

## JAWAHARLAL NEHRU : HIS VISION ON SCIENCE AND TECHNOLOGY AND PUBLIC ADMINISTRATION

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History of human civilisation has been deeply influenced by men of vision, who could look into past to direct the present to a desirable future. India has been extremely fortunate to have such men of vision during the most critical time of her history. Such was the time in the second half of the 19th century and first half of this century. This era brought forth the best in the leadership of the Indian society.

For well over fifty years, Mahatma Gandhi and Pandit Jawaharlal Nehru shaped and moulded India's thought and action and captivated the intellect and mind of many, inside and outside the country. Social and economic strategies of development articulated by each one of them though differed substantially, and yet, they worked together because they shared a vision in the freedom of their country. It is the vision of Pandit Nehru which has, however, shaped, after Independence, the destiny of the country more than of anyone else. In *The Discovery of India*, Pandit Nehru reveals the roots of his vision. He says :

I came to her (India) from West.... I was eager and anxious to change her outlook and appearance and give her the garb of modernity.

Here one finds not only a vision but also a sense of determination, a motive force to direct oneself and others towards actions for transforming a vision to a reality.

Much before independence of the country, he stated that political freedom was not enough. A socialist society must be created and there is no other alternative for the future of India but to become modern, scientific and industrialised. Modernisation meant to him, the development of science and technology, of scientific temper in the society, of

industrialisation and of democratic political institutions for governance of the country. He saw in each of these components definite means of eradicating poverty, starvation, ignorance and superstition.

The attempt in this paper is confined to elucidating Pandit Nehru's vision on science and technology, and what he thought of Public Administration in this context. It is extremely difficult to capture fully the vision of a man like Pandit Nehru. He has been described as a statesman, perfect democrat and a parliamentarian, a charismatic leader, a historian and as an architect and builder of independent India. He was pioneer of Non-aligned Movement and an institutional builder. As the first Prime Minister of India, he led the country for 17 years, till his death. He saw during this period the working of the Indian administration from inside.

The main sources of understanding his vision on science and technology are his speeches delivered at various forums and his personal letters. This paper is not an exhaustive study of his thoughts. Nor it is intended to compare his vision with the realities of today. The presentation of his vision, however, should help us to determine the scope of decisions and actions, if we accept that his vision has relevance today and it provides a sense of direction towards a better future.

#### NEHRU'S VISION ON SCIENCE AND TECHNOLOGY

The roots of a vision on science and technology grew out of fascinating experiences Pandit Nehru had during his childhood. At the age of eleven, he set up a little laboratory where he spent long hours in carrying out experiments in elementary physics and chemistry. Later, he went to Cambridge which then excelled in the teaching of natural sciences. He chose to study natural science at Trinity College. He often recalled his visits to Cavendish Laboratory where leading British Scientists worked. Even though he later abandoned the study of science in favour of law and joined the Inner Temple, science kept on inspiring him. Series of letters of his daughter during 1933 entitled 'Darwin and the Triumph of Science' (February 3, 1933), 'Science Goes Ahead' (July 13, 1933) and the 'Good and Bad Application of Science' (July 14, 1933) and his letter to Aldous Huxley (of September 1, 1933) reveal his early vision of the importance of science in the development of individual and its role in social and economic development. He wrote on July 12, 1934 to his daughter that "No person can call himself educated today unless he or she knows something of science and economics and technology".

He firmly believed that "we cannot progress nationally or individually unless we profit by the lessons of science..." He stated that "it was science alone that could solve these problems of hunger and poverty, of insanitation and illiteracy, of superstition and deadening customs and traditions, of vast resources running to waste, of a rich country inhabited by starving people".<sup>1</sup>

In its wider connotation, science represented to Pandit Nehru a "certain way of approaching problems, a certain way of seeking the truth. It is a certain empirical way whereby we get prepared to reject anything if we cannot establish or prove it." He further elaborated that "science means an approach to all of life's problems. You cannot apply science in your industries keeping other departments of your life free from it". While science changes with each new discovery, and therefore, there is nothing final about it, he maintained that "the scientific method does not change, and it is to that we must adhere in one's thought and activities, in research, in social life, in political and economic life". His vision was to develop in the Indian society a scientific temper which sought "the search for truth and new knowledge, the refusal to accept anything without testing and trial, the capacity to change previous conclusions in the face of new evidence, the reliance on observed facts and not on pre-conceived theory, the hard discipline of mind—all this is necessary for the application of science but for life itself, and the solution of its many problems".

He found considerable scope for application of scientific method to politics when he observed :

Our politics must either be that of magic or of science. The former of course requires no argument or logic; the latter is in theory at least entirely based on clarity of thought and reasoning and has no room for vague idealistic or religious or sentimental processes which confuse and befog the mind. (JNL, Vol. 6, p. 3).

He believed that "socialism was based on science and logic" and he said that its scientific approach "helps me in understanding the problems of history and history itself".

After Pandit Nehru resumed presidentship of the Congress in

<sup>1</sup> Mesage sent on the occasion of Silver Jubilee Session of the Indian Science Congress held at Calcutta, January 3, 1938. See Baldev Singh (ed.), *Jawaharlal Nehru on Science and Society: A Collection of His Writing and Speeches*, New Delhi, Nehru Memorial Museum and Library, 1988.

1937, he started developing close contacts with scientists and scientific organisations in India. In his message titled 'Science and Planning' sent on the occasion of Silver Jubilee of the Indian Science Congress at Calcutta in January 1938, he observed that "Even more than the present, the future belongs to science and to those who make friends with science and seek help for the advancement of humanity". He made his firm commitment to develop "a state organisation of research" and declared that "we have to build India on a scientific foundation", because "any country which is traditionally-minded in regard to various matters, including administration is doomed in a rapidly changing world".

In October 1938, he became the Chairman of the National Planning Committee. By that time, a group of Indian scientists in Calcutta, under the leadership of Dr. Meghnad Saha were formulating plans for the application of science and technology for national development. They found in Pandit Nehru a firm believer in the development of basic and heavy industries on a large scale and ready to promote and use science and technology. Pandit Nehru associated Prof. P.C. Mahalanobis and a number of other scientists in the work of the National Planning Committee (NPC). His contact and interaction with some of the most eminent scientists in the country and with the technical officers of Central and State Governments during his two years' chairmanship of the NPC laid the foundation for developing a perspective for scientific research in India and its application to the development of the country.

He subsequently saw the destructive power of science when on August 6, 1945, the first atom bomb was dropped on Hiroshima. His reaction was: "If the atomic energy behind the atom bomb is utilised for constructive power, it will very much develop the entire structure of the world". He visualised that "the world is bound to change within the coming few years and I hope that atomic energy will be used in constructive power to uplift mankind". In response to a question at his press conference at Delhi on August 25, 1945, whether the future Government of India would have atomic bomb in the country, Jawaharlal Nehru said :

So long as the world is constituted as it is, every country will have to devise and use the latest scientific method for its protection. I have no doubt India will develop its scientific researches and hope Indian scientists will use the atomic force for constructive pur-

poses. But if India is threatened, it will inevitably try to defend itself by all means at its disposal. I hope India, in common with other countries will prevent atomic bombs being used.

On resumption of the work of the NPC after the World War II, he promoted further close interaction between planning and application of science and technology. He grasped the problems of scientific research in India with deep insight. He observed in his message of November 21, 1945 to the Royal Institute of Science, Bombay that "I am convinced that of all the big problems that face India today nothing is more important than the development of scientific research both, pure and applied...." and he pledged his support to the institutions engaged in scientific research. He saw in the development of heavy industries a key to the removal of poverty and to the raising of the standards of life and he visualised that the scientific research would hasten the progress. He wanted Indian "scientists should be the foremost in the world".

While laying the foundation-stone of the National Physical Laboratory at New Delhi on January 4, 1947 he said:

I hope that the National Physical Laboratory which will soon begin functioning here will be followed by numerous other research institutes and laboratories, and a stream of earnest young men and women will go through it and come out to serve the country and the world. During the last few months I have been watching and reading about these schemes of various types of laboratories being set up in different parts of India and I have also to some extent scrutinised other vast schemes—river valley schemes, projects, barrages, dams, etc., some of them bigger in scope than the Tennessee Valley Scheme—and my mind has been fired by the picture that I saw emerging out of these great schemes. In the turmoil of the present what seemed to me for more important and essential was laying the foundations of these great development of India.

It is to fulfil this vision that he set up a Scientific Manpower Committee in April 1947 to advise on the best method of utilisation and augmenting the scientific manpower resources of the country. On the recommendation of the Committee a roster of scientific talent was prepared. A portfolio of scientific research was created in the new Cabinet formed

in August 1947, and Pandit Nehru, as Prime Minister, placed scientific research under his personal charge. Immediately thereafter, on August 23, 1947, he held a high level meeting attended by several ministers, secretaries, the Director of the Council of Scientific and Industrial Research to discuss the future set-up of scientific research in India. He categorically stated in the meeting that "I am interested in scientific research and wish to be closely associated with it and help in its promotion".

It is this association during next 17 years as Prime Minister of the country that gave Pandit Nehru the opportunities to transform his vision into reality, and each step he took opened up new vistas of science and technology in India. Introducing Atomic Energy Bill in the Constituent Assembly of India (legislative) on April 6, 1948, he urged the House to consider that:

If we are to remain abreast in the world as a nation which keeps ahead of things, we must develop this atomic energy quite apart from war—indeed. I think we must develop it for the purpose of using it for peaceful purposes... for the development of human life and happiness and not one of war and hatred.

After the passage of the Atomic Energy Act, the Atomic Energy Commission was set up under the chairmanship of Dr. Homi J. Bhabha to control and develop atomic energy and material used in it. In his speech on the opening of Atomic Energy Establishment at Trombay, Bombay on January 20, 1957, he complemented young scientists who were working in the establishment for their good work and said "the future becomes much more assured not because of these buildings we put up of cement and steel but because of human material that one sees doing this work".

A chain of eleven laboratories were planned before Independence. Under his leadership, the progress of setting them up and expansion picked up momentum. He saw a distinct and practical advantage of the development of research laboratories for keeping pace with the developments in the world and also for "the development of temper of science in our departments of life". In his address on the occasion of the opening of the National Chemical Laboratory, Pune, on January 3, 1950, he visualised that "these laboratories would help... in opening the doors to large number of young men and women and give them opportunities to do work for the country in the cause of science

and in application of science for public good”.

He was aware of the fact that the specialised research institutes and laboratories are not by themselves sufficient to spread the science, scientific research and its application. The role of universities in the spread of scientific education was considered as important but he envisaged that they should not be loaded with the task of specialised research. In his inaugural speech at the Scientists' Conference on the Development of Atomic Energy for Peaceful Purposes at New Delhi on November 26, 1954, he observed :

But if our universities start, if I may say so, specialising too much in one thing, going too far ahead, it is possible that they will become lopsided. Therefore, it is far more important that the universities should give a general education in the whole scientific field, rather than by itself do the work which national laboratory does.

Separating research from teaching in the universities was also intended to give greater orientation to the research institutes to deal with the practical needs of industry and society. Utilitarian emphasis on the scientific research institutes would enable the country to develop appropriate technology apart from indigenising the technological development elsewhere.

On March 13, 1958, he read out in Lok Sabha the Government of India Scientific Policy Resolution No. 131/CF/57 dated March 4, 1958. The Resolution emphasised that :

The wealth and prosperity of a nation depend on the effective utilisation of its human and material resources through industrialisation. The use of human material for industrialisation demands its education in science and training in technical skills. Industry opens up possibilities of great fulfillment for the individual. India's enormous resources of manpower can only become an asset in the modern world when trained and educated.

The aims of the Scientific Policy were defined as:

- (i) to foster, promote and sustain, by all appropriate means, the cultivation of science, and scientific research in all its aspects—pure, applied and education;

- (ii) to ensure adequate supply, within the country, of research scientists of the highest quality, and to recognise their work as an important component of the strength of the nation;
- (iii) to encourage and initiate, with all possible speed, programmes for the training of scientific and technical personnel, on a scale adequate to fulfil the country's needs in science and education, agriculture and industry, and defence;
- (iv) to ensure that the creative talent of men and women is encouraged and finds full scope in scientific activity;
- (v) to encourage individual initiative for the acquisition and dissemination of knowledge, and for the discovery of new knowledge, in an atmosphere of academic freedom; and
- (vi) in general, to secure for the people of the country all the benefit that can accrue from the acquisition and application of scientific knowledge.

The Resolution reveals the breadth and the depth of his vision on science and technology. He visualised India to be on the forefront in scientific research and as an industrialised nation by developing and utilising the vast reservoir of talent and material. Expansion of scientific research institutes and laboratories and technical education was given priority by him. Industrialisation, with emphasis on heavy and basic industries using the latest development in science and technology, threw open a vast range of opportunities for application of scientific research and for employment of technical manpower. Higher technical education rapidly expanded under his leadership and country witnessed the growth of engineering colleges, institutes of technology, medical colleges, agriculture science universities, etc. A strong foundation and an infrastructure for a scientific and industrial society in India was built by him.

He was conscious of the need for social control over the scientific and technological progress. He observed that unless this progress "is balanced by some kind of moral standards and ethical values, it is likely to lead to destruction", and "too much of stress on technology and other branches—specialised branches of physical sciences—has led to certain lopsided growth of human beings in industrially and technical advanced countries. It had led to too great a power being placed in the hand of human beings without corresponding moral capacity to use it rightly".

He wanted a marriage between science and industry in India. At the same time he noticed the tendency amongst scientists to remain

confined to experimentation. He observed that "there is a tendency, I find for them, to do wonderful experiment and it remains an experiment after that. The next stage somehow does not come". For a practical application of scientific research he stressed that "there should be association of thought with action".

He was conscious of the criticism that despite the tremendous growth of scientific and technical institutions of higher learning producing highly qualified manpower, there has not been the spread of mass education and scientific temper. He said that despite all the progress, "I do not suppose it will be true to say that the background of general thinking in India is governed by the scientific approach. Nor can it be done by some mandate of the Government. That has to come out of the educational process and by the industrial and technological changes that are coming about in the country". And yet, if India today is the third country in the World after USA and USSR in having the largest scientific and technical manpower pool and is emerging as an industrialised nation, it is entirely due to the vision of a leader who built, step by step, a structure to fulfil it. No leader of any nation—developed or developing—in power or outside it, has promoted science and scientific research and industrialisation with such a vision and vigour as Pandit Nehru did in India.

#### DEVELOPMENT PERSPECTIVE OF SCIENCE AND TECHNOLOGY VISION

It was Pandit Nehru's vision of science and technology which influenced his development approach and strategy. He was a socialist because he felt that "socialism is a scientific approach to the World's problem". He was in favour of planning because "planning is the scientific method; it is science in action". He was deeply impressed by the economic progress Russia had made through planning and large scale industrialisation and development and application of science and technology. He visualised that in India too industrialisation, planning and socialism will accelerate the advancement of scientific research and its application in dealing with the problems of poverty, ignorance and superstition. He was a democrat because the scientific temper permits oneself to be persuaded by logical reasoning and empirical approach and for this, it is necessary to have individual freedom to express oneself. He launched an entirely new experiment of achieving a socialist society through democracy as he visualised that only political democracy can permit social and economic democracy—the main aim of so-

cialism. It is in this vision of science and scientific approach that one finds in him a system's approach to social, economic and political development of the country.

Pandit Nehru drafted the Resolution on Fundamental Rights and Economic Policy at the Karachi Congress in 1931. The Resolution adopted was the first step towards the socialist goal by advocacy of nationalisation of key industries, state ownership of mineral resources, railways, shipping, etc., and for providing a living wage and other amenities for the masses. Pandit Nehru firmly believed that industrialisation and socialism would effectively deal with the problem of economic backwardness of the country and would transform the society. He differed with Gandhiji and with others in the pursuit of his conviction. Gandhiji wanted Pandit Jawaharlal Nehru to recognise that :

...if India is to attain true freedom and through India the world also, ... people will have to live in villages, not in towns, in huts, not in places. Crore of people will never be able to live at peace with each other in towns and places. They will then have no recourse but to resort to violence and untruth...without Truth and Non-violence there can be nothing but destruction of humanity. We can realise Truth and Non-violence only in the simplicity of village life....

The essence of what I have said is that man should rest content with what are his real needs and become self-sufficient. If he does not have this control, he cannot save himself.

However, Nehru's perception of the problems and the vision of its solution were different. To him:

A village normally speaking, is backward intellectually and culturally and no progress can be made from a backward environment. Narrow minded people are much more likely to be untruthful and violent. We have to put down certain objectives like sufficiency of food, clothing, housing, education, sanitation, etc., which should be the minimum requirements for the country for everyone. It is these objectives in view that we must find out specially how to attain them speedily. There is no question of places for millions of people. But there seems to be no reason why millions should not have comfortable up-to-date homes, where they can lead a cultured existence.

Nehru believed that for fulfilling these requirements, development of heavy industries and application of science and technology are inevitable and questioned "How far that will fit in with a purely village society". In his letter to Aldous Huxley on September 1, 1933, Pandit Nehru wrote that Gandhiji is essential "a man of religion" and that "Mr. Gandhi's personal philosophy, and those who look upon him more or less as a religious or moral leader, presumably accept it to a greater or lesser extent. Mr. Gandhi no doubt realizes that his strict personal code cannot be followed by more than a handful of people, but he hopes that this handful will set an example which will result in toning up the lives of large number of others". A critical analysis of this approach is further provided in his address at the cultural conference organised by the students of Scottish Church College, Calcutta on January 3, 1939. He stated :

Ordinarily, the religious approach in the past has been the way of individual development. It tries to improve the individual hoping that improvement of the individual will affect the social group. Nevertheless, the modern method lays stress on improving the environment so that a person living in a particular environment may grow to his fullest capacity. Both these methods have not been, however, contemporary. Perhaps the stress laid in the improvement of a particular environment is more important today because if the environment is bad you cannot make much progress. We have to think in terms of social culture and what kind of environment it develops. What is the good, for instance, of your trying to cultivate unselfishness and noble qualities when the social structure that surrounds you is based on selfishness and produces bad influence on life?

These views of India's two most outstanding leaders who were so different from each other but together who shaped the destiny of the nation, have been given to reveal alternative approaches and visions on India's development perspectives. Gandhiji focused on man for system's development whereas Pandit Nehru focused on the system for individual's development. Gandhiji was not against science, technology or industrialisation; but his vision was to keep them within the range of a way of life and nourish it. Nehru's vision was that of extensive application of science and technology and industrialisation for better living of the masses and for their liberation from the clutches of poverty,

ignorance and superstition. His vision was to create an environment which can induce the individual to develop his or her maximum talent and potential .

#### VISION ON PUBLIC ADMINISTRATION

With a vision on science and technology and the development perspectives based on it, did Pandit Nehru visualise the change in the public administration in India? In what way his commitment to democratic political system with the adoption of parliamentary form of government influenced? The change, or lack of it, in the administrative system after the Independence? What was his response to the vast expansion of scientific and technical organisations and manpower and the emergence of state-owned industrial enterprises? From the limited functions of maintenance of law and order and revenue collection, the state had assumed the role of not only the protector and regulator but also of motivator of change, educator, producer and distributor of goods and services in its pursuit of development goals. Did this change require restructuring of the public administration? What was Pandit Nehru's vision on the concept, role, structure and operation of public administration in India?

It is generally contended that the nature and severity of problems—national and international—immediately after independence which Pandit Nehru had to deal with on priority basis were such that public administration did not attract much of his attention. Yet, he took keen interest in not only setting up the Indian Institute of Public Administration, but also in coming over every year to deliver his Presidential address to the General Body of the Institute. There are speeches which basically reveal his perception of the problems of public administration in India and the measures required to deal with them.

There are two ways to see his vision on public administration in India. One, what he did to the administrative system as it had existed before independence and continued thereafter. The other approach is to look for his vision in the system's perspective and see how its orientation and functioning was sought to be changed. In this context, one can see that Pandit Nehru concentrated on those aspects of governance of the country which decisively determine the effectiveness of the administrative system. If the goals are clearly defined, if policies are well articulated, if political institutions are effective in providing good leadership and in inculcating social and political behaviour

congruent with the requirements of their effective functioning, the administrative system is bound to respond to the demands placed on it. If it does not, it could be either due to the above inputs being defective or absent, or on account of the structural limitations on the capacity of the administrative system. He defined social and economic objectives to give coherent policies, he adopted planning for their formulation and he experimented with alternative structures of their implementation. He expanded the scope of public administration in India. Thus, both micro and macro approaches are necessary to comprehend Pandit Nehru's vision of public administration in India.

### *A System Perspective*

In the system's perspective, the traditional administrative machinery could be treated as a sub-system of an overall system of governance of the country. Alternative sub-system established for carrying out new tasks could be considered as a part of a vision beyond the confines of the traditional administrative system. If the effective functioning of the administrative system is critically dependent upon the working of other institutions having functional linkages with it, development of such other institutions becomes a precondition; and only a man of deep foresight and broad vision can work for developing and strengthening them. In this wider context of public administration, Pandit Nehru emerges as a pioneer in institution building.

In a parliamentary form of government, the effective functioning of the Parliament and its various wings including its Committees has a very close bearing on the working of the administrative system. How Pandit Nehru as a Parliamentarian and as the Prime Minister for 17 years nourished and strengthened it is fairly well documented. His conduct was exemplary and the examples he set as a parliamentary leader became a model of desirable behaviour for the institutionalisation of the Parliament at a time when most of the elected members were not familiar with the requirements of new structure of governance of the country.

He established scientific and research organisations outside the fold of the administrative system. Similarly, public sector enterprises emerged and expanded rapidly in the field of industrial production. New forms of organisation evolved for undertaking multipurpose development projects. Even the field administration saw the emergence of alternative structures for development. Area development authorities, urban development authorities and special purpose bodies

were established with the intention of intensive utilisation of special expertise needed for the development work. By granting autonomy to these organisations, he intended to protect them from the baneful influence of bureaucratic functioning evident in the traditional administrative system and to give the flexibility to respond to the different conditions in which they operate and the demands placed on them by the government and society. It also created a dispersal of power within the machinery of government and society. While presenting the Indian Statistical Institute Bill before Lok Sabha on December 14, 1959, he strongly supported the need for autonomy of the Institute and he said :

We have been progressively coming to the conclusion that too much centralisation of our activities is not a good thing.

You cannot have creative impulses dealt with routine methods. That is why wherever science has grown very considerably ... they give widest latitude to the scientific apparatus.

These institutions do not have to come for sanction to people who usually have no ghost of an idea of science or that special thing. What happens in the government apparatus normally, is that it is looked at, very competently looked at, but not looked at from the particular scientific or like point of view.

He further added that as the State-owned enterprises grow, it becomes difficult for them to operate if there is a constant reference to the government. It is, therefore, necessary for them to have flexibility and non-interference in their work. He visualised no conflict between the needs of autonomy and public accountability; it was a matter of devising suitable methods and procedures and of appropriate attitudes of the government officials.

In his vision of the Planning Commission, one can see a new institutional framework for policy formulation. Traditionally, the Secretariat had performed the role of policy making. Its staffing pattern, for this purpose, was based on the concept of a 'generalist' administrator with necessary field experience as a pre-requisite. The structure of the Planning Commission, the process of planning and the Five Year Plans as the framework of policies of government, reduced the Secretariat's role to operational and implementation policy issues. The conceptual and allocational aspects of policies increasingly were guided by the Five Year Plans prepared in the Planning Commission with close

and active participation of a large number of government, non-government officials and experts in the task forces and study groups and also working as specialists within the Planning Commission.

At the micro-level, Pandit Nehru's vision of the administrative system as inherited from the British seems to focus on the attitude and behavioural profile for the development administrators. In the middle range, *i.e.*, between micro and macro levels, he visualised Panchayati Raj and community development as vehicles of development, strengthening of democracy at the grassroot level, and as necessary for public cooperation in the development effort. His views on some of the very crucial issues facing the administrative system are more symptomatic than diagnostic. Consequently, it is difficult to say whether they represent a vision; but nevertheless they are very important and significant as they do reveal his choice of continuing with the administrative system left by the British in the country at the time of the Independence.

#### *The Perspective of the Administrative System*

India's struggle for freedom picked up at a time when rule of law had been fairly well established despite a few abbreviations here and there. Codification of laws, administrative apparatus to enforce them and judicial machinery for adjudication had more or less impersonalised the governance of the country. A governance by laws could not escape from evolving an administrative system displaying characteristics of Weberian model of bureaucracy. In fact, the period during 1858-1919 is described as the "bureaucratic state" or "bureaucratic despotism". Prof. B.B. Mishra observes that "This law-based absolutism in India conduced to the progress of modern science and literature".

It is the rule of law in India which provided a more enduring and strong base for the unity of the country. It had an enormous impact on the liberation of intellect and mind from the strangulating hold of personal rule and social traditions which legitimised it. It promoted democratic and secular consciousness. It is not surprising, therefore, that many of the leaders of freedom movement were men who had close interaction with rule of law. Pandit Jawaharlal Nehru was one of them.

Whether Pandit Nehru had visualised any other system of administration for the governance of the country is not known. But before independence, he expressed resentment against the prevalence of the spirit of ICS in Indian administration. He categorically stated: "It seems to me quite essential that the ICS and similar services must

disappear completely as such before we can start real work on a new order". Would there be a change in the administrative structure of the country and the civil service staffing pattern or did it mean that the change in services would reflect Indianisation? These issues were not discussed even when socio-economic ideology of development was being articulated to broaden the objectives of freedom movement. It was becoming quite clear that after the Independence, India would go in for planned development to achieve 'socialistic' objectives in a democratic political system; yet the suitability of the administrative system as machinery of government was really questioned to explore alternatives. The reactions of leaders were confined to the style and not to the substantive aspects of the administrative system in the country.

During the experience as the first Prime Minister in the Interim Government (1945-47) Pandit Nehru observed :

The (Civil) services were fossilised in their mental outlook; they were wedded to by gone and absolute methods and refused to move with times. It remains to be seen how long we can function in these circumstances. The experience of the past three or four months has shown us that the conduct and attitude of officers have not changed.

After independence, the administrative system of the colonial era was not only retained, but also given constitutional protection. The Indian Constitution is perhaps unique in having an entire chapter devoted to institutionalisation of the All-India and Central Services on the same pattern as they had existed as the backbone of the colonial administrative system. It has often been questioned as to why Pandit Nehru, who remained Prime Minister of the country till his death on May 27, 1964, did not overhaul the administrative system? Various explanations have been offered. The national leaders and the government were too engrossed with the massive problems arising out of the partition and the external threat in Kashmir. The top priority was to be given to the consolidation of the Union and maintenance of law and order. These problems required stability both political and administrative and the steelframe of India dealt with the crises quite effectively. National leaders being too well groomed in the British traditions and having adopted Westminster model of parliamentary democracy with cabinet form of government, could not have created uncertainty and

instability in the institutional balance by revamping a well-established administrative system based on rule of law, even though it was restricted in its approach and functions. It does not, however, mean that Pandit Nehru was happy and satisfied with its working. All these factors might have influenced Pandit Nehru's choice in favour of continuing with the inherited administrative system. In fact, he seems to have resisted, at times, any change in it. Yet, he expressed his dissatisfaction with the way it worked.

The Problems of the administrative system on which Pandit Nehru expressed himself quite frequently are primarily those which arose from: (a) expansion and orientation of the traditional administrative machinery, (b) 'generalist' versus 'specialist' controversy, (c) the concept of civil service neutrality and the role of civil servant in the development process, and (d) centralisation versus decentralisation including the Panchayati Raj and Community Development and the relationship of officials with the public.

With the broadening of the role of the State, it was inevitable that the administrative system would expand. Socialistic policies further added to the rapid expansion of the bureaucracy. Pandit Nehru was conscious of it. He said, "The growth of socialism is the growth of bureaucracy". His response to the criticism of the expansion was that it is odd that people who shout most loudly against bureaucracy are the people who want more of it. That is what is involved in the growth of socialist avenue of work". At the same time he was himself extremely unhappy about the expansion. In his inaugural address at the Twenty-fourth Annual Meeting of Central Board of Irrigation and Power at New Delhi on October 26, 1953, he observed :

I see a strange maldevelopment in the country .... (T) he way the government organisations and departments multiply as also the staff engaged by them, leads nowhere but to waste. Then arises the problem of coordination between them who have grown so big, for, each is an independent unit. A coordinating agency is created and as usual, its size also goes on increasing. Then again arises the problems of how to coordinate the activities of the coordinating agencies. All this is at once baffling and confusing. I am astonished to see all this and in my opinion, this should be stopped.... Such maldevelopment in our organisations is dangerous to our country.

A certain degree of expansion of the administrative machinery after independence was inevitable. But the question has often been asked: How much of the expansion has taken place because of those components of the development role for which it had not been designed in a democratic system of governance? For instance, if political parties and other non-governmental organisations are used more effectively to perform the functions of educating (social and political), mobilising and organising them in favour of behavioural transformation and around development programmes, and of articulation, aggregation and communication of interests, the administration system would be less involved in social and political issues and conflicts. On the other hand, without the effectiveness of these organisations, the politicians in a democratic system would have the propensity to promise more than the administrative system can deliver and thus give a damaging blow to its image and create widespread public doubts about its credibility. Moreover, there would, in the absence of strong political party organisation, be a tendency to use the administrative system as a conveyor belt for political penetration for mobilisation, organisation and for creating the conditions of acceptability of the political authority. Consequently, the size, functions and powers of bureaucracy would increase manifold. Socialism is a political ideology, and it requires in a democracy, a political organisation to propagate it and articulate a value system within the society to produce a behaviour pattern in its favour. Can it be secured by the authority of state exercised through its administrative system? Pandit Nehru in his Second Annual General Body Meeting of the Indian Institute of Public Administration held on April 7, 1956 said:

We have the objective of socialism or the socialist pattern. Now, every machine that you make is meant to turn out something you want. If we want socialism, then the administrative machinery that we have must gradually turn out socialism. If it is turning out something else, then, it does not fit in with the objective we have and there is a constant conflict between these two.

He was referring here not to the individual but to the pattern of recruitment, promotion, etc. But he emphasised in his Third Annual General Body Meeting of the Institute on April 6, 1957 that:

It becomes all the more important that the administrator has his hands on the problem of the people all the time, and the people feel that this man is one of them, that he is reflecting their wishes,

and will always reflect their wishes.

He visualised an overlapping role of the elected representatives and politicians and the officials when he stressed that in the "growth of socialistic avenue of work", the administrator's work would:

... involve close contact and touch with people and winning over the people to his side. It involves, in fact, the approach of a politician, of a good politician, of an effective politician—not in the sense of the politician's approach when he tries to get votes, but the normal approach of a politician when he wants to win over the people to his side to do something with their help.

It is quite apparent that in the developmental process the role of the administrator was being conceived in much wider context and often, it involved, even if not envisaged, a competition with the role of a politician. This political role led to the re-examination of the concept of civil service neutrality. In his Presidential Address to the Fourth Annual General Body Meeting of the Institute held on April 5, 1958 he stated that "Civil Service neutrality is a fiction which I have often wondered at". During British times, he maintained that the concept of:

Neutrality meant keeping within the strict lines of that pattern of Government going outside it was tantamount to lack of neutrality. Neutrality thus, in fact, meant extreme partisanship, not at all neutrality. If a person raised his voice against the established pattern, he was supposed to be an anarchist. That he had to function within prescribed framework is understandable, but why call it neutrality?

He maintained "the person who is to be completely neutral is a head clerk and no more". He contended that "the whole conception of the public servant in India has in the past been rather a static conception". "Doing one's job as efficiently and adequately as possible, and impartially, was the conception in British time", and that "the idea of a public servant setting in a world apart and doling out impartial justice is completely out of place in a democratic society, and much more so in a dynamic democratic society...."

He was essentially visualising in the administrative system a change in the attitudinal and behavioural profile of the officials for a

multi-dimensional role—parts of which either ran into conflict or in competition with the functionaries of other organisations in society. He did not affect any structural change even though he was, at times, not happy with it.

It his speech at the Administrative Staff College of India, Hyderabad on October 23, 1958, he resented the class system in the administration. He said:

I do not like this business of Class I Officer, Class II, Class III and Class IV. I can understand a person abler, more competent, occupying a more responsible position. But let him not think that he belongs to a superior class.

He often resented the rigidity of the administrative system caused by its rule-orientation. He found these rules out-dated and complex, responsible for delays and thus source of corruption. He wondered how “the Government of India had continued to exist so long with these rules. It should have collapsed under them”. Yet, a society in which objectivity and impartiality have not become the values of social conduct, the formal organisations, *i.e.*, bureaucracy seek to inculcate them through rule; and therefore, rule orientation becomes excessive. A man of scientific temper like Pandit Nehru would have found these rules irritating. Not till the scientific temper creates in the society the basis of trust and confidence in the objectivity and impartiality of others, would dependence on rules decline.

With the vast growth of scientific and technical manpower in government service, he came under pressure to affect changes in the administrative system based on the concept of “generalist at the top, specialist at the tap”. He had high respect for scientists and technical experts. He observed that :

The Scientists’ outlook is normally a dynamic outlook; a technician’s is normally dynamic; the administrator’s is normally static. It is very difficult for him to get out of that and therefore, an administrator is often left behind by changes, technological changes and social changes that are taking place.

He stated in his speech delivered at the Central Laboratories for Scientific and Industrial Research, Hyderabad, on January 2, 1954 that:

Scientists and engineers are far more important than administrators. The administrator has no doubt his place but that is secondary to scientist and engineer.

When it was pointed out to him that engineers were not being appointed as Secretaries to Government, he admitted that "our services are steeped in a system of gradation or caste system which is probably the legacy of the British rule", as "the old system of classification was the very basis of administration". He said that "such pattern is totally out of place in the present set-up and conditions". However, he was not in favour of affecting any change as he felt that "Enough number of persons who can use their pen well in the officer are available in India, but the number of good engineer is inadequate". Moreover, he contended that:

It is possible that a renowned first class engineer might be much more needed by us than any of our Secretaries. Secretaries are available in abundance but engineers are few. These can also be the case that though the engineer is working in his own sphere, yet in official status, Secretary is in a way superior. This is just a gradation; for whereas engineers have a reputation all over the world, the Secretaries are not known by any one outside Delhi. What I am driving at is that this is a wrong way of assessing a man's worth, simply by the salary drawn by him or the designation attached to his post?

His reasons were not confined entirely to the shortage of the technical manpower. He found that excessive specialisation does not produce a wider outlook. In his speech at the Administrative Staff College on October 23, 1958 he observed:

We produce highly competent individuals in specialised fields. But there is a tendency for those highly competent individuals to know nothing about other fields or not enough. But too much specialisation and not enough of a wider outlook, is apt not only to limit the individual but limit his work.

In his address at the anniversary meeting of the National Institute of Science in India, New Delhi on January 20, 1959 he referred to Prof. P.C. Mahalanobis's observation that "Scientists should be on top and

not at the bottom", Pandit Nehru said that "scientists were actually taking command of military equipment, but humanity was not deriving any benefit from this".

It is thus apparent that Pandit Nehru did not visualise any change in the administrative system. However, he laid considerable emphasis on the change of the attitude of officials and stressed on them to develop an approach and style for seeking active public cooperation. The administrator should be courteous not only to the people but to their thinking. He stressed that his real success in his job depends on the extent to which he can evoke public cooperation.

On the issue of centralisation versus decentralisation, he observed the necessity for both, even though there are contradictions. In his inaugural address at the Twenty-Third Annual Meeting of the Central Board of Irrigation and Power at New Delhi on November 17, 1952 he pointed out that:

Now centralisation is important in the modern world; it is inevitable whether it is Government, whether it is anything else. It may give you better result, it may produce better efficiency and all the rest of it, although a stage arrives in the process of centralisation when perhaps efficiency does not grow, it lessons ... . Undoubtedly, the greater the centralisation, the less the individual freedom, although some better results might be obtained.

He visualised, therefore, a balance between the needs of centralisation and of freedom to be arrived at through, not on ideological but a practical and analytical approach. In Panchayati Raj he saw decentralisation necessary for a healthy base of democracy. He observed that "If that base is unsound, then we are not cent per cent stable democratically...". He further stated in his Presidential Address on the Third Annual General Body Meeting of the Institute held on April 6, 1957 that:

It is true, I think, that our experience of panchayats has been distressing. But real democracy cannot be at the top; it can be only at the base.

He visualised the implication of Panchayati Raj for the administrative system. It would, he contended, bring "all kinds of changes in the

relationship between the administrative apparatus and the people". He further observed that:

After all, it should be one of the principal functions of public administration, in its broader context to direct democracy into right channels.

For this purpose, he emphasised that all depends upon the manner of functioning of the administration in which the conduct of the administrator is very important. The administrator must give the impression that:

he is functioning in accordance with the public will, always thinking of public grievances, trying to remedy them, consulting them and so on...

Further, he stressed that the panchayats:

... should not be officialised. The official element should be rather distinctly advisory—of course helpfully advisory—but not at all in the sense of bossing over, interfering and not allow, if I may say so the members of the panchayats to make a number of mistakes. Let us accept that a mistake is often better than the helpless and powerlessness which comes from somebody sitting on top and carrying on the business of the panchayats. They will never grow by that.

It is, therefore, apparent that Pandit Nehru's main thrust was to seek behavioural and attitudinal change of officials within the administrative system. These attitudes may refer to work, methods and procedures, rules or they may refer to the system of classification of services or staffing pattern or they may be towards citizen of a democracy or towards dealing with specialised scientific and technical organisations or public enterprises. He sought a behavioural transformation without altering the structure, and perhaps he visualised that the stage in the history of India's development has not yet come to alter the very basic concept and structure of the administrative system in India. Nevertheless, he expanded the scope of public administration at the system's level. He created new forms of organisation and built institutions for scientific work and development functions.