destiny is assured with or without performance. Promotional avenues in such organizations and scientific departments are moderate to excellent, though in a few organizations like the Geological Survey of India, more than a decade is needed to reach the next higher post, especially at JTS level. In the Indian set-up, performers are always at loggerheads and non-performers get plum postings and early promotions. Even the highest awards in India and Asia like Bhatnagar award and Magsaysay award, respectively, seldom result in accelerated promotion to the awardee. A performer is always vulnerable to criticism. Therefore he suffers extensively, whereas a non-performer is engaged in extra-constitutional work. Hence, he is not subjected to scrutiny and gets early promotion. A non-performer is never punished. Regarding the concept of assessment, theoretically, all promotions are subjected to the assessment. Who will assess and what are the criteria of assessment are million dollar questions. Assessment of head of an institution on the basis of performance is a utopian idea. Who will dare to assess the head of a research institute or cabinet secretary or secretary? Fine filter of discrimination is not possible in the Indian scenario. Lack of accountability is the crux of the problem. Each assignment of an individual should be subjected to the public scrutiny. Job security should be replaced with social security. Reward and punishment are essential for performance.

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Why no takers for a scientific career?

Gone are the days when young students used to opt for a scientific career out of interest and aptitude. The scientific education is now compared with engineering and other professional studies in terms of job opportunities, emoluments, future prospects, privileges and duration of studies. The comparison goes as follows:

(1) Prospective engineering graduates from good institutions are assured of jobs from various reputed companies through campus interviews even in their final year of the engineering program. Thus an engineer is theoretically settled in life after four years from the intermediate, whereas for a scientific research/teaching career, at least eight to nine years would be required before one is settled.
(2) An engineering graduate may start his career anywhere from Rs 10,000 to Rs 25,000 compared to Rs 12,000 to Rs 15,000 with which a scientist would start at the end of his studies.
(3) Promotions in engineering services are frequent and common, and there is ample opportunity for an active and hard-working engineer to make progress to his satisfaction on the basis of his performance. Opportunities in the scientific world of teaching and research are not at all comparable. In these services the promotions are time-bound.
(4) Another disadvantage with the scientific career is that there is no accountability of the performance. Good work goes unrewarded and non-performance or poor performance goes unpunished.
(5) Still another disadvantage is that the scientific career is not result-oriented in the sense engineering service is. An engineer can show his merit and performance in a time-period in unity with his action and this period is small, whereas a researcher/teacher would require a much longer period.
(6) In research odd requirements (sometimes normal ones too), poor maintenance of equipments, non-cooperation of supporting staff and red-tapism are great impending factors.

In spite of the above disadvantages and shortcomings, a small minority of talented young people do opt for a scientific career out of interest and aptitude. The only point to be considered is what should be our methods, system and policy to attract young persons to this career.

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Earth's oldest crust

I read the Research news entitled 'The quest for earth's oldest crust' by A. V. Sankaran with interest (*Curr. Sci.*, 2000, **79**, 935–937). It is really informative and thought provoking. It enlightens about the world's oldest crust in many parts of the world, ranging from evidences of 4.28 b.y. continental crust in Western Australia to 4.03 b.y. oldest rock from Acasta gneisses. These ages are based on zircon dating by SHRIMP method. There is one slight error, the author mentions that Rajasthan's oldest rock is amphibolite but the fact is that the oldest rock is Tonalite Trondhjemite gneisses near Jhammarkotra whose age is 3.3 b.y. (refs 1–3). The amphibolite which the author mentions in the text is intrusive in these gneisses which gives an age of 2.83 b.y. (ref. 1).

1. Gopalan, K., Macdaugall, J. D., Roy, A. B. and Murali, A. V., *Precambr*
2. . *Res.*, 1990, **48**, 287–297.
3. Wiedenbeck, M. and Goswami, J. N., *Geochim. Cosmochim. Acta*, 1994, **58**, 2135–2141.
4. Roy, A. B. and Kroner, A., *Geo. Mag.*, 1996, **133**, 333–342.

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