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**PRESERVATION AND INNOVATION
The Tasks of Government in Developing Countries**

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**Convocation Address to the
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PRESERVATION AND INNOVATION *
The Tasks of Government in Developing Countries
By
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I suggest that the main obstacles to growth and development are neither technological nor economic, but social factors. This assertion may jar on those who hold the view that given the economic inputs, the rest of the complex facets of the economy and the nation take care of themselves and produce the desired change. I shall therefore share some of my thoughts on this subject.

It was not until I was made responsible for the Atomic Energy programmes of this country and came face to face with problems of development through the application of advanced technologies and basic research, that I became conscious of the problems -that are encountered when Government has to perform a role which goes much beyond the maintenance of law and order and the security of the nation. Collaborating with Dr. Kamla Chowdhry in a study** of the growth of the activities of the Atomic Energy Commission of India, an organization for developmental tasks, and of Bhabha, an outstandingly successful innovator of our times, I was struck by the illumination of many complex issues.

I recognize that governments are involved in providing stability as well as change to society, two seemingly conflicting goals. At one end of the spectrum are certain administrative services, acting on past precedents and traditions providing security and continuity, impersonalized to the extent that if one person is substituted by another, every one knows how the successor will behave and operate under a given set of circumstances. At the other end, there are organizations based on research and development, involving individuals who act on insights and hunches, non-conformists questioning assumptions, innovating and learning. The two extremes require organizations and working cultures, which are rather different. We would have near disaster if we have a judge who is an 'innovator' instead of a 'preserver'. On the other hand, an educational or a scientific administrator would be sterile and ineffective if he is a preserver rather than an innovator. Most tasks encountered in the contemporary world call for organizations wherein creative thinking and innovation are essential ingredients of survival as well as growth. Industrial and agricultural development, and the conduct of foreign affairs call for innovators, rather than traditional administrators.

**Convocation Address to the Indian Institute of Management, Ahmedabad, April 1967.*

It is perhaps useful to note that if in a given situation we are content to leave all environmental conditions unchanged, we can at best achieve an evolutionary change through the natural course of survival and growth. On the other hand, forcing the pace of development needs probing the boundary conditions of each situation so as to push in the direction in which change is possible. The instruments of change have therefore to be those who do not take their environment for granted.

Most of us are familiar with the hierarchical organization structures involving vertical controls which continue to dominate governments whose principal role until recently was one of preserving a social order. They carry an administrative service, characterized by anonymity coupled with security of tenure, insulating individuals from outside pressures. The system has built in controls, which act negatively, attempting to stop a wrong thing from happening.

To realize how distant this culture is from one wherein innovators are involved in developmental tasks, we can examine some of the factors, which have been observed in the study of Atomic Energy. Organizations were built round men, and no organization chart stood in the way of recognizing and rewarding talent. Amongst professional groups of scientists and engineers, motivation and control was largely inherent and contained in professional commitments. Control was exercised through discussion and judgment of peers with administration performing largely the role of service. Autonomy of working conditions and selfdevelopment were important to the innovators. Horizontal control systems are effective when they involve mobility and interactions. The economic analogue of horizontal controls is competition. Horizontal controls are implicit and do not have to be imposed from above. For instance, if there is a situation where supply exceeds demand, the price is controlled by competition rather than by price control. Each competitor, without having to be told so, fully realizes the negative implications of his charging a higher price than others. The military application of it is seen in arms control through the balance of terror. Armed conflict between the U.S. and the U.S.S.R. during the last twenty years has been prevented not by action of the United Nations, but by the implicit threat of reprisals.

While vertical controls are dependent on a system of reporting and feedback involving more than one level, horizontal controls are dependent on direct interaction at the same level. The 'hot line' between Moscow and Washington is necessary to preserve stability through horizontal controls between the two power blocs. The effectiveness of vertical controls are dependent on the time span of delegation. For instance, if the Public Accounts Committee reviews the operation of a Government undertaking two to three years after an event has occurred, its comments cannot have any possible effect in producing control on tactical decisions by the management. With a time span of this order only a strategic decision such as one involving the establishment of a steel plant could be questioned with relevance to controls.

One may ask why competition, which is synonymous with horizontal controls, has become associated with capitalism? Are horizontal controls contrary to socialism or the State ownership of the means of production? Would it hurt if Hindustan Steel were not just one company? Would not the managements of Bhilai and Durgapur have positive incentives if they were competing with each other and with TISCO and Indian Iron? Can vertical controls of a Board of a monolithic corporation or of the Bureau of Public Enterprises, or of the Parliamentary Committee on Public Enterprises, or the Auditor General provide adequate substitutes for what can be gained through accountability for task performance in a situation of survival and growth in a competitive economy?

Vertical controls usually specify what cannot be done. The Industries Development and Regulation Act is a typical example of such control. Top bodies involved in such control can rarely function in anything but roles of strategic decision-making. When they involve themselves in the decision-making processes of day-to-day administration, the system indeed gets fouled up. I would suggest that since vertical controls inhibit innovation and remove the decision-making process from the operating level, they are unsuitable as a system for the developmental tasks of government.

We are not suggesting here the abdication of supreme authority at the top most echelon of government. But one is talking of a self-restraint and exercise of power based on understanding of the control systems appropriate to developmental functions. One is moreover asking for a sophistication which recognises that there is a distinction between a formal and a real organisational structure, the social culture of an organization being influenced mainly by the men who are in it, the determining factors being their assumptions and outlook on life and their attitudes related to their past training and traditions. It is because of this that one despairs of finding solution to our real problems by only organisational changes.

In research laboratories, and in other developmental tasks it seems important that the Chief Executive, besides being involved in policy-making and administration, maintains direct contact with his professional role. The creation of administrative practices appropriate to a given technology or set of tasks comes with familiarity and knowledge-of-acquaintance of the technology or tasks concerned.

There is a need for a constant interplay between the basic sciences, technology and industrial practice if economic progress is to result from the activity undertaken. The wearing of several hats by the same person, and the mobility of personnel from one type of activity to another have undoubtedly provided the impetus for growth in the projects of the Department of Atomic Energy. We may contrast this with the practice prevalent in higher educational institutions for basic sciences and technology and national laboratories where the work of applying the results of research to practical ends had to be done through other units, not originally related to the laboratories or the men that work in them.

The various factors indicated earlier are interrelated and mutually dependent. A change in one influences the total scheme of things, for in organisational structures and culture, the whole is more than the sum of its parts. Structures, procedures and techniques are important but these must be sustained by a cluster of attitudes conveying care, trust and nurturance on the part of responsible persons.

With the problems that we are facing in the country today, it is pertinent to ask how the considerations, which we have discussed, are relevant to Government. The foremost need would be to identify activities where developmental functions are primarily involved. Organizational reforms involving systems of horizontal and vertical controls would grow naturally when men who are appropriate for these tasks are placed in positions of responsibility.

Will we have the conviction and courage to introduce these changes? The answer is surely crucially related to our survival.

The Convocation is a ritualistic farewell to those who have graduated after two years of exposure to what the Institute stands for. There is a great emphasis here on the decision making process. What is equally important is an understanding of the backdrop of the physical and social environment in which we operate. For it is through assumptions made from an understanding of the background that innovators derive their nourishment. I am sure you have acquired plenty of this here, but hope that you will continue to test and renew your assumptions on the experiences that you gain. I wish that you would perform successfully the role of innovators.

*** Paper "Organisation for Developmental Tasks: Atomic Energy Commission of India" by Kamla Chowdhry and Vikram Sarabhai, 1968.*

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“Atomic Energy Commission Electronic Project: A Study of the Transformation of a Departmental Production Unit into a Commercial Public Sector Enterprise, Sixth Annual Report, 1967-68, Pg. 24”

<u>Project</u>	<u>Faculty</u>	<u>Sponsor</u>
5. Atomic Energy Commission Electronic Project : A Study of the Transformation of a Departmental Production Unit into a Commercial Public Sector Enterprise	Profs. Kamla Chowdhry, John Dearden, Ravi J. Matthal, V.L. Mote & Samuel Paul	Atomic Energy Commission & IIMA

Source: IIMA Archives

**“Organizations which have employed IIMA students for permanent and summer jobs,
Appendix I, Campus Recruitment Programme, 1972, Pg. 10”**

Calico Mills, Ahmedabad	Gujarat Bottling Company Pvt. Ltd., Ahmedabad
Canara Bank, Bangalore	Gujarat Metal Box Company, Ahmedabad
Carborundum Universal Ltd., Madras	Gujarat Nets Ltd., Ahmedabad
Ceat Tyres of India Ltd., Bombay	Gujarat Small Industries Corpn. Ltd., Ahmedabad
Cement Agencies Ltd., Bombay	Gujarat State Co-operative Marketing Society Ltd., Ahmedabad
Central Distillery and Chemical Works Ltd., Delhi	Gwalior Rayons Ltd., Delhi
Chartered Bank Ltd., Calcutta	
Chesebrough-Pond's Inc., Madras	
Clarion McCann Advertising Services Ltd., Bombay	Handicrafts & Handlooms Export Corpn. of India Ltd., Bombay
Coates of India Ltd., Bombay	Hindustan Brown Boveri Ltd., Bombay
Coca-Cola Export Corporation, New Delhi	Hindustan Lever Ltd., Bombay
Coelho Brothers, Mangalore	Hindustan Machine Tools Ltd., Bangalore
Continental Device India, Faridabad	Hindustan Precision Instruments Ltd., Poona
Cooper Engineering Co. Ltd., Poona	Hindustan Steel Ltd., Bhilai
Council of Scientific and Industrial Research, New Delhi	Hindustan Thompson Associates Ltd., Bombay
Cutler Hammer India Ltd., Faridabad	Hindustan National Glass Manufacturing Co. Ltd., Bahadurgarh
Cyanamid India Ltd., Bombay	Holy Family Hospital, New Delhi
	Home Products Marketing Agency, Bombay
Deccan Embroidery Mfg. Co., Poona	Hotel Oberoi Intercontinental, New Delhi
Delhi Cloth & General Mills Co. Ltd., Delhi	Hyderabad Allwyn Metal Works Ltd., Hyderabad
Devidayal Cable Industries Ltd., Bombay	
Dharamsi Morarji Chemical Co. Ltd., Bombay	IBM World Trade Corpn., New Delhi
Digvijay Cement Co. Ltd., Ahmedabad	Indequip Engineering Ltd., Ahmedabad
Dinesh Mills Ltd., Baroda	India Hume Pipe Ltd., Bombay
Dr. Beck & Co. (India) Ltd., Bombay	India Pistons Ltd., Madras
Duncan Brothers Ltd., Bombay	India Tobacco Co. Ltd., Calcutta
Dunlop India Ltd., Calcutta	India Tourism Development Corpn. Ltd., New Delhi
	Indian Airlines, New Delhi
EID Parry Ltd., Madras	Indian Aluminium Co. Ltd., Bombay
Electric Steel Ltd., Calcutta	Indian Banks' Association, Bombay
Electronics Corporation of India Ltd., Hyderabad	Indian Detonators Ltd., Hyderabad
Electronics Ltd., Faridabad	Indian Explosives Ltd., New Delhi
Enfield (India) Ltd., Madras	Indian Express Newspaper (Bombay) Pvt. Ltd., Bombay
Enterprise Development Private Ltd., Hyderabad	Indian Institute of Management, Ahmedabad
Escorts Ltd., Faridabad	Indian Institute of Public Administration, New Delhi
Esso Eastern Inc., Bombay	Indian Oil Corpn. Ltd., Bombay
	Indian Oxygen Ltd., Calcutta
Fabril Gasosa Ltd., Goa	Indian Plywood Co. Ltd., Bombay
Fertilizers & Chemicals Travancore Ltd., Alwaye	Indian Rare Earths Ltd., Bombay
Fibreglass Pilkington Ltd., Bombay	Indian Space Research Organization, Ahmedabad
First National City Bank, Bombay	Indian Tube Co. Ltd., Calcutta
First National City Bank, Delhi	Indo-Burmah Petroleum Co. Ltd., Bombay
Food Corpn. of India, Ahmedabad	Industrial & Agricultural Engineering Co. (Bombay) Pvt., Ltd., Bombay
Food Fats & Fertilizers Ltd., Tadepalligudam	Industrial Credit & Investment Corpn. of India Ltd., Bombay
Ford Foundation, New Delhi	Ingersoll-Rand (India) Pvt. Ltd., Ahmedabad
Forgings Pvt. Ltd., Faridabad	Institute of European Studies, Vienna, Austria
	International Computers Ltd., Ahmedabad
Gabriel India (Pvt.) Ltd., Bombay	International Tractor Company of India Ltd., Bombay
Ganesh Flour Mills Ltd., Bombay	
Ganju House, Srinagar	J. B. A. Printing Inks Pvt. Ltd., Bombay
Gannon Dunkerley & Co. Ltd., Bombay	J. K. Synthetics Ltd., Kota
Geo Industries & Insecticides (India) Pvt. Ltd., Madras	J. N. Marshall & Co., Poona
Glaxo Laboratories (India) Ltd., Bombay	J & P Coats (India) Pvt. Ltd., Bombay
Godfrey Philips India Ltd., Bombay	Jafkay Engineering Corpn., Bombay
Godrej & Boyce Manufacturing Co. Pvt. Ltd., Bombay	Jaipur Metals & Electricals Ltd., Jaipur
Godrej Soaps Pvt. Ltd., Bombay	
Greaves Cotton & Co. Ltd., Bombay	
Grindwell Norton Ltd., Bombay	
Guest, Keen, Williams Ltd., Calcutta	

**“Organizations which have employed IIMA students for permanent and summer jobs,
Appendix I, Campus Recruitment Programme, Post-Graduate Programme in Business
Administration, 1973, Pg. 11”**

Central Distillery and Chemical Works Ltd., Delhi	Hindustan Precision Instruments Ltd., Poona
Chartered Bank Ltd., Calcutta	Hindustan Steel Ltd., Bhilai
Chesebrough-Pond's Inc., Madras	Hindustan Thompson Associates Ltd., Bombay
CIDCO, Bombay	Hindustan National Glass Manufacturing Co. Ltd., Bahadurgarh
Clarion McCann Advertising Services Ltd., Bombay	Holy Family Hospital, New Delhi
Coates of India Ltd., Bombay	Home Products Marketing Agency, Bombay
Coca-Cola Export Corporation, New Delhi	Hotel Oberoi Intercontinental, New Delhi
Coelho Brothers, Mangalore	Hyderabad Allwyn Metal Works Ltd., Hyderabad
Comet Paints Pvt. Ltd., Vallabh Vidyanagar	
Continental Device India Ltd., Faridabad	IBM World Trade Corpn., New Delhi
Cooper Engineering Co. Ltd., Poona	ICI (India) Pvt. Ltd., Calcutta
Council of Scientific and Industrial Research, New Delhi	Indequip Engineering Ltd., Ahmedabad
Cutler Hammer India Ltd., Faridabad	India Hume Pipe Ltd., Bombay
Cyanamid India Ltd., Bombay	India Pistons Ltd., Madras
	India Tobacco Co. Ltd., Calcutta
Deccan Embroidery Mfg. Co., Poona	India Tourism Development Corpn. Ltd., New Delhi
Delhi Cloth & General Mills Co. Ltd., Delhi	Indian Airlines, New Delhi
Devidayal Cable Industries Ltd., Bombay	Indian Aluminium Co. Ltd., Bombay
Dharamsi Morarji Chemical Co. Ltd., Bombay	Indian Banks' Association, Bombay
Digvijay Cement Co. Ltd., Ahmedabad	Indian Detonators Ltd., Hyderabad
Dinesh Mills Ltd., Baroda	Indian Explosives Ltd., New Delhi
Dr. Beck & Co. (India) Ltd., Bombay	Indian Express Newspaper (Bombay) Pvt. Ltd., Bombay
Duncan Brothers Ltd., Bombay	Indian Institute of Management, Ahmedabad
Dunlop India Ltd., Calcutta	Indian Institute of Public Administration, New Delhi
	Indian Leaf Tobacco Development Co. Ltd., Calcutta
EID Parry Ltd., Madras	Indian Oil Corporation Ltd., Bombay
Electric Steel Ltd., Calcutta	Indian Oxygen Ltd., Calcutta
Electronics Corporation of India Ltd., Hyderabad	Indian Plywood Co. Ltd., Bombay
Electronics Ltd., Faridabad	Indian Rare Earths Ltd., Bombay
Enfield (India) Ltd., Madras	Indian Space Research Organization, Ahmedabad
Enterprise Development Pvt. Ltd., Hyderabad	Indian Tube Co. Ltd., Calcutta
Escorts Ltd., Faridabad	Indo-Burmah Petroleum Co. Ltd., Bombay
Eso Eastern Inc., Bombay	Industrial & Agricultural Engineering Co. (Bombay) Pvt. Ltd., Bombay
	Industrial Credit & Investment Corpn. of India Ltd., Bombay
Fabril Gasosa Ltd., Goa	Ingersoll-Rand (India) Pvt. Ltd., Ahmedabad
Family Planning Association of India, Bombay	Institute of European Studies, Vienna, Austria
Fertilizers & Chemicals Travancore Ltd., Alwaye	International Computers Ltd., Ahmedabad
Fibreglass Pilkington Ltd., Bombay	International Tractor Company of India Ltd., Bombay
First National City Bank, Bombay	
First National City Bank, Delhi	J. B. Advani & Company Pvt. Ltd., Bombay
Food Corporation of India, Ahmedabad	J. B. A. Printing Inks Pvt. Ltd., Bombay
Food Fats & Fertilizers Ltd., Tadepalligudam	J. K. Synthetics Ltd., Kota
Ford Foundation, New Delhi	J. N. Marshall & Co., Poona
Forgings Pvt. Ltd., Faridabad	J & P Coats (India) Pvt. Ltd., Bombay
	Jafkay Engineering Corpn., Bombay
Gabriel India (Pvt.) Ltd., Bombay	Jaipur Metals & Electricals Ltd., Jaipur
Ganesh Flour Mills Ltd., Bombay	Jairamdas & Sons, Bombay
Ganju House, Srinagar	Jairamdas Udyog Pvt. Ltd., Bangalore
Gannon Dunkerley & Co. Ltd., Bombay	Jansatta, Ahmedabad
Geo Industries & Insecticides (India) Pvt. Ltd., Madras	Jardine Henderson Ltd., Calcutta
Glaxo Laboratories (India) Ltd., Bombay	Jay Engineering Works Ltd., Calcutta
Godfrey Philips India Ltd., Bombay	Jehangir Vakil Mills Ltd., Ahmedabad
Godrej & Boyce Manufacturing Co. Pvt. Ltd., Bombay	Jenson & Nicholson (India) Ltd., Calcutta
Godrej Soaps Pvt. Ltd., Bombay	Johnson & Johnson Ltd., Bombay
Greaves Cotton & Co. Ltd., Bombay	Jupiter Mills Ltd., Ahmedabad
Grindwell Norton Ltd., Bombay	Jyoti Ltd., Baroda
Guest, Keen, Williams Ltd., Calcutta	
Gujarat Bottling Company Pvt. Ltd., Ahmedabad	Kamani Engineering Corpn., Bombay
Gujarat Metal Box Company, Ahmedabad	Kamani Services Pvt. Ltd., Bombay
Gujarat Nets Ltd., Ahmedabad	Karamchand Thaper & Bros. Pvt. Ltd., Calcutta
Gujarat Small Industries Corpn. Ltd., Ahmedabad	Khira Steel Works Pvt. Ltd., Bombay
Gujarat State Co-operative Marketing Society Ltd., Ahmedabad	Killick Slotted Angles Ltd., Bombay
Gujarat State Textile Corporation Ltd., Ahmedabad	Kirloskar Consultants Ltd., Poona
Gwalior Rayons Ltd., Delhi	Kirloskar Electric Co. Ltd., Bangalore
	Kirloskar Electric Co. Ltd., Poona
Handicrafts & Handlooms Export Corpn. of India Ltd., Bombay	Krishi Engines Pvt. Ltd., Hyderabad
Hindustan Brown Boveri Ltd., Bombay	Krishi Vishwa Vidyalyaya, Jabalpur
Hindustan Copper Ltd., Khetrinagar	
Hindustan Lever Ltd., Bombay	Lakme' Ltd., Bombay
Hindustan Machine Tools Ltd., Bangalore	La-Medica, New Delhi
	Larsen & Toubro Ltd., Bombay

**“Organizations that have employed IIMA students for permanent and summer jobs,
Appendix I, Campus Recruitment, Post-Graduate Programme in Business Administration,
1974, Pg. 15”**

Electronics Ltd., Faridabad	IBM World Trade Corpn., New Delhi
Enfield (India) Ltd., Madras	ICI (India) Pvt. Ltd., Calcutta
Engineers India Ltd., Delhi	Indequip Engineering Ltd., Ahmedabad
Enterprise Development Pvt. Ltd., Hyderabad	India Hume Pipe Ltd., Bombay
Escorts Ltd., Faridabad	India Pistons Ltd., Madras
Esso Eastern Inc., Bombay	India Tobacco Co. Ltd., Ahmedabad/Bombay/Calcutta
Eswaran & Sons Engineering Pvt. Ltd., Madras	India Tourism Development Corpn. Ltd., New Delhi
	Indian Airlines, New Delhi
Fabril Gasosa Ltd., Goa	Indian Aluminium Co. Ltd., Bombay
Family Planning Association of India, Bombay	Indian Banks' Association, Bombay
Fertilizers & Chemicals Travancore Ltd., Alwaye	Indian Cable Co. Ltd., Calcutta
Fibreglass Pilkington Ltd., Bombay	Indian Detonators Ltd., Hyderabad
First National City Bank, Bombay	Indian Explosives Ltd., New Delhi
First National City Bank, Delhi	Indian Express Newspaper (Bombay) Pvt. Ltd., Bombay
Food Corporation of India, Ahmedabad	Indian Institute of Management, Ahmedabad
Foods Fats & Fertilizers Ltd., Tadepalligudam	Indian Institute of Public Administration, New Delhi
Ford Foundation, New Delhi	Indian Leaf Tobacco Development Co. Ltd., Calcutta
Forgings Pvt. Ltd., Faridabad	Indian Market Research Bureau, Bombay
	Indian Oil Corpn. Ltd., Bombay
Gabriel India (Pvt.) Ltd., Bombay	Indian Oxygen Ltd., Calcutta
Ganesh Flour Mills Ltd., Bombay	Indian Plywood Co. Ltd., Bombay
Gangappa Cables Ltd., Hyderabad	Indian Rare Earths Ltd., Bombay
Ganju House, Srinagar	Indian Space Research Organization, Ahmedabad/ Trivandrum
Gannon Dunkerley & Co. Ltd., Bombay	Indian Tube Co. Ltd., Calcutta
Garware Nylons Ltd., Poona	Indo-Burmah Petroleum Co. Ltd., Bombay
Geo Industrial & Insecticides (India) Pvt. Ltd., Madras	Industrial & Agricultural Engineering Co., (Bombay) Pvt. Ltd., Bombay
Glaxo Laboratories (India) Ltd., Bombay	Industrial Credit & Investment Corpn. of India Ltd., Bombay
Godfrey Phillips India Ltd., Bombay	Industrial Finance Corpn. of India, Bombay
Godrej & Boyce Manufacturing Co. Pvt. Ltd., Bombay	Ingersoll-Rand (India) Pvt. Ltd., Ahmedabad
Godrej Soaps Pvt. Ltd., Bombay	Institute of European Studies, Vienna, Austria
Greaves Cotton & Co. Ltd., Bombay	International Computers Ltd., Ahmedabad
Grindwell Norton Ltd., Bombay	International Tractor Company of India Ltd., Bombay
Guest Keen Williams Ltd., Calcutta	
Gujarat Bottling Co. Pvt. Ltd., Ahmedabad	J. B. Advani & Company Pvt. Ltd., Bombay
Gujarat Industrial Development Corpn., Ahmedabad	J. B. A. Printing Inks Pvt. Ltd., Bombay
Gujarat Metal Box Co., Ahmedabad	J. K. Synthetics Ltd., Kota
Gujarat Nets Ltd., Ahmedabad	J. N. Marshall & Co., Poona
Gujarat Small Industries Corpn. Ltd., Ahmedabad	J & P Coats (India) Pvt. Ltd., Bombay
Gujarat State Co-operative Marketing Society Ltd., Ahmedabad	Jafkay Engineering Corpn., Bombay
Gujarat State Financial Corpn., Ahmedabad	Jaipur Metals & Electricals Ltd., Jaipur
Gujarat State Textile Corpn. Ltd., Ahmedabad	Jairamdas & Sons, Bombay
Gwalior Rayons Ltd., Delhi	Jairamdas Udyog Pvt. Ltd., Bangalore
	Jansatta, Ahmedabad
Handicrafts & Handlooms Export Corpn. of India Ltd., Bombay	Jardine Henderson Ltd., Calcutta
Happy Home Enterprises, Bombay	Jay Engineering Works Ltd., Calcutta
Hindustan Brown Boveri Ltd., Bombay	Jehangir Vakil Mills Ltd., Ahmedabad
Hindustan Cooper Ltd., Khetrinagar	Jenson & Nicholson (India) Ltd., Calcutta
Hindustan Lever Ltd., Bombay	Johnson & Johnson Ltd., Bombay
Hindustan Machine Tools Ltd., Bangalore	Jupiter Mills Ltd., Ahmedabad
Hindustan Precision Instruments Ltd., Poona	Jyoti Ltd., Baroda
Hindustan Steel Ltd., Bhilai	
Hindustan Thompson Associates Ltd., Bombay	Kalpalok, Bombay
Hindusthan National Glass & Industries Ltd., Bahadurgarh	Kamani Engineering Corpn., Bombay
Holy Family Hospital, New Delhi	Kamani Services Pvt. Ltd., Bombay
Home Products Marketing Agency, Bombay	Karamchand Thaper & Bros. Pvt. Ltd., Calcutta
Hotel Oberoi Intercontinental, New Delhi	Khira Steel Works Pvt. Ltd., Bombay
Hyderabad Allwyn Metal Works Ltd., Hyderabad	Killick Slotted Angles Ltd., Bombay

**“Organizations which have employed IIMA students for permanent and summer jobs,
Appendix IV, Campus Recruitment, 1975, Pg. 14”**

Devidayal Electronics and Wires Ltd., Bombay	Handicrafts & Handlooms Export Corpn. of India Ltd., Bombay
Devidayal Rolling and Refineries Pvt. Ltd., Bombay	Happy Home Enterprises, Bombay
Dharamsi Morarji Chemical Co. Ltd., Bombay	Hindustan Aeronautics Ltd., Bangalore
Digvijay Cement Co. Ltd., Ahmedabad	Hindustan Brown Boveri Ltd., Bombay
Dinesh Mills Ltd., Baroda	Hindustan Copper Ltd., Khetrinagar
Duncan Brothers Ltd., Calcutta	Hindustan Everest Tools Ltd., New Delhi
Dunlop India Ltd., Calcutta	Hindustan Lever Ltd., Bombay
EID Parry Ltd., Madras	Hindustan Machine Tools Ltd., Bangalore
Electric Steel Ltd., Calcutta	Hindustan National Glass and Industries Ltd., Bahadurgarh
Electronics Corporation of India Ltd., Hyderabad	Hindustan Precision Instruments Ltd., Poona
Electronics Ltd., Faridabad	Hindustan Steel Ltd., Bhilai
Enfield (India) Ltd., Madras	Hindustan Thompson Associates Ltd., Bombay
Engineers India Ltd., Delhi	Holy Family Hospital, New Delhi
Enterprise Development Pvt. Ltd., Hyderabad	Home Products Marketing Agency, Bombay
Escorts Ltd., Faridabad	Hotel Oberoi Intercontinental, New Delhi
Esso Eastern Inc., Bombay	Housing and Urban Development Corporation Ltd., New Delhi
Eswaran and Sons Engineering Pvt. Ltd., Madras	Hyderabad Allwyn Metal Works Ltd., Hyderabad
Fabril Gasosa Ltd., Goa	IBM World Trade Corporation, New Delhi
Family Planning Association of India, Bombay	ICI (India) Pvt. Ltd., Calcutta
Fertilizers and Chemicals Travancore Ltd. Alwaye	IDL Chemicals Ltd., Hyderabad
Fibreglass Pilkington Ltd., Bombay	ITC Ltd., Ahmedabad/Bombay/Calcutta
First National City Bank, Bombay/Calcutta/Delhi/Madras	Indequip Engineering Ltd., Ahmedabad
Food Corporation of India, Ahmedabad	India Hume Pipe Ltd., Bombay
Foods, Fats and Fertilizers Ltd., Tadepalligudam	India Leaf Tobacco Development Co. Ltd., Guntur
Ford Foundation, New Delhi	India Paper Pulp Co. Ltd., Calcutta
Forgings Pvt. Ltd., Faridabad	India Pistons Ltd., Madras
Fouress Engineering Co (India) Ltd., Bombay	India Tourism Development Corpn. Ltd., New Delhi
G. G. Dandekar Machine Works Ltd., Bhiwandi	Indian Airlines, New Delhi
Gabriel India Ltd., Bombay	Indian Aluminium Co. Ltd., Bombay
Ganesh Flour Mills Ltd., Delhi	Indian Banks' Association, Bombay
Gangappa Cable Ltd., Hyderabad	Indian Cable Co. Ltd., Calcutta
Ganju House, Srinagar	Indian Explosives Ltd., New Delhi
Gannon Dunkerley & Co. Ltd., Bombay	Indian Express, Bombay
Garware Nylons Ltd., Poona	Indian Institute of Management, Ahmedabad
Geo Industrial & Insecticides (India) Pvt. Ltd., Madras	Indian Institute of Public Administration, New Delhi
Glaxo Laboratories (India) Ltd., Bombay	Indian Institute of Science, Bangalore
Godfrey Philips India Ltd., Bombay	Indian Market Research Bureau, Bombay
Godrej & Boyce Mfg. Co. Pvt. Ltd., Bombay	Indian Oil Corporation Ltd., Bombay
Godrej Soaps Pvt. Ltd., Bombay	Indian Overseas Bank, Madras
Greaves Cotton & Co. Ltd., Bombay	Indian Oxygen Ltd., Calcutta
Grindwell Norton Ltd., Bombay	Indian Plywood Co. Ltd., Bombay
Guest, Keen, Williams Ltd., Calcutta	Indian Potash Ltd., Madras
Gujarat Agro Industries Corporation Ltd., Ahmedabad	Indian Rare Earths Ltd., Bombay
Gujarat Bottling Co. Pvt. Ltd., Ahmedabad	Indian Space Research Organization, Ahmedabad/Trivandrum/ Bangalore
Gujarat Industrial Development Corporation, Ahmedabad	Indian Tube Co. Ltd., Calcutta
Gujarat Metal Box Co., Ahmedabad	Indo-Burmah Petroleum Co. Ltd., Bombay
Gujarat Nets Ltd., Ahmedabad	Industrial and Agricultural Engg. Co. (Bombay) Pvt. Ltd., Bombay
Gujarat Small Industries Corporation Ltd., Ahmedabad	Industrial Credit and Investment Corpn. of India Ltd., Bombay
Gujarat State Co-op Marketing Society Ltd., Ahmedabad	Industrial Finance Corporation of India, Bombay
Gujarat State Fertilizer Co. Ltd., Baroda	Ingersoll-Rand (India) Pvt. Ltd., Ahmedabad
Gujarat State Financial Corporation., Ahmedabad	Institute of European Studies, Vienna, Austria
Gujarat State Textile Corporation Ltd., Ahmedabad	International Computers Ltd., Ahmedabad
Gwalior Rayons Ltd., Delhi	International Tractor Co. of India Ltd., Bombay
	ION Exchange (India) Ltd., Bombay

Connections of IIMA students with ISRO and Space Research

Kiran Karnik, PGP 1968

The path chosen by KIRAN KARNIK (PGP '68) is in many ways unusual. For many years he has been working in a most unbusiness like organization-Space Application Centre. Drawn by the personality of Dr. Vikram Sarabhai, who was then Chairman of the Atomic Energy Commission, he joined the commission in Bombay after graduating from the Institute. There he spent a couple of years working on problems relating to organization, structures,



Kiran Karnik

costing of indigenous rockets, and techno-economic studies of food irradiation plants and of large nuclear-power based agro-industrial complexes. He then moved to Ahmedabad where he got involved with various projects related to space research such as "Krishi Darshan" pilot agricultural TV project, and a domestic communications satellite system. The first step towards promoting a domestic satellite system was the development (in 1975-76) of the Satellite Instructional Television Experiment (SITE), a joint Indo-US project. Kiran's involvement in this was total, and stretched from its conception to evaluation. As Manager of the SITE Management

Office, he had both a complete overview and involvement with the nitty-gritty details of a project. He found this work not only exciting but also "exhilarating." "The ferment and thrill amongst the people in remote villages of North Bihar or Orissa at seeing, for the first time ever, a moving picture, a television programme - this just cannot be described, nor can the sensation that one gets when

these feelings are transmitted to oneself. It not only makes years of effort and hard work seem worthwhile, but entices one to continue and make even greater effort (and not switch jobs.)" recalls Karnik with pride.

In 1975, he was made responsible for the ISRO's TV programme production for the SITE. This

involvement with television programmes became deeper and deeper, and Kiran is now the Director of the Development and Educational Communication Unit. In between he worked for UNESCO in Afghanistan, as a consultant on communications planning. For about 15 months from mid-81, Kiran worked for the United Nations in New York and (briefly) in Vienna, acting as Special Assistant to the Secretary General of UNISPACE 82, the second UN conference on Space. "This was a very different and interesting experience in the world of international politics—Space too having become an arena of politics, thanks to its increasing militarisation," he reminisces. Recently Kiran had the opportunity of renewing his connections with the UN, when he was nominated as a member—and later elected as Chairman—of the Expert Group on Direct Broadcasting Satellites for Education, set up by the UN Secretary General.

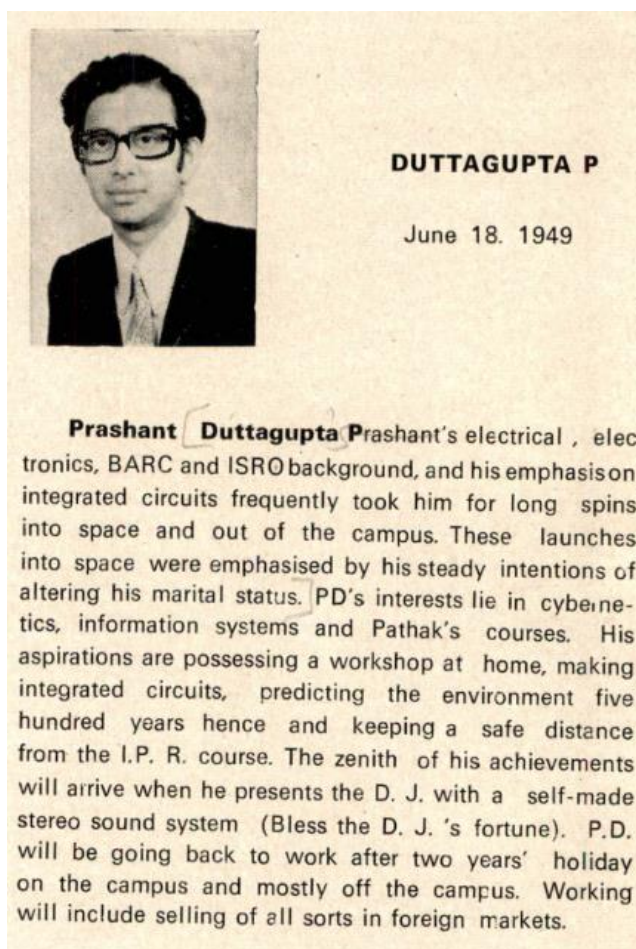
As Director of ISRO's Development and Educational Communication Unit, Kiran has had a great deal of involvement in the planning of the TV system in the country and especially of the INSAT-related elements.

Working for the government has its frustrations. Not the least of these is the financial aspect, as compared to fellow-MBA's working in the private sector. But Kiran feels that there are other rewards, in terms of job satisfaction and in doing something which can have an effect on very large numbers of people. Looking back he explains the reason for the path he chose:

"Two roads diverged in a wood, and I
took the one less travelled by,
And that has made all the difference."

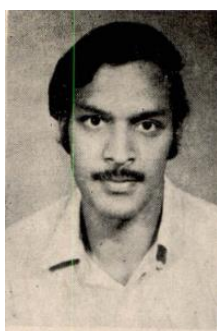
On the academic front, apart from presenting papers at various conferences, he has published a number of articles and been a co-author of a couple of reports published by UNESCO and has edited a book, *Alternative Space Futures and The Human Condition*.

Prashant Duttagupta, PGP 1974



Source: IIMA Student Yearbook, 1974, IIMA Archives

Pankaj Jain, PGP 1977



PANKAJ JAIN

The gentle giant, Pankaj is the engineer (from ISRO)
turned economist. Largely known as "Punk Jain"
claims to have tremendous contacts in SBI — IIM.
Bubbling with enthu, he is motivated to the core (God!
he has hardly learnt anything in the last 2 years).

Source: IIMA Student Yearbook, 1977, IIMA Archives

D. N. Sastry, PGP 1977



D.N.SASTRY



After PGP, I started with Dept of Space at Hyderabad. I also had a stint with HAL and then moved to Computer industry and private sector in '87. Career changes and moves were more frequent from then onwards. Visionlabs, Hinditron, Onward Computers, Indotronics are the companies I worked for in Hyderabad, before I moved to an overseas assignment to head Computer Systems House LLC in Muscat, Oman. After successfully establishing the company from ground zero and completing 2 large projects there, I moved to USA as Vice President for New Horizons Software Inc., (a start-up NRI company) based in Lowell USA. After 3 years with NHSI and a brief experiment with my own company, I am currently working as Software Development Manager with CISCO Systems

Married Lakshmi in '79, an Engineer from REC and with success stories of her own, she is currently Senior Process Manager at Sanmina Corporation, a large contract-manufacturing firm in North America. Elder son Aditya (20) is in 3rd year of college and younger son Sashanka (15) is in high school. Both enjoy playing basketball.

I enjoyed my career, travelling and working with different people and nationalities each having distinct culture. I would like to do things quietly. I enjoy visiting friends, reading and music and being a handyman at home repairing and then replacing most of the repaired items!

Source: The reunion batch of 1977, Funda, IIMA Yearbook, IIMA Archives, 2002

Dave P. N., PGP 1979



DAVE PN

If there is one man at IIM who is buzzing with ideas it is Dave, the man from Uganda. His copyrights include 'ejecting seats' in automobiles, offering professional services like pundits for marriages to Indians abroad and starting a casino in the dormitory. The last one he successfully accomplished was to be run on a 'Service Centre' basis. Has dazzled many a listener at IIM by rendering a new version each time of the only song he learnt in Uganda. Fond of transistorized music while bathing, was mistaken for a UFO in D-7 during summer training at ISRO.

Source: IIMA Student Yearbook, 1979, IIMA Archives