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EDITORIAL

Awards and rewards

Sometimes the past suddenly intrudes upon us. So it was, when the controversy over the Arjuna award to Milkha Singh reminded me of another day and another age. The late 1950s and the first couple of years of the decade of the sixties were a time of hope and optimism. Independent India was still young and as a boy I was thrilled to hear of Milkha Singh's glorious quarter mile run across Rome's Olympic Stadium in 1960. It was a time of the radio and the newsreel that preceded a film in the cinema theatres. It was a time when we still thought of the hockey gold in the Olympics and Ramanathan Krishnan could even finesse his way into a Wimbledon singles semi-final. Cricket was not the all-consuming force that it is today. Gavaskar and Kapil Dev were still to appear on the horizon; Tendulkar was not born. It was a time when a new world order appeared possible; John Kennedy's assumption of the US presidency promised a future that was to turn into a mirage. The disastrous border war with China lay ahead and the demoralizing food shortages of the mid-1960s were yet to be anticipated. The green revolution and Mrs Gandhi had not yet entered our lives. It was in this ambience that Milkha Singh raised the bar of sporting achievement by sprinting to within a tenth of a second of an Olympic medal, breaking the existing record in the course of his spectacular run. Why did such a man not receive this country's highest national award for achievement in sport, even when it was first instituted? Why did the committees in the Sports Ministry suddenly rediscover Milkha Singh? In the long years since the Rome Olympics there have been many sportsmen and women honoured for far lesser achievements. Milkha Singh's instinctive reaction of rejecting the award, highlighted the infirmities of the entire selection process, sparking a debate on the mechanisms by which we acknowledge men and women of distinction in sport. Are awards important? Undoubtedly they are; particularly in a directly competitive sphere of activity like sport. Was Milkha Singh a stray omission? Obviously not, since there have been many plaintive cries in the past few weeks from once famous names.

Inevitably, pondering on the issue of awards and recognition, I drifted to thinking about science. This is the right season to worry about awards. The annual Bhatnagar awards, instituted in the late 1950s by the Council of Scientific and Industrial Research (CSIR) will be given away even before this is read; this year's selections will be announced by month's end. These prizes are intended to recognize achievement in all branches of science, engineering and medicine, with the important proviso that the awards are restricted only to those researchers who have yet to reach the age of 45. Instituted in 1958 by CSIR, to honour the memory of its founder Shanti Swarup Bhatnagar, the awards were unfettered by age in the early years. In the inaugural year, K. S. Krishnan, then a mature 60 years, was a recipient, but in a few years, the Bhatnagar prizes were strictly limited to relatively young or middle-aged achievers; clearly-late bloomers were sharply excluded from the circle of recognition. The roll call of honour in the early years was impressive, some of the most famous names in Indian science amongst them. Interestingly, age has always been an important parameter in deciding limitations on awards, an issue that has been previously discussed in these columns (*Curr. Sci.*, 1999, **76**, 1059). Bodies which institute awards, often, intend to use recognition as a means of encouragement; in the hope that celebration of promise may pay more dividends in the long run, than acknowledgement of performance. Thus, there are a plethora of 'young scientist' awards with varying age limits; 32 for the Indian National Science Academy (INSA), 35 for CSIR (which is restricted to 'in-house' scientists) and 40 for the B.M. Birla Foundation. By definition, the young scientist awards are 'talent spotting' exercises, with relatively few high achievers recognized for actual performance. But, there is often, a cascading effect, with 'promise' being persistently recognized, before fading into middle-aged oblivion. Early awards can also provide a route up an administrative ladder. Late entrants to the playing fields of science and quiet plodders, who suddenly bloom late, are completely left out of the awards network. There are a few prizes which are given without explicit age restrictions; but selection committees are unlikely to be swayed by a candidate who has been previously unrecognized. Truly, one award begets another.

In recent times, awards have proliferated. Many private bodies have sprung up which honour scientists. Government departments vie with one another in instituting high profile awards. The millennium's beginning (or end) and the fiftieth anniversary of our independence provided ample excuse. The Swarnajayanthi Fellowships instituted four years ago targetted the scientist population below the age of 40. This initiative attracted considerable attention largely because a handsome research grant was supplemented by an even handsomer monthly fellowship of Rs 25,000 as a bonus on top of a regular salary, making it the most lucrative of our awards. Understandably, the scheme met with a fair share of criticism, even as the search for 'world class' performers slowly began to peter out. There has been little input into the Indian scientific scene in recent years. Institutions hire relatively few people and many are already in their mid to late 30s. Even before they settle down they are in fact out of the 'awards net'. But, in keeping with the mood of the times the Department of Biotechnology also introduced bioscience awards carrying a cash prize aimed at a similar age group. In the inter-agency competition the value of awards has steadily been enhanced, with the Bhatnagar awards escalating by about an order of magnitude over a decade, reaching a respectable (and desirable) figure of Rs 2 lakhs.

While cash awards are welcomed by the scientists who receive them, peer recognition is also conferred by Academies, and we have many of them. Science, in its broadest sense, is represented by as many as three academies based in Delhi, Bangalore and Allahabad. Any external observer is bewildered by this surfeit of academies; but, history prevails over common sense as each of these bodies grows in strength. The annual election of 'fellows' is an elaborate process and those who are outside the academy are often desirous of getting in. Here too, for an unfathomable reason, age is an important criterion. There are again two distinct schools of thought; those who believe recognition is an important tool in encouraging scientists to raise performance levels and a more conservative school which holds that elections must be a consequence of achievement. There is also a fond hope in the Councils of these bodies that reducing the average age of their fellowships might invigorate their organizations. Even at the academies, the late bloomers are ignored; the dominant prejudice is that success in science is unlikely after middle age.

But, for those who pick up their share of honours, careers end poses another challenge; a scramble for the limited number of emeritus scientist and professorship schemes, which allow a life in science past the mandatory age of retirement. Here the competition stiffens because of a diminishing number of opportunities. The conversion of the Indian National Science Academy's emeritus scientist program, from one which paid an honorarium to one which is purely honorary has made it unattractive for many; a clear case of the importance of the 'cash award'.

The most contentious issue with awards of all types is, of course, the decision making. Judgements must necessarily be subjective. In the case of science, research publications are often, the only available parameter. The rise of the insidious 'journal impact factor' has introduced a seductive, but misleading quantitative element, into the process of judgement. Scientists now highlight 'average impact factors' on their lists of publications, little realizing that their papers in high impact journals may in fact be cited much less than the journal average. Even within a broad field of science like biology, the impact factors of (and perceptions about) journals vary widely with subdisciplines. It is hardly possible to compare journals in plant physiology with those in neurobiology. Some disciplines remain Cinderellas waiting for a fairy godmother. While most selection committees struggle under the burden of a difficult task, correct judgements hardly cause a ripple, glaring acts of omission or commission can raise a storm. Patronage, prejudice and pressures are inevitably a part of the process. The awards and rewards system in science is determined by complex dynamics. Our Milkha Singhs may one day suddenly appear on the scene.

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