



Science and Politics

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Abstract

Science is the function of constant thought and immediate action of a dedicated scientist. Scientific growth depends on intellectual and spiritual power of an individual. The government belonging to a political party largely influences the progress of science in a country. In many cases, politics dictate the governing of the research institutes and often act as hindrance in the progress of science. Scientific talent can never progress under suppressive and bureaucratic attitude of the administrator. The article reflects personal experiences and opinions of the author which is open to criticism.

Keywords

Science, politics, research institute

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Science

The progress of scientific development depends largely on a congenial atmosphere, motivation, dedication, sincerity and honesty. Scientific talent can never progress under suppressive and bureaucratic attitude of the administrator. The progress and achievement of a scientific institute depends on the productivity of research of the scientists. A good administrator should motivate the young scientists to dedicate themselves to their research and inspire them by frequent visits to their laboratories. He should generate team spirit among his scientific staff. He should try to resolve and come to an amicable solution of the problems faced by his staff.

In this context I want to cite an example of my beloved teacher Late Dr. A. K. Sharma, a world renowned cytogeneticist. In the first hour of his function he used to revise the works of doctorate students waiting eagerly for him. He used to revise chromosome morphology through microscope and guide each student about his research. Within one hour he could finish observations of all the students with fatherly inspirations and leave laboratory. It created great inspirations among his students.

A good administrator should never adopt an attitude of bossism towards his substitute that would spoil their motivation to do research. He should have capacity to judge and select the best talents in each scientific group in his institute. At the same time he should be lenient to a staff not dedicated to his duty creating bad atmosphere in the institute and if needed should throw him out.

The same is true in the case of a departmental head. Although bureaucracy follows a hierarchical system and is a strong instrument in the functioning of the machinery of an administrator,

it should never suppress genuine talent. A good administrator should have capacity to identify the talented scientists in the scientific and technical groups, and encourage them constantly to devote themselves to research. He should be aware of the fact that the productivity of the institute depends on the cumulative productivity of the scientists in any institute and that if shows suppressive attitudes, the talents of the scientists would never grow and be expressed in research. A departmental head must make periodic visits to each laboratory/experimental field, inspect eagerly the research findings of each scientist, offer suggestions if any and encourage them to go ahead with their research contribution. At the same time he should try to understand the problem faced by the scientists and find a solution to them. And if he cannot resolve them, he should consult his colleagues and finally approach the director of the institute to resolve the problems of the scientists.

The attitude of a personal manager will definitely and significantly increase scientific progress of an institute. The director should stimulate and create an atmosphere of motivation, dynamism, team spirit and growth of scientific talent. He should believe that the creativity in science depends on the motivation of the scientists and not on the exercise of the administrative power over his subordinates. The director should realise the value of time and try to resolve problems quickly without lingering on them. In many cases, the director avoids giving an appointment to the scientists. This definitely would discourage the scientists in their research and thereby hampers further progress of science. He can afford to meet him only for five minutes, listen to his problem and make an amicable solution. In this respect I can give an example of Dr. J. S. Kanwar, the former Deputy Director General of ICRISAT. He used to give appointment to his scientific staff frequently not more than five minutes to know and resolve their problems.



Science is the function of constant thought and immediate action of a dedicated scientist. Scientific growth depends on intellectual and spiritual power of an individual. Sincerity, dedication, honesty and overall faith in God are the building blocks in the progress of a scientist. A true scientist will never aspire for any personal comfort. His mind is fully taken up in resolving scientific problem. He does not care his personal problem. It is worthwhile to recall the story of Archimedes who discovered the law of specific gravity and the law of buoyancy of a floating body in water. He kept ruminating on the problem constantly. While was in bathtub, he understood the phenomenon, and came out of his bathtub in his nude state calling loudly his wife 'Eureka; Eureka' (I got it).

This is a classic example of a dedicated, true scientist. Thus scientists' minds always work even in their dreams. There are evidences of scientists finding solutions in their dreams. It clearly indicates a constant dedication of a true scientist to his research problem. This is the philosophy of science.

Politics

Politics is a part and parcel of any administration. There are always some groups in favor and others in opposition of the director of an institute. The director should have the capacity to balance this situation very tactfully and should not create an atmosphere of fear among his staff members. The director should be sympathetic to the problems of his opponents and stimulate scientific spirit among them.

The government belonging to a political party largely influences the progress of science in a country. In many cases, politics dictate the governing of the research institutes. The situation varies in different countries. In my opinion, politics should not interfere in the functioning of an educational and research institute, and change the system which should not affect in major way. Rather, each new government should adopt new measures to enhance further the scientific growth of the research and educational institute. Thereby, this will continue in the fructification of scientific innovations by the scientists in the research institutes.

In the following paragraphs, I want to explain my own observations on the mode of the functioning of politics in the administration of research and education in different countries I have visited.

During my studies in Indian universities in twenties there was no political influence (unlike at present) in the progress of education and research in a particular department. An atmosphere of scientific spirit, enthusiasm, and team spirit prevailed among the scientists and professors. The head of the department always gave encouragement to the research scientists that stimulated a steady scientific growth. It is quite natural that he showed favours to some groups.

The head of the department was a highly qualified person, and well-known in his own discipline. In general, all the professors commanded good respect although some of them were very strict in their functioning. The situation has completely

changed. At present, a political party governing the particular state selects the vice-chancellor irrespective of his educational qualifications.

Now, a new system has been installed in the selection of the head of the department. The head of the department is selected from among the professors of that department. Recently, the head of the department is selected on rotation.

A director, who is selected in an institute, governs the research institute. Each post in a research institute is advertised and the eligible candidate is selected in an interview, where the director is a member of the interview committee. In the national research institutes, the director has his own group to whom he shows favours creating dissatisfaction among other groups, and in some cases, an atmosphere of tension prevails because of this.

It discourages the progress of the scientific development mentioned earlier. The situation depends on the personality of an individual. On the contrary, in some institutes, the director does not show any partiality. Thus, politics play a major role in the functioning of an Indian institute. At present the situation is radically changed. Promotion is given on the basis of merit by a special high power committee in Indian Council of Agricultural Research (ICAR), New Delhi.

The functioning of international institutes is governed by the governing board set up by an international organization like UNO and other countries. The director general of an international research institute is selected on the basis of interview from among the eligible scientists from different countries. It is desirable that at least one international scientist heading a particular research program should be selected from each donor country.

It was often observed during my period in ICRISAT that the international scientist from a donor country was very young and less qualified compared to the national scientists of the host country. The same young scientist had enormous power to dictate the research and the professional growth of the national scientists thereby creating dissatisfaction among these scientists. He often showed favours and created conflict among his staff and thereby exploited them.

Sometimes, promotion was given to the less eligible scientist in the face of highly qualified staff. This created a lot of tension among the staff. On occasions, persons were transferred to other departments, thereby affecting the professional development of the scientists. The highly qualified scientists were often suppressed by the international scientists in their professional growth. All the national scientists were afraid of going against the international scientists, lest they were sacked. They had to accept all decisions of the international scientist. Of course, in several programs the international scientists were highly qualified and well experienced. They were mostly sympathetic to the professional development of their scientific staff.

In my own observations, politics does not play role in the functioning of university education and research in the United States and Europe. I found that professors are busy in their



own research and do not care for politics, although they have their own groups with whom they work in collaboration. To my surprise, I found a very old professor more than 75 years of age, was still working with great dedication in his own line of research. The professors get promotions and monetary benefits on the basis of their contribution to science. This system leads to a substantial progress in science in these foreign countries. This stimulates brain drain from other countries namely India for better opportunities in these countries.

In Mexico and probably in other Latin American countries, politics determines greatly the functioning of the education and research institutes. The director is elected for a period of three years on the basis of votes of the students and professors. There are always two opposing parties. In this case, qualifications and experience have little influence in the selection of the director. The director, in turn, elects his own group and heads of the departments. In many cases, the head of the department enjoys all the facilities and suppresses the growth of the opposing and more qualified group.

It definitely affects the smooth professional growth of his staff. In the next elections if the director belonging to an opposite group is elected, he makes a drastic change and reshuffles the whole system. He shows strong favours to his own group. This system definitely hampers the professional growth of the scientists and professors in an institute in these countries.

In the United States, the highly qualified foreign scientists are given good recognition and are well placed in a particular department quite contrary to other countries. In the latter case, there is good evidence that the professional growth of the foreign scientists is greatly suppressed by the administration. This phenomenon is related even in the subsequent administration. One can imagine how it is impossible to run a smooth and steady scientific growth in the day to day functioning of the institute. In Mexico, many highly qualified foreign scientists are offering their professional services in different universities. In my observations during 20 years in Mexico, due recognitions are not given to the foreign scientists by the Mexican authorities. There are vivid examples of some professors leaving one university to join another under political pressure.

In Mexico, the foreign scientists are not taken into consideration even on the decisions regarding professional growth. They are

not normally invited to important academic meetings. They are treated as second class citizens in the educational society of a particular institute, although some of them have shown the maximum productivity in scientific publication of books and peers in the international journals.

As mentioned earlier, in spite of their worldwide reputation, their immediate boss, who is very young and less qualified, liked to suppress them. No opportunities are given to the foreign scientists for their professional growth in Mexico. On the other hand, some non-US foreign scientists are given high recognition by the Americans and occupy senior positions in the US universities. A few of them are Noble Prize winners. That is why the United States has been progressing substantially in scientific research.

Of course, CONNACYT gives good recognitions of the scientists through promotions and offering remunerative and lucrative scholarship on the basis of scientific productivity of the scientists irrespective of their country of origin. This system is highly encouraging to the professional growth of the scientists. In India, through the implementation of ASRB (Agricultural Scientists Recruitment Board) system scientists in ICAR institutes get promotions on the basis of their scientific productivity and through interview. Rotation system of head of the department in Indian universities is highly encouraging.

In USA, Canada, Germany, UK and European countries all research and educational institutes have large infrastructural facilities including cutting age advanced research which create a strong working environment for leading and innovative research including online library with all journals and e-books available 24 h all the days in a week. In America, institute has option of working hours of 7:00, 8:00 or 9:00 AM for 8 h, where one can take leave when he needs on prior information or as emergency leave.

All employees are initially given sort term employment for 1-3 years which is extended based on the performance. It always gives an opportunity for high impact publications. So promotion and salaries depend on appropriate research funding, innovative ideas and positive output. All institutes try to give an unbiased environment with equal opportunities irrespective of nationality, gender, race, orientation, skin color, disabilities, marital status, etc.