taxonomy. Now at about the age of 80 as an emeritus professor, he continues to extend his help. As indicated in the science and technology article, the job opportunities are also low for specializing in basic sciences. Self-financing colleges that offer glamour courses like Microbiology, Biochemistry and Biotechnology employ such candidates. It is disheartening to note that the Ph D degree holders have to appear for a written test and an interview for a paltry salary of Rs 3000–6000 per month. Further, students who opted for classical subjects for their Ph D work find difficulty in getting research fellowships from agencies like CSIR in the form of SRF since taxonomy is not a frontier area. With the advent of choice-based exam system, life science students even at under graduate level keep away from basic subjects. Regarding the selection of the candidates for Ph D degrees, the authors of the first mentioned article, suggested a National Level Entry. But those who clear NET/GATE always wish to join premier institutions like IISc and CCMB, since this invariably paves the way for post-doctoral position abroad. If so, what about the fate of other branches of biological sciences? Recent implementation of UGC withdrawing the exemption of Ph D degree holders from the eligibility for lectureship is a mortal blow to research scholars. If the implementation continues, such research scholars in universities and other research centers will be constrained to concentrate on these tests rather than their research. In addition to NET/GATE, institutions like CCMB have their own entrance tests for selection of candidates to Ph D program. Often these persons who have cleared NET/GATE, do not succeed in such tests while those who have not cleared NET are able to pass such tests. The selection of a candidate purely depends upon the candidate's interest and research supervisor's satisfaction about the candidate's qualification. I can give a number of examples of many non-stipendiary research scholars who shine better than persons who entered in research through NET/GATE.

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Brain drain: Crocodile tears galore

Apropos to the correspondence 'Science and Technology in India and brain drain – Some suggestions' by S. Seshadri *et al.*, in *Current Science*, 2000, **78**, 1407, while all the points mentioned by the authors are genuine and relevant, there is at least one major glaring point that has been left out – that of the inordinate delays (which sometimes goes into several months together, or even years) in release of grants by the funding agencies, which inadvertently affects the release of stipends/salaries to the research staff working under several projects funded by various government organizations throughout the country.

The instances of non-release of grants/stipends have become so frequent that, it would appear as if research is meant only for those who happen to come from reasonably well-to-do families, who can afford to sustain themselves during the long periods of work without stipends. Imagine the plight of those who hail from poor families and have to solely depend on their monthly stipends for their bread and butter, when their stipends are withheld for months together.

From the point of view of the Universities and their respective departments which are running the sanctioned projects, the concerned authorities/investigators do not make much noise about this. Ultimately, it is the research staff that suffers and as a result dwindles in its numbers, with many opting out.

While the points that are being elaborated here might seem less important to the point of triviality to some, let me highlight that, this very point is a major reason that creates a strong aversion for research amongst the youngsters.

Once a fresher goes through the turmoil/mental trauma of not even getting the basic emoluments that he/she is entitled to, realization dawns and is followed by disillusionment. While on the one hand, researchers have to meet deadlines in giving results, the spectre of working without income has been giving the most nightmarish experiences to many young researchers. Words spread thick and fast and the experiences of a few young researchers are serving as eye openers for others – the disinterest/disinclination/aversion for doing research in India is intensifying by the day amongst the younger generations.

It might be nice and romantic for someone in the higher echelons of scientific community to sit in the comfortable, cosy relaxed confines of scientific hierarchy to give hollow comments on 'doing science for the sake of science', or 'money is not everything' or discuss brain drain over cups of tea/coffee; at the most, these would amount to mundane lip service to an issue that deserves a far more serious introspection. The ground reality is alarming and no one seems to be bothered/perturbed.

Young researchers also see/find their counterparts in other fields (except research) earning incomes that are more than just substantial; the pressures they come to terms with, when they do not get even their 'relatively' meagre stipends/salaries on time, only act as the final straws on the camel's back.

If funding agencies do not have intentions of releasing grants that have been sanctioned to Universities, on time, then why sanction a project in the first place? It would be interesting to know how the authorities sanctioning projects/University administrators/departmental faculty members would react, if their 'Fifth Pay Commission revised' salaries are withheld for just one month.

Given these circumstances, what is wrong in youngsters with an interest and aptitude for research, deciding to pursue professions other than research

only to take care of their pangs of hunger and (to a lesser extent) social recognition?

Our country keeps losing the cream of its bright minds to the lures of the Western world. Everyone in the scientific hierarchy seem to be voicing concern over this – Let me ask one question: how many scientists in India at the senior levels encourage their children to stay back in India and 'serve' the nation in the field of research? how many scientists in India would not want to proudly display the names of foreign Universities they have worked with, in their curriculum vitae? The 'love' bug that bites and sends the adrenaline pumping towards sojourns abroad is biting everyone in this country, so why blame young researchers? Let youngsters get themselves a bright future and let us stop shedding bucketsful of crocodile tears.

The present state of affairs, is in a way making sure that the very few who decide to stay back, change their decisions hastily and follow the rest of their contemporaries to either go abroad, or switch over to more lucrative professions.

Perhaps, it is too early to say that scientific research in India is finding its way to its grave, but definitely the path is being cleared for its final journey. Let us clear our throats for a Final Requiem.

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Gresham's Law

It may be of interest to note that Gresham's Law is not really due to Gresham but due to a great scientist, Nicholas Copernicus, who had imbibed the spirit of renaissance, was a doctor of medicine well versed in law, painting, and yes, economics. He was regularly consulted upon various financial matters by the state. According to Edward Lipinski, an eminent Polish economist (*The Scientific World of Copernicus* (ed. Bienkowska, B.), Reidel, Dordrecht, 1973, pp. 107–119): 'Copernicus deserves to be recognized as the first economist to give a precise definition of the law of money circulation, known as Gresham's Law (from the name of a much later writer, who, incidentally never formulated that kind of law)'. Lipinski states that the 'modern' theory of money originated in Poland, possibly because the trade in raw materials which were in great demand on the world market, was concentrated in Gdansk, Poland. It is probably no great surprise that no credit on this matter is given to Copernicus who shunned publicity even for his heliocentric theory. If a Galileo had thought of it, well, the world would have known it long time ago!

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NEWS

RHIC, a new heavy ion collider in search of quark-gluon plasma*

The best physicists never let preconceptions influence the activity of their imagination – the imagination is to be guided by what works.

– Heinz R. Pagels
in 'The Cosmic Code'

'How did it all begin?' has been a question that has challenged humanity over several millennia. Philosophers have pondered over this fundamental query and scriptures like the *Bhagavatam*, the *Bible* (in Genesis) and others have provided some scenarios. Scientists have been theorizing too. Einstein's essay 'Cosmological considerations' raised the status of cosmology from a realm of mythical speculations to a respectable science... The Big Bang cosmology is based on Aleksandr Friedmann's non-stationary solutions of Einstein's field equations, on Edwin Hubble's discovery of an expanding universe and so on. As new discoveries are made by experiments and observations, the story/theory may change. In the context of thinking along the concept of *creatio originans*, 'the question has been raised as to whether it would be possible to create a "universe" in a well-equipped laboratory. Edward Farhi and Alan H. Guth concluded that "to create conditions in a small region of space which would give rise to a new universe. . . could require an energy density that is far too high to be provided by any known technology"'. The Relativistic Heavy Ion Collider (RHIC), may break this barrier and give a new thrust to the enquiry of this enigmatic puzzle.

*Credits: (a) http://cerncourier.com/main/article/40/3/13 and (b) http://www.rhic.bnl.gov/