

CORRESPONDENCE

The Crest of the Peacock

I enjoyed reading a review by R. Sridharan of the book *The Crest of the Peacock, Non-European Roots of Mathematics*, written by G. G. Joseph and I felt I should convey a few remarks on the same. Sridharan's review (*Curr. Sci.*, 1996, 70, 753–754) was admirable and balanced with his generous comment on page 754: '... modern mathematics, as it is understood today, does owe a great deal to the renaissance in Europe, which in turn was a miraculous revival of Greek thought.' Even with regard to our own illustrious mathematicians' 'fundamental contributions to the study of quadratic indeterminate equations,...' and, in particular, (Jayadeva's) 'complete solution of quadratic indeterminate equations by the remarkable Chakravala method', the tendency for anyone to 'overstate his case' or soar, at times, to dizzy heights

of euphoria does perhaps require to be tempered in the light of what appears to be a very fair appraisal, in this connection, by André Weil in (page 24 of) Chapter I entitled 'Protohistory' of his well-known book *Number theory, an approach through history – From Hammurapi to Legendre*: '... For the Indians, of course, the effectiveness of cakravāla could be no more than an experimental fact, based on their treatment of a great many specific cases, some of them of considerable complexity and involving (to their delight, no doubt) quite large numbers. As we shall see, Fermat was the first to perceive the need for a general proof, and Lagrange the first to publish one. Nevertheless, to have developed the cakravāla and to have applied it successfully to ... difficult numerical cases ... had been no mean achieve-

ment.' Sections IV, VI, VIII and IX of Chapter I of the above-mentioned book contain a detailed authoritative and objective analysis of the 'brilliant discoveries' from India – the kuṭṭaka (=pulveriser) method "recalling to our mind Fermat's 'infinite descent'" the bhāvanā rules ('composition formulae' for special binary quadratic forms) and the 'cakravāla' (= 'the cyclic process') whose 'true originator remains unknown'.

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Nobel prizes in X-rays or NMR

In the article '100 years of X-rays and 50 years of NMR' by R. Chidambaram *et al.* (*Curr. Sci.*, 1996, 70, 878–888), the authors have given a list of Nobel prizes won in the disciplines of X-rays or NMR. I feel that the following names should have been included in the table.

1. 1917: C. G. Barkla (Physics): Discovery of characteristic X-rays of elements.
2. 1936: P. Debye (Chemistry): Diffraction of X-rays and electrons in gases
3. 1946: H. J. Muller (Medicine): Pro-

duction of mutations by X-ray irradiation.

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