

Why no SSB prize after 45 years of age?

The Shanti Swarup Bhatnagar (SSB) Prize for Science and Technology is considered as the most coveted award for an Indian scientist. It is also sometimes referred to as India's Nobel Prize. It is nice to notice that several SSB awardees have later been included among the list of FRS¹, UK. However, unlike the Nobel Prize, the SSB prize is only given to scientists of age limit 45 years or younger (<http://www.csirhrdg.res.in/ssb.htm>). Why to limit the age for an award which is so important for outstanding contribution in different branches of science!

Creativity mind in different disciplines of science is also found to be different in age. The average age of Nobel laureates in different science fields is in the following order: Physics < Chemistry < Physiology/Medicine (http://www.nobel-prize.org/nobel_prizes/lists/laureates_ages/all_ages.html). Many of us are aware of the famous quote of Richard Feynman 'the age in which we live is the age in which we are discovering the fundamental laws of nature, and that day will never come again'. There is an interesting study

on the average age of Nobel laureates in physics in different decades, which is found to be increasing gradually (<http://www.almaz.com/nobel/papers/age/>).

In biological sciences also, experimental results in subjects such as biophysics, computational biology and biochemistry come faster in comparison to subjects such as genetics, neuro science, developmental biology, etc. So scientists doing research in the latter fields are likely to miss the award in spite of coming up with fine discoveries in the course of their research in India. One such example can be Imran Siddiqi, at Centre for Cellular and Molecular Biology, Hyderabad, who has publications in journals such as *Nature*², *Science*³ working in India. Because of his outstanding research, Siddiqi has been awarded the prestigious Infosys Award in 2011 (<http://www.infosys-science-foundation.com/prize/laureates/2011/index.asp>), but unfortunately, he could not be included among the list of SSB awardees. There may be several such cases.

The age limit for SSB award was decided in the past. Though it may not

matter to a scientist to be included among the SSB awardee list, unable to include a well deserving scientist in the list definitely suggests that the criterion of age limit for judging SSB award should be reconsidered. In fact, the Infosys Award, which was established in 2008, also has an age limit of 55 years. It may be worth while for the committee of Infosys Prize too to retrospect on this aspect.

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2. Ravi, M., Marimuthu, M. P. and Siddiqi, I., *Nature*, 2008, **451**, 1121–1124.
3. Marimuthu, M. P. *et al.*, *Science*, 2011, **331**, 876.

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India's global impact is taking its due course

Narayana Murthy's simple questions¹ like 'if there is one Indian invention that became a household name in the globe', or 'technology that transformed the production of global corporations', or 'idea that led to earth-shaking invention to delight global citizens in the last 60 years', first require a plain 'yes' or 'no' answer. To this end, by and large, an affirmative reply does not seem to have emerged^{2,3}. The real issue is then to identify the possible reasons for a negative response. In his book⁴, Amartya Sen provides enough evidence to suggest that spirit of enquiry has been an integral part of Indian culture and tradition. This is exemplified by mathematical and scientific excellence that marks ancient to pre-independence India. The apparent lack of excellence is therefore specific to the post-independent India. The reason for this could have been the circumstances that prevailed in the first part of our 68

years' of independence. In that era of self-reliance and closed economy, the pressing need would have been reverse engineering and technology implementation, rather than scientific excellence. The societal needs and reward system may have thus drawn the best minds of the time to the former. With improved economic conditions and globalization, India has just reached the stage to afford contributing originally and significantly to global science and technology. Given that the country's scenario is rapidly changing for the better³, it is hoped that we will not have to be apologetic next time when Murthy asks the question. At the end, it is reassuring to note that in a recent survey⁵ of interdisciplinary research, which is considered to yield broad societal and economic impacts that cannot be captured by citations alone, India has ranked first in terms of publications, leaving behind countries

such as US, UK, Germany, Japan and China.

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2. Rao, C. N. R., *Curr. Sci.*, 2015, **109**(5), 844.
3. Mashelkar, R. A., *Curr. Sci.*, 2015, **109**(5), 1021–1024.
4. Sen, A., *The Argumentative Indian: Writings on Indian History, Culture and Identity*, Allen Lane, 2005.
5. Van Noorden, R., *Nature*, 2015, **525**(7569), 306–307.

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