employed by the corporations and the additional responsibilities the commissioner has of looking after these functions along with his other duties warrants for a separate personnel department.

2) All the personnel sub-functions are performed as per the provisions of the BMC Act 1949. This concept is one of essentially following the rules and procedures laid down. In other words, the focus is on a 'maintenance' or establishment oriented role rather than one of a 'innovative role' where the situational aspects of a problem are taken into account and fresh alternatives, policies and systems are designed to tackle the problems.

3) The system of performance appraisal is based on the Annual Confidential Reports (ACR). This method is more trail-oriented and dependent on the 'superior' entirely for rating the individual. In other words, it is more a control device, used by the superior. This has been the traditional pattern followed in government and industry.

4) There is no formal procedure for manpower planning. The process which is followed is a traditional one, where the departmental heads forecast their manpower requirements on the basis of the increase in work load enumerating both existing and new activities, and justifies the proposal.

5) Both AMC and BMC provide a variety of welfare facilities to their employees.

Moulik, T.K. "Bureaucracy for People's Development: A Contradiction for Congruence?" Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.405) (mimeo).

This paper argues that the bureaucracy, as it obtains in the present socio-economic order, cannot perform the role of people's development; at best they could operate as givers, a -----and after corrupt delivery system. To opt for bureaucracy for people's development means to opt for 'one third efficiency' syndrome without people's development. On the other hand, if the pyramid of power structure can be turned upside down, it is possible that a large part of indifferent and persistent bureaucrats sitting on the fence will gain courage to join the proletarian programme for people's development, according to the author.

Vyas, V.S.; and Khanna, Inderjit. "Famine and Famine Relief: Coping Strategy at the District Level". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.418) (mimeo).

The drought-induced famine brings with it suffering and misery to millions of people. Their distress lasts not only during the famine but continues long afterwards, since the affected people have to reorganise their economy afresh from shambles. The government also takes responsibility for providing the basic needs like drinking water, medical and health facilities and to ensure availability of foodgrains, fodder and other items.

This paper examines the strategy evolved in a district of Rajasthan to cope with the recurring famine in the area and the rationale and the effectiveness of this strategy.

The conclusion is that the extent of relief expenditure does not seem to have a direct and proportionate relationship to the population affected. Any one of the following explanations may be valid. Perhaps in some years the administration had a better grip on the situation and was, therefore, managing the crisis more effectively. Conversely, in some years the pressures were too great to resist and wasteful expenditure was incurred. The latter view finds support in the observations of various Finance Commissions. They have maintained that while the expenditure on famine relief has been increasing, it has had little or no long-term impact on the economy in terms of reducing the incidence of future famines or mitigating hardships of the affected people. By and large it has been a fire-fighting operation, the objective of which has been to provide employment virtually at the doorstep of the affected people. The objective seems to be that of diffusing the crisis, but not one of trying to find a more permitted solution to it.

Khanna, Inderjit. "External Aid and Development Strategy in Rajasthan". Ahmedabad: Indian Institute of Management, 1982 (A) (IIMA Working Paper No.425) (mimeo). (See also PSG monograph No. 44 below).

The objective of this study was to look at the impact of external assistance in one state (Rajasthan). The first use of foreign assistance is that it brings in foreign exchange. Secondly, by providing some additional financial resources, it enables the government to consider reinvesting equivalent domestic resources in other areas or sectors which would otherwise not have been possible.

Thirdly, on the periphery, it is said to bring about a greater project discipline and some interaction with better technology in the more developed aid giving countries.

This study attempts to examine the validity of these arguments. Taking the second of the latter two issues first, it has been seen that the vigorous conditions imposed by aid giving agencies result in much higher costs, distortions in placement of personnel and steep expansion in departmental organisations. All these will be difficult, if not impossible to sustain after such projects are over.

The pre-emption of funds for aided projects has also resulted in drastic cuts in outlays of other sectors, thus slowing down activities therein. It has also increased regional disparities by increasing the gap between districts where such projects exist and those which have not been amongst the fortunate few.

Khanna, Inderjit. External Aid and Development Strategy in Rajasthan. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 44).

External aid, both multilateral and bilateral, comes to play an important role in the process of development in any country. India is not exception. In simplistic terms, the effects of foreign capital can be analysed on the basis that by making available a larger money supply, it reduces the pressure of demand in the financial resources available in the internal economy. The states play a crucial role in the planning and implementation of developmental programmes, and because the financial resources of most states are limited, the role of this external assistance in the state's development effort becomes necessary to analyse.

This monograph is a study of the impact of external aid in the state of Rajasthan. Rajasthan was chosen for the study due to its vast area and peculiar physical conditions. Rajasthan is known for its vast stretch of barren lands and rolling sand dunes. More than 55 percent of the state's area comes under the 'Thar' desert. Recurring drought and scarcity conditions have taken their toll on the state's developmental efforts. Planned development over the preceding three decades accelerated the economic activities and their impact was reflected on the state income.

Central assistance is one item which goes into making up the overall state resources which then determine the size of the state plan. The state's own resources is the other item. The latter comprise the state's own effort at resources mobilisation

and are also affected by the awards of the successive Finance Commissions. The percentage of external aid which the state government becomes entitled to is in addition to the normal central assistance and to that extent it does raise the size of the state plan to some extent. What then is the trade off, if at all there is any, in going in for external assistance? From the state's point of view, by obtaining some additional financial resources, the government can consider reinvesting equivalent domestic resources in other areas or sectors which would otherwise not have been possible. Secondly, it may bring about a greater project discipline and some interaction with better technology in the more developed aid giving countries.

It was seen in the study that the rigours imposed by aid giving agencies resulted in much higher costs, distortions in placement of personnel and steep expansion in departmental organisations. All these would be difficult, if not impossible, to sustain after such projects were over. As regards the additional financial resources, the study indicated that in the case of Rajasthan from 1974 to 1981, the state government spent a sum of Rs.154.33 crores on such projects whereas it had received only Rs.22 crores (14.25 percent) as additional central assistance during this period. Looking ahead into the Sixth Plan (1980-85), the study found that while Rs.276.94 crores is proposed to be spent by the state government on such projects during this period, on the resources side, they had notionally been allowed only a sum of Rs.59 crores (21.30 percent as additional central assistance.

The pre-emption of funds for aided projects also resulted in drastic cuts in the outlays of other sectors thus slowing down activities within such sectors. It also increased regional disparities by increasing the gap between those districts where such projects existed and others which did not get such projects. Hence the study argues that since aid is said to provide additional resources and is thus a means to development, one must ensure that this means does not compromise on the end goals of development. With regional imbalance increasing, the end goals today would seem to be farther away from realization than before. Further all negotiations are to be with 'head held high'. If this holds between national government and aid giving agency, it holds equally between state government and the central government. In sum, therefore, the case of external aid to Rajasthan did not indicate any tangible financial gain to the state. On the other hand, by increasing costs, reducing the pace of development in non aided sectors and by increasing instead of reducing regional imbalances, it only created more problems for the future.

Giridhar, G. Some Aspects of Urban Growth and Development. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 42).

Considerable variations exist in the patterns of urban growth in different countries or even within a country over time. The basic factors that will determine the future growth of urbanisation are by and large the same in most cases. These factors are broadly the current level of urbanisation, population growth and availability of natural resources. It is clearly observed that where the productivity and incomes over time have increased., urbanisation has also increased. Productive urban growth, reflected in high urban incomes had induced rural to urban migration and led to high levels of urbanisation and urban growth. This movement however could have eased the population to land ratio in rural areas. Alternatively, when the urban productivity has not increased significantly, the level of urbanisation remained static with large sections of population in either rural or urban poverty.

This study proposed to do the initial exploratory work of first looking at the pattern of such growth in India in general and later in the state of Gujarat in particular and then to analyse a few factors related to such growth. Some policy level questions are raised but a deeper analysis of policy alternatives to urban growth has not been attempted here but should be attempted as a logical extension of this work.

Mishra, P.N. Optimal Government Expenditure Policy: A Case Study of Expenditure on Social Services in Gujarat, India. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 28).

This study starts with a discussion of the principles that should underlie the exercise of any attempt to prepare the expenditure plan of a Government. It is emphasised that such exercises are equally, if not more, important for short-run expenditure plans as they undoubtedly are for long term plans. The dimensions of the problem are identified. It starts with describing the nature of expenditure system in Government including the precise roles played by officials at various levels and finds that decision making responsibility is distributed vertically so that the decision maker is virtually a faceless body. At the same time, expenditure decision makers in Government decide spending of people's money and therefore, one must guard against all the consequences involved in such decisions. It is pointed out that maintenance of proper records as insisted by Accountant and Comptroller General of India is not enough for ensuring that people's money is spent in their best interest because it involves not only effective and full expenditure of money as planned but also it is a question of what can serve the best interests of people. In this sense, any Government decision gets tied down to the very planning process, both in the short and

long run, the problems of implementation, monitoring and evaluations.

This raises a whole lot of issues involved in management of Government expenditure. These issues are organised in proper sequence for further probing. It is concluded from these that at the issue level, any budget should be consistent, optimal, socially acceptable, politically implementable, effective in the short run, more effective in the long run, judicious in terms of distribution of benefits, capable of making the citizens contribute their maximum through the freedom of action left into them and leave enough scope for quick adjustment in a changed situation. Later in the study, these issues are explored at length in terms of theoretical appropriateness and empirical compatibility.

The structuring of the study starts with a critical review of methods generally employed in social benefit cost analysis in the light of above mentioned requirements. It is found that SBCA, as a method, is not adequate because the social goal has to be in vector form rather than scalar form for better implementability besides other difficulties associated with it.

Empirical exercises are made for the State of Gujarat. Data on budget, revised budget and actual expenditure are collected since the inception of the State, namely, 1961. Only expenditure on social services is examined. Education, health, family planning, housing, rural water supply and related sectors are examined in greater detail with due emphasis on primary education, housing for rural poor, primary health and nutrition. Besides expenditure variables, data are also collected on production, employment and demographic variables.

The analyses reveal the following:

- a) Whatever is presented at the time of budgets has generally no relation with how the money is actually spent.
- b) There is a tendency to underbudget outlays on education components, revise it upwards later and end up spending less than what is finally provided for.
- c) All the components of education except technical education exhibit a relatively smoother trend and most other expenditure variables exhibit fluctuating trend.
- d) Growth rate of workers lags far behind the growth rate in industry and trade.
- e) Urbanisation is increasing with twice the speed of female literacy.

A more detailed study of error in budget making reveal

- a) The error of underprediction of actual changes in expenditure

is not as serious as overprediction.

- b) The turning point errors are the major error variety.
- c) The budget makers tend to increase their budget making at the time of revised budget in comparison to first budget.
- d) a picture of monthly expenditure pattern suggests that most of the expenditure gets done in the month of March.

The major findings are:

- a) About 80% of Government expenditure in education, health, medical and family planning goes to relatively rich segments of the population engaged in industry, trade, business etc.
- b) Expenditure on education is more employment oriented followed by medical cum health and family planning.
- c) The fact that Government expenditure mostly goes to business, trade and industry and its distribution is highly uneven over various months, strengthen the fear further that the present Government expenditure pattern is inflationary in nature.
- d) Details of individual expenditure programmes require continued scrutiny to improve their distributional judiciousness.
- e) Only a marginal improvement in respect of judicious distribution is possible by altering the expenditure pattern in Government. It can be improved by changing the expenditure mix.

Ganapathy, R.S. "Spatial Underdevelopment, Small Towns and Public Policy: The Indian Experience". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.450) (mimeo).

This paper critiques the conventional approach to the development of small towns in India and presents an alternative frame work. The alternative may appear idealistic, even unrealistic at the present historical moment. However, a critical understanding of the growth of small towns in the context of national and international economy, leads us to the frame work suggested. Whether this alternative frame work can be implemented without fundamental structural change is a valid question. In the short term, political movements, administrative reforms and critical education can lead us toward that goal. But there are obvious limits to this approach. In the long run, only a fundamental structural change in the social relations of production can bring about the renewal of small towns in India and elsewhere. The small towns will become lively, humane and communal places of living. The constraints of the present power structure and opposition by

established interests are likely to be the major impediments in the realisation of this goal. A structural understanding of the predicament small towns face today, will enable us to bring about progressive change and not continue to advocate liberal-reformist policies.

Paul, Samuel. "Public Management Training in Developing Countries: A Review". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.462) (mimeo).

This study is not on training in the military and the private sector. It concentrates instead on training for those categories of public servants in developing countries who play administration and managerial roles in their organizations. The term 'public management training' (PMT) is used to refer to this activity. The study focuses on all formal training activities designed to strengthen the knowledge and skills and influence the behaviour and attitudes of middle and senior level public servants in government with a view to improving their task performance.

As training is a vast field, this paper specifies the pre-conditions for training effectiveness in the developing countries from a national perspective. It seeks answers to a variety of questions. How has public administration and management training evolved over the years? What pattern and indications of growth in terms of inputs and outputs can be discerned from published data? Do governments have training policies for their public service? How do institutions perform their training function? What are their major activities and programmes? What is the impact and effectiveness of PMT? What are the lessons to be learned from institutions that have performed relatively well? Do they offer any innovative approaches and modes of training?

The problems and gaps identified during the course of this survey of PMT were so overwhelming that one is likely to lose sight of the positive developments in this field. The overview of the positive features are:

- a) there has been a significant expansion in the infrastructure for PMT in the Third World during the past two decades.
- b) The network of training institutions has expanded to include newer types of institutions and modes of training.
- c) There was growing interest in the formulation of national training policies in many LDCs.
- d) Experiment with newer and more relevant modes of training are

taking place in the different parts of the Third World, often with assistance from donor agencies.

The problems and gaps in PMT fall into:

a) The training infrastructure in LDCs is highly skewed in favour of elites in the public service and in many cases the utilization of existing facilities was poor.

b) The absence of training policies in most LDCs and the inability or lack of will to implement policy where it exists represents a major area of concern.

c) Problems of institutional development and management were a major cause of poor training performance.

Ganapathy, R.S. "On Methodologies For Policy Analysis". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.481) (mimeo).

Policy Analysis as a major form of applied social science is a comparatively recent phenomenon in public systems. This paper examines the nature of methodologies in policy analysis and their relationship to social science theory and implementation of public programmes. It argues that methodological choice in analysis implies a prior theory and ideology and is linked to the policy analysis outcome. A topology of policy analysis methodologies is developed and through critique and reconstruction, the methodology of critical policy analysis is outlined. Examples of policy analysis are analysed in the context of India and U.S. The possibilities and limitations of critical policy analysis that transcends and synthesises conventional policy analytic methodologies are explored.

Ganapathy, R.S. "Development Of Urban Agriculture in India: Public Policy Options". Ahmedabad: Indian Institute of Management, 1983. (IIMA Working Paper No.482) (mimeo).

The cities in India are rapidly growing and the manifestation of urban crisis in a variety of areas, viz., environment, food, energy etc. can be directly traced to the unbridled growth of cities. Urban land use patterns are changing dramatically due to the pressure of population and the role of urban fringe in supplying food, fuel, forage and industrial forest products has declined considerably. Urban areas in India have emerged as

centres impoverishing peripheral regions. The environmental crisis of the urban region has become acute and interlinked in complex ways to urban energy, land use and the political economy of urban development.

This paper looks at the nature of this crisis and the potential of urban agriculture in ameliorating the crisis. It develops an analysis of the nature of the crisis, reviews the different possibilities that exist in urban agriculture, discusses the constraints for effective implementation of agricultural programmes through institutional structures and finally develops policy options and strategies for promoting urban agriculture.

Ganesh, S.R.; Murari, B; and Shethi, Neeva. Experience of Management by Objectives (MBO): Implementation in a State Government. Ahmedabad: Indian Institute of Management, 1983 (PSG Monograph No. 50).

In the field of organization development, little literature exists on 'changing and processes of changing'. This is perhaps because there is a paucity of longitudinal field studies of organizational changes. It is in this context that the idea of following up and documenting the experiment in MBO implementation in Tamil Nadu State Government was born in 1979.

This is an account of this experience. This MBO experiment was introduced in seven selected organisations in the State of Tamil Nadu as it would provide both a stimulus and a practical framework for administrative reforms. These seven steps had certain common steps. These were

- 1) A diagnostic survey to understand the organization and to devise an appropriate phasing based on the capabilities and readiness of various levels in the organisations.
- 2) Selection of one or more MBO Advisers to act as internal consultants in the organisations and institutionalization of MBO process.
- 3) Exposure seminar in MBO in each organisation covering the middle-management levels.
- 4) Finalization of corporate objectives after identifying the strengths, weaknesses, opportunities and threats and devising corporate level key result areas (KRAs) in the top management group. The participation of external consultants was normal feature of such meetings.

Contextual changes generally hold down undertaking any significant and sustained steps toward organization development and

performance improvements in public systems with the government. However as a result of the MBO implementation exercise and varying tangible and intangible benefits to varying degrees in the seven organizations, there appeared to be an awareness about the need for performance improvement and the need for development of people. Potential stability and an enthusiastic bureaucracy could provide the enabling condition for undertaking such organization development efforts in the near future. The major lessons are summarised for administrators and organisations development consultants in public systems as a set of guidelines or imperatives.

a) Build a critical mass of people who understand, appreciate and feel the need for sustained performance improvements in the state government system since the key people move across organizations.

b) Build a critical mass of people who understand, appreciate and feel the need for sustained performance improvements in the organization undertaking an O.D. effort.

c) Build the relevant knowledge and skills at different levels.

d) Adopt a problem solving approach and sophisticate incrementally.

e) Create inter-locking groups around the organization's ongoing tasks.

f) De-emphasise individual MJPs; also deemphasise mechanics of implementing MBO.

g) Provide for constant interaction with consultants.

h) Keep political and administrative linkages serviced and supportive.

i) Educate Finance and Audit Departments first and get them involved.

j) Develop support for and create a models at the highest level linked to Chief Minister and Chief Secretary to provide intra-government consultancy support in policy and organization issues.

Chaudhuri, Shekhar. "Recent Government Policies and Their Implications for Management of Technology in Manufacturing Industries". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No-500) (mimeo).

Over the years, a considerable body of knowledge has been de-

veloped to tackle the problems of technological innovation and R&D management in the context of the economically advanced countries. This knowledge was however not very relevant to technology management problems in India because of the significant difference in the external environment of the firms. Till very recently, the model of economic growth that had been adopted by the Government was based on import substitution within protective tariff walls.

The Indian economic environment is tending towards a more competitive one. Though hard research data is not available to prove this proposition, there is emerging evidence which is readily available. Moreover, technology is becoming an important element of the strategies of Indian business enterprises.

1982 have been declared the year of productivity. Imports are liberalised for domestic use and industrial development. But due protection is given to indigenous industries for development. Provisions have also been made to give more impetus to the country's export efforts.

Chaudhuri, Shekhar. "Technological Innovation in a National Laboratory in India: A Case Study". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.512) (mimeo).

This paper gives a historical account of a major technological innovation in India. The technology was developed in a national laboratory and successfully transferred and commercialised by a public sector corporation and promoted by one of the state governments. This paper focuses mainly on the managerial processes involved in the innovation. The innovation process was found to be an extremely complex one with a large number of organisations involved in it at different points in time.

The laboratory faced a number of problems as a result of a high degree of uncertainty in the government's policy towards it, a hostile external environment and a lack of credibility with its external constituencies. The total innovations process could be categorised into three stages on the basis of the dominant managerial orientation: i) entrepreneurial, ii) reactive muddling through and iii) planned learning. The planned learning mode seemed to be superior to the other two. A number of factors associated with the managerial actions seem to have aided in the success of the innovation. These were: i) the presence of a product champion during the most of the technology development stage, ii) continued support of the project by the direct in-charge of the laboratory after the departure of the product champion, iii) strong commitment of the technology development team based on pride in indigenous technology, iv) effective relationships developed by the product champion with the key

decision makers in government, v) close association with the team of committed consultant for a considerably long period of time vi) supportive external evaluation by funding agencies at a later stage in the overall process, vii) an organic linkage between the technology development and productionising stages provided by transferring the development team to the manufacturing enterprises and viii) multiple lateral linkages with organisations in government which helped in a number of technology adaptation decisions during the phase of commercialization.

Gupta, Anil K. "Socio-Ecology of Land Use Planning in Semi Arid Regions". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.525) (mimeo).

Land use planning in tropical developing countries has posed a tremendous challenge to planners owing to high ecological diversity. The problem is particularly complex in semi arid regions where due to a high degree of environmental uncertainty, the traditional land use practices have been evolved by farmers with a high degree of flexibility.

In this paper, a new approach, termed socio-ecological, has been proposed to provide a perspective for land use planning which would be consistent with long term interests of ecological balance and short term interests of survival for the poor. This concept is fundamentally different from the traditional socio-ecological studies pursued by Park and Hawley.

The author contends that ecology defined the range of economic enterprises that had found suitable for survival typically by different classes of farmers. Access to institutions, coupled with other public intervention influenced the scale at which these enterprises have operated by different classes. After discussing the socio-ecology of stress in semi-arid regions, some of the traditional risk adjustment mechanisms have been listed. Empirical evidence on land, livestock, trees and household energy management has been presented. Inter-play between ecological and market forces has been illustrated with the help of credit resource and land transfer maps of a block of about 70 villages.

Finally, it is argued that policy intervention for redesigning institutions and their access modes in backward regions, which are unable to attract market forces is called for. This will enable the poor to manage land, livestock, labour use linked with craft activities in semi-arid region in congruence with environmental need.

Ganapathy, R.S. "Urban Agriculture: Urban Planning and the Ahmedabad Experience". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.530) (mimeo).

Cities all over the world are growing rapidly and the manifestations of the urban crisis in a variety of areas, viz., environment, food, health, energy, land use, are quite evident. Urban land use patterns are changing dramatically due to the pressure of population and the role of agriculture in supplying food, fuel and forest products has declined considerably. The urban poor's access to food has become worse and they have to pay higher prices for food and fuelwood while their incomes are growing more slowly.

The food subsidies and public distribution systems for essential commodities defuse and contain the crisis in the short term but do not address the needs of the poor in the long term. This paper looks at the experience of Ahmedabad, an Indian city and the historical transition of urban food system and develops alternatives for urban planning that focus on urban agriculture. There are several social, political and economic constraints, however, in promoting urban agriculture. This paper also discussed the planning issues involved in urban agriculture in India, review the specific case studies and experiments in Ahmedabad, based on an ongoing study, and generate public policy options for urban agriculture.

Ganapathy, R.S.: and Padmanabhan, G. "Household Energy Behaviour and Urban Development: The Case of Ahmedabad". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.548) (mimeo).

Energy is a key input to meet the basic needs of human beings like food, clothing and shelter. Household energy behaviour needs to be understood for ensuring individual and social well being. The urban household energy use in India is critical because of the wide variations in the quantity of energy use among the socioeconomic and ethnic groups residing in a city. This paper develops a conceptual frame work and describes a case study of household energy behaviour in Ahmedabad, a major Indian city. In the context of the energy profits of the city, household energy is assessed from the demand and supply sides. A survey of three hundred households and secondary data analysis was done. The results link energy consumption to cooking patterns, technology and source availability. Some general policy options are also discussed.

Shroff, Manu R. Public Enterprise Banks and Financial Institutions in India. Ahmedabad: Indian Institute of Management, 1984 (PSG Monograph No. 52).

The organised financial system in India is predominantly in the public sector. Nationalised commercial Banks numbering 28 account for over 90 percent of total deposits. The 31 private Indian banks are each individually too small to exercise any significant influence except locally. Much of the criticism that followed nationalisation of banks in India was concerned with complaints of banks not giving adequate attention to the social goals of policy. A question has often been raised whether customer service as well as objectives of credit policy would have been better served by adopting a different structure for the banking system. An alternative is unit banking with regional branch spread only; another is district banks. The large national level banks with branch networks all over the country suggest wasteful overlapping of functions. At the same time, the possibility of competition that such a structure provides is a factor both for the depositor and the borrowers. Regional or functional specialisation among banks has also been suggested. A reorganisation of the banks on regional lines could also make for a banking structure that is more capable of responding to local and regional needs.

More important than structure are questions concerning policy and the extent to which the authorities are prepared to let the banks and financial institutions function as genuinely autonomous entities. The modality and procedures for appointment of the Chief Executives and guaranteeing the security of their tenure are relevant to the free functioning of such institutions. The financial needs of enterprises and individuals farmers, retail trade, transport operations for new investment and existing undertakings are not always capable of being segregated into long term capital and current working capital. At a conceptual level, the farmer's need to finance his own food and subsistence during the time he is engaged, employing his own labour, in a work of land improvement may be regarded as capital expenditure or consumption credit.

The profitability of banks in India is already low and although they are not required to make profits, their capital structure in the eyes of foreign correspondents tends to strengthen their capital base. Government comes to the rescue by providing additional equity to some of the nationalised banks, but this can only be palliative. The challenge to policy makers is to design a system which subserves the objectives of policy and yet generate adequate surpluses.

While there may be merit in the line of thinking presented above, the picture is clearly overdrawn. Numerous committees in India have come to the conclusion that a strong primary agricultural credit society (PAC) at the village level is the best answer to

the problem. There are nearly 1,00,000 such societies in India but many are weak and need to be upgraded. Provided this can be done and an adequate number of strong PACs established, the further links in the chain of credit through the higher tiers of co-operative banks, Regional Rural Banks or Commercial Banks branches should pose little problem. In the final analysis, therefore, in the organisation of credit as in so many other programmes, success depends on the strength of the social and political structures at various levels and their commitment to the basic social and economic objectives.

Bhatt, Anil; Giridhar, G.; and Monappa, Arun. The Urban Community Development Programme of Ahmedabad: A Community Based Evaluation. Ahmedabad: Indian Institute of Management, 1985 (PSG Monograph No. 56).

This study deals with the views of a community and experience of an Urban Community Development (UCD) project. It was meant as a device to enable the UCD administration to do the mid-course corrections in their plans of action and strategy in terms of various activities improving their effectiveness and special emphasis on certain activities, selected project localities or certain segments of the communities.

The major issues arising out of this community based evaluations were:

1) So far as UCD has served the communities, it was found that it had served various sections of the society equally well. In fact according to the communities' own perception, UCD has emphasised the weaker sections more than the better off sections of the community.

2) In terms of various localities, Project Area-II, that is, the area generally known by the UCD administration as Asarva Megharnagar area seemed to be somewhat neglected. As many as 22 percent of the respondents did not know anything about UCD activities in this project area as compared to 8 percent in Area-I and 6 percent in Area-III. Generally Area-II had also shown a relatively wider gap between knowledge of the UCD activities and participation in these activities. Area-II, therefore, seemed to generally need more attention and more concerted effort by UCD.

3) In Area-II, the major reasons for the dissatisfaction of the community was UCD's inability to do much about getting municipal services to their area. This also pointed to the UCD's status and importance in relation to the rest of the municipal corporation. The discussions with COs and with municipal officers from time to time indicated that the importance of the UCD programme did not seem to have registered with the well established regular departments of the corporation.

4) In terms of other specific activities, UCD seemed to have concentrated more on cultural activities and less on economic or income generating activities. The skill imparting activities had been intermittent and irregular, the quality was not very high and there had been very little follow up in helping the participants to get post training information, help and facilities to actualize their training into higher income generation.

Another enquiry in the implementation of the CV scheme had brought out that the community volunteer had been treated as one additional functionary for the UCD rather than as one belonging to and representing the community. Within three years of UCD'S functioning, little more than half of the sanctioned posts of volunteers were filled. Many of them did not belong to the community residentially, socio-economically or culturally. A good proportion of the volunteers came from other localities and belonged to middle and upper classes and castes. Quite a few of them had been entrusted with one specific activity like running a Balwadi sewing or knitting classes and perceived their work as only performing an assigned activity within a specified fixed time of the day. The finding was that the community volunteer was the least effective and left much to be improved. That was why the community had also very little knowledge and information about CV and its perception about CV not very positive.

In short, this community based study shows that in three years of its functioning, UCD had made its presence felt in the communities where it was working. Also it seemed to have given special attention to the weaker sections like women, low castes and low income groups. However, most of its emphasis was in performing activities rather than achieving the objectives or looking at the larger impact of such activities. The overall objective was to help the communities to move towards better quality of life, to help communities to develop skills, capabilities and confidence to work towards improving the quality of life. The activities were taken up and performed more in the spirit and style of 'administration' rather than 'development'. Sudden taking up and dropping of activities, transfers and promotions of community organizers, ineffective management of the volunteer scheme and a lack of developmental approach and lack of strategic thinking seemed to have been some of the major problems of the management of UCD programme in Ahmedabad.

Mishra, P.N. Forecasting State Level Taxes: A Case Study of Gujarat, India. Ahmedabad: Indian Institute of Management, 1985 (PSG Monograph No. 58).

Economists have suggested use of buoyancy and elasticity coefficients corresponding to various taxes to forecast their yields. Alternative methods have been proposed and developed to estimate

these coefficients. Conceptually this approach is thought to be superior to the use of growth rates because relevant economic variables find their due place in quantification of buoyancy and elasticity coefficients. Estimates of these coefficients vary over specifications of functions in respect of the number of variables involved in the function concerned as well as their form of involvement.

Econometricians have suggested the use of estimated tax function itself for generating point and interval forecasts. While doing so, usually those specifications of functions are preferred which are found to be more compatible to observed facts pertaining to the sample period but the estimated tax function as a whole is utilised in a deterministic and probabilistic sense to generate point and interval forecasts, respectively.

The purpose of this study is to obtain forecasts of total forces as well as their major components in Gujarat State according to all the three broad approaches described and to ascertain those which yield better forecasts. The approaches described can be broadly classified into three categories. The method of estimating tax yield by using growth rate is simply a special case of time series method of forecasting. This study covers almost all the taxes levied in the state of Gujarat. In particular, the taxes considered are

a) Sales tax, including General Sales Tax, Central Sales Tax and tax on motor spirit as separate components b) State excise duty on liquor c) Motor Vehicles Tax and passengers and goods tax d) stamp duty with non judicial stamp duty on a separate category and registration fees, e) Entertainment Tax f) State electricity duty excluding electricity tariff and central excise duty with domestic and industrial uses of electricity separate categories.

Section 2 provides a brief description of methods used in quantification of buoyancy and elasticity coefficients and generation of forecasts. This section also contains a new method of clearing tax data for computing elasticities. Section 4 provides empirical results of buoyancy and elasticity co-efficients. Section 5 contains tax forecasts as obtained from alternative methods.

The study concludes by discussing the resulting conclusions and a method of evaluation of sales tax department to improve its administrative efficiency with a view to improve tax yield.

Ganapathy, R.S.; Ganesh, S.R.; Maru, Rushikesh M.; Paul, Samuel; and Rao, Ram Mohan. Public Policy and Policy Analysis in India. New Delhi: Sage, 1985.

This book is a collection of papers and cases presented in a workshop on Public Policy organized at the Indian Institute of Management, Ahmedabad in 1982. The book has been organized in five sections. The first section deals conceptually with approaches to policy analysis and consists of two papers, one by Schelling, "Policy Analysis as a Science of Choice" and the other by Ganapathy, "Methodology for Policy Analysis". The section brings out the point that the science of policy analysis cannot remain value neutral. It must concern itself with the structural causes of scientific problems and not restrict itself to measurable economic criteria. The second section provides detailed reviews of policy making in three sectors, namely rural development, energy and health and population. In the next section, four case studies on policy making and implementation are presented: the National Adult Education Programme, health manpower, the Science and Technology Plan and the ICSSR Programme of Women Study. Together, the sections two and three highlight the impact of numerous factors ranging from interface between bureaucracy, specialists and politicians, political process involved in policy formation and the impact of the value systems of different actors.

The fourth section reviews the role of policy analysis in India from the perspective of policy analysts. Guhan, in his paper "Towards a Policy for Analysis" argues that from the experiences presented, it really does not seem to matter whether we start with analysing articulated policy and move to policy performance or vice versa. But in either case, we need to go beyond both what is said and what is done to the "continuous doctrinal struggle" that lies behind them. The surface of policy has to be pierced to bare the underlying structure of conflict and to evaluate to what extent policies are effective guides to action and in what respect they are mere facades.

In the paper "Autonomous Research Institutions and the Public Policy Process", Ganesh and Samuel Paul look at the experiences in the use of autonomous research institutions by government for policy analysis. They find that it is certainly possible to have a transducer role for autonomous research institutions in both public opinion making and implementation by the government. Training is also identified as a key role for influencing public policy. Ram Mohan Rao reviews the work of various committees set up by the government from time to time and their recommendations. He finds that even though the recommendations of many of the committees are not mandatory, their analysis and recommendations can play a significant role in policy formation.

In section five, the study of policy analysis in Britain is discussed in a paper by Bernard Donoghue. He finds that increasingly, policy analysis is used in the formation of public policies. Robert Klitgaard, in his paper "The Emergence of Public Policy", argues that the status of the comparative work done so far suggests that fruitful policy research can be done by studying cases of success; by focusing some of the work on comparative studies of problems that may be called intersectoral and

interdisciplinary; and through studies of new programmes with collaboration among different institutions.

Bhatt, Anil; and Dholakia, R.H. Training Plan for Municipal personnel in Gujarat. Ahmedabad: Indian Institute of Management, 1989 (PSG Monograph No. 61).

The overall objectives of this study was to prepare a plan for implementations of training programme for various categories of Municipal employees. More specifically it included

- a) Number of training courses to be completed in each quarter for the four year programme period.
- b) Types of training courses
- c) Category wise number and types of training programmes
- d) Duration of each of these courses
- e) A brief descriptions of the course outline for various categories of employees
- f) Costing of the training programme
- g) System of evaluation for the training
- h) Design of the administrative set-up in the Board for implementing the training programmes
- i) Identification of training institutes.

This document in the training plan, besides dealing with the contextual background such as the magnitude of the tax, essentially covers the number and types of employees, types of training courses, duration, cost, course content, session plan, time schedule, number of courses required for each type of course to cover all employees in the relevant categories and suggested institutions. The document also includes a system of evaluation and monitoring with model performance. This document includes the structure for implementing the training plan, namely, a small cell to be managed by a director of training. Later on if the training institute is established the cell can be incorporated in the institute.

Satia, J.K.; and Cowlagi, V.R.S. "Reshaping State Government's

Role in Industrial Development". Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.985) (mimeo).

The State Governments will have an important role to play in the new industrial policy frame work. But they would have to rethink their role reflecting the changed scenario. Rather than distort market prices through subsidies and tax concessions, they would have to assist the firms to secure competitive advantage over time.

The paper argues that competitive advantage can accrue through actions to increase productivity across the whole range of industries and through careful targetting of selected industries. Fundamental issues such as labour relations, careful appraisal of projects, functioning infrastructure, and continually improving quality of labour force need attention.

Barros, Oscar J. Government Policy Technology Development, Industry Structure and Performance of Industry. (Ahmedabad: Indian Institute of Management, 1989) (Unpublished doctoral dissertation)

Several research studies indicate a significant deterioration in the performance of industry in India over the last two decades. The growing concern in this regard are i) inadequate growth in industrial production ii) a high cost industry structure and poor competitiveness iii) lack of technological innovations and self reliance. Literature reviewed suggest strong relationships between structure and performance of industry. Other perspectives indicate that government policy and technology are strong intervening variables influencing industry structure which in turn determines the performance. A framework with more explanatory power has been developed in the study and it indicates that a nexus of relationships between government policy, technology and industry structure influence industry performance. Case study methodology is used to evolve a historical and exploratory perspective of the research issues in three industries, namely, the detergent industry, the electric motor industry and the electronic switching equipment industry. The conceptual framework suggested is validated by the analysis of these case studies. The case studies are backed up by an analysis of secondary data.

A quantitative analysis to understand the individual impacts of licensing policy, technology and industry structure on the performance of industry is also attempted.

The major findings of the study are:

a) A restrictive licensing policy influences a major technological change in the form of labour intensive technologies in the unorganised sector. This policy and technological intervention increases the concentration of the industry. However, despite a larger spending on R&D, performance of the organised sector declines in terms of value added factor productivity. On the other hand, development of the small scale sector units helps in increasing the price efficiency and output of the industry as a whole.

b) In a liberal licensing policy environment, research and development in the industry decline. However, growth of labour intensity in the organised sector increases resulting in higher growth in output, value added and labour productivity and reduced concentration in the industry.

c) Rigid technology import policies reduce the technological content of collaborations of large firms in the industry. Transfers of such technologies reduce the long run efficiency in terms of value added, factor productivity and innovativeness and price efficiency.

d) Technology and structure are stronger intervening variables on the performance of the detergent industry, whereas policy and structure influence output levels and growth in output in the electric motor industry.

The study helps in i) understanding and managing the relationships between government policy, industry structure and technology ii) providing a methodological framework for policy analysis and development in managing the growth of industry in any given context. This would prove useful to policy planners and industry leaders for designing intervention strategies in order to improve growth competitiveness, efficiency and innovation in industry.

POPULATION MANAGEMENT, FAMILY PLANNING AND FAMILY WELFARE

Satia, J.K.; and Rangarajan, C. "Optimal Targets for the Family Planning Programme", Economic and Political Weekly, 9(15), (April 13, 1974).

In this paper, the benefit-cost analysis is used to investigate the optimal targets for the Indian family planning programme. An economic and demographic model, similar to that of Coale Hoover model is constructed and validated to measure the benefits of fertility declines. Two types of effects are used to estimate benefits: aggregate consumption effects and per capita consumption effects. The costs of achieving the fertility declines are estimated using equations based upon the past data. The benefits and costs of successive higher declines in fertility are compared to derived optimal targets.

The analysis points out that the benefits and costs are sensitive to interest rates and horizons of analysis. Therefore, the optimal targets depend upon the values selected for these parameters. But the most significant factor is the type of effect used to measure benefits. The aggregate consumption effects are estimated to be only 20 per cent of the per capita consumption effects. It is concluded that a decline in general fertility rates from 179 to 120 (approximately 30 percent) by 1985 is justified based upon aggregate consumption effects. However, a much higher decline in fertility is indicated if the per capita consumption effects are used to measure benefits. The study, therefore, reveals the interactions among per capita consumption, distribution, measures suggested for fertility declines, and the financing of these measures.

Pareek, Udai; and Rao, T.V. Status Study On Population Research In India: Behavioural Sciences (Vol.1). New Delhi: Tata Mcgrawhill, 1974.

This volume is the first among three volumes of status studies on population research conducted by the Family Planning Foundation (The other two are in the areas of Demographic Research and Biomedical Research). This is a study of the contribution of behavioural science research to family planning and population studies. Against the back ground of the country's overpowering tradition that goes back to over 3000 years, the diversity of its structural units and languages, the heavy density of its rural population and the imperfect communications systems, the administration of an extensive programme of family planning at a national level is faced with problems that are at once complex and difficult. These also serve to underline the urgent need for greater scientific documentation and research. This study attempts to assess the work already done in this area and suggests

directions for future work.

The study surveys behavioural science research in the area of family planning in terms of (a) individual variables like motivation, values, personality variables, education etc.; (b) family variables like family structure and orientation, husband-wife communication and relationships, child preferences etc.; (c) community variables like customs and beliefs, community structure, influences etc.; (d) agencies involved; (e) role of promoters like nurses and extension workers; (f) communication and diffusion; (g) effects of contraceptives; and (h) organizational structures and processes.

The authors look ahead and make suggestions on the type of action research that is at present lacking but that can be profitably undertaken.

Rao, T.V. "Need Based Family Planning Programmes: Content and Treatment Guidelines for T.V. Producers", Journal of Family Welfare, 21(4) (June 1975).

Regulation and control of fertility is essentially an individual decision and it is taken by the individual at his own level, usually in consultation with some significant persons. Such a decision reflects the acceptance of change on the part of the individual. A significant role can be played by communication sources like the television in hastening this process of change in the individual. There are several ways in which the communication source can influence the decision making process at the individual level. An understanding of the points of intersections (TV Programmes) influencing decision making, and working out the strategies of influence require some understanding of the factors affecting and the processes involved in, the decisions to adopt family planning practices. These are presented in this paper with three models of human behaviour and some communication strategies.

Satia, J.K. "Family Planning Workers and Problems of Programme Implementation", Economic & Political Weekly, September, 1976.

The Government of India has recently announced a national policy on population, with several measures to increase the general

acceptance of the family planning programme. These measures include higher acceptive incentives, group incentives, multi-media communication strategy, and the offering of an integrated package of health, family planning and nutrition.

The present paper argues that greater success in family planning programmes can be achieved by increased efforts towards changing attitudes than by merely disseminating information about family planning more widely. This can be achieved by instituting changes in the implementation of the family planning programme, its organizational structure and process and the training of family planning workers.

Gupta, V.K.; and Shingi, P.M. Expanding The Interpersonal Communication Base for Family Planning. Ahmedabad: Indian Institute of Management, 1976 (PSG Monograph No. 7).

This study looks at the attitudes, knowledge and skills of village level workers of different departments regarding family planning programme. The objectives of the study were:

- a) To understand the attitudes, knowledge and skills of these workers in relation to FP.
- b) To assess the scope of their contribution to the FP programme.
- c) To determine their training needs if they were to be used for the FP programme.
- d) To determine standards for rewards for motivating them to work for the FP programme.
- e) To develop an experimental design involving them in FP motivational activities with a view to assess their potential contribution to the FP programme.

Keeping in view the objective of the study, two districts, Lucknow in central Uttar Pradesh and Muzaffarnagar in northern Uttar Pradesh were selected for data collection. Within a district, two blocks, and within each block, two village level worker circles were selected to obtain a list of villages to be visited. To obtain a representative cross section of officials working under different agro-development schemes, the general indicators of agricultural development were kept in mind while selecting blocks as well as VLW circles.

Since the basic objective of the study was to get responses from as many different categories of government officers working at the village level as possible, it was decided to select at least two ULWs, one or two panchayat secretaries, one village pradhan, one co-operative supervisor, one patwari and one primary school

teacher from a VLW circle. In other words, seven respondents were expected to be interviewed per VIW circle to obtain the government officials per block and 56 officials from two districts. A questionnaire was designed to seek information from these village level functionaries about their knowledge and orientation towards the FP programme and their past experiences.

Mittal, B.L. Analysis of Mass Communication Activities in Family Planning Programme in Uttar Pradesh. Ahmedabad: Indian Institute of Management, 1976 (A) (PSG Monograph No. 9).

Many programme officials as well as communication theorists have declared mass communication (publicity) to be of little value in F.P programme now, when large scale awareness has been achieved. The authors have presented arguments in support of an opposite view and outlined the role that mass communication can now play. Their arguments have rested on three major propositions.

a) The view that mass communication can play little role in attitude change is oversimplistic. While conclusive evidence is absent, available research indicates that mass communication is not 'all that blank' in its attitude change ability. What is needed is to understand the exact nature of attitude and the underlying client perceptions about contraception consequences and then to beam specific messages and appeals to correct the clients' view of the reality about contraception and its consequences.

b) The interpersonal communication is not being very useful as FP workers, are not motivated. Mass communication, by virtue of being impersonal is free from this disadvantage and can be qualitatively improved for newer tasks.

c) At any rate, mass communication can act as significant facilitator and reinforcer of interpersonal communication through both paid staff as well as non-advocate opinion leaders.

This study of mass communication activity in Uttar Pradesh indicates that Uttar Pradesh underspent the available budget for mass media activities. The activities seem to have declined over past few years, perhaps partly due to cut in funds. Contentwise, the material - old stock as well as much of new production - continues to centre around awareness creation. The causes of poor mass media activities in Uttar Pradesh were identified as follows:

a) The resources are inadequate. The available material has become obsolete and funds for local publicity are limited.

b) At district level, the mass media activities are not organised efficiently and effectively. Total absence of any efforts at

integration between mass communication and interpersonal communication also exists.

c) The District Health Education Information Officers who are key functionaries in mass media activities lack proper skills in supervising public relations and organisation.

d) There is a lack of requisite monitoring over districts from higher levels. One reason is the large size of the state making it difficult for state MEM authorities to monitor 52 districts. The other reason is the absence of a monitoring system.

The remedies suggested are: To make more funds available; District Health, Education and information officers be put through a major training programme on the social science of mass communication; proper information system for monitoring be established; divisional level cells on mass communication be created for monitoring and guiding district units; design task should be sub-contracted to professional advertising agencies; material selection and user guides be prepared and made available to field staff for achieving greater information between mass communication and inter personal communication; and the roles of DEEs and DHEIOs be merged.

Mittal, B.L. Improving the Achievement on Urban Family Planning Programmes: A Report for Lucknow City. Ahmedabad: Indian Institute of Management, 1976 (B) (PSG Monograph No. 13).

The structure of Lucknow City Family Planning Bureau was being reorganised under an experimental scheme of the Indian Population Programme. This report suggests a set of programme actions that the new structure could undertake for improving the programme achievement. Programme actions broadly fall into three categories: a) provision of services, b) mass communication, and c) interpersonal communication. Expanding the services through opening of new maternity-cum-sterilization homes is only a half remedy. The other half consists in emphasising follow-up services and in assessing service centres for client satisfaction. The mass media can play a useful role in spreading the information and in facilitating interpersonal selling. Two specific information gaps in the Lucknow programme, as seen by the study were: location of the services offered in various urban centres and full knowledge about newer methods like vaginal ligation and mini-pills. Mass communication can be profitably used to fill such gaps.

The needed changes in attitudes should come mainly through interpersonal selling. The work methodology followed earlier had been built around visiting the eligible couples at their home. This ignored both the constraints as well as opportunities that the special characteristics of urban areas provide. Therefore a new market segmentation strategy has been suggested in the study.

An Urban centre is the field unit for organising interpersonal communication through its team of four social workers. Therefore the study points out that increasing the effectiveness of urban centres is crucial for improving programme achievement. The role and functions of an urban centre are critically reviewed and several suggestions to improve their functioning are made.

Field visits by workers were at a low volume and a multipronged corrective action has been suggested. First, workers' salesmanship needed improvement through training by a specialist agency. Secondly, supervisory help was needed in planning and review of client visits and in initial introduction of the workers to the client groups. This would increase 'visit' productivity'.

Lucknow city had, at the time of the study, two large maternity hospitals and soon was to have 8 smaller maternity homes. The potential of these maternity hospitals for FP motivation was not being fully tapped. Observations of postpartum programme in one hospital indicated several shortcomings which needed correction. First was the need to withdraw male workers and appoint only female workers. Second was to work-out the motivator time input which was inadequate, and organise this input. Third was a double accounting system for postpartum and non-postpartum credit. Fourth was a well planned package of mass-communication which could be highly profitable. Finally, a new system of 'achievement accounting' and performance evaluation is suggested.

Murthy, Nirmala. Management Information and Evaluation System for Maternity Home and Urban Family Welfare Centres. Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 34).

Maternity homes have three objectives: a) promotion of Maternal Child Health services, b) Promotion of family planning method and c) post-partum family planning. The roles and functions of these homes have been defined so as to achieve these objectives.

The monitoring of Urban Centres could be done along similar lines as in the case of maternity homes. The analysis and feedback procedures will remain essentially the same. The three main functions of urban centres are education in health and family planning, promoting acceptance of family planning methods, and MCH services. The control attached to maternity homes do not provide MCH services but merely educate and encourage people to take advantage of services offered by the maternity homes.

This paper describes a system for monitoring the performance of the Maternity Home and Urban Family Welfare Centres of Lucknow operating under the Indian Population Project. Since the objective and functions of Maternity Homes and Urban Centres are

distinct from those of Primary Health Centres, the evaluation system proposed for the urban Lucknow is somewhat different from the one operating in other India Population Project districts.

The monitoring system for maternity homes proposed in this study has two parts:

1) All the maternity homes will be compared on some critical indicator for MCH, FP and Post-partum programme to find out whether their performance is 'poor' 'good' or, 'average'. This grade will be a consolidated picture of the units evaluation.

2) The other part of the evaluation will be a feedback on what is deficient in each unit and where corrective action is needed. The feedback will cover more than the critical indicators used for grading purposes. It will cover input variables as well as effectiveness and efficiency indicators mentioned in the study. It is thus possible that a maternity home getting 'average' or even 'good' grade could be found deficient in some aspects not perhaps relevant at that time but if the deficiency persists could affect the success of the programme.

Rao, T.V. A Study of Family Planning Worker Client Transactions. Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 6).

This study was undertaken in response to a doubt expressed in research and administrative circles about the capability of family planning workers to skillfully transact with the villagers and influence them to adopt fertility regulation methods. This study aims at exploring the scope for improving the communication and social skills of family planning workers and experimenting with some training inputs for improving their skills. This study revealed beyond doubt that there is a lot to be desired in terms of the communication and social skills of family planning workers. The experiences of training them also revealed that while training helps in some dimensions, improvement in communication and social skills by itself cannot ensure achievement of family planning goals, unless it is supported by the administrative structure and other processes. In the original design, it was proposed to study the transaction patterns of workers through observations in the field and then identify opportunities and dimensions for improving the patterns of transaction. Appropriate training interventions were proposed to be made on the basis of observations of their transactions. The field investigations reveals consistently that there is great scope for improving their transactional skills. A training programme was then designed to train the workers. The design did take into account the possibility of encountering strong negative attitudes of workers towards their job. New strategies of transacting with villagers were planned by the workers during the training. However, they could not be tried out by them owing to unexpected

disturbances in the field. The follow-up of worker's reactions did indicate a possibility that given adequate support, the training may help the family planning workers to do better in some ways.

The impact of improvement in transactional skills of workers may be seen only if the workers go to the field and have sufficient freedom and conducive conditions to operate. If the worker lacks the basic motivation to go to the field, any amount of skill improvement may no help. While training programmes can help acquiring skills, other variables like personal policies will have to be tackled to provide an opportunity for workers even to given a try. This study amply brings out the number of constraints involved in moving towards this goals of helping workers experiment with better strategies of communication and them select proper ones.

Bhandari, Labdhi R. "Communications for Social Marketing: An Approach for Developing Communication Appeals for Family Planning Programmes". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.218) (mimeo).

This study developed and tested an approach and methodology for identifying communication appeals that have the best chances of influencing people's attitudes and behaviour in the area of social marketing, specifically family planning. There are three distinct aspects of this study. It develops an approach that explicitly recognises the influence of people's value systems on their attitudes and behaviour. It also develops and tests a methodology that empirically generates value dimensions and third, it generates substantive appeals that can be used for promoting family planning practice in north-west India.

Verma, Pramod; and Rao, T.V. "Role of Welfare Officers in Family Planning and Welfare". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.195) (mimeo). (See also the book by the authors (1978) below).

This study aims at sharing the experience of conducting a phased action research in family planning and welfare. The rationale for action research lies in the increasing gap between efforts to create positive attitude towards small family and the limited adoption of family planning techniques on the one hand, and the failure of KAP Surveys to suggest viable strategies for adoption of family planning techniques, on the other.

Experimental strategy based research attempt is presented in this study. The research effort reported here might prove useful to family planning and welfare programmes in different settings such as a village community, educational institution, rural labour trade unions etc.

Verma, Pramod; and Rao, T.V.. Change Agents in Family Welfare: An Action Research in Organized Industry. Ahmedabad: Academic Book Centre, 1978.

The book aims at sharing the experience of conducting a phased action research in family planning and welfare in organised industry. The action research consisted essentially of training welfare officers of textile mills in family planning techniques and motivating them to work for population control and family welfare. This study is based on the conviction that action oriented experiments will help a great deal in evolving strategies appropriate in family welfare. The strategy includes the choice of target group, the identification of change agents, and the environment in which the change agents have to execute their plans.

20 textile mills were chosen for the study. In these mills, each of which had a welfare officer, a survey of the current activities of welfare officers, their attitudes and motivations to do family planning work and their eagerness to work as change agents was made. The 20 mills were divided into 2 groups of 10 each consisting the experimental and control groups. In the experimental group, the welfare officers were given a training programme, in which they examined their own motives and attitudes, learnt about family planning techniques and set future goals and action plans. After the training, the authors (who were the trainers) did nothing further except to provide any clarifications as required and monitor them for a short while. After two years, another survey was undertaken, showing up any differences in the behaviour of welfare officers who had undergone training and those who had not.

There was significant differences in the activity levels. There was not much change in the control group mills; in two thirds the status quo continued. But in the experimental mills, there were significant differences in practically all the mills. The training intervention certainly had a remarkable effect, thus highlighting the role institutions can play on mobilising and motivating change agents.

Rao, T.V.; and Satia, J.K. Managing Family Planning Activities at the Clinical Level. Kuala Lumpur: Asian and Pacific Develop-

ment Administration Centre, 1978.

This book is the second volume of a module series on family planning programme management. It is a self learning manual and contains material on management of family planning activities at the clinic level and is designed for heads of family planning clinics. The objective of the module is to improve the management of family planning clinics which are the primary operational units at the field level for implementing the family planning programmes. It seeks to do this through improving the managerial capability of the doctors heading the clinics and to provide managers and administrators with easily accessible learning opportunities in the various aspects of management of family planning and to help them share common concepts, managerial skills and knowledge for concerted effort in performing managerial tasks. The emphasis is on active participation of learners through various exercises. Though these first appeared difficult, they were tested and found useful in learning management skills in a practical context.

Simmons, George B. "Measures of Efficiency for Family Planning Evaluation". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.287) (mimeo).

In this report, various measures of the inputs into family planning outputs and environmental variables have been described. The relationship between the inputs and outputs can be given the broad label of 'efficiency', and study of efficiency is one sub-area of evaluation studies more generally defined. This study has demonstrated that inputs can be measured and the input-output relations can play an important role in family planning evaluation. It has in many respects raised many questions for research than it has resolved. The best form of the statistical relationships that are associated with evaluation measures is addressed in only a preliminary fashion. The most appropriate specification of the theoretical productive relationships between family planning inputs and the desired ends of family planning programmes has not been defined in any definitive way, and it is to be expected that further research will demonstrate that there may be alternative approaches which may be more appropriate for any given country. The best ways to measure inputs and to define environmental variables are also unresolved. Several directions for future research are suggested by this report. An important contribution could be made by seeking to introduce some of the ideas suggested into administrative practice in a particular

country. Such experience should be carefully monitored to pursue the further development of practical and useful measure of efficiency.

There are also important implications for related programmatic areas of concern. Targets should reflect not only the demographic characteristics of a region but the environmental and to some extent the input characteristics as well. A second programmatic implication is that improved methods of recording information in inputs and environmental variables should be defined and implemented.

Simmons, Ruth; Simmons, George B.; Misra, B.D.; and Ashraf Ali. "The Determinants of Family Planning Acceptance and of Worker and Organizational Performance in Rural Uttar Pradesh". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.288) (mimeo).

This paper outlines the elements of a systems view of the determinants of family planning acceptance. At the village level, the communities vary in their responsiveness to family planning services. Much of these variations is explained by a combination of the effects of the basic social characteristics of the village such as literacy and the amount of extension work undertaken in the village in the form of visits. At the level of the male family planning worker, the variations in performance among individual workers can be explained by a combination of factors, but the characteristics of the organization and the individual background of the worker tend to be the key factors. The variations in work style have a relatively small influence in individual worker performance. It is clear, however, that there are missing variables in the equations estimating the determinants of individual worker performance. The quantity of work undertaken by the individual worker and the social and economic characteristics of the population for which the worker is responsible are not estimable on the basis of the data from the interviews with workers.

An attempt is made in the last part of the discussion of FPWA performance, to reestimate a truncated version of the equation estimating the determinants of individual worker performance which includes the missing variables as well.

Giridhar, G. "Population and Development: Integrating Linkages". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.298) (mimeo).

This paper without specific reference to any one programme, presents some theoretical underpinnings and goes on to suggest certain policy-relevant areas where population and developmental objectives converge. The theoretical framework here is essentially based on current state of the art.

The study of relationship between population change and socio economic development has been in the past guided by two notions. First, development was defined primarily in terms of growth in per capita income. Second, population growth was treated as coming from outside the planning framework. However, the prevailing skewness in income distribution and in the beneficiaries of all the attributes of social development pitted against increasing population growth largely due to decline in mortality rates has led to a need for a wider concept of development to include a number of variations representing quality of life such as infant mortality, literacy rates, rural/urban residence, employment potential as so on.

It has also been hypothesised that these very changes lead to a decline in population growth also. Be it health care delivery, adult education, social and occupational mobility or cost benefit calculations governing the decision to have one additional child, the general goals and objectives need to be broken down into small and manageable projects for proper implementations. The need for managerial input is felt predominantly at this level.

Mohan, Manendra. "Physician And The Family Welfare Concept". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.360) (mimeo).

This paper discusses the role of physicians in creating motivation for family planning, and particularly the contribution they can make in giving a form to the concept of family welfare. The purely professional aspect of involvement of physicians as dispensers of advice and devices or modes of family planning is also equally important. That aspect is not intended to be covered in this paper. The focus of this paper is primarily on the physician in the social context.

The social obligations of physicians requires them to go a step further than that of being a dispenser of medical advice and equipment. They should voluntarily offer to interact with the target groups in appropriate forms. The question of the choice of an appropriate method is vital. There is a great deal more attention required to be given to this aspect than has been done so far. If the physician, in his socio economic capacity can help remove the apprehension of potential acceptors and convince

time that there exist methods which they can safely adopt, a lot of ground would have been covered and the way paved for the final stage of action.

Murthy, Nirmala. Experiments in Management Development. Experience of India populations Project - I. Ahmedabad: Indian Institute of Management, 1981. (PSG Monograph No.40).

During the last six years, the IIMA's Health and Population Unit has been involved in the India Population Project (IPP) - an experimental project in six districts of Uttar Pradesh. The project was initiated by the Government of India with financial assistance from the World Bank. The main objective of the project was to find better ways of achieving material goals in family planning. One of the hypotheses that the project intended to test was that improved management practices would lead to greater efficiency and achievement.

The government wanted to know what could be accomplished with management interventions within the basic programme structure. Most of the interventions therefore, were directed towards improving work methodology, system development, and changing management processes. Three different approaches were used training, action research and technical advise in specific interventions.

The efforts resulted in 12 research projects, training of all the management personnel at the block, district and state levels, and development and implementation of a Management Information System (MIS). In this monograph, five articles have been included based on the work in the IPP. The articles describe the monitoring system for Primary Health Centres on the project area, three major action researches and the management development training programmes for health administrators. The initial studies of the performance of the family planning and health programme in the six project districts led to two related findings. First that there was a considerable unmet need for all types of health and family planning services. At the same time, the existing services of the primary health centres (PHCs) were not fully utilized. Second, performance varied widely among PHCs inspite of similar inputs.

While introducing monitoring system to improve management control within the health and family planning organisation, it was felt that improvement in the performance was also a function of the effectiveness of the interaction between field workers and clients. An experimental study was carried out to understand the extent to which family planning workers were equipped with the skills of interpersonal communication and influencing the clients.

Maru, Rushikesh; Murthy, Nirmala; and Satia, J.K. "Management Interventions in Established Bureaucracies: IIMA's Experiences in Population Programme Management". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.434) (mimeo).

It was felt that the need was to establish a Management Information and Evaluation System which will be capable of providing policy guidance to exploit the full potential of the programme. An experimental project was proposed to cover a population of 19.3 million in two States - U.P. and Karnataka. The IIMA was associated with the project in U.P.

The objective of the project was to reduce birth and infant mortality rates in the project districts. Nevertheless, greater emphasis was placed on the process objective of learning that may emerge from continuous monitoring and evaluation process. This paper gives an account of the authors' experiences in this project.

Satia, J.K.; and Maru, Rushikesh. "Management Contribution to Population Programmes: An Overview". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.437) (mimeo).

In the late 60s when population programmes were being established, the programmes managers were concerned with securing setting up organisations, recruiting and training personnel, securing contraceptive supplies, opening clinics and institutionalising the programme activities. However, once such programs were fully established, a number of management problems became apparent. It was generally felt that if the programs were managed well, their efficiency, as measured by their impact, on flexibility levels would increase considerably.

In response to this need, management assistance efforts of many different types were organised. There is now merely a decade of experience in this field and it is worthwhile to review the experience to identify the future needs and mechanisms necessary to meet these needs. Such a review should ideally cover management improvement efforts for both fertility reductions and population distribution.

This paper addresses itself to the following three questions.

- 1) What has been the contribution of the quality of management performance of the population programmes ?
- 2) What types of Management improvements have been attempted during the seventies and with what results ?
- 3) What has been the role of management assistance efforts by agencies/organisations external to the programme in bringing about such improvements ? What factors contribute to success or failure of these management assistance efforts ? What lessons can be derived from these experiences ?

A review of management assistance suggests that considerable efforts have been made in the following areas: management information systems; management training; commercial and community based distributions of contraceptives; logistics; and organisation restructuring. Both the awareness of the need for and skills in improving management have increased. This process has also resulted in a creation of resource persons complimentary in providing assistance in these areas.

Satia, J.K.; and Maru, Rushikesh. "Incentives and Disincentives in the Indian Family Planning Programme: A Case Study". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.539) (mimeo).

The review of available literature in India suggests that the experience with respect to incentives and disincentives is rather limited. Some types of incentives such as community incentives, incentives in kind, and disincentives have not been experimented. Definitive statements about behavioural consequences of one time monetary compensation to acceptors of sterilizations, the most commonly used incentive, are also not possible because of the difficulty in isolating such consequences from effects of other factors.

The following observations emerge from the experience so far:

- a) There is a widespread knowledge and approval of incentives currently offered.
- b) Incentives to acceptors help in increasing the level of acceptance. Researchers show, and most programme personnel concur, that incentives, especially in camp setting help in increasing performance.
- c) Incentives alone are not enough. Most of research shows that incentives should form an integral part of motivational activities.

d) Incentives do not seem to have any direct adverse effect in either the quality of acceptors or on the quality of services.

e) Differences in the size of incentives by itself does not seem to influence preferences for various methods. The more important factor may be the priority attached by the programme to a particular method.

In conclusion, the information base to assess and design incentives and disincentives schemes is weak. Therefore, there should be a much wider public debate about the desirability and implications of these schemes. Secondly, for optimal effectiveness, such schemes should form an integral part of the population policy and programme. Finally, the administrative machinery for the implementing such schemes should be carefully designed and tested before it is used on a much larger scale.

Kumar, Ashok; Giridhar, G.; Lal, N.B.; Murthy, Nirmala; and Satia, J.K. Programme Implications of Base Line Survey Data India Population Project (II) Uttar Pradesh. Ahmedabad: Indian Institute of Management, 1984 (PSG Monograph No. 55).

As a part of the India Population Project, considerable data were accumulated. During the course of analysis of this data, several programme issues arose. The data were then analysed to identify programme implications. The following areas were identified for further research: accessibility and utilization of health services, family planning performance analysis, implications of fertility related findings to programme management, and infant and Child Mortality. A state level seminar was organised at Varanasi by the Population Centre, Lucknow and the Indian Institute of Management, Ahmedabad to discuss the findings.

This report is a collection of papers presented at the seminar. The first paper by Lal, Ashok Kumar, and Sharma presents the indications of base level situation in the project areas in Uttar Pradesh. It also describes the methodology of the baseline survey. The coverage of MCH and health services is presented and acceptance level of family planning methods is discussed. They identify priority action areas and populations requiring attentions and make several recommendations to strengthen IEL and service activities.

Prof. Satia discusses accessibility and utilization of health services using data from Ghazipur district. He finds that the reach of preventive health service so far is quite limited. The people's perceptions about the type of services available at the subcentre, dispensary and PHC do not differ significantly. Similarly, although BHWs seem to reach 70 percent of rural populations, they are perceived to provide a limited range of serv-

ices. Issues identified relate to use of private clinics for preventive services, role of health functionaries, image of service institutions, and choices regarding interventions to reduce infant mortality.

Prof. Nirmala Murthy analyses family planning performance in the project districts. She finds that current use of family planning methods in the project area is low and is below state average. There are also no significant urban rural differences in contraceptive prevalence. The majority of acceptors reported self motivation and an acceptor of terminal methods already has 5 or more children. This the impact of contraceptive use on birthrate is almost negligible.

Prof. Giridhar discusses fertility and related indicators in the fourth paper. He specifically concentrates on analysing data on women who have given birth to five or more children and finds that even these women have not been reached by health services. The small family norm does not seem to be widely prevalent. Prof. Satia discusses households which experienced infant deaths during the previous year. A large segment of these households are not reached by static facilities or Auxiliary Nurse Midwife. These households also do not receive any special attention. Therefore, a strategic shift is needed if infant and child mortality is to be reduced in the short or medium term. Involvement of male BHW workers and private practitioners in providing MCH services need to be emphasized.

Maru, Rushikesh; Murthy, Nirmala; and Satia, J.K. "Management Interventions in Established Bureaucracies: A Case Study," Economic and Political Weekly, 18(35), (August 27, 1985).

When a World Bank Project Appraisal Mission visited India in the late 1971, the Government of India was concerned about the uneven and slow progress of the family planning programme. The Mission identified several constraints on the supply side of the programme organisation: scarcity of personnel at the field levels, the low quality of their training, over centralisation and a shift to less effective contraceptive methods. It was also observed that previous analysis and experiences did not offer detailed guidance on to how the programme should proceed to maximise this potential. The relative effectiveness of programme, inputs as well as the level and structure of demand for these services were not well understood, and the existing information system was not adequate to respond to these questions. It was felt that the need was to establish a Management Information and Evaluation System which will be capable of providing policy guidance to exploit the full potential of the programme. Thus,

an experimental project was proposed to cover a population of 19.3 million in two states - Uttar Pradesh in the north and Karnataka in the south. The Indian Institute of Management, Ahmedabad was associated with the project in Uttar Pradesh. The ultimate objective was to reduce birth and infant mortality rates in the project districts. Nevertheless, greater emphasis was placed on the process objective of learning that may emerge from continuous monitoring and evaluation process.

How do we evaluate the impact of experiment research mode of intervention? Three criteria can be applied.

First, the experiments should achieve a limited objective of developing new ways of managing activities and demonstrate their usefulness.

Second, these should be institutionalised within the experimental areas.

Third, the new methodologies and systems should be diffused in all the project districts.

This paper seeks to evaluate the India Population Project as a case study in management interventions in established bureaucracies in a social development programme.

Giridhar, G.; Satia, J.K.; and Subramanian, Ashok. "Policy Studies in Health And Population - A Review", in R. S. Ganapathy (Ed.), Public Policy and Policy Analysis in India. New Delhi: Sage, 1985.

This paper reviews the policy studies in the area of population, and the purpose of the review is to briefly present major conceptual frameworks and methodological approaches used by the policy studies and their influence on the development of policies and programmes. The chapters discuss studies in the areas of health, fertility-influencing and migration-influencing policies in section II through IV respectively. The review leads to an identification of neglected policy issues, approaches and methodologies and some suggestions on how these gaps can be filled.

Satia, J.K.; and Jejeebhoy, Shireen J. The Demographic Challenge: A study of Four Large Indian States. Bombay: Oxford, 1991.

This book is a study of the way the population problem has been tackled by four largest and the most backward states of India: Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. It attempts

to highlight the distinctions between these four states and the rest of India; analyse the underlying background factors contributing to these conditions and assess the prospects for change. It consists of six chapters besides the first chapter which is an overview.

In Chapter 2, K. Srinivasan looks at the proximate determinants of fertility in the region. The author finds that except in Bihar, there has been a declining trend in fertility in the other three states. In Bihar, there has been a rise due to different factors. Even in these states, the decrease is not as much as what should be expected from their levels of contraceptive use. It may be possibly due to decline in the duration of breast feeding and improvements in the health of population. This may be the price of modernization in its early stages.

Age at marriage is strongly linked to the social and economic structure of society, and also to fertility. This age is slowly increasing.

In Chapter 3, Alaka Basu deals with the demand for children and family planning. Families seem to strongly prefer the two sons - one daughter pattern. The economic value of children are assessed and their costs. In rural areas, the "value" of children seem to get more emphasized while in urban areas it is their "costs". But on the whole, the author feels that "while economic motives are important, the net economic value of children are not". Other factors like insurance in old age and the effect of child mortality expectations are also discussed.

In Chapter 4, Jejeebhoy focuses on the situation of women in the region and its impact on health and reproductive behaviour. Women's position affects fertility in different ways, all of them positive. The best documented indicator of female status is education, and the links between education and fertility are thus very strong. Income generation, health etc. also can have positive effects.

B.D.Misra, in Chapter 5, looks at the demand creation factors in family planning. Information education and community programmes and maternal and child health programmes generate demand for family planning programmes. The role of incentives is complex and unclear. Quality of the programme delivery affects its demand quite strongly.

In Chapter 6, Satia and Giridhar deal with the supply aspects of family planning. It looks at the delivery system, the programme constraints, the key issues managers have to resolve and the role of NGOs. The promising approaches are also discussed.

The service delivery system is found to be poor. The problems include inaccessibility, lack of facilities, nonavailability of medicines and contraceptives and the poor image of health centres in general. The quality of service suffers due to many reasons, but the incentive and target driven systems certainly contribute

to a poor quality. Poor logistic support, tardy procurement, storage and distribution of contraceptives, poor skills of functionaries and their low level of motivation etc. are factors leading to poor quality of service. The implications for improvement of these programmes are also discussed: like improvement in government systems, expanding service delivery, strengthening support system, improving quality of care, increasing people's programme management and the need to involve NGOs.

Chapter 7 by M.E. Khan deals with the experience of NGOs. It describes four projects where NGOs were actively involved. It also describes the efforts in the organized sector like in United Planters' Association of South India and the Tata Iron and Steel Company. It shows the potential of NGOs in family programmes.

Satia, J.K. "Family Planning Workers and Problems of Programmes Implementation", Economic & Political Weekly

The Government of India has recently announced a national policy on population, with several measures to increase the general acceptance of the family planning programme. These measures include higher acceptor incentives, group incentives, multimedia communication strategy and the offering of an integrated package of health, family planning and nutrition.

The present paper argues that greater success in family planning programmes can be achieved by increased efforts towards changing attitudes than by merely disseminating information about family planning more widely. This can be achieved by instituting changes in the implementation of the family planning programme, its organisational structure and process and the training of family planning workers.

HEALTH

Murthy, - Nirmala; and Satia, J.K. Management Information and Evaluation System in Health and Family Planning Programme. Ahmedabad: Indian Institute of Management, 1976 (PSG Monograph No. 10).

The existing data system in the Health and Family planning programme is far from ideal. Though it is a very elaborate and comprehensive data system, it has certain severe limitations. First, it is of little use to the administrators because they think that it is meant for evaluating their work rather than for helping them. Second, the researchers find the data useless because of the incompleteness and inaccuracies in reporting. Third, the data collection procedure is elaborate requiring skills which the workers who collect data do not possess.

This study helps to identify two problem areas in existing system, that is irrelevance and absence of analysis and feed back. The two other minor problems were lack of timeliness and inaccuracy in data reporting. The sources of these problems could also be that the workers do not find these data relevant and useful. The chief concern of the new design of MIES is how the data can be made more useful. In many respects, the proposed system is very similar to the existing system as far as the information content is concerned but it differs from the present system mainly in three respects: a) procedure of collecting information b) number of registers and forms and c) procedure of a data analysis and feedback. The purpose of the new information system is to make the information useful to administrator. So, as a first step, several programme administrators at different levels were asked to specify their data needs. Most of them felt that they needed no data while some felt they need to know why the programme was not working.

MIES uses three types of data: environmental data, programme data and non-programme data. In family planning, for example, the programme information will let the administrator know how much the actual performance has been deficient in terms of targets, percent of targeted couples accepting birth control; and cost per acceptor. The non-programme information will provide some explanations for this shortfall if the potential clients are receiving supplies through non-programme sources. Environmental information will point out the cause, if any, which might explain why the performance is low. This information need not be always quantitative. It may be qualitative since numerous factors have to be considered for a decision and since not all of these can be measured accurately, a manager finally has to use his judgment.

Training for using MIES in managerial decisions making involves a) identifying a problem area b) Analysing all available data to find the solution to the problem and c) making skillful use of judgment in arriving at a decision. This training cannot be restricted to just use of data for decision making. MIES should help the manager to improve his supervision style, use the admin-

istrative flexibility available to him, and to make the best use of resources available.

These abilities cannot be taught but they can be learned and internalized by analysing real life situations presented in a case form. Several cases need to be developed around these themes. A case has been included in this report as an example. This case deals with use of information at the PHC level. The issues discussed in this case are: how should a medical officer evaluate his workers' performance, and what he and BEE can do to help the workers perform better. The case tries to bring out two points. One, a worker should be evaluated on his/her total performance, and not just family planning. This includes her work in MCH, family planning and any other work she is expected to, plus her acceptability to the people in the village, and the image she has built about herself and the subunit. Secondly, there are many things that a doctor and the extension educator can do to help the worker improve her image and work which do not require additional funds or power.

Maru, Rushikesh; Murthy, Nirmala; and Satia, J.K. Multipurpose Worker Scheme: A Study of Pilot Implementation in Chhani Primary Health Centre. Ahmedabad: Indian Institute of Management, 1976 (PSG Monograph No. 11).

The Fifth Five Year Plan document envisages integration of the health, family planning and nutrition programmes. It recommends that unified services be provided at the door steps of the people by multipurpose health workers. This study was carried out to assess the scheme's strengths and weaknesses by evaluating its pilot implementation in one PHC (Channi) in the Baroda district of Gujarat State. The scheme was initiated in November, 1974. First, the vacant positions at PHC were filled. The PHC was then partitioned in six sectors and each sector was entrusted to a sector supervisor. Four of the sector supervisors came from malaria; one from vaccination; and one from family planning. Similarly, 17 workers came from malaria; six from vaccination and five from family planning giving a total of 28 basic health workers in PHC. Except for medicines, no additional resources were needed for the implementation of the scheme. Training was organized locally. The original scheme envisaged distribution of medicine to be undertaken by all the workers. To evaluate the impact of the scheme on the various programmes, the performance of PHCs in these programmes was compared before and after the scheme was launched. The total performance of the malaria programme was measured in terms of detected fever cases and blood smears per 1000 population. They seem to have improved substantially since the inception of the MFW scheme. The D&E cell study observed that in Baroda district, the performance of BHW area in malaria increased dramatically compared to the increase in the non-BHW area. This could have been because the PHCs selected for

BHW scheme were already performing better than other PHCs. The performance of the former family planning workers was close to the average performance of the PHC. None of the former family planning workers performed too well or too poorly in any programme. The malaria workers showed large performance variations among themselves. The impact on performance was mixed. There was marginal improvement in some programmes and a marginal deterioration in others.

This raises the question why the favourable gains mentioned above are not reflected in improved performance, specifically of the family planning programme? The workers and their supervisors were asked this question. They mentioned that family planning achievement did not depend upon the worker alone. There were many other factors such as drives, camps, higher incentives, involvement of other departments, responsiveness of the community and so on. A large part of the performance, therefore, seem to have been accounted for by the activities other than extension education carried out by the workers. Supervisors also felt that while workers might have become marginally effective in extension education, he was not the most important factor in motivating acceptance. The MPW scheme offered an opportunity for improving the malaria, vaccination, family planning and other health work. However, modifications in work methodology and supervision and the integration of MCH work into multipurpose health work was necessary. It is expected that such modifications will lead to improvements in programme performance.

To fully exploit the scheme's strengths and to realize the ultimate goals of better health, two areas need careful consideration. A shift of emphasis from surveillance and curative work to preventive work, and community involvement is called for. The study also reveals that there are definite gains like increased job satisfaction and credibility of workers, better field supervision and reduced travel time for workers. However, these gains have not improved performance of various programmes substantially.

No generalization can be made on the basis of the study of one PHC. However, the authors feel that the study does raise issues which need to be tackled to fully realize the potential benefits of the multipurpose health worker scheme. With this in view, this report provides a basis for discussion of these issues with the concerned administrations and officials.

Murthy, Nirmala. Multi purpose Scheme in Singhpur Block (Rae Bareli). Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 32).

In the national programmes on health, epidemic-control and family

planning, the programmes usually are vertical programmes, being run separately by separate staff. For instance, a malaria eradication programme will have its own staff who will be different from the staff working on, say, a vaccination programme. The multipurpose worker scheme seeks to economise on the workers by giving the same worker skills to work on a variety of programmes. Their area of operation can be reduced, and this increases their efficiency, and will also become more acceptable to the people.

Two attempts had been made earlier in Maharashtra and Gujarat with mixed results. This monograph describes the result of an experiment conducted on Singhpur, Rae Bareilly, Uttarpradesh.

In this scheme, both male and female workers were given a two week orientation work in malaria work, vaccinations, treatment of minor ailments, well disinfection and identification of communicable diseases (In the scheme suggested earlier by the Government of India, only male workers were identified for MPWs). The coverage of population per worker was less than the GOI scheme but their duties were wider in scope. Detailed work schedules were worked out and methods of supervision specified. An explicit component of community involvement was also devised.

The results of the intervention were evaluated. The performance of Singhpur on all programmes except primary vaccinations was much superior to the rest of the district in terms of changes between 1975 and 1976. There was some evidence that malaria workers still tended to do more work on malaria and so on, but a certain degree of "multi purposiveness" was also in evidence. The views of the workers as well as supervisors were ascertained and were positive.

Murthy, Nirmala; and Maru, Rushikesh. Medicine Distribution Through Multipurpose Workers. Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 33).

This study was the first attempt to evaluate the scheme of medicine distribution through field workers. The study indicated that within the limited range of medicines given to them, the workers could competently handle distribution of elementary medicines and there was considerable demand for these services. Especially in areas where PHC coverage was less due to lack of approach roads, there was a definite need for extended medical aid through multi purpose workers. However it was not clear as to how effective this scheme was in meeting the more important basic health needs of the rural population. For example, the workers were rarely allowed to treat children which made them ineffective in providing services to the most vulnerable and needy section of the rural population. They were rather meeting a secondary medicine need some of which could be even superfluous as indicated by a large number of headache cases reported by the

workers.

The other objective of the scheme was to increase the credibility of the workers through medicine distribution and thereby help them to improve their performance in other health and family planning programmes work. This limited objective was also not fully achieved. Workers with medicine were not performing better than those without medicine. Nevertheless they felt that they were now better accepted in the community.

Bhatnagar, S.C.; Maslekar, N.V.; and Satia, J.R. A Study of Drug Procurement and Distribution System for the State of Uttar Pradesh. Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 14).

The objective of the drug distribution system is to supply the right medicines to the patients. This requires that the total system of provisioning, procurement, and distribution work effectively. In this study, the system of drug procurement and distribution system is the focus. Some recommendations are made for improving some of these functions. It is also suggested that evaluation of performance of these component systems is a necessity if the total system is to work here effectively. The main recommendations are given below:

1. Requirements should be projected based upon the last year's consumption. Standard lists should be prepared based upon the projected requirements. The standard list should only consist of items which have high consumption and variability consumption. It may also include low consumption items provided bulk purchase offers considerable economy and have low consumption variability. Separate standard lists may be prepared for different institutions.
2. GCMSD should stock only those items which exhibit considerable uncertainty either in demand or supply. The uncertainty in demand may also arise due to emergency needs.
3. Reorganisation of the information system is suggested around a centralised data system. The reorganisation of the information would lead to better follow-up and timely corrective action. Simplification have been suggested in the bulk contracting procedure to reduce both time and effort spent in bulk contracting. Performance reports have been suggested for monitoring different sections of the GCMSN. In addition, selective mechanisation in terms of use of Government unit record system is suggested. Use of electronic calculator both in purchase and accounts section is strongly recommended. It is felt by the authors that before undertaking a reorganisation of GCMSN, improvements in the present functioning need to be carried out. However, some changes in organisation for

increasing operational efficiency are suggested.

4. Field level operations also need to be strengthened. Specific recommendations are made for determination of needs, redistribution of excess stock, and supplier follow-up.
5. It is pointed out that a close involvement of administrators is necessary in planning the process of implementation including allocation of tasks to different personnel and so on once a broad design is accepted.

The recommendations outlined here are only the first level recommendations. Once these have been implemented, a data base for identifying opportunities for further improvement would be available.

Rao, T.V. "Informational and Documentational Needs for Motivation Education and Communication Aspects of Health and Family Welfare", Health and Population: Perspectives and Issues, 1(3), (1978).

In this paper, an attempt has been made to examine and outline different kinds of people in Health and Family Welfare who need information, the different kinds of information that they may need, the different sources of information available and the different purposes for which they need information in relation to motivational, communicational and educational aspects of health and family welfare. An attempt has also been made to present some general principles for presenting, organising and managing this information.

Information serves several purposes. It may serve different purposes for different kinds of people. In health and family welfare, it helps basically in decision making. Certain kinds of information may help people in a village to decide whether to adopt any family planning practice or not, to select the most appropriate method for them and to take some preventive steps in an epidemic hit area. Information may also have a motivational value and thus it may drive a person to take a quick decision. Information also helps different categories of people. Everyone needs information: family planning workers, health worker, officers, medical personnel, researchers, teachers etc.

Murthy, Nirmala. A Monitoring System For Primary Health Centres. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 35).

Primary Health Centres (PHCs) show considerable variation in their performance. Part of these variations is due to lack of proper monitoring and control systems. Usually, in monitoring systems, considerable routine data are collected consisting of acceptor characteristics, field visits, medicine supplies and the staff. These are potentially useful to monitor the programme. Unfortunately, this system is not being used to the fullest extent. These data are used only to rank the districts in order of performance. No attempt is made to relate input to output. Poor performance may be the result of lack of input, or absence of a critical factor, but the system does not identify the reasons to draw the attention of the proper authorities to them.

This monograph describes a new monitoring system. This system uses a few indicators which measure activity output and input for each programme (e.g., malaria, health, family planning, etc.) to determine whether the performance of PHCs in each programme is under statistical control similar to the SQC methods in industry. Upper and lower control limits are fixed and PHCs crossing the upper control limit are classified as "good" and below the lower control limit, as "poor". Monthly review of PHCs performance can also be done to see whether each PHC is performing statistically better or worse than others in the district and if so by how much.

This system was estimated to cost only Rs.50/- per PHC per year and was expected to influence the style and content of supervision.

The system was implemented in six districts in Uttar Pradesh in October 1975. The poorly performing PHCs were identified and the reasons for their poor performance identified.

Ramaiah, T.J. "Planning and Implementation of Health, Family Planning and Nutritional Services - Certain Problems and Issues". Ahmedabad: Indian Institute of Management, 1980 (IIMA Working Paper No.313) (mimeo).

This paper discusses the major problems of planning and implementation that confront the development of comprehensive health services in India. The problems are categorised into four major groups; viz., those pertaining to decentralisation and integration largely dependent upon higher echelons of the organization, including political; those relating to managerial processes; those pertaining to the recipients of services and the interface between the community and the health services organisation. The same are discussed in the national perspective, without specific reference to any particular state. A number of issues are raised

to stimulate thinking and discussion.

Ramaiah, T.J. "Cost Benefit Analysis of Malaria Control Eradication Programme in India". Ahmedabad: Indian Institute of Management, 1980 (IIMA Working Paper No.323) (mimeo). (See also monograph No. 26 below).

This paper analyses the malaria control and eradication activities in India from 1953-54 to 1976-77. The total cost of the disease to the nation if the control and eradication programme had not been launched and the cost of the programme were estimated for each of the years. The difference between the two estimates for a given year is defined to be a measure of benefits derived from control of the disease. The results obtained have been further analysed and their implications to the programme have been discussed.

The examinations of the absolute net benefits (at constant prices) show that it gradually increased from Rs.1042.33 millions during 1953-54 to Rs.5585.24 million during 1962-63 and thereafter presented a gradual declining trend until 1976-77. This pattern generally compares with that of programme expenditures except in the later years, when the programme expenditure fluctuated. Further analysis indicated that benefits accrued during a year bear a strong positive correlation with programme expenditures. Further, the linear regression of monetary benefits on programmes expenditures show that during the period of analysis, an increase of one million rupees in programme expenditure brought about an increase of about Rs.6.5568 million in benefits. This has certain important implications for control or eradication of malaria in future when examined in the context of the epidemiology of the disease, particularly the role of erogenous factors in vector control.

Ramaiah, T.J. Cost Benefit Analysis of Malaria Control and Eradication Programmes in India. Ahmedabad: Indian Institute of Management, 1980 (PSG Monograph No. 26).

Prevalence of malaria has had many consequences and outcomes in the Indian society. Recognising this, India supported a large programme, perhaps the largest in the world since 1953, initially with the objective of its eradication. However, since 1965, the magnitude of the disease showed an increasing trend having reached a remarkably low level of prevalence in 1962. The reasons for the set back were many, one important reason however, being shortage of financial resources. The disease programme was

evaluated many a time by national and international teams and the emphasis of these mostly has been on the programme elements, namely, its structure, managerial processes, activities, the epidemiology of the disease and temporal changes therein, programme performance etc. The large scale prevalence of malaria has a number of social, economic and demographic consequences arising out of the disease specific morbidity and mortality while some of these consequences lead to direct monetary costs to the society. Some others cost the society in an indirect way. The direct and indirect consequences of malaria are well known. Many of the out comes of this disease are intangible and their monetary costs cannot be quantified.

Keeping this in background, this paper aims at revisiting the entire span of 24 years (from 1953-54 to 1976-77) of the life of National Malaria Control Programme in India with a view to recount the expenditures on its control, eradication and the economic benefits thereof, bringing to bear upon as much scientific rigour into the methodology of benefit cost estimates as permitted by the available data, its quality and quantity. The methodology adopted for this purpose has been one of with NMCP/NMEP and without NMCP/NMEP. The basic approach adopted is

- a) Identification of consequences/ out comes
- b) Quantification of the same and
- c) Conversion of the quantified outcomes into monetary terms, the sum of which would give the gross costs of the disease.

The assumption behind such an approach is that the total cost of the disease (or part of it) serves as a measure of benefits derived from its eradication or the reduction in costs through partial control. This study also attempts to create interest in developing a critical mass of talent in application of methodologies like Cost Benefit Analysis for appraisal of health programmes and projects, with the hope that the results of such an analysis would find place eventually in planning exercises in the health sector, leading to resource allocation decision which would be more satisfying to both the groups i.e. health planners and administrators economic planners and administrators.

Bhatnagar, S.C.; and Sengupta, Samaresh. An Experiemnt in Activity Planning at Singhpur Primary Health Centre. Ahmedabad: Indian Institute of Management, 1980 (PSG Monograph No. 24).

The current populations policy emphasises the voluntary nature of the Family Welfare Programme and its integration with other health programmes. There is a need to examine ways of strengthening the extension efforts in the field. Extension methods have not generated significant demand for family planning. This is because studies have shown that in spite of a large network of

field workers, a very small proportion of the population has in fact been covered by extension methods. Field workers have been allotted excessively large areas which they cannot possibly cover; also they have generally low morale and status in the community. They find themselves ill equipped and inadequately trained to meet the day-to-day problems.

The experiment in this study consisted of strengthening the activity planning process of a PHC through interventions. The information and record keeping systems were redesigned; a methodology for work schedule preparation devised; and a methodology for planning the daily visits evolved. The system of supervision was also modified and streamlined. Training the workers was also done.

After the experiment, the improvement in immunisation and family planning was measured. Major improvements were noticed on both the areas.

The experiment proved that an activity planning process of the kind that was devised in Singapur can help to improve the efficiency and effectiveness of the multi-purpose worker, particularly in the area of family welfare. The necessary conditions for activating such processes in a large number of PHCs are:

a) Enough flexibility has to be provided to the worker in adopting a work methodology suitable to his area of operation and client profile. In addition, substantial amount of training is required to the worker in upgrading his communication skills. Since training sources are limited, particularly for dealing with thousands of peripheral workers in a state, more innovative methods of training like self-instruction manuals, use of video tapes etc. have to be thought of. The case material developed on the basis of worker client transaction could also be used as training material.

b) Some funds may be provided to the PHC doctor for performing special activities of the nature described in this report. It may be made obligatory for the recipient community to raise an equal amount of funds for such activities. This would help promote a total involvement of the PHC in the organisations of such activities.

c) Changes in record keeping, forms and systems for doing an appropriate analysis must be instituted with a brief training of the supervisors. A culture has to be created in which data is used to understand the profile of clients, villages etc. and appropriate activities are planned on the basis of this analysis. It is felt that the PHC doctor with his training and back ground is one who can perceive these advantages and therefore be trained to implement such systems. Training and orientation of activity planning processes therefore need to be imparted to the PHC doctors.

The experimentation in Singapur PHC was quite limited. Several

other components of planning, for example in supplies of medicines etc., were only designed and not implemented.

Subramanian, Ashok. "The Process of Forging Lateral Linkages: A Hospital Experience". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.367) (mimeo). (See also monograph No. 49 below)

The report presented shares the experience of including lateral integrators in a voluntary hospital. It describes the background and the process of introducing newer forms in the existing structures of the out patient services area of a 700 bed hospital. Lessons from the experience are also presented.

An attempt has been made to review the process of creating and introducing integrating mechanisms through the role of a coordinator and a committee in the out patient service area of a hospital. This is part of an effort of the hospital to devise lateral linkages across functional specialities as it focuses attention on its service areas. The review suggests that certain conditions that take into account the nature of the organisation and its particular setting are necessary for the forging of effective lateral linkages. It also suggests that an appraisal of the functioning of the management hierarchy would still be crucial for the successful functioning of the integrating mechanism.

Subramanian, Ashok. "Health for All: An Alternative Strategy - A Note on the Current Tasks". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.396) (mimeo).

There are several positive aspects to the publication 'Health for All: An Alternative Strategy'. Firstly, it is seen as part of a process of analysis and sharing and not a discrete event in itself. Secondly, it is offered to the people at large to initiate and exchange ideas on alternatives; it is not seen as a final document enunciating a strategy on their behalf. It is a reflection of a gathering of concerned practitioners and professionals. The Group's search for an alternative springs from its great dissatisfaction with the present - which it denounces spiritedly and is also the cause of different alternative. Prescriptions related to the alternative offer a hope, but also some questions. This paper raises questions of implementation of the strategy and outlines the tasks to be done in the initial phase. The substantive content of the proposed services is not discussed in detail.

Bhatt, Anil; Maru, Rushikesh; and Prabhakar, A.S. "Socio-Economic Profile and Performance of CHVs in Gujarat: Implications for Selection and Support". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.395) (mimeo).

What type of persons should be selected as Community Health Volunteers (CHV) has been a matter of debate. This study relates socio-economic characteristics - age, sex, marital status, education, caste, organization membership and land ownership with performance on direct patient care, mother and child health, family welfare and environmental sanitation. The paper further suggests strategies for selection, training and support in case of CHVs whose performance is poor.

The study is based on data for one state, Gujarat collected as a part of a larger national evaluation of the CHV scheme. The sample consisted of 6 CHVs for each sample PHC, half of whom were selected randomly while the remaining half were from the previous evaluation done. Ten PHCs were included in the sample based on stratified random method. Two of the 60 selected CHVs could not be interviewed. Thus the total sample consisted of 38 CHVs from 10 PHCs in 10 districts of Gujarat state.

The difference between the findings and experiences of small voluntary community health care experiments highlights the classic problem of transition from pilot projects to nation-wide extension of a successful social innovation. As the scale of operation increases, the ability of the organization to provide intensive continuing and personalized training and support also decreases. A certain degree of routinization and standardization becomes inevitable. Thus, both training and support systems are unable to differentiate between trainees with differential social background. One way to minimize these characteristics of large and complex systems is to develop separate training and support interventions for CHVs from low socio-economic strata.

Bhatt, Anil; Maru, Rushikesh; and Prabhakar, A.S. "Socio-Economic Profile and Performance of CHVs in Gujarat: Implications for Selection and Support", Health and Population - Perspectives and Issues, 4(3), (1981).

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Ganapathy, R.S.; and Ganapathy, Sugandha. "A Nutrition Profile of Ahmedabad". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.483) (mimeo).

Nutritional status is one of the key indicators of the development in a society. Urban nutritional problems are increasingly becoming critical in India. This paper surveys the nutrition scene in Ahmedabad in relation to its socio-economic context, analyses the major problems identified, reviews the emerging trends and develops some tentative recommendations for future action. Improving the nutritional status is a complex task and often involves long term, fundamental changes in life styles, economic activities and community action. In the short term, nutritional impacts can be achieved through education, public programmes and regulation. This exploratory paper is based on secondary data, informal discussions and observations and is written in a popular style to create a wider awareness of the issues. The paper identifies a number of researchable areas which need to be explored, if we have to get a systematic understanding of the problems in urban nutrition as a guide to action.

Subramanian, Ashok. New Roles in Hospitals: Organisational Innovations in the Voluntary Sector. Ahmedabad: Indian Institute of Management, 1983 (PSG Monograph No. 49).

Voluntary agencies have gained recognition for their pioneering work in many developmental sectors of the nation. Particularly in the social services where they have combined a high level of commitment with technical competence, they have been able to demonstrate innovative approaches and methods which are contextually appropriate to local conditions. If innovations are seen as products or processes that are substantially different from what is available in a system, then some of the voluntary agencies, among them hospitals, have demonstrated interesting innovations.

A significant innovation in the organisation structure of voluntary hospitals has been the introduction of new roles. These roles entered the existing organisational network of roles and relationships. The case studies presented bring out the contents of two of the new roles introduced:

a) The professionally trained non medical manager in the hospital and

b) A coordinator manager of a vital segment of any hospital, namely, the out patient service.

New roles can be seen as links between an organisation and its changing environment. They equip the system with skills to cope with emerging tasks. The experiments of the voluntary hospital were attempts to extend management applications to health care and social service organisations. Social service organisations often do not match the growth of their technical systems with changes and improvements in their management systems. Consequently, problems arise due to a high degree of technical and functional differentiations and a low degree of managerial integration. The voluntary hospital faced with such a situation in 1970s made a number of efforts to correct the imbalance. The induction of trained professional managers was one step in that direction. The case study presented suggests that contextual needs, often a crisis, provokes the search for professional management assistance. The introduction of methods and techniques and the demonstrations of their effectiveness precede the induction of a new professional manager's role. Perhaps management applications even in apparently 'insignificant' problem areas of the organisation may be the faltering first steps in the entry of the manager in a setting dominated by technical professionals.

An attempt has been made to review the process of inducting integrating mechanisms through the role of a coordinator and a committee in the out patient service area of a hospital. This was part of an effort of the hospital to devise lateral linkages across functional specialities as it focussed attention on its service areas. The case study suggests that integrating rather than clarifying managerial roles may be necessary to design supportive lateral structures for a new role. An appraisal of the functioning of the formal management hierarchy is crucial for

the successful functioning of the integrating mechanism.

Subramanian, Ashok; and Mehta, Mona. "A Profile of Voluntary Health Effort in Gujarat". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.509) (mimeo).

The role of voluntary (non-governmental, non profit) agencies have been increasingly realised as significant, particularly in the organization and delivery of social services. Their contributions in functions and areas where the governmental system does not or cannot make an impact have now been recognized. This paper presents a profile of voluntary health agencies in the State of Gujarat. It is based on a survey of about 100 such agencies in the state. The paper discusses the pattern of distribution of voluntary agencies in the State, their services and reach. Their work in relation to the State is also discussed.

On the whole, the VOs in Gujarat seem to be medium sized organizations rendering useful services to the people. They are not a homogeneous group - indeed they reflect the diversity of voluntary effort. Their services, sponsors, sources of funds and size of operations vary considerably. Collectively they do provide about a third of the state's services in terms of annual reaming outlay. Their contribution to medical relief, minimum needs and communicable diseases seems significant. The special capacity of the VOs for mobilising and organising the community can be utilized if PHCs were to locate and establish links with the VOs.

Subramanian, Ashok; and Mehta, Mona. "Self Sufficiency in Community Health Programmes of Voluntary Organisations". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.529) (mimeo).

Self-sufficiency in development programmes and more specifically health programmes continues to be an issue of debate. Donor agencies are pressing their project holders to achieve self-sufficiency but meeting with failure. The projects, on the other hand, keep attempting, with increasing frustration, to become self-sufficient. This paper attempts to examine the issue of self sufficiency and also help continue the debate with a little more understanding of the problems.

This paper first gives a review of the perceptions and points of view on the issue of financial self sufficiency in community health programmes of voluntary organisations. The push for self sufficiency does impose a financial discipline in the VO. Yet the ultimate realization of complete self sufficiency may be infeasible and even undesirable in the sense that it can distract the VO from its primary purpose of serving vulnerable sections with a range of services. It can be argued that the VO must be concerned about raising the capacity of the vulnerable section, so that it serves to cope with their environment. So the beneficiary population, in particular the weaker sections, must be educated so that they gain the strength to identify their needs, design services, locate funds and manage their own community health programmes.

Bhatt, Anil; Desai, Kaushik; Maru, Rushikesh and Subramanian, Ashok. Community Involvement in Primary Health Care. Ahmedabad: Indian Institute of Management, 1984 (FSG Monograph No. 53).

Primary health care was the key strategy to attain the goal of health for all by the year 2000. For achieving this goal, community involvement becomes inevitable. Primary Health Care implies the element of 'community'. It indicates that health care is community based and not only hospital or clinic based. If the health care system is centered around the community, then community's involvement and participation is inevitable. Much has been said and written on community participation for development in the last fifteen years or so. Both the concept and the process of community participation have been much discussed and analysed. Yet very little material is available in the form in which it can be used by those who are involved in the field mobilizing organising and managing community participation.

The reason why very little practical or applicable material is available on the subject is because the analysts and experts often tend to romanticise community participation as a process to be watched, applauded, analysed and written about but not something which can be systematically learned, adopted and implemented. It has to be only experimental. Thus 'management' and 'training' in community participation often become a taboo in the world of health development elite.

This document is prepared for the practitioners and trainers in the field of primary health care. It attempts to describe and analyse various elements of community participation to increase the understanding of the nature of community participation. It attempts to discuss the advantages and disadvantages of community participation, its limitations and implications. It also analyses, on the basis of Indian experiences, styles and strategies in generating and managing community participations.

This document is in two parts. The first consists of three case studies. The three case studies illustrate some, though not all, elements of community participation. The case also include analytical notes which discuss the elements of community involvement in each situation so that the practitioners and trainers can use these cases. The second part consists of a review paper which analyses community involvement in primary health care.

Murthy, Nirmala; Satia, J.K.; and Sengupta, Samaresh. A Study of Drug Supply to Primary Health Centres in Uttar Pradesh. Ahmedabad: Indian Institute of Management, 1984 (FSG Monograph No. 54).

Almost everyone connected with the medicine supply situation of PHCs is dissatisfied. Sub-centres complain of not receiving medicines; PHCs find their own supplies inadequate and not matching their needs. They blame district and state levels. The district finds itself in the middle with only a limited flexibility and no capability to influence state level decisions. Consequently it blames the State and PHC. The State has also only a limited control and finds itself burdened with too much paper work. It also receives a lot of complaints. This study was undertaken to identify problems, assess their magnitudes and suggest methodologies to solve them.

Two PHCs (Mohammedabad in district Gazipur and Sahabganj in district Varanasi) in Uttar Pradesh were studied in depth. This led to identification of problems and their magnitudes. The problems were: limited budgets, non-availability of commonly used medicines, irregular supplies, medicine supply not matching the needs of the PHCs, quality of medicines, and high expectations of the people. It was found that each of these problems contributed to a relatively small amount of deterioration in performance, but together, the effect on the supply system was substantial.

It was felt that a piecemeal approach to improve supply will not work; rather a systems approach to reduce the magnitude of problems at all levels was needed. The improved supply system should include realistic budgets, careful selection of medicines to be supplied at each level, appropriate level of decentralization for procurement, improved informations flow, planning and control of consumption, improved monitoring by State and cost effective therapeutic use of medicines. A methodology for assessing medicine needs at PHC using standard prescriptions was developed. This exercise also highlighted a variety of problems which may be encountered in indenting of medicines. Some methodologies for preparing standard pack are discussed in this report. These methodologies, however, need to be tested. The report also suggests a monitoring system for drug use at PHC level and other levels.

Giridhar, G.; and Satia, J.K. "Planning for Service Delivery at Health Centres: An Experiment", Asian Population Journal, 1(2), June, 1986 (A).

The focus of the planning system for PHCs at different levels will differ and consequently the planning system should incorporate flexibility into the system. In this context at least three different foci are indicated in this paper: ensuring the needed inputs, planning for worker's performance and activity planning based upon clients' reach. They represent a continuum in the evolution of PHC's planning systems.

Giridhar, G. "Management Interventions in the Use of Rural Health Services", Manila, 1986 (B).

Achieving program objectives depends on program design and management. Programme design can be stated simply as an expected process of conversion of resources into activities and outputs. For example it is hoped that when a field worker (the resource) goes to a household and provides some curative or preventive care (the activity), the household will accept the service and use it (the output). Further the design assumes that when all these happen, the health of the people will improve, morbidity and mortality will reduce, family planning acceptance will increase and birth rates will come down (the objective). Program management, on the other hand, focuses on the availability of resources, the nature of the bond between the main elements of the organizational structure (the people and their roles), the conduct of program operations, monitoring and evaluation of program initiating corrective action and demand generation. This paper concentrates only on program management, particularly in relation to the level at which program client interaction occurs. This level, which is always the smallest and least staffed, is the front piece of the entire health system conveying the burden of increasing and sustaining people's support.

Sethi, Dipti. "Inter-Organisational Coordination in Development Programmes: A Case Study on Integrated Child Development Services". (Ahmedabad: Indian Institute of Management, 1989) (Unpublished doctoral dissertation)

In recent years, there is increasing reliance on an integrated approach involving multiple agencies in the implementation of government development programmes in sectors like agriculture, health, education. Examples of some of these programmes are: Integrated Rural Development Programme, Integrated Child Development Services (ICDS), National Adult Education Programme, etc.

Literature on evaluation of these programmes has indicated that coordination between the different organisations involved has been a recurring problem. Yet there have been few empirical studies on interorganisational coordination in the context of development / public service programmes in India. Kesseler has pointed out that interorganisational approach has been seldom used in the study of public policy and programmes.

With the above context in mind, the present research explores the nature and determinants of effective inter organizational coordination through the study of one specific development programme, namely, ICDS. ICDS programme aims at improving the health and nutrition status of children in the age group of 0-6 years and the expectant and the nursing mothers in the weaker sections of the society. The package of services planned out for the purpose includes immunisation, pre-school education, supplementary nutrition, health, nutrition education, health check-up and referral services.

ICDS, a centrally sponsored programme mainly implemented through the development administration was launched in 1975 on a pilot basis with 33 projects, which, by the Sixth Five Year Plan had increased to 1,000 projects. The scheme emphasises an integrated approach and envisages coordination between various development programmes.

ICDS projects in Gujarat State were examined adopting the case study research methods. Data was collected through official documents, detailed interviews with the programme officials and functionaries at the state, district and block levels and through extensive field visits to the project sites, observing the operations of the programmes.

The research questions addressed were: 1) what constitutes IOC; 2) How does it take place; and 3) What are the determinants of IOC, in the ICDS programme.

It was found that for understanding IOC in the development programme context, organisations-in-effect (OE) involved in implementing the programme, need to be delineated. IOC was found to be essentially taking place between different organisation sets with different tasks in hand. The nature and determinants of IOC with these different organisation sets were further explored.

Several propositions have emerged which point towards IOC model in the development programme context.

Satia, J.K.; Mavalankar, Dilip; and Sharma, Bharti. "Micro Level Planning Methodology Using Rapid Assessment for Primary Health Care Services". Ahmedabad: Indian Institute of Management, 1992 (IIMA Working Paper No.1047) (mimeo).

The paper describes the use of rapid assessment technique in micro level planning for primary health care services developed and tried out in three primary health centres of a district in Gujarat State.

A quick sample survey is used to assess service needs, coverage levels and reasons for unmet needs in the villages of a PHC. Village profiles are developed based on variations in unmet needs in the villages of a PHC. Village profiles are developed based on variations in unmet needs, from which general interventions for overall improvement of service coverage and targeted interventions for selected villages are identified. A PHC plan is developed. This methodology seems to be a feasible alternative to the current top-down, target based health planning in India because:

- a) it would make health care more client responsive;
- b) promote equity in the use of health services by focusing attention on under served areas; and
- c) help improve efficiency by focussing efforts on small groups of villages with the highest levels of unmet needs.

Though feasible, this methodology has certain limitations when institutionalizing it at a wider scale. These limitations are briefly discussed.

Mavalankar, Dilip; Satia, J.K.; and Sharma, Bharti. "Strengthening Primary Health Care Services: Insights from Qualitative Research in West India". Ahmedabad: Indian Institute of Management, 1993 (IIMA Working Paper No.1978) (mimeo).

This paper presents results of indepth interviews and focus group discussions in two primary health centres. The purpose of it was to understand reasons for nonuse of services and peoples perceptions about the PHC services.

The major insights were:

1. Sterilization is well accepted but many fears remain in the minds of people about after effects of laposcopic sterilization.

2. Immunization is accepted if it is provided at the door steps but the demand is yet not strong enough that people will go to a fixed place to get immunisation.

3. Strengthening communications activities to support service delivery is a crucial need.

4. Role of Government curative services needs clearer focus.

5. Better organisation of delivery services and improving quality of MCH services is required.

These issues need to be effectively addressed if primary health care is to progress in 1990.

**POVERTY ALLEVIATION, DEVELOPMENT PROGRAMMES, DECENTRALIZATION
AND EMPOWERMENT**

Rao, T.V. "Process Consultation for Managing Change in a Voluntary Agency", National Labour Institute Bulletin, 4(20) (October 1978).

This paper is intended to share some experiences of the author in offering process consultation to a voluntary service agency introducing change in the total organisation. The emphasis of the paper is mainly on the process of changing the organisation, the strategy used for the change and the learning points from the experiences with it. The process of process consultation is also described in this paper. This paper is intended for those introduced in such issues as change, OB, organisation, design, process consultations, rural development, conscientisation of the oppressed etc.

Dholakia, Nikhilesh. "Development Administration as Social Marketing". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.247) (mimeo).

Development Administration has come on its own as an area of practice and study. It is differentiated from conventional administration by its emphasis on social and economic change. In the field of management, the concept of social marketing has been advanced and applied in many non-business contexts. Social Marketing is very similar to development administration in its aims and approaches. Social marketing in fact has been presented as an approach for planning social change.

This paper examines the relationships between development administration and social marketing. The commonalities of the two are discussed using a comparative framework. On the balance, it appears that social marketing and development administration (as usually practiced) are sufficiently different so as not to allow fruitful interchange. This paper makes suggestions regarding how social marketing can be adapted to the needs of development administration.

Paul, Samuel. The Strategic Management Of Public Programms. Ahmedabad: Indian Institute of Management, 1980 (PSE Monograph No. 36).

The purpose of this monograph is to present a framework for analysing the management of public programmes in developing coun-

tries. There has been a great deal of concern about the slow pace of socio-economic development in many developing countries and a growing realisation that their public programmes are handicapped by 'poor management'. Public programme outcomes are of course influenced by a number of variables of which management is only one. The environment in which a programme operates, the programme's resources, both material and human, and the technology underlying the programme are some of the determinants of performance in any setting. Various studies have undoubtedly drawn attention to some important factors which are relevant to the performance of public programmes. Their major limitation, however, lies in their failure to articulate the interrelationships among these variables and recognise the possibility that there may be varying combinations of the variables which are appropriate under different conditions. In the absence of a framework that spells out the interdependence among these variables, we are left with a catalogue of factors which is, at best, of limited analytical value.

This work seeks to fill this gap. The secret behind the performance of a public programme lies in its "strategic management". By strategic management is meant the set of top management interventions which influence the design and orchestration of the strategy, organisational structure, and processes of the programme in relation to its environment. The primary focus of the present study is on the management of development tasks which call for strategies and organisational forms different from those required for managing the maintenance tasks of government. The unit of analysis in this study, however, will be the individual programme which is a part of this total set.

Two important conclusions emerge from this analysis of the different types of public programmes. The set of dimensions specified against each programme type represents a congruent combination. Though the combinations differ in significant respects among the different programme types, each has an internal consistency of its own. It is the existence of congruence that causes positive interaction effects among the variables and hence performance to be maximised in a programme. This conclusion reaffirms the importance of designing and managing the strategic, structural and process dimensions of public programmes in the specific context of their environments and governments' objectives for them. Thus, the focus of strategic management is on the orchestration of congruence.

The second conclusion that emerges is that the top management of a programme has some flexibility in positioning it in the objectives - environment space. It is possible for the top management to make strategic choices in terms of the scope of service, sequencing etc.

The specification of the strategy, beneficiary and the sequence of the programme could be done so as to maximize the programme's effectiveness. Sequential diversification of goals and services is a good example of the application of a positioning strategy.

Positioning is the first step in the creation of congruence.

In this paper the author has not made any explicit reference to the role of leadership in programme performance. There is no doubt that successful programmes have behind them leaders with outstanding qualities. It is important to note that among other things, the stability and continuity they provide to programmes which face considerable complexity in the environment is of great significance.

The implications of this model of strategic management for policy makers and managers of public programmes are threefold. First, the strategic management framework provides some useful guidelines for planning the design as well as implementation of public programmes. Second, equity is a major goal in many of the social and rural developmental programmes. Third, private and public management differ in their degree of control over the choice of goals and means and the resources available to them to influence the course of implementation. This model of strategic management underscores the point that the more complex programmes will pay a heavy price in terms of performance when they ignore the managerial implications of the choice made of the variables.

Gupta, Anand P.; and Rao, T.V. The Disadvantaged Groups in Valsad District. Ahmedabad: Indian Institute of Management, 1980 (PSG Monograph No. 29).

This study was jointly made by the Government of Gujarat and the United Nations Children's Fund for extending, strengthening, and delivering basic services to the disadvantaged groups, especially to children and mothers. The Government of Gujarat took up the exercise of preparing appropriate plans for this purpose. Nine districts were identified for the preparation of plans. The Indian Institute of Management, Ahmedabad was entrusted with the task of preparing the plan for accelerating the process of delivery of basic services to the disadvantaged groups in Valsad district.

A good part of whatever data were available was out of date or suffered from the limitation in that they failed to catch the reality. A case in point was the data on infant mortality. The district statistical abstract (brought out by the District Statistical Office) provides data on the absolute number of infant deaths in different talukas. The rate of infant mortality in the district of Valsad worked out to as low as 21 per 1000. This did not sound credible. Another limitation of the data base was that information in many aspects of life in Valsad district were just not available.

With these limitations, the study's finding was that there were

substantial variations in the incidence of poverty within the state. The incidence of poverty was the highest (75.75 percent) in the eastern hilly areas and lowest (32.11 percent) in the Saurashtra region. According to this study, the percentage of population living below the poverty line to the total population in each of the talukas of Valsad district was nearly 75 percent in Dharampur, Chikhdi, Bansda, Umergaon, Valsad and Pardi talukas.

A sustained improvement in the status of the disadvantaged groups in Dharampur and Pardi talukas would call for action in many fronts. In areas (e.g. hill areas in Dharampur taluka) where poverty was rampant and people were forced to starve and skip meals, steps would need to be taken to start schemes (such as employment guarantee scheme in Maharashtra) designed to increase purchasing power in the hands of disadvantaged groups. In areas where even the basic infrastructure (such as safe drinking water, electricity) was missing, enough would have to be done to create the needed infrastructure. On the other hand, in areas (e.g. areas under the FHC at Rohina) where the infrastructure already existed, but was not delivering the required services to the disadvantaged groups, steps would have to be taken to gear up the preparedness and boost the morale of the delivery agents. In addition, a sincere effort would have to be made to change the focus of the present system in favour of the delivery of health services.

Chattopadhyay, Suman; and Pareek, Udai. Organisation Development in a Voluntary Organisation. Ahmedabad: Indian Institute of Management, 1981. (PSG Monograph No. 27).

Since the late sixties, vigorous attempts have been made to formulate OD more precisely with definitive approaches to associated dimensions of OD like its nature, origin, prospects, strategies, objectives, assumptions, values, process, technology, diagnosis, action and evaluation. Subsequently a sizable volume of literature based on field experience of OD in specified organisation has emerged. A time has come to move towards an inductive phase of theory building. In order to do so, it is necessary to collect experiences and learning from as many diverse fields as possible.

This paper consists of four parts dealing with a) the understanding at the time of some of the key issues involved, b) a conceptual framework developed to formulate inter-relations c) certain hypotheses, assumptions and propositions that were to be the basis of the design of the OD programme and d) the outline of the intervention plan. The perspective of the above conceptual framework and the intervention designs were developed. In developing the design, the following hypotheses were used:

- a) It is possible to examine the related knowledge and its linkage with behaviour.
- b) Such an examination can be made both at the national as well as at the evolutionary levels.
- c) Confrontation of issues leads to development of one's understanding of latent issues involved. This develops insights which may provide added strength and adequacy in dealing with problems.

Paul, Samuel. "Beyond Investment: Some Lessons from Development Programmes", Economic and Political Weekly, November, 1981 (A).

In studies of development programmes, three factors have been identified as critical to success: political support or commitment, resources and leadership. It is argued in this paper that while these factors are important preconditions for successful performance, they do not ensure the success of a development programme.

What conventional wisdom does not take into account is 'strategic management', the set of top management interventions which leaders bring to bear on their development programmes specifically. There are certain critical interventions by the government and the programme leadership which provide the basic framework for operational decisions and set the pace for performance.

This paper discusses the role of these critical interventions, or 'strategic management' with reference to six relatively successful national development programmes selected from different parts of the third world.

Paul, Samuel. "The Strategic Management of Development Programmes: Evidence from an International Study". Ahmedabad: Indian Institute of Management, 1981 (B) (IIMA Working Paper No.390) (mimeo).

This paper explores a neglected area in public management: the managerial and institutional innovations which influence the outcomes of development programmes. The experience of six relatively successful and large programmes selected from Third World countries are analyzed to shed some light on this question. A comparative analysis of the 'strategic management' of these programmes reveals several common features: a clear focus on a dominant goal or service; a strategy of sequential diversifica-

tion of goals; effective integration of the relevant inputs to deliver the service; strong demand mobilization efforts; and the use of a decentralised network of organizations using indirect sources of influence reinforced by highly adaptive planning, monitoring, developmental and motivational processes. The design and orchestration of these strategic, structural and process interventions was facilitated by the relative autonomy of the programmes and the continuity and commitment of their leaders.

Murthy, Nirmla; and Singhvi, M.K. Evaluation of 'TRYSEM' in Gujarat. Ahmedabad: Indian Institute of Management, 1981 (FSG Monograph No. 39).

The main thrust of Training of Rural Youth for Self Employment (TRYSEM) Scheme was on equipping rural youth aged between 18 to 35 years with the necessary skills and technology to enable them to seek self-employment. It was envisaged that training will be practical based on the concept of 'learning by doing' and will be in selected trades which can lead to self employment in agricultural and allied sectors, small industries and service sectors. Trainees were to be selected from small and marginal farmers, landless agricultural labourers, artisans and people below poverty line with preference for numbers of schedule castes/tribes and women. After completion of training, the trainees were also to be given appropriate credit support for setting up their own enterprise.

The objectives of this study was to review the implementation of TRYSEM Scheme in the State of Gujarat at various levels of administration to assess its effectiveness and its impact on the beneficiaries of the scheme. This study was carried out in ten talukas, two from each of five selected districts of Gujarat. The scheme was initiated in August 1979. By the middle of 1980 it was reported that over 10000 trainees was trained under this scheme all over the state. The present evaluation study was designed to understand problems in implementing this scheme, and throw light on specific areas of concern specified in the objective of the evaluation.

The major findings of this study were:

- a) Though the differences between TRYSEM and other employment training schemes were widely known at all levels of administrations, operationally there was no difference between TRYSEM and other schemes in terms of how these were implemented. In the selection of trades, curriculum or type of trainees, there was no difference between TRYSEM and other schemes.
- b) Majority of trainees were not engaged substantially in the skills that they were trained in.
- c) Formal monitoring and follow up systems were not introduced.

d) Selection of trades, trainees and institutions was done in various ways and to some extent haphazardly.

e) Training Institutions lacked adequate facilities, machines and tools for giving practical training.

The objective of self employment, though laudable in itself, was rather an ambitious goal to reach on a target basis. To promote self employment, it is necessary to identify those individuals who have potentials and a drive for such a venture. In the present system it was not possible to identify such individuals and bring them under the scheme. Besides the difficulties of selecting proper persons and giving proper training, there were major difficulties of marketing and finance which were plaguing the entire unorganised sector.

Subramanian, Ashok. "Learning About The Task: First Steps in Relating the Organisation and Environment in Community Service Organization". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.382) (mimeo).

Like other organizations, those offering community services need to relate to the environment in a manner that they can influence it or respond adequately to it. Some of them may not be exposed to or endowed with sophisticated planning capabilities. They would still need to learn to perform the planning function at a strategic level in the organizations. A way to initiating such a function would be to undertake the exercise of learning about the tasks they are involved in. The experience of the CSOs which reviewed its tasks along the lines of the reports presented here suggests that exercises like that of deriving the task could form the initial thrusts in introducing a strategic management function.

Khanna, Indrajit; and Subramanian, Ashok. "Learning from Antyodaya: Some Lessons For IRDP". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.426) (mimeo).

The Antyodaya programme was launched by the Rajasthan government to improve the socio economic well being of the 'last man' in 1977. Benefits were to be first extended to the poorest families in all of the villages in the State. In two years nearly two lakh families were assisted by the programme after two rounds of implementation. Pension, land, self employment and wage employment were the benefits offered. There were several positive

changes in the implementations of the programme in terms of proper identification of beneficiaries and ensuring the availability of credit. On the basis of observations, it is suggested that the Antyodaya programme's objective changed implicitly from one of raising the income level of the beneficiaries to that of distributing benefits. This is perhaps due to the overload of the programme in terms of the activities and functions. Before initiating a programme, it is therefore, essential that careful considerations be given to the strengths and limitations of the implementing organisations.

Thus in designing anti poverty programmes such as Antyodaya and IRDP, means of providing a range of services from distribution of benefits to 'after care' advice and support will have to be assessed and measures taken to overcome the limitations. Otherwise the programme may pursue short term targets and lose sight of the main objective.

Subramanian, Ashok. "Managing Grass Roots Organizations: A Study of Voluntary Agencies in Development Programmes". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.435) (mimeo).

Voluntary Agencies have played many roles in developmental sectors of the country. These roles have ranged from that of a provider of relief during crises to that of a social activist and supporter of long term developmental programme. Over the years these agencies have demonstrated that they have much to teach by way of critical choices to be made in development programmes. Such choices may relate to agency goals, services to be offered to the community, the sections of the community to be served and the technology and organisation involved. This paper makes a preliminary attempt to understand some of the significant responses of VAs related to those strategic choices. Some indications of the need to plan for the sharing of innovations of the apprehensions of the voluntary agencies vis-a-vis the larger proximate systems and of the significance of organizational processes are also discussed.

Three voluntary agencies located in rural areas were purposively selected for case studies. Their dominant services were health, education and income generation respectively. With regard to goals the sources of influence are cited. Change of goals and its implications are discussed.

In relation to the choice of service and the section of the community served, the agencies' experience suggests that specificity of the beneficiary group enables the creation of appropriate services. Analysis of the agencies' concrete socio-economic setting is useful for such specificity. While new services

necessary and are offered, careful planning of diversification appears to be essential. As regards technology, the agencies demonstrate their capabilities in the software aspects of communication and educational processes but may require assistance with the hardware when the situation demands it. In organising for services, the agencies studied present evidence of avoiding organisational overload through linkage with public and private agencies and with beneficiary and other grass roots organisations. Some indications of the need to plan for the sharing of innovations of the apprehensions of the voluntary agencies vis-a-vis the larger proximate systems and of the significance of organisational process are also discussed.

Paul, Samuel; and Subramanian, Ashok. "Development Programmes for the Poor: Do Strategies Make a Difference?" Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.438) (mimeo).

The seventies have witnessed a number of development programmes whose objectives was to benefit the weaker sections of society. Their accomplishments in relation to this objective have been varied. While many factors have helped or hindered their performance, it was the purpose of this paper to understand, in a preliminary fashion, the role of programme strategy in enabling weaker sections to benefit from development programmes.

To begin with, six propositions about specific elements of strategy were listed. These were:

- 1) The weaker sections of the population are likely to benefit from a programme when its service is designed to meet the varying needs of beneficiary groups through a process of adaptation over time where necessary.
- 2) The stronger the vertical and horizontal linkages in a programme service, the greater the chances that the programme will benefit the weaker sections.
- 3) The weaker sections are likely to benefit from a programme when its service is so designed that its appropriation by others is rendered difficult or unprofitable.
- 4) The more participative the process of identification of the intended beneficiaries, the greater the chances that programme benefits will reach them.
- 5) The lower the technological and institutional barriers to entry in the design of a programme, the higher the likelihood that the weaker sections will benefit from its service.

6) The stronger the participation of poor beneficiaries or their organisations in the planning and implementation of the programme, the higher the probability that benefits will flow to the weaker sections.

These were taken from various analyses of development programmes and processes. The overall conclusion is that careful attention to programme strategy might make a difference to the accrual of benefits to the weaker sections. It would seem that specification of needs and attributes of the beneficiary group and hence of matching services to their unique needs, creation of programme linkages, careful design of service to avoid competition for benefits from more powerful interests and a participatory identification process are particularly significant. Available evidence is not adequate to judge the impact of lowering technological and institutional barriers and of participation of various sections of the community in the accrual of benefits to weaker sections. This is not to imply that these are less important dimensions of strategy. The question of participation, especially, deserves much greater attention and deeper study.

Subramanian, Ashok. "The Small Step and the Great Leap: Issues in Managing Replication in Development Programmes". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.439) (mimeo).

Many development programmes are evolved in the basis of pilot projects and experiments. Managing replication then becomes a significant function in the programme. This involves the transfer of the experience of a project, in part or in its entirety, to diverse contexts as part of a large scale programme. Planning for resources and logistics is an important function of the programme management. At the same time, it has also to respond to the organisational and socio-political processes constituting the programme environment. Thus replication is more than a linear extension of the model project and calls for innovative and sensitive managerial responses. This paper makes a preliminary attempt to identify the elements of managing the process of replication. Starting with the objectives of this process and its rationale, the paper enumerates the features of the small scale project that are likely to constrain the design and implementation of the large scale programme. It highlights the notions of content and context of the programme. The review ends with a tentative identification of key elements in the management of replication.

Mathur, Kuldeep; and Gupta, Anil K. "Action Research for Micro Level Planning: A Self Appraisal". Ahmedabad: Indian Institute of Management, 1982 (IIMA Working Paper No.440) Mimeo).

An apex national institute in collaboration with some other institutes in the country was involved in an experiment designed to improve the capabilities of planning and implementation among local level officials. It was assumed that improved capabilities among these officials would lead to changes in district administrative organizations and their procedures. This experiment was tried in six districts of the country for three years. This paper describes the process adopted in undertaking this work and attempts to analyse the experiences of the researchers.

The people for whom the effort at improvement was being designed did not get explicitly involved in the action-research process although some conceptual headway was made in that regard. In fact, much of the cell's interaction with officials and their organizations was less encouraging than originally thought. The interventions strategy also did not involve the local political leadership in the action research process explicitly. In the district, the panchayat leadership demanded that the cell should help in strengthening the capability of people's organizations in monitoring and preparing projects. The Zilla Pramukhs felt that the strengthening of the bureaucracy to perform its role better may not be so helpful to the district.

Paul, Samuel; and Subramanian, Ashok. "Development Programmes for the Poor: Do Strategies Make a Difference?", Economic and Political Weekly, 18(10), (March 5, 1983).

Special programmes for the weaker sections of the population have found an important place in the Five Year Plans since the seventies. The increased plan allocation for these programmes were a response to the growing criticism that benefits will flow to the weaker sections because of the specificity of the target groups and of the activities chosen.

The performance of the different programmes for the weaker sections, however, seems to have varied a great deal though their intentions were similar. This leads to a significant question: under what conditions do benefits of development programmes flow to the weaker sections?

This paper addresses the issue of success of development programmes in a preliminary fashion through an investigation of the experiences of eight programmes: 1) Small Farmers' Development Agency 2) Marginal Farmers and Agricultural Labourers Programme 3) Antyodaya 4) Drought Prone Areas Programme 5) Crash Scheme for

Rural Employment 6) Employment Guarantee Scheme, and 7) Food For Work and 8) Operation Barga.

While the primary focus of this paper is on these programmes, supplementary evidence from the experience of other programmes related to these under review is also presented and where directly relevant lessons from the positive or negative effect of changes in other programmes are discussed.

The overall conclusion is that careful attention to programme strategy might make a difference to the accrual of benefits to the weaker sections. It would seem that specification of needs and attributes of the beneficiary group and hence of matching services to their unique needs, creation of programme linkages, careful design of service to avoid competition for benefits from more powerful interests and a participation identification process are particularly significant. Available evidence is not adequate to judge the impact of lowering technological and institutional barriers and of participation of various sections of the community on the accrual of benefits to weaker section. This is not to imply that these are less important dimensions of strategy. The questions of participation, especially, deserves much greater attention and deeper study.

Subramanian, Ashok. "From Campus to Community Building: Changing Perspectives and Programmes of Development Agencies". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.452 (mimeo)).

This paper discusses the predicament of agencies managing campus oriented programmes that are desirous of moving towards a community orientation and suggests some possibilities for action. Lessons are sought primarily from the experience of two development programmes - a hospital and a women's handicraft centre.

Programmes in need of major organisational change might find it useful to prepare their personnel for reorientation in terms of organisational perspectives and goals. Concrete planning, learning by joint problem solving and planning seem to be some useful processes towards that end.

These set the stage for a long term planning culture in an organisation bound by operational involvement. However, the experiment must be powerful enough to withstand the dominant culture of the organisation in which change is sought. Moreover, interests of groups can be a major constraint to change. It might be suggested that the greater the use of capital intensive technology and techno professional and greater the internal cohesion among groups against any shift in perspective, the greater the difficulty in attempting radical change. Incrementalism may be the

only remedy in such cases.

Paul, Samuel. "Mid Term Appraisal of the Sixth Plan: Why Poverty Alleviation Lags Behind". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.508) (mimeo).

This paper presents an analysis of the performance of India's poverty alleviation programmes during the first three years of the Sixth Five Year Plan based on the mid term appraisal published by the Planning Commission. In relative terms, poverty alleviation programmes have performed much less satisfactorily than conventional economic and infrastructure programmes. The paper examines the underlying causes and argues that the orientation and process of Indian planning must be changed radically in order for our poverty alleviation strategies and programmes to perform better.

Bhatt, Anil. "Issues in the Development of the Most Disadvantaged Groups in South Asia". Ahmedabad: Indian Institute of Management, 1985 (IIMA Working Paper No.591) (mimeo).

The paper discusses the efforts made in the development for the most disadvantaged groups (MDGs) in South Asia. It delineates four broad factors - the social political context of deprivation, the role of the central levels of political and administrative leadership, management and administration of development of the MDG and technology and researches impeding the development of MDGs.

It argues that a major policy thrust which provides differential services through a separate and differentiated administrative set up which involves the MDG as an active and participant group rather than as a recipient group is called for if the efforts for the development of the MDG are to show any substantial results.

This paper was presented as a key paper at the expert group meeting on the cross-national project on the development of the MDG held at Asia Pacific Development Centre, Kuala Lumpur on 25-31 May, 1985.

Vyas, V.S.; Bhatt, Anil; and Shah, S.M. Decentralized Planning

In India. New Delhi: Oxford, 1985.

This book is a study of the decentralized planning in India both in the government and the voluntary sector. It examines the concept of decentralization and looks at the plans made. The initiatives of the Central Government like the Community Development Programme, Panchayati Raj, and rural employment projects are examined. Their failure is seen to be due to lack of acceptance of the concept at different levels, lack of adequate financial powers and the centralized working of the administration. Taking the example of Gujarat, the difference in concepts of decentralized planning and devolution of planning is highlighted. There is only a delegation of planning authority but this is not matched by the competence of government machinery at different levels and the commitment by bureaucracy and people's representation of participation by people in a meaningful manner. The barriers to participation are identified; lack of capacity for sustained effort on the part of the poor, lack of information, lack of contacts between officials and people and lack of effective organization. Thus to make participation meaningful and for decentralization to work, income augmentation is vital. Besides, they should be aimed at smaller groups and proper selection of beneficiaries. There must also be a strong effort at higher political and administrative levels.

Bhatt, Anil. Decentralization for Rural Development: An Overview of South Asian Experiences. Ahmedabad: Indian Institute of Management, 1987 (A) (PSG Monograph No. 59). (See also the publication below).

This over view of the South Asia sub region shows that in the last three decades governments of the South Asia have made a variety of attempts at decentralization and rural development. There has been both administrative and political decentralization in the countries of the sub continent.

The administrative decentralizations has led to the considerable extension of the administrative agencies of the higher provincial or central governments to field levels like the district, the sub-district, groups of villages and individual villages.

There has also been considerable political decentralization in which institutions of local self government and other representative institutions like the cooperatives have been created. Attempts have also been made to associate people in bureaucratically managed organizations and programmes by including their representatives through nominations in boards, committees and councils. Alongwith this, myriad rural development programmes have been launched.

The most critical issue that comes out of this overview is: is it not time that the governments move from rural development to development of the poor?

The second most critical question emanating from the South Asian Experience is: Should decentralization mean shifting of powers and resources from higher levels to lower levels of administrative and political units or should it mean from higher people to lower people?

If rural development has to mean development of the poor and the most disadvantaged, and if decentralization has to mean shifting of powers and resources from higher to lower people, then it would mean strengthening and empowerment of the poor.

This has important political and administrative, policy and implementation implications:

a) The leadership at the highest level will have to show political will and political courage not to be pressurised and pushed around by the established vested interests and local political leadership.

b) It would have to develop a differentiated approach to deal with the highly differentiated and unequalitarian social structures in rural areas.

c) This would call for insulating the poor from the established interests which in turn would call for separate and exclusive programmes for poor.

d) It would further call for insulating the administrative machinery from the rich and powerful in the rural areas.

e) An effective system of recruitment and training; an intelligent system of reward and punishment; and rigorous mechanisms of performance appraisal and evaluation will have to be devised for the developmental bureaucracy.

f) Strong and clear policies have to be devised to support non-governmental initiatives rather than to control and stifle them.

g) However, this would not be enough as NGO work cannot substitute government and the task of the developmental of the poor cannot be transferred to the NGOs in its entirety. Instead, governments should 'transfer' NGO strategies, approaches and styles to government managed programmes. This may require governments to have smaller units of operation.

h) Moreover, the programmes and administrative agencies of the government would have to emulate NGOs in incorporating the components of conscientization and organization of the poor. The central leadership will have to ensure this as against the intermediate and local levels of leadership.

More than three decades of the experience of decentralization and rural development in South Asia seems to clearly suggest that if decentralization is to bring about the development of the rural poor, it will have to be steered by the highest and the most central levels of the political and administrative leadership. Ironical as it might seem, if the lowest and the poorest stratum of the society are to benefit and develop from decentralization, it is the highest stratum of politics and administration which will have to ensure this.

Bhatt, Anil. "Making Decentralization Work For The Poor: An Indian Case Of Community Initiative For Development And Social Justice" in Anil Bhatt, Building from Below: Local Initiatives for Decentralized Development in Asia and Pacific (Vol.2). Kuala Lumpur: Asian and Pacific Development Centre, 1987 (B).

India has tried many forms and programmes of decentralization. While numerous institutions were established including the Panchayati Raj, these were invariably captured by the rich and the influential. It is the rural elite who control the political and public institutions, who also decide the allocation of resources, location of projects and the priorities assigned to them. The bureaucracy, which is the conduit of government's elaborate delivery systems set up in the name of decentralization, acts in collusion with the rural elite. In such a context, all decentralization measures tend to be counter productive as far as the poor is concerned. The hypothesis which emerges is that in a highly inequalitarian and stratified society, the poor will have to 'empower' themselves through organizing on their own, to make the decentralized delivery system work. The process of how such organizations are developed and the very poor gradually empowered, is examined in some depth through the case study of Sarwan Yuvak Mandal which was initiated by the tribal people in the Indian State of Gujarat. It was an organization which attained success in terms of increased economic welfare, but more important, in terms of heightened social awareness and action. While such small action groups can effectively solve problems of injustice and corruption at micro level, it obviously cannot bring about macro level social and political change.

Bhatt, Anil. "Decentralisation For Rural Development: An Overview of South Asian Experiences" in Anil Bhatt et. al. (Eds.), Building From Below, Local Initiative for Decentralized Development in Asia-Pacific (Vol.1). Kuala Lumpur: Asian and Pacific Development Centre, 1987.

This is an overview of the efforts at decentralization in the South Asia sub-region. In the last three decades, governments of

South Asia have made a variety of attempts to decentralize for rural development. There has been both administrative and political decentralization in the countries of the sub-continent.

The administrative decentralization has led to considerable extension of the administrative agencies of the provincial or Central governments to field levels. There has also been considerable political decentralization in which institutions of local self-government and other representative institutions like the cooperatives have been credited. Attempts have also been made to associate people in bureaucratically managed organizations and programmes. Along with this, a myriad of rural development programmes have been launched. All these efforts have led to considerable infrastructure development in rural areas, although of course many areas remain what they were thirty years ago.

The problem generally has been that decentralization has generally meant shifting of powers and resources from higher to lower levels of administrative and political units. The study asks whether it should not mean a shift from higher people to lower people, i.e., empowerment of the poor. If this is accepted as the model, it would call for actions like designing programmes exclusively for the poor, insulating them from the powerful established interests, suitable recruitment and training, encouragement of NGOs and peoples initiatives, and different ways of mobilizing the poor. To do this, the highest stratum of politics and administration will have to take the initiative.

Chakraborti, Indranil. "Social Movements: An Organisation Theory Perspective". Ahmedabad: Indian Institute of Management, 1987 (IIMA Working Paper No.686) (mimeo). (Also see the unpublished doctoral dissertation by the author).

The paper first reviews the available literature on social movements (SMs). The following points emerge:

- 1) Classical literature on SMs have missed out or tended to ignore the organisational aspects of SMs.
- 2) The more contemporary literature on SMs do have organisational focus. However, their theorisation is based on inadequate understanding of SMs and their relationship to relevant organisation. Further, they do not justify why and how the collectives in questions qualify to be deemed as organisations.

Section 3 of the paper attempts to rectify the above lacunae and in the process provides a theoretical framework for SMs with due place for organisation theory. It puts forward the concept of social movement kernel (SMK), the core of any SM that guide and leads an SM.

Section 4 of the paper seeks to establish that the SMK is indeed an organisation, by comparing SMKs with various definitions of organisations borrowed from the standard works in the organisation theory. This opens a wide gamut of possible theorisation on SMKs and hence also on SMs, because of the close relationship between the two.

A preliminary attempt towards this is made in section 5 where ten propositions are put forward.

The last section seeks to briefly highlight the likely usefulness of the study.

Bhatt, Anil. Rehabilitation Approach to poverty Alienation. A Study of BAIFs Tribal Development Project in Vansda. Ahmedabad: Indian Institute of Management, 1988. (PSG Monograph No.60) (See also the publication below) (1980).

Voluntary efforts have been generally more effective in reaching the poor as compared to the government delivery system. At times they have also achieved dramatic short term results. But their overall impact on the conditions of the poor has been uncertain. Even when some organisation has been effective in helping the poor to get their rights in local assets or rise above poverty initially. There has been a relapse back to poverty once the outside input and intervention are with drawn or slowed down. Both government and non-government organisations are still searching for effective models approaches and strategies for poverty alleviation.

It is against this scenario that this study of one such effort at reducing poverty permanently with what one may call "rehabilitation approach" was undertaken. This poverty alleviations programme was undertaken by Bharatiya Agro-Industries Foundation (BAIF), a nongovernmental voluntary organisations. The location of this rehabilitation project of BAIF is 15 villages of Vansda a tribal sub district of Valsad district in Gujarat state. The field work of this study began some time in September, 1986, and continued upto March 1987.

Data for this study was collected from the records of the Vansda project maintained by BAIF. Twenty three project participants or beneficiaries both men and women were interviewed indepth.

In addition, a brief and simple survey of 162 of the 510 participants, who had completed 2 or more years was done. The survey included participants of the wadi activities from all the 12 villages. The remaining three villages were included in the project only one year before. 30 percent of the participants who

had completed 2 or more years were covered by the survey. The survey was simple in that it was mainly aimed at surveying more extensively the benefits to the participants in concrete terms such as income, housing, clothes and other material possessions like utensils etc. Thus this study based on both qualitative and quantitative informations gathered through variety of sources and techniques.

Vansda experience shows that poverty alleviation is long term affair. Each family would require five to seven years of intensive help, support and hand holding. If government therefore had to adopt the Vansda model in any of its programmes, it will have to build into the design of the poverty alleviation programme the provision to stick to each household for at least 7 years rather than three to four years. Also the Vansda project calls for highly economic management. In its project proposal BAIF provided for only five percent on administrative expense. Vansda project calls for very efficient operations management. Finally, and most importantly Vansda approach which emphasises development of assets and skills among poor through application of management technology and idealism rather than mobilization and organization of poor to fight against injustice exploitations, oppression and corruption relies heavily on a homogeneous and harmonious social environment.

The Vansda experience suggests that if social and political environment is not very unfavourable as in case of some predominantly tribal areas like Vansda or Dharampur, the rehabilitation approach which incorporates development of assets and skills with careful application of technology and diligent management would go a long way in poverty alleviation at local levels than spectacular but sporadic social action movements or adhoc and illmanaged developmental interventions.

Sethi, Dipti; and Agarwal, N.M. "Project Linkage Programme: Understanding the Process of Evolution and Review of Pilot Project Experience". Ahmedabad: Indian Institute of Management, 1988 (IIMA Working Paper No.729) (mimeo).

'Project Linkage' is a new programme initiated by the Government of Gujarat with an objective of linking rural development with industrial development. Specifically, the programmes attempt to build linkages which will facilitate absorptions of local people as unskilled and semi-skilled workers in the industries located in backward areas.

The programme is introduced at Vapi and Ankhleshwar industrial estates as pilot projects.

The paper describes the process by which the programme has

evolved. From the case study, a few hypotheses have been generated about the role of democracy and autonomous agencies in initiating and establishing development programmes.

The second part of the report describes the objectives, structures, activities and achievements of the programme. Though it is too early to evaluate the programme, the paper attempts to review the programme based on pilot studies. Certain recommendations are made based on the analysis of the pilot experience.

Murthy, Nirmala; Hirway, Indira; Panchmuki, P.R.; and Satia, J.K. "How well do India's Social Services Programmes Serve the Poor?" Washington D.C: World Bank, 1990 (World Bank PRE Working Paper No.491) .

Social overheads play an important role in the overall development of a country. The State in many countries has pioneered in the provision of various social services - education, health, nutrition, housing, social security and social welfare.

The social services considered here pertain to the basic needs of the poor and are expected to ensure them a minimum quality of life improve their productivity, make them self reliant and help them in improving their levels of living.

This study compiles an inventory of all significant public and private interventions in India for the delivery of such social services, with a view to assess the policy objectives and the extent to which poverty issues have been integrated into the design and implementation of these services. It also studies the access of the poor to these services and identifies the factors that determine access, and the impact of social services on the quality of life productivity and self reliance of the poor.

It looks at social services in the fields of education, health, nutrition, housing, social security and social welfare. The study finds that generally polices have been responsive to the needs of the poor. But they did not go far enough, because they did not take into account demand considerations adequately, were not comprehensive and did not take implementation difficulties into account.

The programmes also seem to maintain the status quo and even strengthen class differences. Diverse factors limited the ability of the different social services delivery systems for reaching the poor. In many cases, the government had not understood the nature of the demand for social services, and did not adequately take into account the diversity of the delivery systems needed. A major criticism of these programmes is also the bureaucratic functioning of their implementing agencies.

The review finds resource nonavailability a major problem, but improving the effectiveness and efficiency of existing resources is more important, especially in education, health and nutrition. Adequate data base at the grass roots level is vital for the success of these programmes.

The policy reforms needed are identified as: closer linkages with income generation, better inter-agency coordination, involvement of the poor and a bigger role for NGOs. Design and implementation of delivery systems can be improved by better targeting and improved management of the programmes.

It identifies the areas for further research policy reform and action to improve the access of the poor to social services.

Shett, Anil. Poverty, Tribals And Development: A Rehabilitation Approach. New Delhi: Manohar, 1990.

The study examines the poverty alleviation programme in Vansda taluka of Valsad, a South Gujarat district undertaken by Bharatiya Agro-Industries Foundation (BAIF), a Pune based voluntary organisation.

BAIF's Vansda project was the first integrated development programme where BAIF had a major involvement by way of working with rural poor directly and intensively. It centred around active assistance to villagers to help themselves. In Vansda, most of the terrain was wasted and degraded. These were developed through contour binding, terracing, digging trenches etc. and fruit and forest trees were planted. The participants were given daily wages from National Rural Employment Programme. But in addition, women had other nursery activity to raise saplings. There were also other income generating activities as well.

Beneficiaries were given training in these activities and also on health, usage of drinking water etc.

The study finds that the project had a considerable impact on the lives of the target population. Incomes before and after the experiment showed dramatic differences. For instance, before the project, 69 percent of the participants had incomes below Rs.1500/- but after the project, only 11 percent were at this level. This quantity and quality of their food had changed, and use of drinking water from unhygienic sources showed a dramatic decline. Along with material improvement, social political improvement also underwent changes. There was better political awareness, at times leading to tensions. Better status for women and receptivity for new activities and innovations were other results.

The author presents a "Vansda Model" where the family is taken as the unit (rather than a village or community), and matching inputs are given to technology, management and values (idealism). But the author is not so sure whether the approach will work in other situations where potential for conflict is very high.

Paul. Samuel. "Beyond Investment: Some Lessons From Development Programmes". Economic & Political Weekly

In studies of development programmes, three factors have been identified as critical to success: political support or commitment, resources and leadership. It is argued in this paper that while these factors are important preconditions for successful performance, they do not ensure the success of a development programme.

What conventional wisdom does not take into account is 'Strategic Management', the set up of top management interventions which leaders bring to bear on their development programmes. Specifically there are certain critical intervention by the government and the programme leadership which; provide the basic framework for operational decisions and set the pace for performance.

This paper discusses the role of those critical interventions, or 'strategic management' with reference to six relatively successful national development programmes selected from different parts of the third world.

Maithreyi, K.R. "Ecological Movements: Strategies for Managing Conflicts Around Natural Resources: A Case Study of Forests". (Ahmedabad: Indian Institute of Management, 1992) (Unpublished doctoral dissertation).

The needs of forests' users are often inadequately addressed to by the state when it formulates and implements forests use policy. Consequently, conflict over management arise which sometimes evolves into ecological movements. Such movements are becoming increasingly instrumental in the articulation and resolution of conflicts, and consequently, in the management of forests.

This study focuses on contemporary ecological movement as mechanisms for conflict resolutions.

The objectives of the study were:

- to explain how ecological movements choose their strategies and

tactics in resolving their conflicts with the state and relate the outcome to the conflict resolution process; and

- to identify the attitudes and behaviour of policy makers and implementers that ameliorate / exacerbate conflictual situations.

The case method of research was adopted using a combination of semi structured, in-depth interviews with the various actors, participant observation and detailed analysis of documents. Three forest movements in Karnataka were studied. They centered around the issues of clear-felling, control over village commons, forest use patterns and lease transfers of forest land to industry.

The theoretical contributions of the research are:

1. It provides the framework for analysing conflicts around state controlled natural resources.
2. It identifies and classifies the strategies and tactics used by ecological movements.
3. It identifies and categorises factors that influence the choice of strategies and tactics.
4. The study conceptualises the life cycle stages of ecological movements and discusses the implication of these for conflict resolutions.
5. It develops propositions that link the strategies, the factors affecting their choice, and the outcome.

The findings can be of use both to actors involved in ecological movements and policy makers and implementors by contributing to a better understanding of conflicts around natural resources.

Some implications for the movements activists are:

- For movements that concentrate initially on building a mass consciousness and strength at grass roots external support such as from mass media, judiciary and politicians, is not vital for success. Their direct action tactics have a greater and far more rapid impact on the conflict resolution process, obviating the need for other strategies associated with a protracted struggle.
- It is strategically advantageous to movements to frame their issues as accumulated series of smaller demands that take them progressively closer to their objective. This provides initial success, that in turn builds confidence and convictions among movement adherence, strength and credibility among the general populace and attracts more supporters.
- This study revealed that if there is a heightened consciousness among the people, a decentralised rather than centralised leadership elicits the greatest grass roots response and consequently,

has the greatest likelihood of success.

- It is strategically important for movements activists to view the state not as a monolith, but as a differentiated body, comprising of both antagonistic and sympathetic elements. A multi pronged approach using cooperative strategies with sympathisers while simultaneously using confrontational strategies with the antagonists can be more effective than a single undiversified strategy.

Some implications for the policy makers and implementors are:

- The study finds that people resort to movements only when the institutional needs of articulating a conflict prove ineffective. If the state is proactive, it could prevent the conflicts from developing into protracted struggles.

- It is important for administrators to recognise the true natures and strength of the movement. If it has a strong grass roots base and a diffused, decentralised leadership, then it is necessary to negotiate at the grass roots level. Discussion with the supposed leading group may be inconsequential if the grass roots leadership is left uninvolved.

- Any attempt to co-opt leaders or to divide groups by luring away some movement adherents, proves counterproductive because in the long run it generates frustration and increased aggression. Therefore, movements must be recognised as a legitimate means for expressing collective discontent and for articulating collective demands. Such recognition can improve the conflict resolution process and prevent conflict escalation.

EDUCATION

Paul, Samuel. "Management Education: Social Costs And Returns", Economic and Political Weekly, 5(22), (May 30, 1970).

This paper seeks to apply cost benefit analysis to the evaluation of institutions set up for imparting management education. It applies the technique to the case of the Indian Institute of Management, Ahmedabad.

The major conclusions of the paper are twofold:

1) The social cost-benefit analysis can be adapted to provide a useful conceptual framework for the economic evaluation of educational programmes. The nature of costs and returns is such that of all forms of evaluation, this approach seems most relevant to the evaluation of management educations.

2) The results of the social cost benefit analysis of the Indian Institute of Management, Ahmedabad show that allocation of resources for management education at the national level is justified even when judged under the most pessimistic assumptions about costs and returns.

Rao, T.V.; and Saruchriya D.S. Preception of College Environment, Work Values and Professional Aspirations of Students of a Medical College. Ahmedabad: Indian Institute of Management, 1975 (PSG Monograph No. 16).

The present study aims at comparing the perceptions of campus climate, work-values and professional aspiration patterns of medical students of a college. The results of this study indicated that final year students of the medical college had relatively less positive perceptions of their campus climate as compared to the first year students. This indicates the possibility that students are likely to start off with a high esteem of the college where they study, but by the time they come to final stages, they tend to view the campus as rather ordinary and less positive than in the beginning. This occurred uniformly in all the dimensions of campus climate. The differences in their work value patterns were also not in the desired directions. For example, final years were less oriented to prefer academic and service aspects of their job but more oriented to prefer jobs on the basis of economic and status dimensions. From the beginning, a general tendency was to keep away from rural jobs. Their aspirations also revealed similar orientations. But while such differences were observed, the magnitude of these differences on these dimensions were not high. Two types of inferences could be made:

a) The medical college does not make much impact on the student in changing his value patterns and

b) Whatever impact is made is made in directions that may not be congruent with the needs of the society. Such impact seems to be rather informal than formal, probably because the medical college curriculum does not have any structural inputs to influence the value patterns of medical students and they are left to develop these on their own. Partly they bring with them some values when they join the college and since they are left uninfluenced, they develop in directions like those observed in this study. By the time they come to final years, their values (acquired through informal socializations) strengthen and as the credibility of formal channels comes down, any influence from these channels become less effective. Hence medical colleges should start thinking about socializing medical students from the time they join the college, especially in relation to their professional values and attitudes. This existing curricula do not cater to this need and it is high time to do something about it.

Rao, T.V. "Class Room Interactions Behaviour of Teachers and Students' Mental Health", Ahmedabad Indian Educational Review, 11(3), (July, 1976)

In this paper an attempt has been made to find out the association between teachers' class room interaction behaviour as measured by Flander's technique and a few dimensions of students' mental health. While studying these associations, attention was focussed mainly on the I/D ratios. (I/D ratios denote the indirect influence behaviour versus the direct influence behaviour ratio) and T.S. ratio (Teachers talk to the students during the period observed) and only with adjustments scores the category wise associations were tested in the end.

Rao, T.V. "Career Decisions by Medical Students: A Profile from India", Medical Education, 10(1976) 284-289.

The study reports the process of career choice and social background factors of medical students from seven medical colleges of India. Social background factors analysed include age, sex, father's education, mother's education and monthly average per capita income of the family. Factors relating to career choice include the age at which the students thought for the first time to study medicine, the age at which firm decisions to study medicine were made, and the subjects preferred for specialization

after MBBS (the first degree in medicine).

Seven medical colleges distributed over four geographic zones of India were chosen for this study. The college from the eastern region could not be approached due to student disturbances at that time. There were approximately 800 students in all doing their final MBBS in these seven colleges. The number of students in each college was more or less uniform, ranging from 100 to 120. Of the 800, only 466 students could be contacted. A questionnaire was used to collect data. The questionnaire was administered and received back by the author personally in small groups. In one college it was handed over individually and collected back. As some students on whom the observations are based is always less than 466.

Rao, M.L.; and Rao, T.V. "Higher Education in India: Trends and Bibliography". Ahmedabad: Indian Institute of Management, 1976 (IIMA Working Paper No.108) (mimeo).

This report is based on the survey of the work done in India on higher education. A lot of documented literature is available on higher education, most of which is general and impression based. An attempt is made to include all important articles and publications in higher education even if they are not research based. The study finds that the situation in the seats of higher learning are unsatisfactory and alarming and consequently falling standards and lowering quality.

Education System Group. "An Exploratory Study of Decision Making Strategies and Organizational Health in Maharashtra Phule Krishi Vidyalaya". Ahmedabad: Indian Institute of Management, 1976 (IIMA Working Paper No.142) (mimeo).

This study is an exploratory research project to analyze the decision making strategies and organisational health in a new multi-campus agriculture university.

This study was conducted during February - May 1976. The study was conducted with the following objectives:

- a) To identify the major strategies of decision making used in this university at various levels in performing the tasks;
- b) To analyse the major tasks performed by this university, using the open system model and to use it as a frame work for the study

of perceptual variables;

c) To analyse the variations in organisational health by

- 1) various colleges, research stations and Government Training Centres,
- 2) designations, and
- 3) departments:

d) To find out the effects of such deprivation or over participation on organisational health, productivity etc. and

e) To develop implications of the results for planning strategies and processes for increasing the effectiveness of the system.

The present study attempts to explore both the structural and operational aspects of decision making in the university systems.

It can be concluded that organisational health as perceived the respondent is poor in the MPKV. Areas like general administration, decisional efficiency, personnel function research and examination system seem to be important areas where they expressed poor organizational health. Besides like the Academic Council, Research Committees etc. were also found to cause poor organisational health. Improvement in the general administration was the sole concern for the respondents.

Rao, T.V.; and Vijaysree, P. Psychosocial Maturity and Motivational Profiles of Management Students. Ahmedabad: Indian Institute of Management, 1976 (PSG Monograph No. 15).

This study was undertaken to assess the motivational patterns and psychosocial maturity of management students. TAT stories written by the management students at Ahmedabad formed a major basis for this study. Data collected from various occupational groups were used for comparisons. Several other psychological tests were administered on the management students to study other dimensions of their motivation and personality. This report is intended to present the results of this survey on the management students and formed the first phase of a longitudinal study. In the longitudinal study, it was intended to follow up these students and study their managerial styles etc. after they became managers and performed the managerial roles for some time.

The main sample for this study consisted of the first year students of the Post-Graduate Programme at IIMA 1976-78 batch. The tests were administered in the second term. The students filled up the questionnaires at home and returned. McClelland's TAT pictures for N-Ach were shown in the class room in groups. The tests were administered for feed back and classroom use. Return-

ing the questionnaires was made voluntary as a consequence of which only about 150 of the 175 students returned the filled in and scored answer booklets. As different inventories were distributed in different days, some of those who returned the questionnaires did not return all the tests. The final sample for which complete data on the above stated dimensions were available was 105. For different tests, the sample size differed. Apart from this group, second year PGP students of the 1973-75 and 1974-76 batches offering the laboratory course on entrepreneurial motivation at IIMA were also used for comparisons. The non verbal sensitivity test and the employee rating scale were not administered to these two groups. On the other hand, a Personal Orientation Inventory measuring the self-actualizing tendencies on 16 dimensions was used with these two groups.

The data analysis techniques used here influenced by the following objectives of the study:

- a) To find out the reliability of the psychosocial maturity scale.
- b) To find out the inter-relationships between the different variables.
- c) To study the impact of background factors like age, sex, experience, year of study and educational background on the psychosocial maturity and personal orientations of the students.
- d) To compare the psychosocial maturity levels and personality and social orientations of management students with executives from other professions.

It may be noted that 'psychosocial maturity' is a dynamic aspect of behaviour. It is constantly changes when people are exposed to new environment, and may contain very fluid psychosocial orientations. TAT stories were written by a group of 49 first year students during the first term. There were the students who volunteered for getting themselves tested.

Of the 49 students studied, in 29 of them, the model stage of psychosocial maturity had not changed. In all except one of these cases showing this consistency, the model stage was four. In the one case it was the first; of the rest, in three cases there was consolidation of the model stage in the second test. These three of them showed two model stages in the first test but only one of them was retained by the second test. Only in 13 cases there was a complete change in the model stages of psychosocial maturity between the first test and the retest. To the extent these results are indicative of the reliability of the test and under the circumstances stated earlier the scoring system may be considered reliable.

In order to study the association between student background variables, age, educational background, experience and sex on psychosocial maturity patterns. chi-squares were computed between

the two types of variables. For the psychosocial maturity variables, model stages, dominant content areas, dominant authority patterns, dominant objects, dominant feelings and dominant orientations to action were taken separately.

Pareek, Udai; and Rao, T.V. "Application of Systems Approach at the Micro Level in Education: Two Cases". Ahmedabad: Indian Institute of Management, 1977 (IIMA Working Paper No.181) (mimeo).

A systems approach to teaching and learning procedures starts with an analysis of the existing situation followed up by setting up of goals for such a situation defining evaluation mechanisms, generating alternate solutions to achieve goals, selecting a solution that has the maximum benefit and minimum costs, detailing out the design of the system, developing monitoring mechanisms and introducing the selected solution.

The system approach may not succeed in education unless the curricula are accordingly framed and worked out in detail. By building this approach in curriculum construction, the problem faced by teachers of not having enough time to devote to curricula may be solved. Similarly, students would then be able to see the utility of the systems approach. The suggestions made for this purpose are:

a) National policies of policy formulation and others concerned with curriculum development should discuss this as a useful approach for designing the curricula and introducing systems approach as an approach to integrate various parts of curricula, build linkages amongst various steps and contents in order to achieve the thrust which they want to achieve.

b) Enough stress should be laid on local initiative and it should be made abundantly clear that systems approach does not mean conforming to a set procedure. Systems approach implies understanding and applying the spirit with enough scope for innovations and local initiatives.

Kaul, Mohan; Kuchhal, S.C.; and Chowdhry, Kamala. Report on the Study of Framework, Structure and Funding of Technical Education System in India. Ahmedabad: Indian Institute of Management, 1977 (PSG Monograph No. 18).

The planning commission had set up a Task Force in 1972 to study

the vocational and technical education system in India. The task force covered specifically the programmes of technical education which come within the purview of the All India Council for Technical Education as well as Vocational training and apprenticeship programme under the National Council for Training in Vocational Trades and the Central Apprenticeship Council. The task force recommended that a few studies relating to Technical Education should be conducted by various institutions. On the basis of the Task Force's recommendations, the Planning Commission assigned the study of frame work, structure and funding of technical education system in India to the IIMA. This report has been prepared in relation to this study.

The study was conducted in four states, namely, Gujarat, Uttar Pradesh, West Bengal and Tamil Nadu. The study and recommendations relate primarily to the organisational set up of technical education at the Centre, State and Institutional levels. Academic issues like the type of training to be imparted, development of courses, admission procedures, etc. were beyond the scope of the study.

A questionnaire survey to study the mobility and employment pattern of diploma and ITI level students was conducted in West Bengal and Tamil Nadu.

Interviews were held with different sets of people such as

- a) Officials from Central Education Ministry dealing with Technical Education,
- b) Officials from Planning Commission relating to technical education,
- c) Vice Chancellors of selected universities,
- d) Directors of Technical Education and Directors of Vocational and Manpower Training, and
- e) Officers from state level Education Departments and some representatives from the employment sector.

The study found that institutions were not provided adequate incentive for generating funds through their own efforts. They had to rely on the state or national exchequer. This was also due to the practice of reducing financial assistance if there was a generation of income by an educational institution by undertaking testing, consulting and production activities. There were a number of institutions and polytechnics which had tried production-cum-training schemes in their institutions, the examples being Allahabad Polytechnic and PSG Polytechnic at Coimbatore. The effort was highly institutionalised. Some of the institutions made efforts to develop contact with the industry by undertaking consulting and research projects, but these efforts were not encouraged. There was not much initiative developed at the institutional level as the funds generated through these projects

were deducted from the financial assistance given to the institute. Hence, the report argues, engineering colleges and polytechnics should be encouraged to undertake testing services, repairs and maintenance jobs and consultancy works as a means of resource generation. Industries particularly in the public sector should be urged to adopt at least one polytechnic in the nearby region. Similarly, industrial units in the private sector should be persuaded to adopt polytechnics. Although technical education will continue to be funded by public finance, efforts should be made to raise funds from various industrial units and other employment agencies to finance the educational schemes in various institutions. This will be feasible only to the extent of efforts made at the institutional level. The industrial units can be also help by way of donation of equipment or deputing their executives for teaching. This however, will depend on the efforts individual institutions put in developing strong linkages with various industries and employment agencies. The basic effort therefore should be to make individual institutions viable units for planning and implementing the technical education schemes keeping in view both academic and financial aspects. The preparation of annual budgets at the institutional level, on specific items and schemes, is therefore, stressed so that it forms the basis for planning.

Rao, T.V. "Education for Development: Some Experiences from an Action Research Project". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.191) (mimeo).

The concept of action research emerged out of disillusionment with research contributing to the improvement of a practice or resulting in social action and also the concept of action research has been clarified through the various studies undertaken in the field of social relations and education. Action research has been defined in terms of the relationship of research with field practices.

This paper is intended to share some of the experiences the members of the Education Systems Unit had in relation to an action research project in educational innovations. In this project, a series of attempts were made by a group to introduce change processes in rural areas and development of people.

Pareek, Udai. "Educational Activities" Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.203) (mimeo).

An organization, or a unit of the organisation if the organization is too large, develops its own culture, and influences people who come to work with it. The organization, deliberately or unintentionally, influences several sectors of the society in which it is located. Certain types of organizations, however, are less influenced by external sources than others and vice versa. The organisation learns from such an interaction and undergoes some change. This adoptive role of the organization has been discussed in various chapters in the first part. The chapters discuss the role of the organization in the influencing its own people and outside agencies.

Organizations may plan as to how they can use more indirect influence on behaviour, and encourage creativity and development of potential in other agencies and among their own people. This would mean providing the least guidance and recognizing the learners as important resources for learning. Then education activities become a process of mutual influence and the organization is as much in the learning role as the agencies it is trying to influence. The whole approach to teaching and training changes. Much more emphasis is given on helping the learner discover, innovate, develop his own systems, and develop capability of self learning.

Rama Rao, T.P.; Rao, T.V.; and Singhvi, M.K. A Computer Model for Administration of Teacher Transfers. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 4).

It was hypothesized on the basis of the preliminary investigations made by the Education Systems Unit group in 1975 and subsequent discussions that most of the problems in administration of transfers were due to the size of the data that has to be handled by the officers. They had to depend on their own memory and while trying to transfer one teacher, they may end up creating disturbances that would necessitate a series of other transfers. While political pressure and such unavoidable factors keep influencing the administration, with a computerised handling, the disturbances can be minimised and a number of people could be satisfied.

This study aims at developing a computer model by which it is possible to suggest a combination of transfers that satisfies the maximum number of transfer seekers with a minimum number of actual transfer movements, thus saving time of educational administrators. A quick and timely solution to transfers, identifying the various difficulties experienced by teacher and administrations, improvement in school standards through timely transfers and balanced supply of teachers to different schools are some of the advantages of using the systems proposed in this study.

Mathai, Ravi J.; Fareek, Udai; and Rao, T.V. Management Processes in Universities - A Study of Decision Making and Organizational Health in Two Agricultural Universities. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 1).

This monograph presents the results of an attempt to diagnose the organizational health and decision-making strategies in two agricultural universities from two different states.

It analyses the task structure and decision making strategies used in the two universities. The tasks analyzed are: teaching, research and extension. Decision making is analyzed in terms of the different bodies involved and their roles. Participation and the extent to which members of various subsystems feel satisfied or deprived of participation in decision making in relation to different task areas are also analysed.

The study identifies the characteristics of organizational health and, the pattern of organizational health in both the universities. It also surveys the extent of organizational conflict in the two organisations and their sources. The existing system dynamics that facilitate or inhibit the integration of research, teaching and extension are discussed. On the basis of the survey results, some models for increasing the effectiveness of agricultural university systems are presented.

The comparative study indicates that integration of research, teaching and extension activities should start at the individual level. The universities could develop process mechanisms that lead to the encouragement of all the three activities to be undertaken. The organization health and system outputs are decided by a variety of factors like the history of the university, structure, strategies used to achieve objectives, socio psychological culture among the members, leadership roles and the nature and structure of the tasks.

Many implications for the design of universities are brought out by the study, the prominent among which are relevance of goals to society, the degree to which these goals are shared by members, commitment and the initial trust reposed on them, evolution of appropriate mechanisms etc.

The study recommends a flat structure, involvement of faculty even in administrative functions, committee based decision making, predominance of the academic rather than the administrative functions, emphasis on peer relationships etc. It in fact covers a wide area of institutional building like structure, role design, norms and culture and faculty evaluation.

Rao, T.V. Student Orientations in Professional Education. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 2).

This is a study of professional attitudes, needs, values, alienation, protest-orientations and perceptions of organisational climate among the students of different professions.

The study was undertaken with the objectives of surveying and preparing profiles of students from agriculture, education, engineering and technology, management, medicine and social work. The profiles related to their family and socio-economic background, their professional and institutional choices, their professional aspirations and apprehensions, their attitudes to their professions, their work values, personality needs, perceptions of institutional environment, extent of their alienation and their reaction patterns to campus issues. The study also seeks to assess the extent of differences in these profiles of students of different professions and institutions in relation to the above stated dimensions; to study the extent to which the gap between student needs and institutional environment can predict student alienation, frustration and protest behaviour in the campus and to prepare institutional case studies with strategies for renewal.

Implications for redesigning the curricula of these professional programmes are outlined. An important observation made is that these professional programmes neglect development of attitudes and values and some times even promote what is not desirable in some of these professions.

Rama Rao, T.P.; and Singhvi, M.K. A Computer Model For Location And Upgrading Of Schools. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 3).

This paper presents a computer model for the selection of locations for new schools and for upgrading existing schools. It also aims at facilitating quick decisions on the number of schools to be opened or upgraded and the final selection of localities and schools once the number of schools is decided.

It also helps in identifying the minimum number of schools catering to the needs of various localities. Some of the uses of this computer model are: quick solutions to complex problems; a systematic experimentation of policies, identifying needs of deserving localities, reduction of the time gap between government decisions and actual implementation and streamlining procedures for decisions in various issues related to schools and their

Rao, T.V.; Bhatt, Anil; and Rama Rao, T.P. National Adult Education Programme in Rajasthan: First Appraisal. Ahmedabad: Indian Institute of Management, 1979 (PSG Monograph No. 19).

This was the first appraisal of the National Adult Education Programme of Rajasthan. This was taken up in 1979. It limited itself to the work of seven voluntary agencies in Rajasthan which functioned during 1978-79. A 10 percent random sample of the centres was chosen from the universe. For each agency, one centre rated as the best and another the poorest by the concerned agency, were included in the sample. The research investigators visited agency headquarters on an unscheduled day, randomly chose the centres to be visited and completed investigation of all those centres on the same day. This ensured the element of surprise during the investigation. In all, 125 centres were visited; 119 instructors, 458 learners, 139 dropouts, 348 village elite and 213 potential learners were interviewed. Ten different questionnaires and schedules were prepared to collect data for the study.

The adult education centres (AECs) had become centres for teaching literacy. The need to learn reading and writing had motivated a large percentage of learners to join the AECs. An informal literacy test conducted by the investigators showed that a very high percentage had become literate considering that the average attendance of adults per centre was 15. About 50-60 percent of the centres were dominated by learners from low income and low caste groups.

The distance of the centres from the homes, preoccupation with work during the day time, inadequate facilities at the centres and non-suitability of night time for classes were some of the major problems faced by the learners in coming to the centres.

The instructor was found to be the most critical element of the programme. In terms of their selection, a substantially high percentage were contacted by the agencies and/ or were selected by the village elite. Involvement of the villagers in the selection of the instructors appeared to be uniformly low in all the agencies. Very few instructors mentioned the use of AECs in relation to functional knowledge and social awareness. This indicates that they had either not been able to see the relevance or had not acquired the competence to deal with these two components of the programme. Suggestions by instructors for improvement included provision of better facilities and better educational materials at the centre.

A large percentage of the learners dropped out by the end of the

second month. The main reasons for discontinuance were migration, occupational pressures and illness. The village elite were helpful. The study also provides a critical assessment of the monitoring and information system for NAEF functioning of the SRC and the role of the state government.

Pestonjee, D.M.; Laharia, S.N.; and Dixit Dipti. National Adult Education Programme in Rajasthan: Second Appraisal. Ahmedabad: Indian Institute of Management, 1979 (PSG Monograph No. 23).

This study covered the work of fifty voluntary agencies not included in the first appraisal (See Monograph No. 19). This report also focusses on the activities and performance of adult education centres and voluntary agencies. The methodology adopted for this study does not differ greatly from the first one. Since a much larger area needed coverage in the second study, the districts were divided into four working zones. A 10 percent sample of AECs was randomly chosen for each agency. In each centre, five learners, four potential learners, three drop outs, three numbers from the village elite and one instructor were interviewed. Efforts were made to contact all the concerned District Adult Education Officers. The rest of the sampling procedure was the same as in the first study. Nine different schedules were used to collect data from different respondents. This study was based on appraisal of 186 centres; 768 present learners, 321 dropouts, 464 potential learners, 555 village elite, 184 instructors, 53 supervisors and 15 District Adult Education Officers.

The main findings: A large majority of the learners had agriculture on their main occupation. They came to the AECs to learn reading, writing and maintaining accounts. The male learners however desired more information on agriculture, animal husbandary, health and hygiene, banking and panchayats. Women learners desired classes in sewing, knitting, home management, child care, health hygiene and agriculture. Lack of proper arrangement for seating, lighting and drinking water were the main problems. Apart from resolving these problems, suggestions for improvement included provision of facilities for recreational activities, teaching on functional aspects and more teaching-learning materials.

The maximum dropouts were in the age group of 15 - 20. They belonged mostly to the higher castes and were agriculturists. Fatigue after a hard day's work, family and/or occupational pressure and migration to neighbouring villages for jobs caused males to dropout while females quit because of marriage, domestic work and fatigue.

Coming to the potential learners, most of them were willing to join classes. Their reasons for staying away were similar to

the reasons indicated for dropping out. The village elite were aware of the AECs being run in their villages and had a favourable attitude towards it. The instructors were dissatisfied with their present rate of honorarium. They also wanted longer periods of training of a practical nature. Besides proper facilities for lighting, seating, drinking water, and recreational activities, and more honorarium, they also suggested that teaching and learning material should be supplied in time and the best AEC of the agency should be given an award. Supervisors cited lack of conveyance, inadequate T.A. and problem of safety and security at night as the main problems faced in supervision work. Non-availability of kerosene oil, lack of seating arrangements and recreational facilities impeded the progress of AECs.

The study emphasised the critical role of the instructor and suggested that he should have better training. It was felt that he should be at least a matriculate. The authors highlighted the need to constitute or revitalise the District Adult Education Advisory Committees. Involvement of the NAEP functionaries needed to be encouraged by instituting rewards at various levels. Corrective measures needed to be taken to ensure adequate emphasis on functionality and 'awareness' components of the programme.

Ganesh, S.R. "Twelve Thousand Hours at an IIT: Preparation for Elusive Excellence". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.302) (mimeo).

An under-graduate student at an elite technological institute like the IIT, spends anywhere upto twelve thousand academic hours over five years in the most formative years of his life. Since the pre-independence days there was a plan to establish an Indian MIT and this had found concrete expression in the recommendations of the Sarkar Committee Report in 1946. The objective of setting up such an Indian MIT was conceived of as to produce creative scientist - engineers in India. Therefore, it is not unrealistic to expect that the student who spends twelve thousand hours at anyone of the five IITs would contribute towards technological excellence in India.

This paper argues that due to several organisational contradictions which permits the Institute, neither the operations for, nor the pursuit of, technological excellence has come about, nor can come about under the prevailing conditions. The contradictions identified are:

- 1) Integrated development through an approach that is piece meal.
- 2) Encouragement of inquiry but the teaching is through spoon-feeding
- 3) Avoidance of contacts with students and evasion of responsi-

bility but the teachers desire involvement in the running of the institutes.

4) They desire excellence, but do not put in the needed efforts.

The paper argues that these contradictions have to be resolved before an IIT can truly prepare an undergraduate for technological excellence.

Pestonjee, D.M.; and Singh, A.K. "Schools and Students Across Culture". Ahmedabad: Indian Institute of Management, 1980 (IIMA Working Paper No.340) (mimeo).

This study attempts to explore the personality differences of the students who are studying in denominational and non-denominational institutions. The personality variables which are measured are dogmatism and security - insecurity. It also seeks to observe the possible effects of religion and sex on the two personality characteristics. The sample comprises of 850 adolescent students belonging to the Hindu and Muslim religions and studying in denominational and non-denominational institutions. The main findings indicate that students in denominational atmospheres, Muslim students and boy students are more dogmatic and more insecure in comparison to non-denominational students, Hindu students and girl students.

Pareek, Udai; and Rao, T.V. Training of Education Managers: A Handbook for Trainers in Planning and Management of Education. Ahmedabad: Indian Institute of Management, 1980 (PSG Monograph No. 25).

The effectiveness of training systems like formal institutional training, distance teaching, field studies and other forms of information dissemination depend upon how well they are designed, organized and operated. Effective management of these training systems require a thorough understanding of the training process, mechanisms of identifying training needs, techniques of identifying and developing content or materials that would cater to the training needs, capabilities to develop a training strategy, ability to design the curricula, capabilities for managing the training, familiarization with different methods of training, ability to select appropriate method of training, evaluating the training and continuously improving the training design and content.

This handbook is intended to cater to these needs of the trainers and training managers in the field of educational planning and administration. This handbook specifically serves the following

purposes:-

1. It presents a detailed outline for the training process and the role of the trainer in training education planners and administrators.
2. It outlines different methods of identifying training needs.
3. It presents mechanisms of evolving and to present an overview of training strategies.
4. It discusses mechanisms of translating the training needs into a curriculum.
5. It discusses the various training modalities and methods and criteria for selecting the methods and modalities.
6. It outlines some of the issues and choices to be made in organizing training.
7. It outlines strategies of evaluating and improving training programmes.
8. It presents mechanisms of organising and managing distance training.
9. It presents some detailed mechanisms for developing and using self-instructional material, case studies, role-play, simulation exercises, field work and small group work.

Training of education managers requires familiarity with educational planning and administration as well as training. Generally professional trainers lack familiarity with education management and education managers lack familiarity with the training technology. Increasingly, experienced education managers are participating in the training of educational planners and administrators. This hand book is meant for such managers and for institutes engaged in the critical task of such training.

Rao, T.V.; Bhatt, Anil; and Rama Rao, T.P. Adult Education for Social Change: A Study of the National Adult Education Programme in Rajasthan. New Delhi: Manohar, 1980.

The National Adult Education Programme was undertaken with a view to banishing illiteracy and making literacy an instrument for the people to move towards improving their socio-economic status and the quality of their life.

Based on extensive field work, this volume attempts to study and assess the impact of the National Adult Education Programme in the State of Rajasthan. It surveyed 1785 out of 3615 Adult

Education Centres in the State.

The study looks at (i) the beneficiaries, their background, their needs, the level of their learning in terms of literacy, functionality and social awareness, reasons for dropouts, facilities at the centres, problems faced by instructors and the overall impact on them; (ii) the perceptions of villagers about AEC, the role they are willing to play, the agencies involved and village resources going into AE; and (iii) the resources at the block level used. Similar questions were studied at the Agency and State levels also.

The findings are spread over a wide variety of topics. But the major finding of the study is that despite all the cynicism, AE has had a definite positive impact. Despite the extremely conservative budget, about 15 to 18 adults per centre were found to be becoming literate, some getting many benefits also besides literacy. Of course, improvements are possible and a few are suggested by the study, like involvement of many other agencies like the Agriculture Department; follow up measures like production and distribution of reading materials etc. But the main thrust in the study is the message that "NAEF in Rajasthan is doing well and it should be encouraged by all. It has great potential".

Ganesh, S.R.; and Sarupriya, Dalput. "Sorting and Shaping: Explorations in Helplessness of Higher Education Institutions". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.397) (mimeo).

After independence, the Education Commission called for creation of new institutions to undertake the task of higher education in technology, agriculture and management.

In this paper, we explore the implications of importing the 'MIT model' in the case of IITs and venture some possible explanations of the feelings of institutional helplessness through in-depth data collected in one IIT. The authors believe that the 'sorting' process implicit in the MIT and the business school models, in particular when imposed on the Indian socio-economic milieu has aggravated the isolation of the elites from the realities of the countries as well as increased dependence on the West. This, has, in turn, resulted in mediocrity and irrelevancies even in these islands of intended excellence. The IIT experience serves to illustrate this argument.

Gupta, Ranjit; Mathai, Ravi J.; Moulik, T.K.; and Tripathy, Arbinda. The Rural University: The Jawaja Letters. Ahmedabad: Indian Institute of Management, 1981 (PSG Monograph No. 38).

This document is a collection of letters on the Jawaja Experiment. At the time of the experiment, these letters acted as programme reports. It was thought by the authors that this might be of interest for a number of reasons.

Firstly, this series of letters are an example of action initiation and participation as a basis for observational research. The editors are well aware that this is in itself controversial. Secondly, perhaps these letters portray the reality more closely than the subsequent major narrative¹, since by the time the latter was written, altered perceptions and biases might have influenced the narrative. The large narrative document, however, does quote substantially from these letters. Thirdly, these letters illustrate the actual processes as they developed. Fourthly, even though in some instances it might be difficult for the reader to link some events and circumstances, it can be seen as to how options and strategies were chosen and decisions made. Fifthly, it might also bring out how circumstances caused the earlier assumptions to be changed. Sixthly, many organisations collaborated and the letters once again give examples of the difficulties of inter-institutional collaboration.

Rao, T.V.; and Pareek, Udai. Learning from Action. Ahmedabad: Indian Institute of Management, 1981 (PSG Monograph NO. 37).

Five case studies have been included in this monograph with different settings. The case studies were selected to present a wide range of efforts being made in India in education as a means of improving the condition of the under-privileged. The selected case studies range from direct educational efforts to change amongst the underprivileged and linking these efforts to education. The case studies presented include: The Rural University Experiment in Rajasthan; the Self Employed Women's Association (SEWA) experience in Gujarat, educating tribal youth through participatory methods used by the National Labour Institute, development of youth leadership through adult education by Seva Mandir, Udaipur; and the Ideological Education Experiment at Lokasiksha Parishad in West Bengal. There are several common elements in these studies.

1. For the details of this experiment, see Ravi J. Mathai, The Rural University: The Jawaja Experiment in Educational Innovation. (Bombay: Popular Prakasham, 1985).

Most of the learning relate to two main aspects. The first aspect is concerned about how the organisers are responsible for action and education work, and how their institutions are organised. The second aspect relates to the working of the programmes, the priorities given, the main focus of the programme etc.

The Rural University is a clear example of the view of client as a co-learner and co-actor. The objective is to generate as many self-initiated, self-reliant agents as possible in different areas of activity. The mechanism of continuous focus on process and creating process awareness in the project team as well as the client groups is a clear evidence of this. The clients are treated as givers to the project team as much as the project team is to the clients. The same is attempted in SEWA and Seva Mandir. In both the organisations, the clients participate and determine their own goals and activities. The organisers merely play a catalytic role of helping them try different organisational formats for collective action and help them explore the environment and make demands on the outside system. The organisers of SEWA feel upset at times when some of its members treat SEWA as their employer. This concern on the part of the organiser is reflective of their orientations to the client. NLI project also takes a similar view. In fact, unlike in other experiments, the involvement of NLI team is not continuous, in all these experiments, the clients are highly involved and they are the actors. They do not merely participate in all decisions that affect them but they themselves decide what affects them, what does not and what they should do. It is this high level of participation and co-action by the client groups that seem to make these experiment unique.

Harihar, R.; and Rao, T.V. Adult Education in Rajasthan: Third Appraisal (Jaipur District). Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 45).

The experience of conducting two earlier studies on this theme had provided a better understanding of the Adult Education in Rajasthan programme, especially its client group and new areas of research. (See Monograph No. 19 and 23) But it is not a programme to be evaluated merely on the basis of target achievements, figures and statistics. Research in NAEP, therefore needs to emphasise the qualitative aspects of the programme. It must describe the impact of the programme on its client group in its terms of their behaviour, attitudes, motivation and awareness. The study should also suggest a curriculum for the forthcoming programme according to its findings about the needs of the client group. Adopting these considerations as the guidelines, the authors decided to make the present appraisal an in-depth districtwise study rather than a study of a large sample across the

state. A detailed field diary was maintained throughout the course of the study. It presents the experiences of the author in terms of what they saw of the programme in the villages, what they heard about it from different sources and how they felt with regard to their experience.

It was found from the study that the instructors largely belonged to the upper castes. A large number of male and female instructors were trained for specific jobs like community health work, cooperative work, tailoring, leather work, masonry and Ayurvedic medical practice. A majority of instructors who were motivated by the need to make villagers literate claimed to be very successful while instructors motivated by a desire to do social service achieved average success. All the instructors felt that a sharing of experiences and discussion of problems after some months had passed would be very useful. This would mean organising short training sessions during the services. According to the instructors, supervisors were usually engaged in solving problems of learners which they could do only to a limited extent. They were generally helpful in mitigating rather than solving problems. Over seventy percent of the instructors who invited external functionaries were rewarded with a visit. Forty four percent of the instructors had not invited any external people to visit their AECs.

Male learners were mainly engaged in agriculture and female learners were mainly engaged in household work. A number of other occupations also emerged among the learners. The total family size of learners ranged from 4 to 20. The learners were largely aware that the programme ran for ten months and a majority of them claimed to have attended AEC services for over eight months. The major motivating factor for learners of both sexes in joining AECs was the urge to become literate. The source of awareness was found to be exclusively social contact in the case of family welfare departments, post offices, and police stations. In over forty percent of the learners, source of awareness was found to be both social contact and AEC information. It was found to be exclusively social contact in twenty nine percent of the cases. A majority of the learners stated that they did not have any problem in attending AEC. However, tiredness after work in the fields was found to be a major obstacle to preventing learners from attending AECs.

The supervisor was closely connected with the functioning of the programme right from the beginning when instructors were selected and AECs opened; then during the course of the programme when learners were taught and evaluations took place and finally in the choice of the AECs. It was their responsibility to see that materials were distributed regularly to the AECs. Selection of AEC locations and instructors was based on initial surveys made by supervisors. Supervisions were undertaken during the evenings when the sessions were in progress. Supervisors felt that selections of location for AECs would be more realistic if the district level officers, village leaders, and panchayat office-bearers together discussed with the supervisors when deciding the

locations. They felt that more information on the locations of learners which would help them to improve their output and increase their earning was likely to be far more attractive than mere tuition in literacy. The acute need for follow up programmes was once again stressed. Apart from this, separate budgets should be created for cultural programmes and competitions, films shows etc. Supervisors enjoyed good relations with their instructors on the whole. Instructors were found to be quite loyal to their supervisors.

Harihar, R.; and Rao, T.V. Adult Education in Rajasthan: Third Appraisal (Jhunjhunu District). Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 46).

The third appraisal of the adult education programme in Rajasthan entered its final phase with the commencement of the second in-depth study (For the first in depth study, see PSG Monograph No. 45). The new evaluation strategy evolved for the first in-depth study in the district of Jaipur was used in the second study also. After discussions with the officials in the Directorate of State Adult Education, it was decided to take up the district of Jhunjhunu.

Jhunjhunu had a literacy rate of 27.8 percent at the time of the study. In 1971, the same district had a literacy rate of 23.2 percent. Three hundred AECs were opened in 1981-82 in three panchayati samithis of the district. 217 AECs were for males while 83 AECs were for females. According to official records, the total enrolment was 7850. The methodology used for this study was identical to that used in the case of Jaipur district. (Monograph No. 45) A total of 31 AECs were visited for data collection. This was slightly more than a ten percent sample of the total number of AECs run in the district.

The main findings about the instructors were:

a) The Instructors were found to be young. They largely belonged to the age group of 21-25, and had studied upto Metric or Higher Secondary in a majority of the cases. A very small percentage had received training in functional skills.

b) Self-motivation and recruitment through formal application figured as the main methods by which persons came to be appointed as AEC instructors. One fifth of the lady instructors were chosen on the Sarpanch's recommendation.

c) A majority of the instructors repeated the theme of social service when asked about their motivation to teach adults. A smaller percentage were more specific in their statement saying that the need to serve the cause of literacy had inspired them.

d) Around half of the instructors felt that their efforts had

been very successful.

e) All the instructors who responded stated that they received the materials regularly and on time. However, one-third of the male instructors and half of the female instructors did not respond to the question.

f) The main benefits of the training camps, as recalled by instructors, were gaining an introduction to the objectives of adult education, improving general awareness and to some extent, in gaining knowledge about dairy forming, health agriculture and various social benefits available.

g) A majority of the male instructors felt that training camps should be made a place for interchange of views for removing problems of instructors.

h) All the instructors stated that they had good relations with their supervisors.

i) A majority of the instructors used to lecture and used the black board and adopted the traditional style of teaching.

j) A majority of the instructors gained information on functional matters through their respective supervisors and the working camps attended.

k) A good majority of the instructors stressed the importance of voting objectively. The proportions of lady instructors giving information in voting and elections was much higher when compared to male instructors.

l) Community members visited over sixty percent of the instructors at their AECs. A majority of the instructors stated that they had a good experience with the visitors who provided instructors criticism and encouragement.

The main findings about the learners were:

a) A majority of learners interviewed belonged to the age group of 21-30 and belonged to the scheduled castes.

b) A majority of the male learners were engaged in agriculture and a majority of the female learners were engaged in agriculture as well as household work.

c) The learners were aware of the essential service offered by post office. While enumerating the various facilities available, female learners consistently displayed more knowledge than their male counterparts.

d) A majority of both male and female learners preferred treatment by an allopathic doctor. This is an indication of increasing awareness among learners with regard to medical facilities.

e) In the case of fully aware learners, a majority stated that both the instructor and social contact had been a source of information for them. Among learners who were unaware of two or three items on the average, the source of awareness was more or less evenly distributed between instructor, social contact and both.

f) A large majority of the learners stated that they had no problems in attending AECs and were interested in joining up for the new sessions also. Learners enjoyed good relation with their instructors.

The completion of the third appraisal of NAEF in Rajasthan with the in-depth study in Jhunjhunu made the team feel that the Adult Education Programme has a vast potential to help the rural masses in developing themselves when handled imaginatively and with determination. There are, however, some issues to be tackled. The research team felt that despite the keen interest taken in the programme by the district administration, there were many difficulties in the programme, and good organisation and innovative ideas alone may not be sufficient to make the programme a success.

Ganesh, S.R.; and Banerjee, Sushanta. The Undergraduate Influence Environment: Some Insights for Action. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 48).

It is more than three decades since the first IIT was founded at Kharagpur and almost two decades since the last one came up at Delhi. In spite of the recognition of the five IITs as innovative institutions, there has been very little published research available on the staff or student composition of these institutions and their functioning both within the economic system and the broader processes of modernization through the emphasis on technological development. One of the important concerns of people heading these institutions in the context of assessing the contributions of IITs has been towards understanding the various processes at work in the institution which shape the aspirations, expectations and ambitions of the students and thereby influence career choices that are made. There is no research available on whether the IIT graduate does make career choices in line with the expectations of the institution builders. A further point of confusion arises from the fact that there are multiple perceptions of the education provided by the IITs. Therefore, it is not clear whether the purpose of the IIT education is to produce self-employed technological entrepreneurs or to produce R&D engineers or to produce graduates with broad based engineering education encouraging career mobility.

In this context, this exploratory study sought to address itself

to the following questions:

- a) What are the expectations of various stake holders of the IIT graduates, as for example, the faculty, the employees and the parents?
- b) What are the aspirations, expectations and ambitions of IIT students at the time of their entry, and at the end of each year until they graduate at the end of the fifth year?
- c) What are the influences on the student during his five years in the Institutes and how they affect his aspirations, expectations and ambitions as well as the career choices over the years he spends there?
- d) What is the pattern of employment taken up by the IIT graduate over the years?

The major contribution of this study was to provide a framework for understanding the processes operating in the environment of IITs, influencing particularly the undergraduate students. Such a framework for understanding would provide insights as well as make possible a search for meaningful action based on these insights. This study has been conducted on the major premise of searching for the unknown within the matrix of that which is known. Thus it has been a re-research, a once again attempt to locate some significant elements which grow, perhaps invisibly, perhaps unintentionally, along with the directed and natural unfolding inherent with live human systems. The search for these unknown thus inevitably makes this study an exploratory one as opposed to a validatory one. The direction of the exploration was determined by a search for coherent and internally consistent interpretative devices, generation of hypotheses and a non-evaluative review of the system. The gap between designed performance and actual performance was thus kept peripheral on the assumption that such a study ought to follow after an exploratory attempt such as the present one, using an entirely different methodology than this.

The range of processes that it has focused on include processes of growth of the student and faculty and the administrative groups' response. It goes on to attempt a description of the culture and climate at IITs. The fine interface between these processes and day to day functioning could not be explored due to limitations of time. However, the impact of these processes on the shaping and moulding of the students is identified.

Khanna, Inderjit; and Rama Rao, T.P. Location of Schools: Analysis of Computer Model. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 43).

This project is a sequel to an earlier project - "A Computer Model for Location and Upgrading of Schools" (FSG Monograph No.3). It aims at testing the efficiency of the earlier model developed for location of schools. In this follow up study, the actual process of location and upgrading of schools in Udaipur District during the four academic sessions, 1978-79 to 1981-82 is compared to the possible result of applying the suggested model in similar circumstances. The analysis shows that in the case of location of new schools, use of the computer model gives much better results and also results in savings in costs.

Bhatt, Anil; and Subramanian, Ashok. "Directing Programme Evaluation towards the Field Worker: An Experiment in Adult Education". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working paper No. 485) (mimeo).

Although there is now a more widespread attempt to carry out systematic evaluation studies of development programmes and projects by external agencies, the users of these studies continue to be the elite management group of policy makers and planners and international agencies. The lower levels of the development bureaucracy in the district and in the block seldom have access to evaluation reports, despite having their work studied for purposes of evaluation by social science researchers and consultants.

This paper argues for a wider use of evaluation efforts by the involvement of programme implementers and field workers in the process of 1) debating the nature and content of evaluation 2) using the feed back from evaluation for further planning at their levels and 3) initiating follow up action. An experiment of eliciting such involvement through an intensive two day workshop during the evaluation study of the National Adult Education Programme (NAEP) is discussed in the paper.

The paper concludes with the author's observations on the experiment and a plea for less mechanistic uses of evaluation of large scale development programmes.

This was the first time that an evaluation of the field worker's work was collectively shared with them and where they got the opportunity to examine it. Also it was clear that the attempt generated considerable practical and positive thinking among the field personnel as different from the routine cord mechanical way they were trying to implement the directives and guidelines given. The evaluation exercise was legitimized in the eyes of the people who were being evaluated. They were not feeling threatened. This was further evidenced by the fact that field personnel of another district who later came to know about this workshop and its proceedings invited the authors to undertake the

study of their district. This was despite the critical observations of the projects made in the report.

Subramanian, Ashok; Khanna, Inderjit; Bhatt, Anil; and Singh, Anil K. Managing an Adult Education Project: Fourth Appraisal of the National Adult Education Programme in Rajasthan (1982-83). Ahmedabad: Indian Institute of Management, 1983 (PSG Monograph No. 51)

A project in the National Adult Education Programme is meant to be a 'decentralised' unit which operates at the sub-district level with 100 to 300 centres. However, mere allocation in a district does not make a project a decentralised effort. In the context of NAEP, the project functions through a given organisation structure and a more or less fixed budget. But the goals of literacy and numeracy, development of functional skills and social awareness are sufficiently broad and do permit local variation. That is, the project can decide which of the goals is to be given priority and to what extent these goals are to be pursued concretely in the project area.

This study of NAEP in two districts, Ajmer and Dungarpur of Rajasthan suggests that the planning process in project management has not received adequate attention in NAEP. This is not to say that the two projects studied did not plan or made poor plans. Specific objectives for each project for each year need to be formulated. They have to be set with consideration for the local environment. Project objectives need to be set by project personnel. It is a feeling that this project level exercise in planning can be seen as a systematic effort to:

- a) Review past experiences not merely in terms of numbers and targets but in terms of strategies and quality of performance.
- b) Project current year's requirements and objectives in the light of past expenditure and present opportunities.
- c) Evolve implementation strategies for the current year.

While much attention has been devoted to the aspect of monitoring and evaluation in NAEP, considerably less emphasis has been given to project planning. A 'bottom up' process of planning initiated by the supervisor in consultation with instructors and learners and consolidated at the project level is needed. It must be emphasised here that the concept applied in this planning exercise is one of 'selectivity'. One of the features of the current planning and hence the implementing process is the effort to 'cover' everything and everyone in a given period of time. This is impossible to practise with success. Activities, centres, instructors, material and supervisors have to be viewed in the light of who or what needs the attention of project management

most. Projects would have to contend with the fact that there are only 10 months in a session and that a 'comprehensive' approach towards everything leads to an adhoc scattered set activities without a coherent purpose. In order to ensure that project personnel evolve appropriate strategies of implementation, assistance to project officials for planning officials would be helpful. In these workshops, the importance of flexible and adaptive plans, the process of planning and specific content of project plans can be discussed. The state directorate can evolve a simple and purposeful communication system for reporting plans. Monitoring could then be on the basis of these specific plans. Another useful way of assisting project officials would be to review and give feed back on project plans made by the project officials every year. Even if formal written plans are not made or available, the project management would have ideas on what can be done in the project in a given 10 month period and how. It would be of great help to the project if strategies of implementation are discussed and debated at the beginning of a fresh session. It may not be possible for the directorate to provide such assistance to all the projects in the state. In this connection, two alternatives present themselves:

1) Project officials in the same vicinity meet and discuss their respective plans and 2) If the DAEO's role is reconsidered, it may be possible for a DAEO to organise an annual workshop for a cluster of projects to come together and discuss their respective strategies. These suggestions are made with a view that project effectiveness will improve if the quality of management is enhanced. Better strategies and planning are likely to add to the quality of project management.

Bhatt, Anil; and Subramanian, Ashok. "Directing Programme Evaluation Towards the Field Worker: An Experiment", Management in Government, 16(3), (October - December, 1984).

This paper argues for a less mechanistic and wider use of evaluation studies of development programmes by directing the feedbacks of such studies towards the field worker. In experiment of providing such feedback through an intensive two-day workshop during an evaluation study of the National Adult Education Programme (NEDEP) is discussed. The workshop offered the NAEP field worker an opportunity to react to the study, identify problem areas and plan changes in his activities within the parameter of the programme and in the context of the local setting.

Picholia, K.R. "Poor and the Government",

In the present paper an attempt is made to portray and examine the urban poor in the light of housing, education, medical and health care and opportunities for economic betterment provided by the government for the poor of Ahmedabad city in general and selected sample households in particular and suggest the measures for the betterment of urban poor.

Agarwal, B.B.; Maru, Rushikesh; and Subramanian, Ashok. "Innovations in Elementary Education in India". Ahmedabad: Indian Institute of Management, 1985 (IIMA Working Paper No.587) (mimeo).

The present status of elementary education in the country is of a mixed nature. There are a variety of problems to be faced at every step of the process of education. As one might expect, a number of innovative strategies have evolved over time, both within and outside the formal system, to facilitate the faster achievement of essentially the same objective. This paper seeks to develop an understanding of such innovations. Before going into the details of innovations, however, it would be reasonable to look into the reasons that necessitate innovations.

It is essential that those who are entrusted with the task of implementing changes be competent to do so, and have a sense of commitment to the cause. Teacher Training Programmes, for example, are basically aimed at ensuring that teachers who are the actual agents of learning are themselves up-to-date with the changing frontiers of knowledge. Finally, the task of a change-agent is not over with the first successful trial run. In order to ensure that the proposed change is increasingly well accepted by the target group, and in fact becomes an integral part of it, it is imperative to establish suitable feedback / follow-up mechanism which may, among other things, point out the necessity for some modifications in the design of the innovation. This is clearly demonstrated by the continuous processes of syllabi development. As the profile of the client group changes, the earlier model of change may itself require modifications.

Mathai, Ravi J. The Rural University: The Jawaja Experiment in Educational Innovation. Bombay: Popular Prakashan, 1985.

This is an account of the "Jawaja Experiment" undertaken by Ravi Mathai and a group of faculty members from the Indian Institute

of Management, Ahmedabad. (There was also a member from Indian Space Research Organisation, but he dropped out). The National Institute of Design (NID), Ahmedabad was also closely associated. It aimed at integrating rural development and education through a series of open ended "action learning" initiatives. The researchers would go to Jawaja, a backward area in Rajasthan and spend days with the villagers. They would help them to identify their problems and teach them skills that they would find useful.

The experience and learning that occurred from this "experiment" are narrated in this book. It highlights the potential and importance of nonformal education and the need to link the education with the day to day problems of the beneficiaries. Education can thus be seen by them not as a diversion from their income generating activities, but as a means to enhance their income and quality of life.

It also brings out the need for educationists to tap indigenous local knowledge and the benefits of focused, result oriented action research in the field of education.

Tripathy, Dwijendra. "Role of the Institutes of Management: A Critique", Vikalpa, 2(1), (January-March 1986).

The periodical review of the programmes and activities has been a cardinal strategy of the national institutes of management ever since their inception. This, however, has been an in-house exercise; the results of such reviews have been never shared --not by choice at any rate -- with various publics interested in educational developments, not even with those having a direct stake in management education. There have been occasional whispermings in the media about the Indian Institute of Management (IIMs) which are befittingly regarded as apex institutions in the movement to promote managerial education in the country, but these institutes themselves or those belonging to them have seldom tried to raise a public debate or even join such a debate about their role, their success, their failure and their future directions.

Sethi, Dipti. "Educational Tasks in Development Programmes". Ahmedabad: Indian Institute of Management, 1988 (IIMA Working Paper No.730) (mimeo).

In this paper, broad objectives and strategies of three development programmes: Family Planning, Adult Education and Community Health Volunteer Scheme have been enumerated. The nature of educational efforts required for the programmes is identified and

the existing educational efforts are discussed. Emerging from the above, an attempt has been made to derive certain implications regarding the educational component in the programme and a conceptual model of educational strategy of development programme would be derived.

Sethi, Dipti. "Education Tasks in Development Programmes". Ahmedabad: Indian Institute of Management, 1988 (IIMA Working Paper No.730) (mimeo).

In the developing countries and those undergoing rapid change, the part played in the social field by education is of vital importance.

The paper looks at the educational tasks that confronts the grass route level functionaries of three developmental programmes, namely, the adult education programme, the community health volunteer programme and the family planning worker programme. A conceptual model has been set forth on the understanding of the above.

Bhatt, Anil; and Srinivasan, S. Management of Jana Shikshan Nilayams: Design of Structure and Systems. Ahmedabad: Indian Institute of Management, 1991 (PSG Monograph No. 62).

The basic objective in the planning of post literacy and continuing education programmes is to ensure retention of literacy skills, provision of facilities to enable the learners to continue their learning beyond elementary literacy and to create scope for application of their learning for improvement of their living conditions.

The activities envisaged in the JSNs are meant for the literates who complete the functional literacy courses, school drop outs, pass-outs of primary and non-formal education programme and for the community as a whole for group activities and cultural programmes.

The major components of the management systems examined in the present study are: a) the selection process of the prerak, b) his/ her role and responsibilities, c) the location of housing of JSNs, d) reach and accessibility of JSNs to specific segments of the target group (called focus group in this report), e) the training process, f) preparation and selection of resource material, g) supervision and monitoring, h) structure and administra-

tion, i) budget and resource allocation and j) system for recording and reporting, especially in the context of appropriate information generation and use. In the process, this study has tried to identify gaps in the present design of the programme and tried to deal with implementation problems in so far as they are pertinent to the scope of the present study. The underlying philosophy of the suggestions made in this study has been to stress immediacy, relevance and practice, feasibility, sometimes even seemingly at the expense of theoretical constructs and idealised models of adult and continuing education. The focus has been to constantly ask what and who is the JSN meant for, and to ensure that these primary objectives are constantly addressed.

Bhatt, Anil; Manikutty, S.; and Srinivasan, S. Rapid Appraisal of Jana Shikshan Nilayams. A Study in Gujarat. Ahmedabad: Indian Institute of Management, 1992 (PSG Monograph No.63).

This is an evaluation of the continuing adult education centres (Jana Shikshan Nilayams or JSNs) in three districts of Gujarat: Bhavnagar, Gandhinagar and Fanchmahals. The evaluation was done through "rapid appraisal" (RA) methodology supplemented by surveys. This is the first application of RA techniques to the field of education.

The research team was multidisciplinary, and visited the districts for first hand observation and comparison of these observations (triangulation). The participants were encouraged to do most of the talking and the researchers probed them through non directive questioning. The field surveys were done by investigators who were trained in the art of interviewing.

The study measured literacy levels of neoliterates through sample surveys, and found that except in Gandhinagar, only about 60 percent of neoliterates could pass the tests. The study also obtained the reactions of neoliterates about JSNs. It was found that neoliterates face many difficulties in using JSNs like lack of time, status barriers against preraks, and lack of facilities in JSNs. The preraks were also interviewed. They were generally satisfied with their own contributions, but were frustrated with regard to availability of equipment and perceived apathy of administration. The honorarium paid was seen by them to be too low. The village community was well aware of JSNs and used them, especially the reading and cultural facilities. The management and supervisory systems left a lot to be desired.

The study finds, in sum, that JSNs, while far from satisfactory, still cater to a real need in rural areas where there are no facilities for books or reading prioritization of JSNs goals was strongly recommended, and retention of literacy should be the No.1 priority. Books available could contain more on themes on

transformation, liberation and social awareness. A number of suggestions are also offered to improve the management and control systems of JSNs.

ENERGY

Mukherjee, Shishir K. "A Network Planning Model for Power Generation and Transmission System: A Suggested Module for WASF Programme". Ahmedabad: Indian Institute of Management, 1978 (IIMA Working Paper No.197) (mimeo).

This paper describes a network planning model formulation for power generation and transmission system planning. The model is illustrated by an application for the Northern regional power network in India. The network planning model simulates the operation of existing and proposed generating plants and transmission lines and the locational aspects of the generating plants and the topology of the transmission network is considered.

The application of the network planning model is expected to provide a capability for simultaneous optimization of the generation and transmission system expansion in a power system.

In the second part of the paper, a network programming model for least cost investment in electric power generation and transmission system is presented.

Mukherjee, Shishir K. "Energy-Economic Planning in the Developing Countries: A Conceptual Model for India". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.290) (mimeo).

Developing countries have been adversely affected by the four-fold increase in oil prices of late 1973. As Energy sectors and other economic sectors are competing for the limited investible resources, increasing energy import and development costs might constrain the economic growth rate in the developing countries in the foreseeable future. Integrated planning for energy and non-energy sectors should be given high priority in these countries to analyse energy policy and development plans within a framework of economic planning. The methodologies used for energy sector planning are not usually applicable to the developing countries due to various reasons.

This paper describes an approach for integrated energy - economic planning for the developing countries and illustrates this approach in the Indian context. An energy-economic planning model is considered for India, linking a macro-economic input-output model with energy supply models representing production/ conversion and transportation activities and energy demand forecasting models through an energy impact model. The objective is to determine optimal energy sector development plans for meeting energy demands from productive activities and final consumption,

based on alternative future growth scenarios. The impact of the energy sector as the economy is also analysed in the energy-economic modeling framework.

Due to the intimate linking of the energy sectors with the rest of the economy, it has now become obvious that energy planning should only be carried out in an integrated framework for energy-economic planning which is suitable for analysing the effects of economic growth on energy consumption and also the effect of the energy sector in the rest of the economy. In the past, the absence of such a frame work has led to wrong and frequent over-estimation of energy demand and subsequent under-achievements in energy production programmes leading to energy shortages. It is erroneous to think that due to chronic energy shortages, demand forecasting is no longer important and what is needed is only to plan for supply of increasing amounts of energy. A long-term look at demand is all the more necessary in a scarcity situation so that appropriate policies could be formulated for containing demand and planning for supply.

Gupta, Ramesh. "Finances of the State Electricity Boards and Tariff Policy". Ahmedabad: Indian Institute of Management, 1980 (IIMA Working Paper No.317) (mimeo).

The financial situation of the SEBs has been very critical mainly because of their operational inefficiencies on the cost side and faulty tariff policies on the revenue side. Based on normal operational performance, standard cost should be determined for each Board and after providing for adequate return on its investment in current supply of the electricity, the total revenue requirements must be determined.

In a monopolistic supply situation, operational inefficiencies need not be hidden and in the name of socio-economic development tariff structure need not be artificial.

Gupta, Ramesh; and Singh, Abnash. State Electricity Boards in India - A Study in Tariffs and Costs. Ahmedabad: Indian Institute of Management, 1980. (PSG Monograph No.30)

In November, 1978, Government of India appointed a Committee chaired by Mr. Rajadhyaksha, then member of the Planning Commission, to examine functioning of the state and central organizations engaged in electricity generation, transmission and distribution. The committee's work was done through panels. One of the members of panel - Finance, Financial Management and Tariffs -

was requested to make an empirical study of the cost behaviour and financial performance of the SEBs. This report is an outcome of the above study.

The primary focus was on costs, but an analysis of other technical ratios has led to comments in the nature of the costs incurred by the SEBs. In terms of costs, for example, items related to generation are compared with units generated and so on. If a significant trend is observed, it is possible to make comments regarding the relationship. The drawback in such an approach is that a proportionate relationship may not exist between the items compared. Total costs per unit available for sale have shown an increasing trend for all boards. This is so because of commissioning of new generation capacity and associated facilities which were not fully used. This is also dependent on capacity utilisation of existing plants. Besides depreciation, the different cost elements have shown an increasing trend due to a combination of the above factors. To improve SEBs' performance, the Boards have to put greater emphasis on operations and cost control, which calls for an effective management control system. But no control system can work unless sufficient manpower is available with adequate training and experience for the job. Most of the boards do not have the necessary facilities to train the staff. Consequently, the management is either ignorant of its need or is unable to introduce it. A stage has been reached when the quality of financial management requires much greater attention than hitherto. The SEBs like other public sector undertakings need to look outside the governmental sector for financial and management expertise to improve upon the existing system.

Srivastava, U.K.; And Subramanian, Ashok. "New and Renewable Energy Projects: From Policy to Action". Ahmedabad: Indian Institute of Management, 1981 (IIMA Working Paper No.393) (mimeo).

In the light of various findings relating to the future energy scene in India, the development of new and renewable energy sources have been given substantial emphasis in the Sixth Plan. Some evidence from field level experience of a few of these technologies has become available through micro studies. The focus of this paper is (a) to review this evidence to determine its implications for a strategy for developing new and renewable energy sources on a large scale and (b) to suggest some critical elements that will determine the successes of the strategy for the implementation of such project.

Economic growth and development will demand an increasing level of energy consumption by all users in the future. A substantial rise in the availability of commercial energy forms will be

required. It appears that the share of non-commercial energy will decline if the past practices are sustained. However, commercial energy forms are proving difficult in terms of access and cost, and questions of ecology are demanding attention. Realizing these difficulties, the government has made serious attempts to plan for new and renewable energy projects in as many settings as possible.

The availability of technology is only a necessary condition for its induction and large scale multiplication. The sufficiency condition will be met only when an understanding of the user environment or the context in which technology is to be introduced is achieved. It is suggested, however, that an area approach and local village studies using intensive observation and interview methods can provide an understanding of the context in which specific technological interventions are to be contemplated. Without such efforts and understanding, new and renewable energy projects will remain hopes without significant positive results.

Moulik, T.K. "Commercialization of Renewable Energy Technologies: Some Policy Framework". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.467) (mimeo).

As a mixture of sheer economic consideration and a preference for social values for a particular life style, renewable energy technologies are actively promoted in the world at large, particularly in the developing countries. Among all the developing countries, India's efforts in this field perhaps stand out as critical, not only because of her size or political importance or economic problems vis-a-vis fossil fuel crisis, but also due to the sincerity and seriousness in our attempts. It seems there is a big problem in developing proper linkages between the people making and promoting the new and renewable technologies and those who need them. To repeat the cliché, the fundamental theory of product marketing is to tie up the product to a real need of the persons - a real, specific factual benefit. In other words, one must know the consumer very well before one starts talking about it to him. Simply assuming that the new and renewable energy technologies are addressing society's major unmet needs, would neither promote their commercialization to a suitable market segment nor would it develop into a profitable business opportunities.

This paper attempts to indicate some of the major policy implications for commercialization of renewable energy technologies.

Ganapathy, R.S. Issues in Energy Policy and Management. Ahmedabad: Indian Institute of Management, 1984 (A) (PSG Monograph No. 57).

This is a compendium of papers presented in a workshop at New Delhi in March 1984 to review energy policy and management and to identify the priority areas for the Seventh Five Year Plan and beyond. There are eighteen papers in this volume covering: 1) Energy Economics 2) Energy Planning 3) Energy Conservation 4) Administrative issues 5) Human Resources Development 6) Hydrocarbons and Coal 7) Technology development Power and 8) Dimensions of Renewable Energy Policy and Development.

In the paper on economic issues, Manu Shroff discusses the size of investments and the means of financing in the energy sector, promotion of economic uses of energy and promotion of economic methods of producing and supplying energy. Several issues relating energy pricing to resource mobilisation, efficiency in use, inter-fuel substitutions, regional development and external financing are discussed.

Two papers are presented in Energy Planning. Girja Sharan and K.S. Rao present the conclusions of a study in rural energy in North Gujarat. The paper discusses the roles of different types of fuel such as crop residues, firewood, biogas, kerosene etc. to meet the demand for cooking energy which is the largest component of rural household energy. The growing energy intensity of modern agriculture need a great deal of attention.

R.S. Ganapathy's paper on Energy Planning in India reviews the nature and history of energy planning in India, the methodologies used and their effectiveness. The structural characteristics of energy planning and the institutional framework are also discussed.

Raghuram, in his paper on energy conservation policy, discusses the nature of policies needed for promoting energy conservation. He also presents the administrative and legislative measures recommended by the inter-ministerial working Group in conservation.

Arbinda Tripathy in his paper on Energy Management at the enterprise level discusses the problems posed by inconsistencies of the enterprise level energy concerns and national policy issues.

A.P. Saxena's paper highlights the administrative issues in the energy sector as the following: the pattern of sequential decision making, reactive nature of the administrative responses, lack of linkages with the national development perspectives, inadequate information base staffing arrangements and coordinations.

Pramod Verma in his paper 'Human Resources Management in the

Energy Sector' outlines the reactive nature of the concerned organisations as the central problem in achieving efficient energy programme implementation. Development of the right kind of people and personnel systems through design, monitoring and maintenance of the human resources are identified as being vital.

B. Sinha in his paper 'Management Training System in the Power Supply Industry' puts forth the idea that man power planning should be concurrent with investment planning. Promotional policy and training systems are not seen as conducive to the professional management of this sector. Lack of competition and communications are identified on the main obstacles to the wide spread applications of HRM practices. The possibility of creating a manpower commission for the energy sector is discussed.

A.K. Malhotra's paper 'Energy and Oil' focusses on the nature of energy consumption crunch in India. It concludes that for the next two decades, the conventional sources will be the mainstay for all energy consuming sectors.

S. Narayan's paper 'Coal Futures for India: Policy Alternatives' deals with the problems of coal exploitation, transportation, and environmental pollution. The chief concern is the training of skilled manpower for all these tasks.

M.K. Sridhar's paper 'Technology Development in the Electrical Equipment Industry: Policy and Management Issues' focuses on the performance of Bharat Heavy Electricals Ltd. in the context of Government's technology development policy. The strategies of this organisation relate to the integrated approach of R&D efforts and Product Committees.

Paul Hofieth in his paper 'Energy Policy and Energy Research in Norway' discusses the pattern of energy use policy planning and research in Norway.

R.S. Ganapathy's paper 'A Macro Analysis of Renewable Energy Development in India' analyses the role of renewable energy in the overall energy scene and suggested a number of strategies to promote decentralised local energy development using renewable sources.

K.S. Shah's paper describes a case study of renewable energy diffusion and adoption in Gujarat. Based on this experience, he has outlined number of suggestions to ensure effective adoptions and use of renewable energy technologies at the village level.

V.S. Raju's paper on 'Ocean Energy Policy and Management Issues' focusses on the potentialities of ocean thermal energy and its exploitation and described an ongoing major demonstration project in the Lacadives.

U.K. Srivastava's paper on commercialisation of renewable energy technologies reviews the status and commercialisation potential

of various renewable energy technologies.

V. Gautam's paper on the management of innovation in the energy sector selectively looks at the experiences in promoting some technologies. The need for developing strategies that are contextually relevant and acceptable is stressed.

Anil Agarwal in his paper on cooking energy crisis points out that wood has become very scarce in many villages and only the rich can afford it. The ecological crisis posed by falling of trees has become very serious. The rising number of landless and marginal farmers and the growing poverty pose a serious challenge. Several areas have been identified by the seminar participants and resource persons as of high priority for research training and information dissemination to build energy policy and management capabilities in different organisations at various levels in the context of the Seventh Plan energy programmes and beyond.

Ganapathy, R.S. "Energy Planning In India: A Review". Ahmedabad: Indian Institute of Management, 1984 (B) (IIMA Working Paper No.504) (mimeo).

Energy occupies a central place in our lives. All our activities have energy content and hence energy is a basic need. The history of economic development can be seen as the history of structural change in energy consumption. The energy transitions from coal to oil after 1945, the emphasis on conservation and fuel efficiency since 1973, the present firewood crisis - all these mark important shifts in the economy. Planning for energy development and use was relatively less important till about fifteen years ago and it usually meant increasing the supply of energy from various sources. Recently, however, this situation has changed. Energy planning as a process by which decisions are made on the provision of sustainable energy systems including the development of energy sources and utilisation of energy, has become very important around the world and in India.

This paper reviews the nature of energy planning in India, the methodologies used in energy planning, its structural features and institutional framework. It proposes some guidelines for making energy planning effective, given our socio-economic and developmental context.

The paper points out that in energy planning in India, the structure of the energy sector, that is to say, the mix between public and private sectors, the kinds of equipments produced, the role of central, state and local governments and the role of the market (people) has not received much attention. It points to the need for interorganizational relationships in the energy

sector, and for an analysis of the political economy of energy planning - involvement of different sectors of people, researchers from different disciplines etc.

Ganapathy, R.S. "Renewable Energy Development In India: A Macro Analysis". Ahmedabad: Indian Institute of Management, 1984 (C) (IIMA Working Paper No.505) (mimeo).

The development of renewable energy in India is not simply a technical question. The macro-analysis attempted here reviews the complexity, interdependence and the structural-systemic features of the renewable energy system and its embeddedness in larger contexts. The need for a comprehensive policy package that addresses itself to the need for and supply of the requisite technology and institutions, environment and education, pricing and possibilities for substitution, and the development of local conditions and standards is thus necessary but is yet to evolve. The political economy of renewable energy indicates that technological and social actions are simultaneously called for. The market, the state and the community must play balanced roles and articulations of this balance in renewable energy is a strategic question for India. The macro-analysis shows the need for structural adjustments and hence changes in energy intensity and growth rate. Technological responses like development of energy efficient and renewable energy using equipment or interfuel substitutions are not sufficient to promote renewable energy use. Hence a micro or project approach is not enough in renewable energy planning. A macro analysis may help us to understand barriers. This paper explores some dimensions of this complex issue of renewable energy development and proposes some strategies.

Naik, Charu Sheela. "Industrial Energy Use and Environment Quality: A Case Study of Ahmedabad". (Ahmedabad: Indian Institute of Management, 1989) (Unpublished doctoral dissertation)

The pursuit of modern economic growth generates environmental degradation in some form. Much debate is generated regarding the environmental impacts of major development projects. But the growth of industries in urban industrial centers continued with little public interest regarding its environmental implications. A review of literature shows that combustion of fossil fuels has been identified as the principle source of two common air pollutants viz., Sulphur dioxide and particulate matter. But energy planning exercises are mainly concerned with demand forecasts and

not with environmental implications of the estimated fuel consumption. Also, the major thrust of environment management is addressed to regulating the pollutant emission by cleaning up a fraction of the generated load. Little attention is paid to exploring the pollution regulation implications of influencing the fuel consumption and industrial activity pattern in a region. Policies for industrial growth and environment control needs to be based on an understanding of the interaction among these. There is a need to develop a separate methodology of policy analysis for control of pollution generated due to industrial energy consumption.

The author has undertaken a case study of Ahmedabad to investigate strategies of environment control in reference to its industrial energy usage. The methodology of the exercise lies at the intersection of industrial energy planning and environment control planning.

An analytical framework combining engineering and economic analysis is used for the enquiry. A linear matrix model is proposed to relate industrial activity with environment quality in a region. This model is to be employed for casting four alternate scenarios assuming different policy interventions. A scheme of fuel tax is proposed for distributing the cost of environment regulation among the industries in proportion to their contribution to the total pollutant load. The impact of the trend in technological change is estimated separately using an extended input-output analysis technique.

Four scenarios are generated for the year 1995. If the present industrial growth trend continues it is estimated that the atmospheric particulate load will rise by 31%. When the estimated level of economic activity is attained, the resource requirements for maintaining the particulate load to its present level are estimated for different policy interventions.

The policy interventions for the four scenarios are: 1) treatment of additional particulate load, 2) fuel conservation and treatment of the remainder excess load, 3) fuel conservation and marginal alternation in industrial fuel consumption mix and industry mix, 4) regulation of the industry mix to an optimal pattern for minimizing the pollutant load and treatment of the excess remainder particulate load.

The resource requirements for the four scenarios are estimated to be around Rs.10 crores, Rs.5 crores, nil and Rs. 1 crore, respectively. The third scenario is evaluated to be the preferred scenario. The incidence of the fuel tax in different industries is estimated to be less than 1%. A separate analysis shows that the impact of the trend of technological change in some industries is unfavourable for environment quality.

The findings of the case studies are summarised. Possibilities for improving the efficiency of present analysis are examined. A discussion of the findings shows that suitable policy instruments

to attain a desired optimal industry mix are not available. An extension of our model for multi region analysis is suggested for minimising the total cost of environment regulation. The necessary policy instrument at local and national level are discussed.

TRANSPORTATION

Patel, Nitin R. "Load-Factor Measurement For Road Transport Corporations". Ahmedabad: Indian Institute of Management, 1976 (IIMA Working Paper No.136) (mimeo).

In order to plan its time-tables, a road transport corporation needs to have reliable information on the load-factors on various bus-trips that are currently operated. Existing information does not permit determination of load-factors on segments of trips but provide only over all trip-wise load-factors. This paper outlines a system for estimating segment-wise load-factors. Such load-factors need to distinguish between local and through traffic. The conceptual separation of these types of traffic is discussed. An approach to estimating segment load-factors is described which includes development of results for simultaneous confidence intervals for the estimates.

Ramani, K.V.; and Raghuram, G. Coaching Stock Utilization in Western Railway. Ahmedabad: Indian Institute of Management, 1979 (FSG Monograph No.22).

Coaches form an expensive component of the assets of Railways. Better utilization of coaches therefore, should lead to substantial savings.

Usually coaches are formed into formations with specified number of coaches of different classes and types. These are called rakes. The rakes of one train, after reaching the terminal station, go as another train after undergoing needed maintenance leaving it later. Such schemes are called 'rake links'.

This monograph analyses the linking pattern of rakes in Western Railway and suggests how better linking can be done through a computer model. Examples of actual trains giving better links are given, showing how it is possible to save rakes through such links. In this particular study, it shows that 35 coaches can be saved using this scheme.

Ankolekar, S.R.; Patel, Nitin R.; and Saha, J.L. "Optimization of Vehicle Schedules for a Road Transport Corporation". Ahmedabad: Indian Institute of Management, 1980 (IIMA Working Paper No.333) (mimeo).

This paper discusses construction of a model to minimize the

fleet size required to operate a timetable subject to a maintenance constraint. The constraint requires that vehicles be provided maintenance at least on every two days at a specific location. A heuristic algorithm was devised which also attempts to take advantage of flexibility available in trip timings. The algorithm was applied to a problem faced by one of India's largest State road transport undertakings with encouraging results. Computational experience with algorithm is described.

Ganesh, S.R. "Shaping the Amorphous: Organizational Form for a National Railway System". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.461) (mimeo).

Organizational form is one of the key determinants of organizational performance. Choice of organizational form for public organizations in developing countries can facilitate or inhibit performance. In this paper, an approach for choosing appropriate organizational forms is outlined for public organizations using three steps.

1. Mapping key stake holders
2. Deriving criteria for choice of form from stake holder expectations
3. Matching criteria to alternatives

The approach is illustrated using the example of a national railway system. Some lessons for theorists and practitioners are drawn.

Patel, Nitin R.; and Madhavan, T. "Planning for Rural Roads in India". Ahmedabad: Indian Institute of Management, 1984 (IIMA Working Paper No.494) (mimeo).

This paper summarizes an experience in developing an interactive decision-support-system for planning rural roads in one district in India. The aim of this research was to explore the political benefits to be obtained from the use of computer based quantitative models in designing rural road networks.

The basic question provided in this research was: taking the system of national highways, state highways and district roads as given, could the same level of access be provided with a rural road network that is of shorter length than the existing one ?

The question was addressed at the taluka level for the talukas of Anand, Balosinor, Cambay and Nadiad in Kheda district.

Owing to the large number of villages in a taluka (around 100) obtaining a purely inter-active evaluation can be very cumbersome. To provide further computational support to the user, a heuristic was developed to provide a good starting solution around which the user can conduct exploratory searching. The results convincingly show that large savings can accrue from using decision support models of the type described in this paper. Translated into cost terms, the savings for these four talukas alone amounts to Rs.25 million (US \$2.5 million).

Raghuram, G. "Crew Scheduling in Indian Railways: A Case Study of Vadodara Division". Ahmedabad: Indian Institute of Management, 19 (IIMA Working Paper No.) (mimeo).

This paper discusses the crew scheduling problem in Indian Railways and proposes a methodology to minimize crew requirements. In particular, they deal with the scheduling of passenger train crews in Vadodara Division of Western Railways.

Part I of the paper discusses the organisation structure of the Indian Railways, highlights the decision making process and gives a brief description of the crew categories.

Part II discusses the 'A.D. Sequence' methodology and discuss how this can be used in evaluating a 'crew link' for the drivers of express trains in vadodara division. In conclusion, it is argued that the methodology is very general and it could be used for scheduling of all categories of crew for passenger trains.

Raghuram, G. "A Study of the Problem of Improving the Utilisation of the Non-Suburban Passenger Fleet in Indian Railways". Ahmedabad: Indian Institute of Management, 1986 (IIMA Working Paper No.600) (mimeo).

This paper studies the problem of improving the utilization of the non-suburban passenger fleet of the Indian Railways. The constant growth of the non-suburban passenger traffic outstrips the additions provided to the fleet which anyway is an expensive proposition. The improvement in utilization is sought to be effected by using the fleet more often for the desired services. The paper identifies three constraints that influence the utilization: (i) composition requirements, (ii) maintenance require-

ments and (iii) traffic delays. The need to standardize the compositions of services and provide proper maintenance norms is highlighted.

A methodology is proposed using OR techniques to evaluate current solutions and improve the same to optimately. A framework is suggested for analysing the implementability of the solutions. The paper also demonstrates a methodology to exploit the fact that there are usually a large number of optimal solutions. This involves using a secondary objective function to select a preferred solution.

Raghuram, G. "A Study of the Problems of Improving the Utilisation of the Non-Suburban Passenger Fleet in Indian Railways", in Sarsangi and Agarwal (Eds), Transportation System Analysis and Policy Studies. New Delhi: Tata McGraw Hill, 1987, pp. 677-683.

This paper studies the problem of improving the utilization of the non-suburban passenger fleet of the Indian Railways. The constant growth of the non-suburban passenger traffic outstrips the additions provided to the fleet which anyway is an expensive proposition. The improvement in utilizations is sought to be effected by using the fleet more often for the desired services. The paper identifies three constraints that influence the utilization (i) Composition requirements (ii) Maintenance requirements and (iii) traffic delays. The need to standardize the composition of services and provide proper maintenance norms is highlighted. A methodology is proposed using OR techniques to evaluate current solutions and improve the same to optimality. A framework is suggested for analysing the implementability of the solutions.

Chhokar, Jagdeep S.; and Gopalakrishnan, C. "Accident Rates and Safety Practices in Road Transport Corporations". Ahmedabad: Indian Institute of Management, 1989 (IIMA Working Paper No.787) (mimeo).

The paper tends to understand and explain the variation in accident rates among various Road Transport Corporations in India. It is based on data concerning accident rates and safety practices collected from five RTCs selected on the basis of a comparative analysis of accident rates. The reasons for high and low accident rates and steps which have been or can be taken for reducing accident rates in the five corporations are discussed in detail. Some common measures which may help in reducing accident

rates and enhancing safety of operation in RTCs are identified.

Raghuram, G. and Rao, Venkata. "A Decision Support System for Improving Railway Line Capacity". Ahmedabad: Indian Institute of Management, 1989 (IIMA Working Paper No.839) (mimeo).

The paper describes the design and implementation of an interactive software system which determines the line capacity of a section for moving freight trains. The schedules of passenger trains are given into the system as input. The package can find the effect of decisions related to infrastructure investments like improved signalling, additional stations, additional tracks at stations and additional tracks between the stations in order to improve the line capacity. It permits considerable experimenting with different decision variables.

This model was used with test data on an important section (100 Kms. long with two major yards and twenty stations) in the Western Railway, a zone of the Indian railways. Experiments were conducted to determine:

- i) the effect of changing a portion of the section from single track to double track;
- ii) the effect of improved signalling and higher train speeds; and
- iii) the best possible starting times for freight trains at either origin.

Ramani, K.V.; and Raghuram, G. "Utilisation of Transportation Units: An Optimal Allocation Study." Opsearch 17(1), 1990.

In this paper, a procedure to study the utilisation of passenger transportation units providing a given set of services according to a given time table is presented. The analysis is done by constructing an optimal allocation model. For purposes of explaining the model and its various applications, a rake is considered as a unit of transportation. The examples cited in this paper for illustrating the various applications of the model are taken from the Indian Railways time table, but the station identities are not disclosed.

Manikutty, S. "Resource Constraints and Railways: Can the Railways Meet the Challenge?" Journal of the Railway Staff College, 3(1) (January - March, 1991).

This paper first analyzes the investment needs of the Indian Railways and the effect of freezing the investment and budgetary support at 1990-91 levels. The reduced investments are shown to lead to reduced losses in the short run, because of the heavy servicing burden these investments call for. The important thing argues the author, is to recognise the burden and make investments in those areas where returns are the highest and to improve wagon and low utilization. Some other suggestions to improve financial viability are also offered.

Ramani, K.V. "Impact of Computerisation in Indian Railways". Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.333) (mimeo).

This paper discusses the computerisation effects of Indian Railways over the years, with particular reference to the Passenger Reservation System (PAS) which was started in 1985 and the Freight Operations Information System (FOIS) which is still under development and implementation. It also describes the computerisation in zonal Railways in areas like materials management, freight and passenger accounting and financial management. It is essentially a descriptive paper that informs the reader about the work done in Indian Railways in computerisation.

Raghuram, G. "Spatial Optimisation of the Fuel Purchase Decision for Road Transport Undertakings." Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.995) (mimeo).

Road Transport Undertakings in India have been spending approximately between 15 and 20% of their total expenditure on fuel. Given the fact that they visit different towns and sometimes even different states, the fuel which is available at different prices could be purchased in a way that the fuel cost is optimised.

The paper presents a network model, algorithms and linear programming formulations for the problem in order to decide how much fuel should be purchased at the different towns that the bus visits as part of its vehicle duty schedule. The model presented

minimises the fuel costs for the given amount of fuel to be consumed taking advantage of spatial price differences.

Raghuram, G.; and Padmanabhan, G. "Analysis of Wagon Utilisation and Estimating the Optimal Freight Transport Effort (Loaded and Empty Wagon Movement) for the Indian Railways". Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.934) (mimeo). Also published in Rail Transport, 1 (2), (April - June, 1992).

This paper attempts to identify the key inputs whose growth have contributed to the increase in freight output with an emphasis on wagons, and to analyse the determinants of improved utilisation of wagons. It analyzes the movement of major commodities and transportation models built for their movement. It analyses the wagons utilisation by examining the wagon cycle.

The paper comes to the conclusion that at an aggregate level, loaded rail movement demand is not likely to go up in terms of tonne or wagon kilometres since road movement is ready to absorb the traffic growth. Railways can maintain their market only if they actively seek it. The paper finds that the empty wagon movement in Railways is efficiently done.

Raghuram, G.; and Shobana, R. "Computer Based Itinerary Planning in Transportation Systems". Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.967) (mimeo).

Customers seek to know the best way of getting from an origin to a destination on a transportation system. It becomes important when there are varied choices depending on the desired starting day and time at the origin or a required arrival day and time at the destination.

Considerations such as fare, the number of connections available etc. also play an important role. A computer based system could enhance a customer's ability to make better choices in itinerary planning.

The paper describes an interactive PC-based computer system for itinerary planning. It focusses on airline application. An attempt is made to describe the data structure requirements and modifications to well known algorithms for application on space time transport networks.

Jain, Rekha; and Raghuram, G. "Implementation of Large Computer Communication Projects in a Developing Country: A Case Study". Ahmedabad: Indian Institute of Management, 1991 (IIMA Working Paper No.968) (mimeo).

The implementation of geographically dispersed computerisation and communication projects involving large financial outlays in the context of a developing country is a complex task.

The paper focuses around a case study which highlights some of the issues in the context of Indian Railways' decision to implement a large computer communication network for the management of the freight operations. The study analyses the causes of project delay, in such a computer - communication project. These issues are of general nature applicable to many high technology projects involving large investments in a developing country.

Raghuram, G. and Padmanabhan, G. "The Trucking Industry - An Introductory Note". Ahmedabad: Indian Institute of Management, 1992 (IIMA Working Paper No.1026) (mimeo).

Movement of goods is essential for the distribution of finished goods from the manufacturing centre to the consumption centre and the raw materials from the source to the production centre.

Of late, movement of goods by road has gained considerable importance in India. The road transport industry is penetrating into the market through a strategy of offering innovative services.

The paper examines the trucking industry, and its significance in India. It discusses the demand for freight transportation by road along with the breakeven distance for rail vs. road mode choice. The various inputs needed for providing a good road freight transport service, namely, roads, vehicles, terminals and service management are described. The implications of the trucking industry is discussed with respect to energy, employment, safety and government regulation. And finally, the paper discusses the key issues of concern for the future of the trucking industry.

ing System for Freight Trains in Indian Railways". Ahmedabad: Indian Institute of Management, 1992 (IIMA Working Paper No.1018) (mimeo). Also published under the same title in Rail Transport, 1 (4), (October - December, 1992).

This paper describes the design and implementation of an on line PC based crew allocation and management system for freight trains in Indian Railways: The software allows different rules to be used for calling the crew so that equity in duty hours is achieved. The software generates convenient management control reports and reduces a lot of data redundancy, and can lead to better management control over crew booking, crew working hours, overtime etc.

Manikutty, S.; Raghuram, G.; and Rao, Venkata. "Simulation Models to Evaluate Railway Operating Policies". Ahmedabad: Indian Institute of Management, 1992 (IIMA Working Paper No.1020) (mimeo).

In this paper two applications of simulation models to evaluate the policies on (a) locomotive assignment at a junction station and (b) adoption of a "twin single line" against conventional double line to improve throughput of traffic are discussed. The paper summarizes the models and explains the logic of their algorithms.

Manikutty, S.; and Raghuram, G. "Privatisation in Road Transport: Lessons from Country Experiences", Journal of Transport Management, 17(2), (February, 1993).

In this paper the experiences in privatisation of passenger road transport in four countries; Jamaica, Srilanka, Thailand and India (Delhi Transport Corporation) are discussed. The paper argues that the pressures for privatization are cyclical-demand to nationalize, then to privatize and so on. Unless proper planning is done, the chaotic conditions that necessitated nationalisation in the first place could return after privatisation arise largely due to perceived inefficiencies of the nationalized system, the TRCs may do well to deliver satisfactory, customer oriented services to ward off privatisation.

Jain, Rekha; and Raghuram, G. "Management of Large IT Projects: The Passenger Reservation System of Indian Railways" Ahmedabad: Indian Institute of Management, 1993 (IIMA Working Paper No.1085) (mimeo).

The passenger reservation system of the Indian Railways is a major computer application in a visible, consumer sensitive area. This involves a distributed database, spread over five host computers located in five metropolitan cities in India and terminals located in more than 22 cities. This paper examines this application and draws lessons for management of large IT projects.

MISCELLANEOUS

Gaikwad, V.R. "Social Change and Sociology of Development: A Trend Report Covering The Period 1969-72". Ahmedabad: Indian Institute of Management, 1976 (IIMA Working Paper No.143) (mimeo).

In a number of studies, social change and sociology of development have been closely intertwined. There are however, specific studies on change concentrating on a single factor such as family education, politics, religion, social stratification, urbanization, occupational mobility and social mobility. The studies which could be considered under sociology of development covered such areas as community organization, extension and communication of knowledge, institutional development, social and economic reforms, leadership pattern, people's participation, motivation and aspiration, bureaucracy and development and entrepreneurship. Broadly speaking, while on the one hand the social scientists have examined the change processes on various elements of social systems, on the other hand, they have examined the effect of various social factors on the developmental processes.

Nearly sixty percent of the total articles are either of theoretical nature, or are based on secondary sources in which broad generalizations are attempted. There has been continued interest in rural based descriptive micro-level, empirical studies. A few studies on social change in urban communities are also attempted. Studies on problem of change in tribals and scheduled castes, on poverty and social equality are few, indicating the persistent indifference of Indian social scientists towards these topics.

Chattopadhyay, Somnath. "Psychology of Inequality". Ahmedabad: Indian Institute of Management, 1977 (IIMA Working Paper No.161) (mimeo).

The major focus of discussion in this paper is to review the studies on four areas, namely, (a) physical setting, (b) religion, race and caste, (c) disability and (d) sex.

The central theme of this paper is that social inequality is structured on the basis of structuring of the society itself. Class differentiation, followed by stratification causes the inequality and its relationship with important social factors like status or power and to describe the association between the distribution and utilisation of opportunities that existed in the environment and the different types of discrimination that are practiced in the country. What has not been emphasised, with any amount of concerted action, is the studying of consequential psychology of inequality.

The survey shows that psychology of inequality, per se, has escaped the attention of Indian psychologists. In their studies, variables like age, sex, rural / urban living, socio-economic status, education and income and similar other indices devoting differentiation and inequality are invariably included. But it seems that this is done almost without any purpose or any meaning, and only as a routinised ritual. If it were done with a purpose, one would have seen attempts to consolidate some of these findings in an integrative effort. In conclusion, it is reiterated that psychologists can atleast show the psychological and social costs of inequality. They can not only help understand the phenomenon of inequality in a descriptive manner but also find out the psychological consequences of the quality and contribute to the planning of strategies for social intervention.

Murthy, Nirimala; and Upadhyay, Bharat V. Family Size and Absenteeism Among Textile Workers. Ahmedabad: Indian Institute of Management, 1978 (PSG Monograph No. 31).

One argument used to persuade management to offer family planning services to their workers is that family planning leads to increase in productivity of workers. And therefore, the argument goes, the cost of these services is justified since the industry derives benefit from their increased productivity. The assumption underlying this argument is that in Indian industries, family size is positively related to occupational factors such as absenteeism and accident rate and negatively related to productivity. Absenteeism has been one of the major labour problems in the Indian Industry. The loss due to absenteeism is two-fold. There is a distinct loss to workers because absenteeism reduces their income and there is loss to the employer in terms of efficiency in operation and indiscipline in the factory. Though it is generally believed that family size through the resulting familial burden adversely influences the levels of absenteeism and accident rate, the available studies, most of which are based on macro data have not found very strong relationships between them. This may be because large family size does not necessarily mean familial burden.

This paper presents findings of a study in which an attempt was made to relate various aspects of family such as number of children, especially young children with absenteeism and indebtedness among textile workers. The study was conducted in one of the largest textile mills in Ahmedabad. The sample consisted of 500 workers selected randomly from the target couple registers of the mill prepared during 1974-75. Data on absenteeism and loss of wages were taken from the pay registers of 1975-76. Information about loans were obtained from the workers' co-operative society. From this group, some workers who were absent for more than 100 days a year and others who were absent for less than 20 days were

selected for interview to find out the reasons for their high and low absentee rate. From the Target Couple Register which contained names of about 5,000 married workers, ten percent of workers were randomly selected from the weaving, spinning, engineering and other departments in proportion to the size of the department. The final sample consisted of 501 workers: 204 from spinning department, 2-4 from weaving, 24 from engineering and 69 from various other departments. The sample consisted of older workers with a long record of service with the mill.

The analysis relating family size with absenteeism shows that there is perhaps a non-linear relationship between the variables. Absenteeism is the highest among workers with no children; is the lowest among those with less than three children and rises again with the number of children. Among other demographic variables, age was found to have similar non-linear relationship with absenteeism, education had no relationship, while income had negative relationship. When the age of the youngest child was taken in conjunction with the number of children, absenteeism was found to be highest among workers having less than four and young children and lowest among workers with large grown-up children. The difference was found to be significant. Indebtedness was also found to have similar relationship with family responsibility.

Monappa, Arun; and Kamat, D.S. "Status of Personnel in Corporate Structure: An Empirical Study". Ahmedabad: Indian Institute of Management, 1979 (IIMA Working Paper No.279) (mimeo).

An analysis of the Annual Reports of the top 150 companies, as rated by Economic Times, 1975 was done to identify those companies having personnel departments. Further analysis was done on the basis of the industry and sector (public/private), classifications. The remuneration of the personnel employees in the (217 2A) category was compared to those in other functional areas, again by industries and sectors. While the public sector had more number of employees, they were paid less than their private sector counterparts.

Another finding was that personnel employees were paid as much as if not more than their counterparts in other areas. The variety of designations used, and the educational profile of the personnel officers were also studied. Correlations were also made in respect of the total wages, sales, profits and remuneration of all 217(2A) category employees and personnel 217(2A) employers.

The personnel function was recognised and given a distinct identity and status in a majority of the companies. The remuneration of personnel employees was on par with, if not greater than other nonpersonnel employees in most cases.

Pestonjee, D.M.; and Singh, Udai Bhanu. Job Satisfaction as a Function of Role Stress, Locus of Control Participation and Organisational Climate in an Electric Supply Company. Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 47).

Despite all its richness, job satisfaction research has suffered through neglect in the areas of managerial satisfaction. Most of the studies available to date are mainly concerned with the problem of rank-and-file workers and only occasionally deal with white-collar employees. Further, they suffer from lack of comprehensiveness. Most of them have been limited to a few variables which have been dealt in connection with job satisfaction either using these variables as antecedent variables or the outcome variables.

In the present investigation, an attempt has been made to fill in these gaps. The present investigations were directed to deal with the job satisfaction of managerial personnel. An attempt has also been made to include a large number of variables as antecedent conditions to job satisfaction of managerial executive personnel of a private electricity generating and supply company.

The following hypotheses were tested in the present investigation:

- a) Persons with different levels of locus of control will differ significantly in relation to their job satisfaction.
- b) Persons with different levels of perception of the prevailing motivational climate in their organization will differ significantly in relation to their job satisfaction.

The study was conducted in a private electricity generating and supplying company of western India. A total of 150 persons were given a set of questionnaires through personal contacts. They were assured of anonymity. The filled questionnaires were also collected personally. Only 101 sets of questionnaires were found to be complete in all respects. The main findings to the present investigation were:

- a) No significant relationships were observed between locus of controls and various dimensions of job satisfaction including overall satisfaction.
- b) A low and significantly negative correlation was observed in the case of locus of control and personal adjustment areas of job satisfaction.
- c) The climate of expect influence was found to be significantly associated mainly with on-the-job dimension of the job satisfac-

tion and not with the off-the-job dimensions of job satisfaction.

d) The climate of extension was found to be effective in increasing one's satisfaction, mainly the on-the-job aspects of job satisfaction dimensions, namely, job and management but not in the case of off-the-job aspects of job satisfaction.

e) Affiliation climate was found to be detrimental to one's feeling of satisfaction with the management. No significant relationships were found with any other dimension of job satisfaction.

f) It has been found that one's perception of high participation in decision making has an influence on his job satisfaction in areas such as job management social relations, on-the-job and overall satisfaction.

g) No relationships has been observed between autonomy and satisfaction in the job and personnel adjustment areas. The relationship between autonomy and on-the-job factors has been found to be merely significant.

h) Except in the case of job and personal adjustments areas, opinion seeking dimensions of participation has been found to be effective in increasing one's feelings of satisfaction in the case of management area, social relation area, on-the-job area, off-the-job area and overall job satisfaction.

i) Involvement has been found to be significantly and positively related to all the aspects of job satisfaction.

j) Role stagnation and ambiguity has been found to be significantly but negatively associated with all the dimensions of job satisfaction except in the case of social relation area of job satisfaction.

k) Role overload has been found to have a negative influence on all the dimensions of job satisfaction.

The overall indices of role stress have been found to be negatively associated with all the dimensions of job satisfaction except in the case of social relations area of job satisfaction.

The general picture emerging out of these findings indicate that favourable climate of achievement, expert influence, extension and participative management styles will enhance the job satisfaction level of managerial personnel. These findings have some practical implications in the sense that continuous monitoring of these variables can enable us to maintain the organisational health and effectiveness.

Singh, Ramadhar. Children's Judgments of Personal Happiness.

Ahmedabad: Indian Institute of Management, 1982 (PSG Monograph No. 41).

The major purpose of this research was to study how children of 4 to 9 years of age express their immediate happiness. In experiment 1 (n=72) and 2 (n=144), children were provided with a combination of concrete (balloons) and verbal (remarks) reinforcements for their performance on a simple motor task and were asked to express their happiness along a 15 point scale. In experiment 3 (n = 48) and 4 (n = 48), the order of presentation of three verbal remarks was manipulated to study whether happiness is susceptible to the primacy or recency effect. Because more than one factor were present in all the four experiments these experiments provided rigorous tests of the centration hypothesis of Piaget.

Experiments 1 and 2 yielded strong evidence against centration: all 4 to 5 year olds were able to attend to both verbal and concrete reinforcement in the expression of their happiness. More importantly, they followed an averaging role in the integration of verbal and concrete reinforcements. Developmental changes were present in boys. The 8 to 9 year old boys ignored balloons in the expression of their happiness. Patterns in the profile of concrete and verbal reinforcement were also variable across the age groups of boys. In girls, happiness obeyed a non-linear rule. Also, they interpreted absence of balloon as punishment.

Experiment 3 and 4 obtained recency effect in happiness. Children were most influenced by the latest reinforcement. However, they utilized all the three verbal remarks in expressions of their happiness. This result also argued against the centration hypothesis.

Considered together, the finding of present set of 4 experiments show that happiness obeys an averaging rule, that children's judgements are characterized by recency effect, that 4 to 5 year olds in India have a well-developed metric sense, and that children of 4 to 9 years of age were equally good in decentering to the multiple aspects of the reinforcing situations. Accordingly, it can be concluded that children are more complex than they are believed to be. Implications of these are discussed for further research and for education.

Ganesh, S.R.; and Joshi, Padmanabh. "Lighting Candles: Impact of Leadership Actions on Institution Building". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.458) (mimeo).

This paper uses the metaphor of lighting candles to describe the process of institution building. To illustrate this, it draws upon the actions of a prolific institution builder like Vikram Sarabhai in order to distill lessons about the impact of leadership action on institution building. Through picking up an exceptional personality, it attempts to demystify leadership actions surrounding the creation and development of institutions to distill learnings for unexceptional people involved in the task of institution building in various walks of life. It reports empirical data from two institutions, namely Ahmedabad Textile Industry's Research Association (ATIRA) and Physical Research Laboratory (PRL) which were founded by Dr. Vikram Sarabhai in 1947. It develops a model of leadership impact on institution building based on fire concepts. It concludes with suggestion for the use of the model for both theoretical and practical purposes.

Ganapathy, R.S.; and Subramanian, Ashok. "Design of an Organization Structure for Ocean Development". Ahmedabad: Indian Institute of Management, 1983 (IIMA Working Paper No.486) (mimeo).

The development of ocean resources has become a major strategic programme for India. The vastness complexity and uncertainty of the ocean environment necessitate a coordinated and responsive organization structure. This paper outlines the design considerations and proposes an organisational structure within the Government of India, to achieve its main objectives in ocean development. Firstly, an analysis of tasks, roles and linkages in ocean development is attempted. Various approaches to organisation design like contingency theory, cultural analysis, stakeholder analysis, matrix organisation and organisational learning are reviewed in the context of the tasks ahead in ocean development. It is argued that the design of the structure should be seen in multiple ways and structure is much more than an objective set of relationships and formal location of authority. Such a process view of the structure enables us to look at the design as a part of ocean development rather than as an "objective stage" prior to its implementation. Consistent with the nature of advanced technology which is highly turbulent, its environment and an assessment of the alternatives in organisation structure within Government of India, an organisational structure at the top management level and programmes is designed. The structure is based on an analysis of environmental conditions and task requirements as well as perceptions of and consensus among stakeholders. The design is influenced by a larger contextual understanding of Indian strategic vision and her political economy.

Dixit, M.R. "Monitoring The Government Policy Environment". Ahmedabad: Indian Institute of Management, 1986 (IIMA Working Paper No.601) (mimeo).

Recent favourable and unfavourable changes in the government policies have prompted many corporations to review their corporate strategies. This has pointed to the need for monitoring the government policy environment formally and systematically. This paper discusses the types of influences the government policies can have on the corporate strategy of a corporation and the various steps in developing an in-house system for monitoring the government policy environment. It presents the findings of a study aimed at understanding the monitoring practice of large corporations, and illustrates how a large diversified company monitors the events centering around the announcement of the annual budget of the Central Government.

This article highlights the need for monitoring the changes in government policies and their implications for the company's strategy through various examples and discussion of the types of influence government policies could have in the formulation and implementation of corporate strategy. It discusses the various steps in developing an in house monitoring system. The practice of large corporations in this regard is discussed. The study found that corporations tended to attach greater relevance to the regulating policies of the government than the promotional ones. The role of industry associations and government officials and publications as sources of information has been brought out. The need for reviewing the monitoring process is stressed.

Saiyadain, Mirza S. "Training Functions in India". Ahmedabad: Indian Institute of Management, 1986 (IIMA Working Paper No.646) (mimeo).

This study was undertaken to examine the state-of-the-art of the training functions in India. It covered such areas as manning of training departments, training infrastructure and cost, methods used to identify training needs, nature and durations of training programmes, and evaluation of training effectiveness. The major findings are:

- a) One third of the organizations have separate training departments under a manager (training) who reports directly to the highest position in the personnel department. Most of these managers are professionally trained. Training departments which are not separate units are unfortunately managed by those who do

not seem to have any basic professional qualifications though they are sent to short duration training programmes.

b) While one third of the organizations have separate training departments, only a few have fully equipped training infrastructure including teaching faculty of their own. Most seem to depend on others for training.

c) A very small portion (0.017%) of the total budget of human resources is spent on training.

d) As far as in-company programmes are concerned, more reliance is placed on internal faculty for the training of workers, while for managers, external faculty is the major resource.

e) A large number of organizations take post training feedback and evaluation seriously and make adjustments in their training plans accordingly.

While the survey results provide an overall picture of the training functions in India, a larger sample would have helped in undertaking a more comprehensive analysis of some of the aspects of training.

Singh, Meera; and Pestonjee, D.M. "'On the Job' and 'Off the Job' Areas of Job Satisfaction in Relation to Job Involvement and Participation". Ahmedabad: Indian Institute of Management, 1992 (IIMA Working Paper No.1038) (mimeo).

The study examines the effect of job involvement and participation on 'on the job' and 'off the job' factors of job satisfaction in different groups. Data were collected from a sample of 145 officers and 135 clerical personnel of a large banking organisation in the West Zone. The results tend to support previous research findings regarding the moderating effects of job involvement and participation on 'on the job' and 'of the job' factors of job satisfaction in different groups. In fact, significant interaction between job involvement and participation and job level and participation are obtained. The relationship between 'on the job' and 'of the job' factors are also discussed.

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