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EDITORIAL

Ministering Science and Technology

If elections are here, can ministry formation be far behind? Periodically, we are treated to the spectacle of politicians, flushed with success, jostling for portfolios, some of which are more prized than others. Few will contest the fact that today Science and Technology is a quiet, backwaters ministry, which might attract public attention only when someone claims by an alchemical trick to have transformed grass into gold and as once happened, converted herbs into fuel. Many important components of the Indian science system like the various arms of strategic and defence research, the medical and agricultural research establishments and the department of environment lie outside the Ministry of Science and Technology. Academic science also derives its basic support through the Ministry of Human Resources Development and the University Grants Commission. Not surprisingly, no important, political or even social, agenda can be pursued from within the Ministry. Inevitably, the stewardship of science and technology is an 'additional charge' for an important functionary or is relegated to a minister who must be found a portfolio. The days where science and technology were sheltered under a Prime Ministerial umbrella are clearly over. In the last decade, there has been a steady slide in the perceived importance of the Ministry, with all the attendant difficulties of diminishing resources and declining manpower inputs of high quality. If indeed the Ministry is important for the conduct of scientific research, then scientists must view its slow regression with concern. The marginalization of the Ministry is evident in the battle over animal experimentation. All the shots have been called from the Ministries of Welfare and Environment, encouraging activists to literally invade a national laboratory (National Institute of Nutrition, Hyderabad), inevitably requiring a judicial restraining order.

Are ministers important for the functioning of ministries? Presumably so, but if the popular British TV serial 'Yes Minister' is any guide, ministers are usually putty in the hands of a trained bureaucracy, whose primary

purpose is to perpetuate their supremacy. Ministers do have their uses. Many schemes of doubtful value can be railroaded past an unwilling scientific establishment by invoking a 'ministerial diktat'. In Delhi, the secretaries in the science ministries are formally 'technocrats', but are almost invariably shackled by generalist administrators holding the purse strings and deciding the rules of the financial game. The importance of the politician 'minister' is really in acting as a broadminded referee in this pointless internecine battle for turf. The principal sufferers in this scenario are the thousands of scientists and hundreds of institutions that constitute the backbone of the scientific enterprise in this country.

Surely then, there is a case for having ministers who have a modicum of commitment to their portfolios and who have a vision for the ministries under their charge. We cannot forget the role played by C. Subramaniam at the Agriculture Ministry, where he shepherded the 'Green Revolution' and his stewardship at the Ministry of Science and Technology in the early 1970s, where he created the National Council of Science and Technology, the forerunner of today's science funding agencies. Politicians, if they choose to do so, can indeed influence in a positive manner many of our important and essential institutions. Unfortunately, there are far too many examples to the contrary, to engender any hope. A recent editorial in *Nature* noted the passing of US Congressman George Brown, who indeed championed the cause of science funding in a Congress determined to trim budgets. If the scientific enterprise in the West is strong, it is largely because of the broadbased political support that is given to the cause of science and technology. Research is no longer cheap. High investments of public money require a substantial political will and a confidence that the 'returns on investment' will be commensurate. Suboptimal investments and the absence of strict evaluating mechanisms will only hasten the decline of many institutions into an abyss, from which recovery in the future will be almost impossible. Science in India is practiced in institutions that vary widely in quality, re-

sources and administrative structure. The 'showcase' laboratories are only the tip of a hidden iceberg of indifferent quality.

Scientific and technological progress, the world over, will continue with increasing pace in the new century. The gap between cutting edge, international science and the efforts made in India will inevitably grow. The high profile successes of 'strategic science' and the growing tempo of the drum beating on information technology, have in the recent past, diverted attention from the many important areas of basic sciences, biomedicine and agriculture, which need to be carefully fostered in the com-

ing years. The major battles in biomedical research in the future, will undoubtedly require that the troops are well trained in basic biology, chemistry, physics and even computer science. Those charged with the responsibility of 'ministering' science and technology may need to devote their full and undivided attention to the difficult task of galvanising a lethargic, far flung and dispirited scientific establishment to face the future with enthusiasm.

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