

BOOK REVIEWS

of relativity and uncertainty and even physiology to the *Vedas*.

Another popular claim is on the speed of light as mentioned in the *Rg Veda*. This is based on a verse which states ‘Salutations to the Sun God who traverses 2202 *yojanās* in half a *nimiṣa*’; this is the motion of the sun and not light. The trick is to conveniently modify the value for *yojanā* as 9 miles and 110 feet (instead of 5 miles) and 1/8.75 second for *nimiṣa* (instead of 90 ms).

Seven chapters are devoted to *Vedic mathematics*, a book authored by Sri Bhārathi Kṛṣṇa Tīrthaji Māhāraj (1884–1960) who was the Śankarācārya of Govardhana Maṭha, Puri. He had a great fascination for mathematics and used to deliver lectures on rapid calculations. He devised 16 formulae or *śutrās*. Techniques for arithmetical operations, finding squares, square roots, cubes, solving algebraic equations are all explained in a great detail along with the *śutrās*.

Then follows a chapter on Trachtenberg’s speed mathematics. His methods of solving arithmetical operations also are described in great detail. This is followed by a life sketch of this genius whose struggle during the war touches one’s heart. Even though one finds this out of context, its similarity with Vedic mathematics needs to be understood. A good teacher of maths should get inspired by these methods which look like magic, to lead a child to enjoy solving mathematical problems.

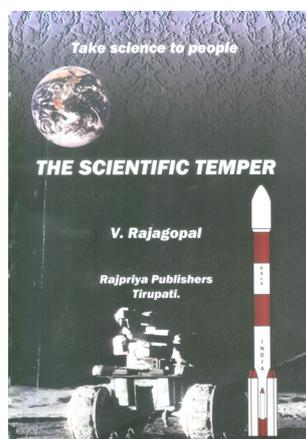
The book, *Vedic Mathematics*, when published in 1965, created a new wave of admirers, who were stung by the words *vedic* and *śutrās* to the extent that a re-discovery claim got attached to the Swāmiji of the Puri Maṭha. Rao cites many great scholars who admired the content but were quick to add that there is nothing ‘Vedic’ about the book. The last part of the book carries discussion on this false claim on a *vedic* source and the concern of great mathematicians of our time. They are directly aimed at a resolution adopted by the Government to act on this ‘important “*vedic*” source with a view to promote a particular band of religious majoritarianism’. The methods can be introduced in text books without the tag *vedic*, they say with a suggestion that they can be called ‘Śankarācārya’s mathematics by high speed computation’.

Thus the book is an eye opener on the real contribution to mathematics and the

false claims. It serves as an important resource in a field where Rao is a lone traveller. The younger generation, irrespective of their exposure to mathematics, should read this book carefully and appreciate the role of honesty in doing science and be watchful on the false claims. We also need to congratulate Navakarnataka Publishers along with Prof. Balachandra Rao for having brought out this book.

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The Scientific Temper. V. Rajagopal. Rajpriya Publishers, Tirupati. 2018. 184 pages. Price: Rs 400.

The Scientific Temper is non-fiction, popular science book. It delivers an interesting account of the crucial issues confronting the current scientific scenario in India. The author V. Rajagopal is a research scientist of international repute with over four decades of experience as an agricultural scientist and is the visionary behind the social movement ‘Hunger Elimination and You’ (HEY).

The book is a compilation of an in-depth analysis of various aspects of science. In the course of just over 180 pages and 40 chapters, the author has shed light on a range of topics stretching from scientific research, science journals, scientists, India’s potential to win Nobel prize, science academies to biodiversity loss, women health security, agrarian crisis, science journalism, the need for

holistic approach and conducive environment for advancement of science, etc. This book offers an informative read for students, research scholars and science enthusiasts and helps them to develop a scientific temper.

From the first to the last page the book promotes critical thinking and focuses on the scientific topics of prime concern and converses diverse viewpoints on the topic but with a human touch to it. The essays are written in a non-technical language with the essence of modesty. Most of the projections and facts presented by the author are based on the previously published scientific data. Virtually most of the essays are compilation of earlier published articles either in scientific journals or in newspapers. A few of them are updated versions of the global and national reports on nutrition, hunger, farmer’s suicide, and various other themes.

In the introduction, the book inspires the youngsters with the scientific principles and quotes from the people’s President Kalam and who prepares the ground for the development of scientific temper with a strong conviction.

In the next section, the author has set forth adequate background information on various issues hindering the growth of science and then has offered specific solutions to it. The incisive SWOT analysis, non-recognition of Indian scientific research for Nobel prize, suggestions to improve the ranking of Indian journals, and emphasis on quality, citation and impact of research over the quantity of research publication as a criteria for recognition of applicants for the scientific post serves as an eye-opener in the pursuit of achieving research excellence. The author’s effort and infectious enthusiasm to take science to the public is evident throughout the book. Rajagopal’s first-hand experience and substantial illustration of depletion of the forests, biodiversity loss and environmental pollution due to human activities generate concern in the reader’s mind and calls for inspired action. This book also takes the reader on a journey through the previously untold circumstances that lead to the development of science and some of the remarkable achievements of Indian scientists over several decades. The book is fascinating in its depiction of the importance of the green revolution, the value of *Annadhata* in combating the food crisis which will

touch the heart of every Indian reader. The book also provides solutions to revitalize agriculture and reminds us most emphatically the famous statement that 'everything else can wait but not agriculture' and since farmers are the backbone of the country, their life and contribution to the progress of this nation is incalculable.

In one article he stresses how the growing trend of distrust of science endorsed by a set of people can drift the science towards degradation and dark ages with the classic example of the genetically modified (GM) crops. The controversy pertaining to the GM crops

has created a needless confusion and fear psychosis among the farmers and the public. Although he hopes that in future the scientific issues will not enter the precincts of court and the activists/politicians will show more faith in the scientists and the regulatory authorities for the sake of upholding the scientific spirit. In another article he condemns the swift commercialization of nature at unprecedented magnitude for short-term benefits.

Overall the book is thought-provoking but more thorough proofreading is recommended to alleviate some of the chaos caused by typos and replication. The

dearth of a systematic approach in the arrangement of topics interrupts the smooth succession of thoughts from one topic to the other. Despite these shortcomings, Rajagopal's book is engaging and deserves to be applauded for highlighting the crucial scientific issues and giving it the due attention it warrants in a lucid manner.

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