

Notes on the Differences between the Two Recensions of the *Līlāvātī* of Bhāskara II

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Introduction

The *Līlāvātī* (abbr. L) is a Sanskrit work on arithmetic and mensuration (computational geometry) composed by Bhāskara II in or a little before A. D. 1150. The number of the manuscripts (more than six hundred) of the work listed in the CESS,¹ as well as the number of the commentaries on it (more than thirty),² proves that it has been the most popular mathematical textbook in India used by a number of people of the entire subcontinent. It is regrettable that virtually no study based on those manuscripts has been done yet on the history of the transmission of such an influential work. So far, we only know that there are some differences between the northern and the southern recensions of the work,³ represented respectively by the Ānandāśrama edition (I call it ASS)⁴ and by the Hośiarapura edition (VIS).⁵

The ASS is accompanied by two commentaries, one by Gaṇeśa and the other by Mahīdhara. Gaṇeśa, son of Lakṣmī and Keśava of the Kauśikagotra, composed

¹CESS: David Pingree, *Census of the Exact Sciences in Sanskrit*, Ser. A, Vols. 1–5, Philadelphia: American Philosophical Society, 1970–1994. For the manuscripts of the *Līlāvātī*, see A4, pp. 300–308, and A5, pp. 254–257. The number of manuscripts may be multiplied if we take into account those which are left and forgotten at corners of a number of family libraries.

²CESS, A4, pp. 299–300.

³See R. C. Gupta's article cited in III.15. See also fn. 5 below.

⁴ASS: The *Līlāvātī* edited with Gaṇeśa's *Buddhivilāsinī* and Mahīdhara's *Līlāvātīvivaraṇa* by Dattātreyā Āpaṭe, *et al.*, 2 parts, Anandashrama Sanskrit Series 107, Poona: Anandashrama Press, 1937.

⁵VIS: The *Līlāvātī* edited with Śaṅkara and Nārāyaṇa's *Kriyākramakarī* by K. Venkateswara Sarma, Vishveshvaranand Indological Series 66, Hoshiarpur: Vishveshvaranand Vedic Research Institute, 1975. Yano and I have pointed out some of the variant readings found in the VIS in our Japanese translation of the ASS edition, which has been included in: *Collection of Astronomical and Mathematical Works in India*, edited by Michio Yano, Kagaku no Meicho Series 1, Tokyo: Asahi Press, 1980, pp. 139–372.