

Editorial

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As always we have a generous sprinkling of topics in this issue, ranging from accounts of the discovery of the Higgs Boson (or what looks like it!) from the LHC experiments at CERN and the Indian connection in this epoch-making discovery to an account of the challenges in our quest for clean energy, an issue overlaid with political complications. The survey series ‘*Darshana Jolts*’ has its concluding feature in this issue.



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This issue also features the 17th century philosopher-mathematician-scientist Marin Mersenne who has been described as “the centre of the world of science and mathematics during the first half of the 1600s”. It is perhaps a good occasion to reflect on what lessons we in India can draw from the story of Mersenne. Probably the most vital role that Mersenne played was in bringing people to work together. It is not that he succeeded on every occasion; he was dealing with highly talented people who could act like prima donnas, hold derogatory views about fellow scholars, and make cooperation very difficult. Yet Mersenne persisted. His was not a personal, self-centred agenda, and this may have given him the clarity and strength to not give up. In addition he possessed the necessary ‘people skills’ and he was an inquirer and scientist himself. Such a combination of traits must be rare! A modern day phenomenon comparable to what Mersenne did is the growth and development of free (as in ‘open source’) software. Consider for example TeX, Linux and GeoGebra: each is largely the creation of a single individual (respectively: Donald Knuth, Linus Torwalds and Marcus Hohenwarter); each has spawned a large user community; each has benefited greatly from community developmental effort, which is possible precisely because of the open nature of the work. Each is revolutionary in its way. What each example showcases, as does Mersenne’s work, is the way that energy, creativity and goodwill begin to

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flow freely when transparency, cooperation and non-authoritarian thinking come together.

What education system will nurture a culture where transparency and cooperation flower, and where authoritarian modes of thinking are banished? Two items which are conspicuous by their absence in our education system are the nurture of initiative, and the nurture of public debate. Where initiative does develop, it tends to lie almost exclusively in the zone of profit-oriented private enterprise. This may bring limited gains, say in generating employment and stimulating development, but it carries within it the seed of non-transparency. Public debate gets bypassed in such a context; it has no role to play. Fundamental questions do not come to light; e.g., related to consumerism, or to the manipulative power of large corporations. Though there are a few outstanding exceptions in our country to the profile described (namely: the business families that have helped hugely in the cause of education and public health), this can hardly serve as a model for growth and development. As a society we need to take responsibility in a much wider grass-roots sense for our policies and our follies and ills.

What we need, surely, is a discourse on the nurture of ‘open source initiative’ (to coin a term) and transparency, and how these can become an integral part of education, particularly at the high school and college level.

May we learn more from Mersenne’s open-source ways, and may those ways percolate through society!

