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EDITORIAL

Requiem for a missing generation

You are a lost generation.

Gertrude Stein to Ernest Hemingway

One generation passeth away and another generation cometh: but the earth abideth forever.

Ecclesiastes

The American author and connoisseur of the arts, Gertrude Stein (1874–1946) coined the phrase ‘lost generation’ to describe the band of American authors, which included Ernest Hemingway and F. Scott Fitzgerald, who settled in Paris in the years between the two World Wars. The American expatriates were to produce a remarkable body of literary work, one of the earliest novels being Hemingway’s, *The Sun Also Rises*. In the preface the author quoted Stein, immortalizing the phrase ‘the lost generation’. He also went on to quote from the *Bible*; a reflection on the transition between generations. My search for Stein and Hemingway was catalysed by a recent ‘News Focus’ piece in *Science* entitled ‘Missing generation leaves a hole in the fabric of research’. Here was an article, datelined New Delhi, which attributes to some of India’s scientific leaders the phrase ‘missing generation’ to describe the absence of ‘leaders in the age group of 45–55 years’ (*Science*, 2002, **298**, 733). The fact that an entire generation of scientists in India is devoid of men and women of substance and accomplishment appears to have been made by the most prominent members of a generation of scientists and science administrators, who have had the opportunity to guide the destinies of institutions, academies and government science departments, for much of the past quarter of a century.

How did a group of men, so widely experienced, so remarkably accomplished and so politically astute come to such a clear, and apparently, unanimous conclusion? The evidence on which the ‘missing generation’ has been postulated, appears to be the inability of search committees to find scientists in India, suitable to head the Tata Institute of Fundamental Research (TIFR) in Mumbai. The choice of a scientist, who has spent almost his entire research career in the United States as the new TIFR Director and the attendant discussion in the popular press appear to have provided the immediate provocation for the news report in *Science*. Even earlier, yet another scientific leader was imported from the United States, for the Harish Chandra Research Institute in Allahabad

(formerly the Mehta Research Institute), curiously enough an organization which, like the TIFR, falls under the ambit of the Department of Atomic Energy, whose leaders never tire of trumpeting the importance of indigenous scientific and technological development.

Science in its report notes that the ‘phenomenon’ of the ‘missing generation’ takes many forms including the ‘appointment of the first outsider to lead one of the country’s flagship labs. . . . It’s also contributed to a graying at the top of the scientific hierarchy’. In a damaging commentary on the state of science in India, the report quotes a member of the Council of TIFR as saying ‘that the search committee looked high and low for domestic talent even perusing the membership lists of the country’s scientific academies’, but drew a blank everywhere. The irony will not be lost on those who know that we have a profusion of ‘Academies’ and that many of India’s scientific leaders, who are quoted in this report have presided over these organizations, whose most important objective seems to be the election of new members. In rationalizing the move to look elsewhere for leadership we are told that we must ‘ruthlessly go for the best’. Indeed the private sector and the Board of Control for Cricket in India would applaud this sentiment; the latter relying on foreign coaches and trainers for some time. The ‘go for the best’ strategy is unexceptionable and it would be interesting to apply this principle across the board. We would do well to ask: Are the heads of administrative departments that control science the very best? Are the councils of management that govern our institutions the very best? Do we have mechanisms in place that dispassionately assess the heads of institutions and scientific departments? The answers to these questions might all be negative, leading to the conclusion that a new era has dawned, where India’s long enduring scientific leaders have suddenly decided to be ‘ruthless’, in their relentless search for new leadership, at the frontlines of battle.

The current controversies do highlight some important issues; considering a few of them may be instructive. Many of our autonomous institutions are governed by Councils of Management, whose constitution leaves much to be desired. Very often the Chairmen (and there are very few women in these positions) of these Councils have little more than a passing interest in the institutions under their charge. Their tenures are long and their disinterest or self-interest most manifest when there is a

change of executive leadership in the institutions. Councils have a limited role when institutions are run by strong executive heads and have in place fair and robust internal mechanisms. However, they have a pre-eminent responsibility when there is a change of leadership, in identifying and recruiting new heads for the organizations, over which they are expected to exercise a gentle, supervisory role. I must hasten to add that the problems of institutional councils are not only a present-day phenomenon. In 1936, a Quinquennial Review Committee (the Irvine Committee, under Sir James Irvine) was appointed to review the Indian Institute of Science (IISc). The institution was then in a turbulent state. C. V. Raman was to resign as its director in 1937. In 1939, this journal noted in an editorial: 'We doubt whether the Institute really suffers from any clash of personalities, but we are prepared to admit that there is almost an irreconcilable war of ideals, arising from two academic luxuries which the Institute can hardly afford. The first of them is apparently a body of elderly authorities composing the Governing Council, whose imagination has become by routine administration as rigid as perhaps their arteries, on account of their advancing age: the other is a group of ardent young students and members of the staff who, inflated with noble ideals, are impatient to dash forth to win their spurs in extending the frontiers of knowledge. . . . The former is as dangerous a symptom as the latter is a healthy sign, for a generous enthusiasm and sterling ambition, when wisely harnessed and judiciously directed, must at all times constitute an invaluable asset for the Institute' (*Curr. Sci.*, 1939, 8, 197). The editorial written over six decades ago goes on to question the constitution and responsibilities of the Governing Council of IISc; questions which remain valid and relevant for most of our autonomous institutions, including TIFR, to which the report in *Science* drew attention.

A second issue which may be useful to address is whether the carrot of administrative and executive authority the sole means by which accomplished Indian expatriates are attracted to return to our institutions? While many schemes for attracting early career scientists to return to India have been advanced, there has been little success in luring more established and most importantly, visible and active scientists of Indian origin to return to this country. Many countries which would like to advance rapidly in an increasingly competitive world like China, have attempted to put in place new mechanisms to reverse the direction of flow of scientists to the West. The inducements to return have included the creation of elitist laboratories with exceptional facilities (*Nature*, 2002, 420, 257). In this context we may recall the abortive, contentious, but nevertheless stimulating, proposal to establish a National Science University as an essentially non-resident Indian initiative, with substantial government support. In his devastatingly worded critique of our scientific structure as it stood in 1994 (and little has changed since then) the author, Swadesh Mahajan said: 'It is not science that brings glory, fame or fortune; it is scientific administration. It is not excellence in scientific research that makes one a leader, but the administrative title of 'Director' (or an equivalent) that legi-

timately confers leadership upon a person. The director is not only absolutely powerful but must also be the most important scientist when he is appointed director and for all times to come. No one may have a greater scientific stature or ambition than the director whose specific interests take precedence over everyone else's' (*Curr. Sci.*, 1994, 67, 503). Mahajan summed up a perception of Indian institutions and their leadership which was, and is, widely shared. Unsurprisingly, it is difficult to attract senior scientists of accomplishment to our institutions unless they are vested with administrative authority. We might also expect that leaders of institutions have a clear vision of the immediate future of their organizations. This is rarely the case; most often, the wand of executive authority is used to facilitate a personal scientific agenda.

The report in *Science* ends on an ominous note, emphasizing that the secretaries of seven major departments have exceeded their terms. The case for extensions becomes strong since we are now clear that there is a 'missing generation'. For good measure the article ends with an implied threat, quoting yet another senior scientist, that career bureaucrats may step into the line of succession at the 'science ministries'. While there must be every effort to facilitate the research and academic work of productive, serious and scholarly, senior scientists beyond the age of formal retirement, the practice of extending executive and administrative authority is a pernicious one. Political skills are often more important than administrative talent, leaving many of our institutions and departments irretrievably damaged after extremely long tenures of their administrative heads. There are, of course, honourable exceptions; but we must be wary of administrators whose attachment to their chairs exceeds their commitment to science and their institutions. In thinking about the many difficult, and at times unpleasant, issues addressed in the *Science* report, I was reminded of Oliver Cromwell's famous exhortation to the Long Parliament: 'You have sat too long for any good you have been doing. Depart, I say, and let us have done with you. In the name of God, go.' Cromwell was famously quoted by the Conservative MP Leo Amery, in the British Parliament in May 1940, when he rose to demand the exit of the Prime Minister, Neville Chamberlain, in one of the defining moments of the early days of World War II.

I shall end as I began with Gertrude Stein. In her Paris salon, she was among the first to recognize the talents of Pablo Picasso and Henry Matisse. And, of course, she befriended the young Hemingway. She identified a generation of artistic and literary talent. They were 'lost' only from their moorings in post-World War I America. The men who rule India's science have coined a remarkable phrase, which reminded me of Stein, to arrogantly dismiss an entire generation of scientists in India; many of whom have laboured diligently, with extraordinary commitment to their chosen disciplines, silent and at times forlorn, witnesses to deteriorating standards of decision making. This essay might serve as a requiem for the 'missing generation'.

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