



## Review of *Vaṭeśvarasiddhānta* and *Gola* of Vaṭeśvara \*

It's a long and complicated text. I have read every line, and compared it with the manuscript readings conveniently given in the appendix. Prof. Shukla has demonstrated enormous acuity and ingenuity in editing the work; it puts to shame the old, partial edition by Ram Swarup Sharma and Mukund Mishra (who, however, anticipate many of Shukla's restorations, for which their work should have been acknowledged).

I would not, however, have gone as far as Shukla often does in re-writing the manuscripts or even inventing whole verses. This kind of editing strikes me as a distortion of the evidence, one based on the notion that the author could not have made the mistakes that the manuscript readings imply. I believe it would be better, however, to leave the manuscript readings which follow Vaṭeśvara's solid knowledge of grammar and prosody even when he may present a mathematically imprecise formula; the correct formula belongs in a commentary. I enclose some proposals I would make for returning the text to a state closer to that justified by the manuscript readings, including a number of passages where the meter or the grammar demands a reading different from Shukla's. The text is also marred by frequent occurrences of -स्स for - ः: स, or of - ः: for - स, and other inconsistencies of external *sandhi* (it is the inconsistency which is disturbing, and not following the general practice of the manuscript). In many cases also alegores inserted into the text are *not* enclosed by [ ] as was intended. I have not noted these slips since they would occupy many more pages, and can be corrected by any careful reader.

It was a good idea to present the full text of the principal manuscript below the edited texts; more convenient, and useful, perhaps, would have been a facsimile in a separate volume of that manuscript. The reader cannot be sure what errors may have crept into the complicated presentation of the manuscript's readings. So far as I can see, manuscript B was used in only two places—V I, 27a–28b and VII 1, 9–11. In the latter case, the line numbers in the apparatus for Ms. A are incorrectly placed, and the statements about Ms. B are inconsistent. Since Ms. B appears to have been the manuscript used by

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\* David Pingree, *Indian Journal of History of Science*, Vol. 26, No. 1 (1991), pp. 115–122 (The text *Vaṭeśvarasiddhānta* and *Gola* of Vaṭeśvara, was critically edited with English translation and commentary by K. S. Shukla, Part I: Sanskrit text, Part II: English translation and comments, Indian National Science Academy, New Delhi, 1985–1986).

Sharma and Miśra, one wonders whether or not some of their odder readings depend on that manuscript. Not enough is said of it to be able to answer this question.

A reproduction of Ms. A would also allow the reader to examine Govinda's contribution (it is surprising that Shukla seems nowhere to refer to his important article in *Garṇita* 23 for 1972) and to reconstruct the original location in the manuscript and the order of the verses in the so-called *Gola*; this is not possible from the scanty information offered in pp. xxi and 302 of vol. I. I do not find Shukla's arguments for attributing this *Gola* to *Vaṭeśvara* (Vol. 2, p. liii) entirely convincing. Incidentally, there is a manuscript of a *Karaṇasāra* that may be *Vaṭeśvara*'s at Kotah, it deserves to be investigated.

I have not worked through *all* of the English translation. What I have seen, of course, represents Shukla's heavily emended (or re-written) text, and therefore present *Vaṭeśvara* in a "better" light than the manuscript evidence really suggests. It would easily be possible to employ English terms for many of the terms that now appear in transliterated Sanskrit; the practice of using transliterations tends to keep this technical material inaccessible to historians of science who do not know Sanskrit and thereby defeats the purpose of a translation. Many of these English equivalents are given in the glossary appended to Vol. 1; they should be incorporated into the translation in Vol. 2.

If I have been critical of Shukla's work, it is only because I believe that some aspects of his editorial and translating policy do not conform to general practice. But I greatly admire his extraordinary ability to wrest sense from the frequently garbled text of the manuscripts at his disposal, and the brilliance of many of his emendations is overwhelming. I congratulate him on his fine achievement, and the Academy for having undertaken to publish his book.