Convocation address by Shri L. K. Jha, Governor, Reserve Bank of India, at the Indian Institute of Management, Ahmedabad, on Saturday, April 11, 1970.

In the efforts that we are making to develop our economy we are constantly confronted with the constraint of resources. The most obvious shortage is that of capital. India like other developing countries is caught in a vicious circle. Low incomes result in low levels of capital formation, which in turn perpetuate, if not aggravate, the low levels of income. Then there are other shortages of which we become acutely aware in different contexts at different times, such as of foreign exchange, of steel or even foodgrains. While we recognise these material shortages and try to overcome them, we are apt to ignore the one shortage which to my mind is the most critical. It is the shortage of human resources, of manpower, of entrepreneurial, managerial, technical and skilled personnel, of the attitude of mind that transforms stumbling blocks into stepping stones, obstacles into opportunities. And it is the role of human resources in economic development that I propose to discuss and explore this morning.

I shall begin with an assertion. Prosperity is a man-made phenomenon. If we look at history, or consider the rates of growth in different countries in the world today, we find that even countries not rich in natural resources, with no deposits of oil and even those which lack a fertile soil, have prospered or are forging ahead. Progress has depended much more on the quality of human endeavour and enterprise. The Industrial Revolution in Britain was really an intellectual revolution - an outcome of a high level of inventiveness and innovation. Empirical investigations have shown that the per capital growth of 87.5 per cent in G.N.P. which the United States achieved between 1909 and 1945 cannot be explained by quantitative increases in labour and capital inputs. It is only the creative response of the human mind to objective opportunity which can account for this achievement. Similarly, the economic upsurge in Germany after World War II, often referred to as the German miracle, can only be explained in terms of the industriousness and intelligence which the German people displayed in rebuilding their economy after the ravages of war. A similar ferment is in evidence in Japan today which has attained and sustained a phenomenal rate of growth. Japan has no iron ore. To start with, it had to import both the technology and the machinery for making steel. Yet today it sells steel to the very countries from which it imported its technology and machinery and from which it still imports its iron ore. Surely such phenomenon cannot be explained in terms of purely material factors.

This does not mean that the people of any country are more brainy or more diligent or more inventive than of any other. Indeed, the world's richest country is the biggest importer of brains. The relatively poorer countries, including the poorest among them such as our own, are exporting brains. We refer to this as the brain drain. It is a convenient phrase which enables us to put the blame for our failure to use the talent that our people possess upon those who have the talent or those who can put it to the best possible use.

The inadequate attention which has been and is being paid to the human element in discussions on development is partly due to the fact that in the evolution of economic thought the material factors were over-emphasised. Not only Adam Smith, who is regarded as the father of modern economics, but also Richardo, John Stuart Mill and even Alfred Marshall did not give enough importance to the human element, the really active element, in economic evolution and gave too much credit to what I would call the passive elements. Earlier economic textbooks used to refer to capital, land and labour as the three main factors of production. Labour in this approach was treated in the same inert category as the material factors like land, or natural resources in general and capital, though Marshall referred to organisation as an additional factor of importance.

The first economist of repute who perceived the process of development in terms of the human factor was Karl Marx. We are apt to think of him merely as the protagonist of labour which no doubt he was. Even in his championship of labour he was giving due weight to the human element in the economic process. What is not so well known is the fact that after having outlined the historical background of capitalist development in a few strong strokes in his Communist Manifesto, Marx launched out on a panegyric of bourgeois or entrepreneurial achievement that has no equal in economic literature. Let me just quote a few sentences : The bourgeois, he said, "has been the first to show what man's activity can bring about. It has accomplished wonders far surpassing Egyptian pyramids, Roman aqueducts and Gothic Cathedrals."

It was Schumpeter who made entrepreneurial activity and innovations the very corner-stone of his theory of economic development. Schumpeter defined it as the ability to perceive new opportunities that cannot be proved at the moment at which action has to be taken and the will-power adequate to break down the resistance that social environment offers to change. By way of illustration he drew a distinction between the kind of economic effort which would lead to an increase in the number of animal drawn vehicles as traffic increases and the kind of entrepreneurial vision which resulted in the construction of railway systems to cope with the same problem.

It needs little reflection to realise that the most important element in economic progress has been man's capacity to invent, to innovate, to take risks, to do something which has never been done before. It is through these qualities that rivers which flow from mighty mountains to the sea have been made to quench human thirst, irrigate the soil, transport goods and generate electricity. One must of course recognise that other resources are needed for development. Capital is clearly one of them. It is a man-made resource. When a man does not consume all that he earns and saves something to improve his future earning power, he forms capital. Capital has to be invested in a project and then the project has to be constructed and efficiently run. At every stage there is a human resource going hand in hand with man-made resources and natural resources.

It would be a mistake to treat all the human elements that go into a successful project as pertaining only to the entrepreneur. Schumpeter was largely concerned with the nineteenth century experience when the entrepreneur was also the owner and manager of the concern he created. Entrepreneurial ability without command over capital and the capacity to manage rarely bore fruit.

Over time things have changed. The entrepreneur in modern industry is not the major provider of capital. He has access to the capital market and to financial institutions. Then again he does not himself have to supervise the construction of the project. He can hire competent agencies for the purpose. And he also recognises that for successful management he must delegate authority to men of competence.

Another important change that has come about is that entrepreneurship is no longer a function exclusively or mainly discharged by individuals or families. It is much more of a corporate function. The State at the national level, municipal bodies below it, as well as incorporated bodies like joint stock companies perform the role ascribed to the entrepreneur. And since much of the leadership in a corporate organisation rests with what are known as managers, the entrepreneurial function is now frequently attributed to the manager.

Galbraith has dramatised this change in his own characteristic manner by attributing to the managers a far more important and significant role in the running of the whole industrial economy than to the entrepreneurs. It is worth quoting Galbraith. He says "the entrepreneur no longer exists as an individual person in the mature industrial enterprise. Everyday discourse except in the economic textbooks recognises this change. It replaces the entrepreneur as the directing force of the enterprise with management." He then goes on to say that the key decisions are taken not only by the top people who fall in the category of management but by a very much larger circle which includes all those who bring specialised knowledge, talent or experience to group decision making. "This, not the management" according to Galbraith, "is the guiding intelligence, the brain of the enterprise." He calls this organisation "the techno-structure."

In this chain of reasoning Galbraith first substitutes management for entrepreneurship and then replaces management by what he calls the techno-structure. I believe Galbraith's presentation has only limited validity. Basically industrial growth depends upon four distinct human contributions : the initial decision to set up a new project which pertains to the entrepreneur; the command over capital necessary to fulfil the project; the managerial skill needed to organise and run the project; and the operational efficiency which has to be there at every level. The fact that in the United States today a large industrial corporation has within it the capacity to set up a new project, to find the resources for it, to manage it well and to enthuse every worker to do his best to make it a success may well mean that the same individual or group of individuals within the corporation is performing more than one of these functions. However, to generalise from this and to argue that the management or the techno-structure is the entrepreneur would be as much a mistake as the idea based on 19th century experience that the entrepreneur is the manager. Instead of generalising the experience of other times or other countries one must look at the conditions prevailing in a particular country to draw valid conclusions.

So let me now turn to the situation in India. For a somewhat accidental reason the role of management as an independent and a distinct function came to be recognised much earlier in India than in most countries. As British investment in India began to grow, the people who provided the capital, found it necessary to set up an organisation in India to manage the projects into which the investment was made; it was impossible to do so from a distant island. These investments were primarily in projects, which for overwhelming reasons had to be located in India rather than in Britain. So managing agencies came into being which looked after such diverse concerns as tea gardens and coal mines as well as electricity and railways, and also jute mills when it was found that their costs were very much lower in India than in Dundee. Originally the managing agency had a fairly strong personal representation of the promoters and their family members. Later with greater recourse for capital to the city of London, the managing agencies were increasingly run by salaried employees. Further, as the management operations became more complex and as the products of different projects became more diversified, the basic management decisions began to be transferred to the production units concerned. The managing agency became more an instrument of control direction and even entrepreneurship rather than of management.

The managing agency houses set up by Indians with Indian capital followed a similar pattern but with significant differences. Since distance did not separate the entrepreneurs from their enterprises and since in the absence of a well developed capital market the entrepreneur was also largely the owner of the enterprise, the 19th century pattern of the entrepreneur being also the owner and the manager of the project has persisted in India. The Managing agencies were very often virtually family concerns. In the enterprises too, key posts were filled by family members of the promoters.

After independence, with the advent of planning and with the confidence that the successful completion of the First Plan gave, a new vitality was in evidence in the Indian economy. Bright young men instead of studying law or literature turned to science and technology. The number of applications for industrial licences to set up new projects shot up and there was keen competition among intending entrepreneurs. The established managing agencies began to perform the kind of role which Galbraith attributes to what he calls the techno-structure. Men of lesser means turned to small scale industries. While larger manufacturers sought foreign collaboration and technical know-how, machine tools were improvised and produced to do particular jobs in engineering workshops. Even the artisan and handicrafts came back to life. Handloom fabrics made their mark on world markets.

But somehow somewhere by the end of the Third Plan this fervour was gone. A recession followed. Capacity in capital goods industries lay idle. We seemed to have a surplus of steel on our hands. Bank deposits were growing but there were not enough borrowers coming forward. Engineers were unemployed. Far from being a scramble for foreign exchange, as we knew when the economy was humming with life and development was proceeding at a rapid pace, our reserves began to grow up.

I shall not attempt to identify the reasons that lead to this decline, but I would venture the view that it had something to do with the minds of men. Fortunately economic activity is once again on the upswing. What we have to ask ourselves is how we can sustain and strengthen this stimulus. I have repeatedly argued that the important task before the economy today is to raise the level of investment. The one thing that we need most for this purpose is more entrepreneurship.

The basic question before us, as I see it, is how to strengthen this human quality of entrepreneurship which to my mind is the key resource which is in acute shortage in our economy today. I am posing this question in order to provoke some thought and some discussion on the subject. I do not pretend to have the answer to it. Such observations as I make are but tentative efforts to grope towards a solution, a task in which I hope others will join me.

Entrepreneurship in India, as anywhere elase, is a rare talent, but it is far more scarce because it is not consciously fostered. While educational institutions cannot teach entrepreneurship, they can certainly nurture it and allow it to develop in a much more active way. Social attitudes have a great deal to do with the encouragement of entrepreneurship . Students are encouraged by their parents to start thinking in terms of seeking a job and to regard the whole educational system as an avenue to employment. It does not involve too much mathematics to appreciate that if the number of jobs remained the same, an increase in the number of people qualified to get such jobs would only add to the number of the educated unemployed. The educational system has to augment not the number of job seekers but the number of job creators.

Positive encouragement to those who have the capacity to do new things is not merely a psychological exercise. Without access to material resources only those who are born in rich families can turn into entrepreneurs. To my mind one of the most hopeful changes in the recent past has been the reorientation of the role of the banking system. Banks as well as long term financial institutions are actively engaged in the promotion and support of new enterprises and new entrepreneurs in such diverse fields as small and large industry, retail and wholesale trade, transport, workshops, agriculture and a host of other avenues which a man with imagination and talent can discover for himself.

This dynamic role of the banks in the development process was the key element in the industrial revolutions experienced during the nineteenth century by countries considered at that time to be relatively backward like France, Germany, Austria, Japan and even the United States. The banks in these countries unlike those in the U.K., served not merely as a source of short-term capital. They evolved on the lines of the famous Credit Mobilier of the brothers Pereire and created "financial organisations designed to build thousands of miles of railroads, drill mines, erect factories, pierce canals, construct ports and modernise cities" - to quote the well-known economic historian, Gerschenkron. As I say goodbye to banking I carry with me the hope that financial institutions in India will do their best to foster entrepreneurship.

The second hopeful element on which I would dwell is the growing recognition in the country of the role of professional managers. That we have a number of excellent Institutes for Management and that many industrial concerns run their own management courses are indeed healthy, encouraging signs. I have earlier argued that entrepreneurship, ownership and management are distinct functions, but depending upon the prevailing conditions in different countries at different times they have often been combined in the same individual or group. Considering how close managerial skills are to the entrepreneurial talent and taking into account the available support from banks and financial institutions, I believe that in our economy today there is the opportunity and the need for managers to turn into entrepreneurs.

Of course one m ust recognise and emphasise that when we think of larger projects, the initiative will have to come from those who can command some resources of their own which means either those connected with joint stock companies or by the Government itself. Since it is a part of our public policy to build up the public sector, the question does deserve serious consideration as to how the qualities of entrepreneurship can be developed within the governmental framework. As a rule in publicadministration, conformity and orthodoxy are considered\

to be the great virtues while innovation and experimentation are ranked among the deadly sins. The yardsticks and norms appropriate to general administration are not conducive to creative effort. Unless this problem is squarely faced, the kind of dynamic leadership for growth and development which the public sector has in our conditions to provide will not be there in an adequate measure.

Let me now try to sum up. I have been at pains to emphasise the importance of the human element in economic development. Material resources in the last analysis turn out to be less crucial than what is usually imagined. Human ingenuity can increase output per acre of land, step up the production of existing plant and machinery and create new industries out of such material resources as are available. This talent to innovate and to create although distinct from is closely linked with managerial ability.

And so when I wish the young men who are going out of this great institution today good luck and good fortune in the future, I would like to express the hope that many of them will set up their own enterprises and make a success of them.

****