

## Ending an Innings

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Retirement is not always an attractive prospect. There are some who approach it with equanimity, while others struggle to come to terms with the inevitable. Sportsmen face this choice at a relatively early age; youth and physical fitness are essential prerequisites for success. Indian cricket has witnessed some dramatic upheavals over the last year or so and the pressures on the big three, Rahul Dravid, Sachin Tendulkar and Saurav Ganguly to 'voluntarily' retire have been evident. A graceful exit draws applause; a forced retirement can leave scars that never heal. For sportsmen, retirement from the major calling comes early in life and alternate careers must be carefully considered, even when performances are at their peak. For most others, who work in a less frenzied environment retirement looms at a specific point in time; politics is, of course, a profession that is an exception, clearly because it does not provide even minimal security during the evolution of a career. Unlike many other fields of work, scientists appear to struggle to a significantly greater extent with the notion of retirement. Having spent an entire career working on subjects they like and enjoy, retirement seems to be a rude and disagreeable way of ending a deeply personal relationship with their places of work. Unlike writers or artists, scientists can almost never work from home. They need laboratories, equipment, expensive journals, co-workers, and most importantly, a community to interact with, in a highly structured environment. In the best of institutions, many researchers and academics enjoy a remarkable degree of freedom to pursue their interests; always getting paid and rewarded for doing what they like best. There can be no better career than one where a pet hobby can be relentlessly pursued, even while a living is earned. Successful scientists, who have earned a measure of recognition from their peers, are always loathe to retire; unhappy that age suddenly debar them from activities they enjoy. Some countries, notably the United States, have legislated against 'age discrimination', thereby eliminating mandatory retirement in academia. This is indeed possible in a system where every facility extended to faculty in an academic institution can be based on a hard-headed internal assessment of performance in teaching and research. Laboratory space and salaries are the two most important instruments of administrative coercion available to managers of institutions. Attractive retirement

benefits can also serve as an inducement for early departure.

The demographics of the developed countries, the West and Japan, have been changing rapidly. The aging of societies in these countries is evident. Countries like India and China, which boast of reservoirs of youth as an intrinsic strength, have begun to realize that enhanced life expectancy and lowered rates of population growth will begin to tilt the balance later in this country. Aging cannot be arrested in individuals. Neither can collective aging in modern societies be ignored. Some European countries already face the spectre of a large proportion of the population living off state pensions, after retiring from the rolls of productive employment. In these situations it would seem important, indeed imperative, to ensure that people work as long as they can. Nevertheless, it is in Europe that mandatory retirement is enforced and voluntary retirement appears attractive. For many years now, European (a term that must include the British) scientists have migrated westwards, as they approach the age of retirement, which varies between 65 and 68 years. North American universities have greatly benefited from this 'mature' brain drain; the senior expatriates often adding substantially to the academic profile of the institutions that provide them shelter. There have also been some celebrated cases of Indian scientists, who have accepted lifelines thrown to them from American institutions, at late stages of their careers. The interesting differences between European and American approaches to retirement in academia are highlighted by Peter Lawrence in a recent Commentary in *Nature* (2008, **453**, 588).

Lawrence, a developmental biologist at Cambridge, titles his essay 'Retiring retirement' and opens with the quote 'The evening's the best part of the day' (Kazuo Ishiguro). He begins his attack on mandatory retirement citing the examples of famous British biologists who moved to America; Oliver Smithies, winner of last year's Nobel Prize for physiology or medicine, and the now well-known examples of Francis Crick and Sidney Brenner. Lawrence bolsters his argument quoting, approvingly, the German President Horst Kohler: 'We could achieve much more if we allowed the curiosity and impulsiveness

of youth to be tempered by the wisdom and the inner calm of the old'. Critics of the Lawrence thesis will undoubtedly be quick to point out that 'wisdom and inner calm' are not necessarily attributes that appear with age. Lawrence notes that 'thanks to pressure from the European Union' the situation is slowly changing in the UK. Academics can now apply for extensions and he cites the example of Cambridge where 50% of the staff ask to be continued. To Lawrence this reflects a 'high level of job satisfaction'. The scientists whom Lawrence quotes and holds up as examples of highly productive individuals, even at an advanced age, are some of the most illustrious names in their field. Who can argue with Sydney Brenner when he says that 'I know many 35-year old scientists who should be retired and some 70-year olds who are the best postdocs you will ever find'. There is an oft advanced counter to Lawrence's plea to retire retirement. Keeping people in employment indefinitely will inevitably limit the opportunities for the young. While this may be less of a concern in aging societies, in most countries the abolition of 'age discrimination' can only be approached with great caution. Lawrence realizes that his views run counter to accepted wisdom and takes the opposition head on by quoting Anton Chekhov (*Uncle Vanya*): 'For twenty-five years he's been lecturing and writing about things that any intelligent person already knows and no stupid person cares to know ... which means that for twenty-five years he's been keeping somebody else out of a job'. To Lawrence the tendency to 'stereotype individuals' and to 'assess people as groups' lies at the heart of the problem. Clearly, the principle that all men (and women) are equal cannot apply when performance is judged; by the time mandatory retirement age approaches the differences between individuals can be exceptionally large. The cycle of retirements and recruitments permits academic institutions to maintain an upward slope of performance, if the bar is constantly raised with every succeeding generation. If high performers are abruptly retired, institutions may temporarily witness a drop in research productivity, which can be disconcerting. For the most highly motivated individuals relocation to countries where retirement is not mandatory appears an uncomfortable, but viable, option.

In India the age of retirement in central academic institutions has been recently raised to 65, a jump of three years. In some institutions 're-employment' can be considered for a further five years. This move came in the wake of the expansion of the higher education system, ostensibly to address the shortage of teaching faculty. Inevitably, the increase in retirement age will spread to research institutions, although the state universities may

not follow suit. The absence of an 'earned tenure' system in India means that most newly appointed faculty at our institutions are 'permanent' members. Formal contracts are rarely enforced and there is no real connection between performance and continuation. As a consequence, when retirement approaches there are no accepted mechanisms for discrimination between performers and nonperformances. In many publicly funded institutions the most valuable perk of a 'government job' is housing. Increases in retirement ages immediately affect the ability to accommodate new individuals. Despite the many attempts to promote off campus housing, the situation in our major cities acts as an inhibitory factor. Laboratory and office space is another difficult issue. Paradoxically, it is easier to continue members who do little and ask for little. In an environment where intellectual attainments are not valued and administrative influence is prized, extensions and facilities are often not extended to the most valuable members of an academic community. To some extent the inability of universities to sometimes retain the most academic of their faculty has been responsible for the gradual erosion in intellectual values. India may not be able to 'retire retirement' but we might do well to reflect on Lawrence's essay and ask: 'How can we exploit the talents and abilities of the most senior and able members of our community'. Several schemes introduced by agencies and academies now permit formal association of retired researchers with their parent institutions. In most cases the association is a limited administrative arrangement; there is little or no academic involvement with the surroundings. It is clear that only extraordinary and exceptional individuals can maintain a high degree of intellectual productivity, with advancing age. For the rest, a substantial majority, retirement can provide a release from the constraints of a formal commitment to an institution. If our institutions demand more from their academic faculty, retirement may indeed provide an avenue to shed the shackles of regular employment. Mandatory retirement is unlikely to disappear from the academic scene in India. Our institutions may even benefit by making voluntary exit more attractive. This would permit individuals to make informed decisions and explore alternate choices of careers. An editorial comment that precedes the *Naturejobs* section in the issue of the journal that carries Lawrence's commentary notes: 'But in the end, perhaps the only way is to let each individual decide; should I continue to trek to the lab or should I be content to let the next generation take up the mantle' (p. 693). Ending an innings is not easy, especially if the decision is voluntary.