The “Oldest Indo-Greek Text in Sanskrit” Revisited: Additional Readings from the Newly Discovered Manuscript of the *Yavanajātaka*

Bill M. MAK

0. Introduction

The *Yavanajātaka* (*YJ*, “Genethliacal astrology of the Greeks”) is one of the most important historical documents extant in Sanskrit which attests to the intellectual exchange between the Greeks and the Indians in the early centuries of the common era. In 2012, on the basis of a newly discovered Nepalese manuscript (*Q*), I have shown that Pingree’s generally accepted claim that the *Yavanajātaka* of Sphujidhvaja was “a versified work composed in 269/270 CE based on a prose original in Greek composed by Yavaneśvara in Alexandria in 149/150 CE” is no longer tenable in view of the new evidences. 1) In this paper, I will attempt to consolidate my findings as well as filling in some of the lacunae in Pingree’s edition on the basis of the newly discovered manuscript (*Q*) as well as the old one (*N*) reexamined.

1. Spurious Claims of Dates and Bhūtasamkhya in Pingree’s Edition

As shown in my previous study of the *YJ*, the important dates Pingree claimed to have identified in the colophon of the last chapter of the text (Ch.79, vv.60–62), based on the characteristic way of representing numbers by figurative words known as *bhūtasamkhya*, turned out to be his own emendations. 2) Thus all Pingree’s claims which hinge on these *bhūtasamkhya* readings will need to be reexamined. 3)

The date of composition was in fact not given in this text as typical of all early *jyotiṣa*, or Indic texts in general. The adoption of the “beginning of Aries” (*meṣādi*) as the equinoctial point, 4) together with the use of astronomical cycle (*yuga*) of 165 years starting from Śaka -56 points only to the *terminus post quem* of 22 CE, while the actual date of composition could be much later. 5) Furthermore, it is not even certain that the text was composed by Sphujidhvaja, who was one of the Greek kings (*yavaneśvara*) himself, let
alone that there were two earlier texts beside the present one, one in prose Sanskrit and another one in Greek as Pingree suggested.\(^6\) At any rate, hints of the actual date of the work may be gleaned from the general content of the work (§3), as well as its technical content and relation to other \textit{jyot\(\text{i}\)sa} texts (§4).

2. Lacunae/Corrupted Passages

In view of the availability of the new manuscript Q, some major lacunae/corrupted passages may now be amended (2.23–26; 3.7; 4.20–23; 4.35; 16.20; 17.6; 17.16; 18.34–36; 26.26; 28.1; 30.27, 66–67; 31.33–34; 34.21–22; 40.22; 57.32; 60.6, 28–30/78/88/94; 62.8–10; 67.8; 68.1–5; 73.1; 74.1; 79 et passim).\(^7\)

3. General Content

3.1. Mathematical Expressions and Units

The lack of \textit{bhūtasamkhya} in all the mathematical algorithms as well as some characteristic use of traditional Indian units (\(3\frac{1}{8}\) \textit{palas} = 1 \textit{kudava}; 1 \textit{nāḍikā} = 10 \textit{kalaś}, etc.) point to a certain affinity between the \textit{Vedāngajyot\(\text{i}\)sa} (VJ) and the YJ.\(^8\) However, since the YJ utilizes indigenous Indian materials in tandem with the Greek ones (e.g., \textit{horā}<\textit{ōpa}, \textit{drekkan\(\text{s}\)}/\textit{drekkan\(\text{s}\)}/\textit{drekka}/\textit{dreaka}<\textit{dēkano\(\text{s}\)}, \textit{liptā}<\textit{λεπτόν}, etc.), while there has been no explicit description of the planets or the Zodiac in the entire Vedic corpus, including the VJ, such disparity suggests that the VJ or the knowledge therein served as the substratum of the YJ. By and large, the mathematical thinking of the YJ is comparable only to that of the VJ and not to any known Greek work,\(^9\) though more of the non-Greek nature of the work is evident through particularly its technical content as we shall see (§4).

3.2. Reference to Indian Culture

Although the YJ was considered by its author to be a work based on the Greek teachings, the abundant Indian elements such as the utilization of the Sanskrit alphabets,\(^10\) and references to various aspects of Indian society, such as the \textit{āyurveda}, castes and Indian deities must be properly accounted for. The well-wrought amalgamation as shown in various verses suggests a process of synthesis which might have lasted for decades or even centuries.

\textit{sūcīvibaddhamārge}\(^A\) \textit{vibaddhamārge} \textit{brhaspates} \textit{tu} /  
\textit{nicāribhasthe vijitārīḍīṣṭe tadā tu kāpālikakaccham} \textit{āhuh} //62.25// 
\textit{emend., "vina\(\text{o}\) N, "niba\(\text{o}\) Q} \textit{emend., vibandhamārge} \textit{emend., vibandhamārge} \textit{NQ, "mārga Np} 

— 1102 —
The “Oldest Indo-Greek Text in Sanskrit” Revisited (B. M. Mak) (39)


Mak: When [a planet] is occulted (i.e., by another planet, lit., whose path is obstructed), then [garments] stitched by a needle; but for Jupiter (even when it is occulted), firm woollen garments; if [the planet] is located in a house of the fallen (nīca-) or enemy (-ari-), and is overcome (vijita-) or aspected by an enemy (-aridṛṣṭa-), then they say it is a rag (kaccha) of a Kāpālika (practioner of a Śaiva tantric cult).

Pingree: If (by) Jupiter, they are pieces of colored woollen cloth used as bandages or stop-signs on the road and fastened by pins; and if it is in its depression or in an enemy’s house or if it is overcome or aspected by an enemy, then they say it is the hem of the lower garment of a beggar.

In this example, the planets and the garments were made to correspond to each other by analogy, resulting thus the occulted planet represented by stitched materials which are generally considered inferior. Jupiter should be taken separately since it is always auspicious. \(^{11}\) The worst planetary configuration is represented by the rag of a kāpālika, referring to a Śaiva cult which was ostracized by a certain segment of the Indian society. \(^{12}\)

4. Technical Content and Relation with Other Jyotīsa Texts

There are a number of technical features which the YJ shared with the VJ but not any known Greek astral texts. These include most notably the concept of titi, an artificial unit based on the synodic month which was described as the “soul” (jīva) of astronomical calculation in our text, \(^{13}\) and the use of the twenty-eight Indian lunar mansions (nakṣatras). \(^{14}\) Furthermore, there are also some features of the horoscope in the YJ which are not attested in any Greek or Roman sources extant, for example, the division of a sign (30°) by seven (sapiṁśa) and nine (navṁśa). While it is possible that the YJ inherited a Greek tradition lost to us, the Indian content of the horoscope suggests that the YJ represents a new attempt to amalgamate the two.

Because of the early date Pingree gave to the YJ, this text was considered a progenitor of all later jyotīsa texts, including the Vṛddhayāvanajātaka (VYJ) of Minarāja of which some parallel passages may be found, Pingree dated the VYJ to the early fourth century, interpreting vṛddha- as “expanded.” However, more generally, vṛddha- may simply be understood as “old,” suggesting the work to have preceded rather than succeeded the YJ. As far as the parallels are concerned, the VYJ may represent a smaller, and possibly earlier core. \(^{15}\)

Besides the VYJ, the hitherto unexamined Gargasamḥita and Parāśaratānta, both quoted
in the VYJ, may too be antecedents of the YJ. It is noteworthy that in Varāhamihira’s BJ (sixth century), some of the Greek contents therein cannot be identified in the YJ, and by and large, there is no evidence that the very learned Varāhamihira knew this work at all. One may thus speculate that the circulation of the YJ must have been fairly limited or that it became widespread only after the time of Varāhamihira.

5. Conclusion

From the above discussion, we can see that there is little evidence, if at all, to suggest that the YJ was a versification of a prose translation of a lost Alexandrian text in Greek dated mid-second century as Pingree claimed. The mathematical idioms, the general contents as well as the technical concepts utilized in the texts suggest that it was most likely an original attempt by the Indianized Greeks to amalgamate Greek astral science with the Indian one based on a preexistent tradition in India. The work was most likely conceived in Sanskrit by an author who was conversant in both Greek and Indian astral science, and was certainly greatly familiar with the Indian culture and the Sanskritic tradition. From a philosophical point of view, the YJ could be dated between 22 CE to early seventh century, with the likelihood of somewhere between the fourth and sixth century as suggested by various evidences. While it may not be the oldest jyotiṣa texts extant in Sanskrit, its content remains to be of great interests to scholars of different fields. A closer examination with other jyotiṣa texts such as the Gargasamhitā, the BJ and perhaps more importantly, the VYJ may help to establish its true historical position.

1) Mak 2013a: 1–2; 2013b: 81–82. 2) Mak 2013a: 11–14; 2013b: 68–71. The findings confirmed the suspicions of Shastri, who was in fact the first to propose the bhūtasamkhya readings (and the śaka era interpretation), which were described by himself as “doubtful” (Shastri 1901: 8).
3) For example, the earliest use of zero in an Indian text, the earliest use of bhūtasamkhya, the dating of the Vasiṣṭhasiddhānta, the interrelation amongst the jyotiṣa texts extant, the impact of Greek astral science on its Indian counterpart and so on.
4) The beginning of Aries (mesādi) is referred to as the starting point of the luni-solar yuga (Mak 2013b: 88–89).
5) On the possible backward calculation, see Mak 2013a: 10 fn.16. The terminus ante quem for this work remains to be 629 CE, the date of Bhāskara’s commentary to the Āryabhaṭiya where passages of the YJ were quoted.
6) On the problem of identity of Yavaneśvara and Śphujidhvaja, see Mak 2013b: 71–73.
7) A new critical edition of the YJ is currently under preparation.
9) There is no evidence of the concepts of geometry or trigonometry in the Yavanajātaka.
The “Oldest Indo-Greek Text in Sanskrit” Revisited (B. M. Mak) (41)

The entire chapter seventy-two titled nāmavidhi is the description of a system of prognostication which generates aksaras based on their assumed correspondences with the navamśas of a sign.

11) Cf. Brhajijatakas 2.12a. 12) While kāpālika itself may refer to the kāpālavratins or the “criminal brahmins” who perform asceticism to atone their sins, the description elsewhere seems to suggest the image of the later Saiva cult. Śiva wearing a “garland of skulls” (kapālamātī) — 2.4; a man wearing “hide strung with a chain of skulls” (kapālamātākulabaddhacarmā) — 3.33. Dating of the Śiva kāpālika is problematic but undisputed references are generally only after the fifth century.

13) kramena candrasayavarādhilaksyas tithis caturmānavidhānajīvam (79.6ab, ed. mine). “The tithi, which is to be defined as the gradual waning or waxing of the Moon, is the soul of the principles of the four (systems of time-) measurement.” (Mak 2013b: 90–92).

14) YJ Ch.73: yātrānāsātratithiphalam “The influence of the nakṣatras and tithis on expeditions.”

15) Compare eg., YJ 17.1–23 with VYJ 23.1–12.

Abbreviations


Bibliography


(Key words) Yavanajātaka, Sphujidhvaja, Indo-Greek, jyotiṣa

(JSPS Research Fellow, Ph.D.)

— 1105 —