

HISTORY OF SCIENCE IN SOUTH ASIA

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia, published online at <http://hssa-journal.org>

ISSN 2369-775X

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A Note on the Indian Planetary Exaltations and their Greek-Language Sources

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1 INTRODUCTION

IN THE COMMENTARY OF HIS CRITICAL EDITION AND TRANSLATION of Sphujidhvaja's *Yavanajātaka*, David Pingree notes that the degrees of the exaltations (*ucca*) of the planets – that is, the regions of the zodiac in which they are considered uniquely powerful – as given in that text largely correspond to the standard scheme found in Greek-language astrological works.¹ The two exceptions concern the exaltation degrees of the sun and Jupiter in Aries and Cancer, respectively:

The two deviations in the *Yavanajātaka*, then, are Aries 10° for 19° and Cancer 5° for 15°. It is possible that these represent purely scribal errors, a θ' being omitted from an $\iota\theta'$ and an ι' for an $\iota\varepsilon'$ in the manuscript translated by Yavaneśvara.

¹ Pingree (1978:II, 220 f.), ad *Yavanajātaka* 1.58–60:

meṣo vṛṣaḥ karkituleśamīnāḥ kanyā mṛgaś co(cca)grhāṇi vindyāt | ravīndujīvārkiśukrain-davārā yathākra(maṇi) [...] [sūrya]sya bhāge daśame tṛtīye somasya jīvasya tu pañcame syāt | saurasya viṃśe tv adhisaptake ca vindyād bhṛgoḥ pañcadaśe budhasya || bhaumasya viṃśe 'ṣṭayute (pra)sūtaṁ triṃśallave svocagṛhe niveśam | svocāt tu jāmitram uśanti nīcam triṃśallavo yac ca samānasamkhyam ||

मेघो वृषः कर्कितुलेशमीनाः कन्या मृगश्रो(च)गृहाणि विन्द्यात्। रवीन्दुजीवार्किशुकैन्दवारा यथाक्र(मं) [...]

[सूर्य]स्य भागे दशमे तृतीये सोमस्य जीवस्य तु पंचमे स्यात्। सौरस्य विंशे त्वधिसप्तके च विन्द्याद्भगोः पंचदशे बुधस्य॥ भौमस्य विंशे षष्ठयुते (प्र)सूतं त्रिंशल्लवे स्वोच्चगृहे निवेशम्। स्वोच्चात्तु जामित्रमुशन्ति नीचं त्रिंशल्लवो यच्च समानसंख्यम्॥

As noted by Pingree (1978:I, 54) in his apparatus, the two latter stanzas are also quoted (with minor variations) by Bhaṭṭot-pala ad *Brhajjātaka* 1.13. The first stanza, incomplete due to a tear in the unique manuscript available to Pingree, contains a metrical irregularity which could easily be emended by substituting *-sitai-* for *-śukrai-*.

Sphujidhvaja's exaltations are completely confused by Mīnarāja (1, 43–46), but all later Indian astrologers have copied it [*sic*] faithfully [...] ²

Although Pingree's assumption that Sphujidhvaja's is the earliest preserved Sanskrit work on horoscopic astrology and must therefore be the original source of the Indian exaltation degrees has now been called into question by Bill Mak and others,³ it is substantially correct to say that Indian astrological tradition agrees with the scheme given by Sphujidhvaja. Pingree's reconstruction of the likely mechanisms behind the two Indian deviations – the Greek alpha-numeric 1θ (19) becoming 1 (10) and 1ε (15) becoming ε (5) – is likewise compelling, irrespective of who was responsible for the original misreading. However, Pingree's reference to the 'completely confused' version of the exaltations found in Mīnarāja's *Vṛddhayavanajātaka*, and its presumed dependence on Sphujidhvaja, merits closer examination.

Planet	Greek standard	Sanskrit standard	Mīnarāja
Sun	Aries 19°	Aries 10°	[Aries] 10°
Moon	Taurus 3°	Taurus 3°	Taurus 27°
Mars	Capricorn 28°	Capricorn 28°	Capricorn 3°
Mercury	Virgo 15°	Virgo 15°	Virgo 28°
Jupiter	Cancer 15°	Cancer 5°	Cancer 15°
Venus	Pisces 27°	Pisces 27°	Pisces 5°
Saturn	Libra 20°	Libra 20°	Libra 27°
[Additional]	–	–	20°

Exaltation degrees of the planets according to Greek and Sanskrit standard schemes contrasted with the scheme of Mīnarāja.

2 A CASE OF DISPLACEMENT

THE ARGUMENT THAT I AM ABOUT TO PRESENT first occurred to me a few years ago and is briefly sketched in a footnote in one of my previous publications.⁴

² As also remarked by Pingree (*loc. cit.*), individual Greek-language sources sometimes differ from this scheme, in each case by a single degree in either direction – a fact that to my mind suggests a confusion of car-

dinal and ordinal numbers as a likely cause.

³ See Mak 2013; 2014, in which the earlier contributions of K. S. Shukla and H. Falk are also discussed.

⁴ See Gansten 2018: 171, n.30.

At that time, however, I had not fully considered its implications for the early transmission history of the doctrine of exaltations. It thus seems worthwhile to examine it here in greater detail, and to draw out those implications.

Mīnarāja gives the following account of the planetary exaltations:

The exaltation of the sun is the first ten degrees; of the moon, the twenty-seventh [degree] from [the beginning of] Taurus; for Mars, the third degree of Capricorn is declared supreme by experts; for Mercury, the number twenty-eight from the sixth [sign, Virgo]; for Jupiter, the [degree] numbering fifteen from Cancer; for Venus it will be the fifth from Pisces; for Saturn, the twenty-seventh of Libra. The twentieth [degree] is declared to be of full strength; earlier and later in the house, subtraction [is to be made].⁵

Comparing this with the standard scheme found in other Sanskrit works, three important points may be noted. First, no sign of exaltation is explicitly mentioned for the sun, although ‘the first ten degrees’, if taken to refer to the zodiac as a whole, would fall in Aries; second, the degrees of exaltation for the remaining six planets all differ from the standard scheme; and third, Mīnarāja’s account ends with an odd mention of the twentieth degree, not assigned to any particular planet.

If we compare the models as shown in the table above, a partial explanation suggests itself almost immediately: following the 10 degrees given for the sun, a superfluous figure 27 has somehow intruded, leading all subsequent numbers to be displaced. Thus, the 3 degrees for the moon’s exaltation in Taurus have been assigned instead to Mars’ exaltation in Capricorn; the 28 degrees properly belonging to Mars in Capricorn have been assigned to Mercury in Virgo, and so on. This chain eventually leads to the figure of 20 degrees (originally belonging to Saturn in Libra) being left unassigned. However, this solution leaves us with a new question: where did the intrusive figure 27 come from?

⁵ *Vṛddhayavanajātaka* 1.44cd–46 (edition by Pingree (1976: I, 8), my translation):

*uccaṃ raver ādyatamā daśāṃśāś can-
drasya saptāśvisamo vṛṣac ca || mṛgodgamo
bhūmisutasya tajjñais tṛtiyabhāgaḥ paramaḥ
pradiṣṭaḥ | gaṇāśvisamkhyendusutasya ṣaṣṭhā
jīvasya karkāt tithisaṃkhyā eva || syāt pañcamo
bhārgavanandanasya mīnāt svarāśvis tu śanes
tulasya | viṃśanmitaḥ pūrṇabalaḥ pradiṣṭaḥ*

arvāgatīte bhavane tu pātah ||

उच्चं रवेराद्यतमा दशांशाश्चन्द्रस्य सप्ताश्विसमो वृषाच्च ॥
मृगोद्गमो भूमिसुतस्य तृतीयस्तृतीयभागः परमः प्रदिष्टः ।
गजाश्विसंख्येन्दुसुतस्य षष्ठाजीवस्य कर्कात्तिथिसंख्य
एव ॥ स्यात्पञ्चमो भार्गवनन्दनस्य मीनात्स्वराश्विस्तु
शनेस्तुलस्य । विंशन्मितः पूर्णबलः प्रदिष्टः अर्वागतीते
भवेन तु पातः ॥

3 THE GREEK CONNECTION

THE ABSENCE OF AN EXPECTED ELEMENT (a word for Aries) and the presence of an unexpected one (the superfluous figure 27), taken together, raise the question of whether one might have mutated into the other. In Sanskrit, the possibility seems a remote one. No word used to denote the sign Aries – *meṣa*, *aṣa*, *kriya*, etc. – has the numerical value 27 either in the frequently used *bhūtasamkhyā* (word-numeral) system or in the less common *kaṭapayādi* one; and even if they did, a scenario where the primary meaning of such a word would have been overlooked in an astrological context appears highly unlikely.⁶ Nor is any of these words, written in the scripts used in northern India in the early centuries of the Common Era (including the Aramaic-derived Kharoṣṭhī), similar in appearance to the numerals 27.

In Greek, on the other hand, the situation is much more promising. Astro-nomical and astrological papyri often curtail the names of the zodiacal signs using abbreviations of two or three letters, such as κρ or κρι for Κριός “Aries”.⁷ It is certainly suggestive to note that the first letter of this name is also the first element of the Greek alpha-numeral for 27, κζ. Although considerations of palaeography in relation to a wholly hypothetical source, for which neither the century nor the region of origin is known, are necessarily speculative, we may further note the similarity between the letters ρ and ζ in cursive forms of Greek writing common from the first to the third centuries CE.⁸

On the basis of these observations, we may reconstruct the likely chain of events as follows: in a Greek-language text, an original abbreviation of the name Κριός (or some oblique form of the same) is misread as κζ. These two letters, occurring in the context of a list containing alpha-numerals, are interpreted as meaning 27. Next, this intrusive 27 occurring between the numbers 10 (the exaltation degree of the sun) and 3 (the exaltation degree of the moon) displaces all subsequent figures, leaving a meaningless number 20 at the end of the list. Finally, Mīnarāja does his best with the list as he understands it, enshrining the mistake in Sanskrit verse.

The above scenario accounts for Pingree’s “complete confusion” in a series of plausible steps. It does, however, seem to preclude any dependence of Mīnarāja on Sphujidhvaja (or on any other Sanskrit source) or vice versa, at least for the

6 For the *bhūtasamkhyā* and *kaṭapayādi* systems, see Plofker 2009: 47, 75 ff.

7 This form of abbreviation was first brought to my attention by an anonymous reviewer of an earlier version of this paper, who suggested the variant κρι. For instances of both two- and three-letter abbreviations, see, e.g., Jones 1999: II, 170 ff. (I am grateful to Stephan Heilen for alerting

me to these examples). Either abbreviation would remain identical irrespective of the case form intended, which, judging from the context, would most likely have been the genitive (Κριου).

8 See Thompson 1912: 192 f. I am indebted for this observation to the anonymous reviewer already mentioned.

topic of exaltations. If the displacement in Mīnarāja's list is due to a misreading of a Greek abbreviation, then clearly Mīnarāja used a Greek-language rather than a Sanskrit source for the exaltations. Equally clearly, Sphujidhvaja and the mainstream Sanskrit tradition did not depend on Mīnarāja, as they do not reproduce his displaced values. Yet once that mistake has been corrected, we see that Mīnarāja's work and the mainstream tradition are based on exactly the same scheme of exaltations; therefore both must be derived, independently of each other, from Greek sources.

Indeed, we are now able to take the argument one step further: assuming that Pingree's explanation for the deviant exaltation degrees in the case of the sun and Jupiter is correct, which seems highly likely, the presence of this telltale error both in Mīnarāja's immediate source and in that used by Sphujidhvaja (or his Indian predecessors) suggests the existence of at least two, and possibly more, copies of an astrological text in Greek dependent on the same hyparchetype, in which a θ had been accidentally dropped from the alpha-numeric $\iota\theta$ and an ι from $\iota\epsilon$.⁹ What text this may have been, and whether it was authored in the Indo-Greek cultural area or in some other part of the Hellenistic world, we do not know. But it does suggest that, while Pingree may have been partly correct in positing a "bottleneck" text from which all subsequent Indian literature on horoscopy derived, that text was neither Sphujidhvaja's *Yavanajātaka* nor any other Sanskrit work, but rather a currently unidentified work in the Greek language.

4 CONCLUSION

THESE ARGUMENTS CONCERNING THE DOCTRINE OF EXALTATIONS are not intended as blanket statements regarding the sources or intertextuality issues of the *Vṛddhayavanajātaka* or the *Yavanajātaka* as a whole. Both works do refer to earlier Sanskrit authors, and the historicity of such claims will no doubt be addressed in the forthcoming edition and translation of the *Vṛddhayavanajātaka*.¹⁰ At the very least, however, we may be reasonably certain that one of Mīnarāja's sources – presumably an important one, used for a central doctrine near the very beginning of his work – was written in Greek, and therefore that Mīnarāja had some proficiency in that language. In response to a question recently raised by Mak, there thus seems to be some justification for labelling Mīnarāja an Indo-Greek.¹¹

⁹ I am not aware of any non-Indian source containing both these deviations. Winkler (2011: 247) reports a figure of "Cancer in [1]5°" for the exaltation of Jupiter in the imperfectly preserved MS P. Carlsberg 81 (which, as Andreas Winkler informs me in a personal communication, has a hole in the

place where the numeral for 10 would be expected); but the same source explicitly gives "Aries in 19°" as the exaltation of the sun (*loc. cit.*).

¹⁰ This project is currently being pursued jointly by Bill Mak and Ronnie Gale Dreyer.

¹¹ See Mak 2018: 12 f.

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