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[ July, 2004

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VYĀSA-PŪRṆIMĀ NUMBER

व्यासपूर्णमाङ्कः



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# पुराणम्- PURĀṆA

Vol. XLVI., No,2 ]

[ 2 July, 2004

## व्यासपूर्णमाङ्कः

VYĀSA-PURṆIMĀ NUMBER

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## व्यास-वन्दना

नमः सर्वविदे तस्मै व्यासाय कविवेधसे ।  
चक्रे पुण्यं सरस्वत्या यो वर्षमिव भारतम् ॥

बाणस्य हर्षचरिते १.३

× × ×

श्रवणाञ्जलिपुटपेयं विरचितवान् भारताख्यममृतं यः ।

तमहमरागमतृष्णं कृष्णद्वैपायनं वन्दे ॥

भट्टनारायणस्य वेणीसंहारे १.३

× × ×

मर्त्ययन्त्रेषु चैतन्यं महाभारतविद्यया ।

अर्पयामास तत्पूर्वं यस्तस्मै मुनये नमः ॥

दण्डिनः अवन्तिसुदर्याम्, १.३

× × ×

जयत्यखिलसंलापरत्नराशिसमुद्भवः ।

भारतामृतसंभूतिः पाराशर्यपयोनिधिः ॥

अवन्तिसुन्दरीकथासारे १.४

× × ×

कृष्णद्वैपायनं व्यासं सर्वभूतहिते रतम् ।

वेदाब्जभास्करं वन्दे शमादिनिलयं मुनिम् ॥

शकराचार्यस्य विष्णुसहस्रनामभाष्योपक्रमे २.

### Translation

1. Salutation to Omniscient Vyāsa, the poet Creator who created the pious Mahābhārata in the form of shower of Sarasvatī.

× × ×

2. Salutation to Kṛṣṇadvaipāyana (Vyāsa) free from desire and passion who composed nector- like Mahābhārata which is to be received eagerly through the ears.

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

3. Salutation to that sage (Vyāsa) who in the past through the knowledge (Vidyā) of the Mahābhārata put life in human Machines.

ॐ नमोऽस्तुते विद्यायै नमोऽस्तुते नमोऽस्तुते

4. Victory to Pārāśarya (Vyāsa) who like ocean is the origin of all jewel - like dialogus

ॐ नमोऽस्तुते पारशर्ये नमोऽस्तुते नमोऽस्तुते

5. Salutation to Kṛṣṇadvaipāyana Vyāsa who is abode of tolerance etc., devoted to welfare of all creatures and the sun for lotus like Vedas

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

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ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

\*\*\*

Translation

1. Salutation to Omnipotent Vyasa, the great Creator who created the great Mahābhārata in the form of abode of tolerance.

ॐ नमोऽस्तुते कृष्णद्वैपायन्ये नमोऽस्तुते नमोऽस्तुते

ON ASTRONOMICAL REFERENCES IN THE MAHĀBHĀRATA  
- AN EXERCISE IN ARCHAEOASTRONOMY\*

By

VIRENDRA N. SHARMA

*Introduction*

[ महाभारते कौरवपाण्डवानां युद्धं सविस्तरं वर्णितमस्ति । भारतीय परम्परानुसारतः महाभारतयुद्धं यथार्थभूतमस्ति न तु कविकल्पनानिबद्धमात्रम् । महाभारतयुद्धस्य काल-विषये महान् विसंवादो वर्तते महाभारतकालनिर्णयविचारकेषु विद्वत्सु । महाभारते युद्ध-कालसमीपे ग्रहाणां स्थितेः दुर्निमित्तानामपशकुनानां च प्राप्यते वर्णनम् । अत्र विदुषा लेखकेन आधुनिकसंगणकाधारेण एषा ग्रहस्थितिः ख्रिष्टीयसंवत्सरात् ३०२२ वर्षं प्राक् निर्धारिता । भारतयुद्धस्य कालश्च तस्मिन् वर्षे ९ नवम्बर - २६ नवम्बर दिनाङ्केषु प्रतिपादितः । ]

Mahābhārata, the great epic of India describes a legendary war between royal cousins of Kuru dynasty, the Kauravas and Pāṇḍavas, in which warrior princes from all over the subcontinent fought on one side or the other. It is widely believed that the narration centers around actual events that took place, some time between 3500 and 500 B.C. The author of the epic is said to be a sage --Veda Vyāsa--who according to the evidence of the epic itself, was a contemporary of and an eye witness of the events. However, the original version of Veda Vyāsa did not survive unaltered for long, as it was continually enlarged and new stories added to it over the centuries.<sup>1</sup> The present form of the epic is supposed to have taken shape by 400 A.D. and very little or nothing has been added to it since then.

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\*. This article has its origin on a discussion which the author had with His late Highness Kashināresh Maharaja Dr. Vibhuti Narain Singh about ten years ago. Seeing the author's keen interest about the dates of the Mahābhārata, Maharaja desired that the author should prepare an article on the dates of the Mahābhārata based on the astrological references in the Mahābhārata itself. We are thankful to the author for his efforts in the fulfilment of the desire of the late Maharaja. We hope that the author will continue to contribute to the Purāṇa Bulletin on the subjects of the Purāṇas and the Mahābhārata. **Editor**

1. The epic itself reports its three successive narrators, namely, Vyāsa, Vaiśampāyana, and Ugrasravā. We will assume for the analysis of this paper that the astronomical events reported in the Mahābhārata belong to the original version of Vyāsa and not added later on with other stories.

A number of astronomical references, portents of calamitous events, are scattered in the epic around the time of the war.<sup>2</sup> Based on these references scholars have made numerous efforts to date the time of the epic.<sup>3</sup> However, most of these efforts have been before the availability of modern computers.<sup>4</sup> In this paper, the astronomical references of the epic are critically examined using computer programs and a possible date or dates of the events searched which will satisfy most of the astronomical references.<sup>5</sup>

### ***Chronology of Events***<sup>6</sup>

The chronology of the events related to the war is as follows. Having come out in the open after one year in hiding, the Pāṇḍavas demanded their share of the kingdom from Kauravas, their cousins. The Kauravas refused declaring that the Pāṇḍavas had broken their agreement of staying incognito for one full year. The Pāṇḍavas claimed that they had indeed stayed in hiding for one whole year according to their own reckoning. Peace missions, one led by a Brahmin and the other led by Kṛṣṇa, were dispatched from the Pāṇḍavas's side to the court of the Kauravas; both of which failed. When peace overtures failed, war preparations began in earnest on both sides. The armies of the two antagonists assembled on the field of Kurukṣetra, and a terrible war followed which was fought from sunup to sundown for 18 days. On the tenth day of the war, 'Bhīṣma', the grand-sire of the Kauravas, and the first commander-in-chief of their side, was mortally wounded and had to be withdrawn from the fighting. He lived on, however, for another 58 days and breathed his last after the

- 
2. It is sometimes said that the omens described in the epic Mahābhārata have been directly borrowed from the Babylonian astrology. However, we did not find any resemblance between the Babylonian omens and Mahābhārata omens. See R. Campbell Thompson, *The Reports of the magicians and astrologers of Nineveh and Babylon in British Museum*, I (London, 1900).
  3. A summary of views regarding the dating of the epic is given by S.P. Gupta and K.C. Ramachandran, *Mahābhārata myth and reality differing views*, (Delhi, 1976).
  4. For example see E. Védavyas, *Astronomical dating of the Mahabharata war*, (Delhi, 1986).
  5. The computer programs used for this research were : 1. modified version of *Planetary Programs & Tables -4000 to +2800*, Pierre Bretagnon/Jean-Louis Simon, (Richmond, 1986). 2. *LoadStar Plus*, Zephyr Services, (Pittsburgh, 1990). 3. *CalMaster 2000*, Zephyr Services, (Pittsburgh, 1991).
  6. For a brief story of the epic see Chakravarthi V. Narsinhan, *Mahābhārata*, (Columbia University, New York, 1965),.



next winter solstice. On the 17th day Karṇa, a celebrated Kaurava warrior, fell on the field, and finally on the 18th day a mace dual took place between Duryodhana, the leader of the Kauravas and Bhīma, one of the Pāṇḍava brothers. The dual was witnessed by several people including, Balarāma, the elder brother of Kṛṣṇa. Balarāma had gone on a pilgrimage a few weeks before the war and as such did not participate in any of its battles. The astronomical events discussed in this paper took place at the time of these episodes or before, within a span of two-three years.

### *Astronomical References*<sup>7</sup>

Just before the Pāṇḍavas appeared in the open, Bhīṣma tells Duryodhana:

तेषां कालातिरेकेण ज्योतिषां च व्यतिक्रमात् ।  
पञ्चमे पञ्चमे वर्षे द्वौ मासावुपजायतः ॥

तेषामभ्यधिका मासाः पञ्च द्वादश च क्षपाः ।  
त्रयोदशानां वर्षाणामिति में वर्तते मतिः ॥

M.B. 4.47.3-4

"...Because of their [heavenly bodies'] irregular (motions), and with passage of time, every five years, two extra months are generated. On this basis, my [Bhīṣma's] view is that thirteen years, five months and 12 days have elapsed for the Pāṇḍavas [since they went to the forest]."

### **Kṛṣṇa's Peace Mission**

The month, the *nakṣatra* and the season when Kṛṣṇa started on his peace mission to the court of the Kauravas were as follows:

कौमुदे मासि रेवत्यां शरदन्ते हिमागमे ।  
स्फीतसस्यसुखे काले कल्यः सत्त्ववतां वरः ॥ M.B. 5.81.7

7. This paper is based primarily on the following editions of the epic:

1. *The Mahābhārata*, ed. S. Vishnu Sukthankar, et al, (Bhandarkar Oriental Research Institute, Pune, 1942-1966). This reference will be called Bhandarkar in this paper.
2. *The Mahābhārata*, ed. Sreepad V. Satavalekar, (Paradi, 1972).  
*The Mahābhārata*, Eng. tr. by Pratap C. Roy, (Calcutta).  
Mahābhārata will be abbreviated as M.B. from now on.

When...(Kṛṣṇa started on his journey), the month was Kārtika, the nakṣatra Revatī, end of Śarada (fall) and beginning of Hemanta (winter)<sup>8</sup>. The crops were flourishing.

### Dialogue of Kṛṣṇa and Karna before the War

At the court of the Kauravas, Kṛṣṇa met Karna, a celebrated hero of the epic. Kṛṣṇa tells Karna:

सप्तमाच्चापि दिवसादमावास्या भविष्यति ।  
संग्रामं योजयेत्तत्र तां ह्याहुः शक्रदेवताम् ॥ M.B. 5.140.18

"The seventh day from hence, it will be new moon, which the learned call the day of Indra, let the war (or preparations for war) begin then."<sup>9</sup>

Replying to Kṛṣṇa, Karna pointed out bad omens in the sky related to the oncoming events.

प्राजापत्यं हि नक्षत्रं ग्रहस्तीक्ष्णो महाद्युतिः ।  
शनैश्चरः पीडयति पीडयन्प्राणिनोऽधिकम् ॥

कृत्वा चाङ्गारको वक्रं ज्येष्ठायां मधुसूदन ।  
अनुराधां प्रार्थयते मैत्रं संशमयन्निव ॥

नूनं महद्भयं कृष्ण कुरूणां समुपस्थितम् ।  
विशेषेण हि वार्ष्णेय चित्रां पीडयते ग्रहः ॥

सोमस्य लक्ष्म व्यावृत्तं राहुरर्कमुपेष्यति ।  
दिवश्चोल्काः पतन्त्येताः सनिर्घाताः सकम्पनाः ॥ M.B. 5.141.7-10

"That fierce planet of great effulgence, Saturn is oppressing the nakṣatra of Prajāpti,<sup>10</sup> in order to greatly afflict the creatures of the earth. The planet Mars, O slayer of Madhu, with its crooked (retrograde) motion in Jyesthā, approaches Anurādhā indicating a great slaughter of friends. Without doubt, O Kṛṣṇa, a terrible calamity approaches the Kurus when specially, O thou of Vṛṣṇī race, as a planet is afflicting Citrā. The spot on the lunar disc has changed its position; and Rāhu approaches towards the

8. See the Appendix for modern designation of *nakṣatras* within the zodiac.

9. Here "beginning of the war" should be interpreted as "the beginning of the preparations for the war" and not necessarily engaging in the first battle of the war.

10. A vast region of space spanning from the stars  $\beta, \delta, \pi$  Scorpii of Anurādhā (237°-250°) to the star  $\alpha$ -Virginis, or Spica, of *nakṣatra* Citrā (197°-210°), was known as Prajāpati in ancient India. Richard Hinckley Allen, *Star names, their lore and meaning*, (New York, 1963), 181.

Sun.<sup>11</sup> Meteors are falling from the sky with trembling motion and loud noise."

When the peace mission of Kṛṣṇa failed, the Pāṇḍava army started for the battle field of Kurukṣetra as indicated by the following verse.

रौहिणेये गते शूरे पुष्येण मधुसूदनः ।  
पाण्डवेयान्पुरस्कृत्य ययावभिमुखः कुरुन् ॥ M.B. 9.34.14

After Balarāma had departed, Kṛṣṇa and Pāṇḍavas, (the same day) in Puṣya nakṣatra, started for Kurukṣetra

### Vyāsa's Narration

Before the war began, the sage Vyāsa comes over to see the blind king Dhṛtarāṣṭra, the patriarch of the Kauravas and draws his attention to evil omens he had been witnessing on the earth and in the sky above, warning an impending doom of the king's dynasty. In the same context, he describes a set of planetary positions in sky foretelling a great calamity ahead for the warrior class of the country.

ज्वलितार्केन्दुनक्षत्रं निर्विशेषदिनक्षपम् ।  
अहोरात्रं मया दृष्टं तत्क्षयाय भविष्यति ॥  
अलक्ष्यः प्रभया हीनः पौर्णमासीं च कार्तिकीम् ।  
चन्द्रोऽभूदग्रिवर्णश्च समवर्णे नभस्तले ॥ M.B. 6.2.22-23  
रोहिणीं पीडयन्नेष स्थितो राजञ्जनैश्वरः ।  
व्यावृत्तं लक्ष्म सोमस्य भविष्यति महद्भयम् ॥ M.B. 6.2.32  
अभीक्षणं कम्पते भूमिरर्कं राहुस्तथाग्रसत् ।  
श्वेतो ग्रहस्तथा चित्रां समतिक्रमय तिष्ठति ॥  
अभावं हि विशेषेण कुरूणां प्रतिपश्यति ।  
धूमकेतुर्महाघोरः पुष्यमाक्रम्य तिष्ठति ॥  
सेनयोरशिवं घोरं करिष्यति महाग्रहः ।  
मघास्वङ्गारको वक्रः श्रवणे च बृहस्पतिः ॥  
भगं नक्षत्रमाक्रम्य सूर्यपुत्रेण पीड्यते ।  
शुक्रः प्रोष्ठपदे पूर्वे समारुह्य विशां पते ।  
उत्तरे तु परिक्रम्य सहितः प्रत्युदीक्षते ॥  
श्यामो ग्रहः प्रज्वलितः सधूमः सहपावकः ।  
ऐन्द्रं तेजस्वि नक्षत्रं ज्येष्ठामाक्रम्य तिष्ठति ॥

11. One of the lunar nodes is called Rāhu in Hindu astronomy.

ध्रुवः प्रज्वलितो घोरमपसव्यं प्रवर्तते ।  
चित्रास्वात्यन्तरे चैव धिष्ठितः परुषो ग्रहः ॥<sup>12</sup>

वक्रानुवक्रं कृत्वा च श्रवणे पावकप्रभः ।  
ब्रह्मराशिं समावृत्य लोहिताङ्गो व्यवस्थितः ॥ M.B. 6.3.11-17

संवत्सरस्थायिनौ च ग्रहौ प्रज्वलितावुभौ ।  
विशाखयोः समीपस्थौ बृहस्पतिशनैश्चरौ ॥

त्रिषु पूर्वेषु सर्वेषु नक्षत्रेषु विशां पते ।  
बुधः संपततेऽभीक्ष्णं जनयन्सुमहद्भयम् ॥ M.B. 6.3.25,27

Elaborating upon the evil omens he had seen in the heavens above, Vyāsa says:

"I have observed this all the time (these days) that the Sun, the Moon and the stars are all ablaze., All this forebodes (our) great ruin. On the full moon day of month of *Kārtika* the Moon, having lost its splendor, turned red along with the sky and then became invisible<sup>13</sup>. (These days) the planet Saturn oppresses Rohiṇī (Aldebaran or Antares). The sign of the deer on the Moon has moved from its usual place. Rāhu (Lunar node) constantly eclipses the Sun. The white planet (Venus) after passing over the *nakṣatra* Citrā (Spica) stays there<sup>14</sup>...A fierce comet is afflicting the *nakṣatra* Puṣya. The fiery bodied (Mars) is retrograde in the star group Maghās and Jupiter in the *nakṣatra* Śravaṇa. The Sun's offspring (Saturn) is attacking the *nakṣatra* Bhagam (the Moon).<sup>15</sup> Venus ascending toward the *nakṣatra* Pūrva Bhādrapadā, shines brilliantly, and is wheeling towards the *nakṣatra* Uttara Bhādrapadā. The dark planet blazing like fire ...having attacked the *nakṣatra* Jyeṣṭhā (Antares), stays there...<sup>16</sup> A fierce planet, Venus (?) has come between Citrā (Spica) and Svātī

12. An emended version given in the Bhandarkar edition of the M.B. is as follows : "*rohiṇīm Piḍayatyevamubhau ca śaśibhāskarau*" Bhandarkar, M.B., 6.3.16, (foot notes), 14. "The Moon and the Sun both are afflicting the *nakṣatra* Rohiṇī."

13. The description indicates a lunar eclipse. In the month of *Kārtika*, the Moon at full is in the *nakṣatra* Kṛttikā.

14. A number of translators have interpreted "white planet" as Ketu, one of the nodes of the Moon's orbit. For example see Pratap Chandra Roy, M.B. iv, Udyoga Parvan, (Calcutta), *Op. Cit.* However, the accepted meaning of "white planet" is Venus. Besides, Ketu is not mentioned anywhere as such, in the Mahābhārata chapters of interest for this paper.

15. We have taken "*bhagam*" to mean the Moon. In a number of mss. consulted by Bhandarkar, "*bhagam*" is replaced by "*bhāgyam*" which some translators interpret as the *nakṣatra* Pūrva Phalgunī. See Satavalekar, *Op. Cit.*, (ref. 7), M.B., 6.3.14. However, we have not accepted this interpretation as will be explained later.

16. In certain recensions of the M.B. the 'dark planet', *śyāmo grahaḥ*, is given as the "white planet," *Śveto grahaḥ*. See Bhandarkar, M.B. 6.3.15. We have rejected this interpretation, as "white planet." Venus has already been indicated near the *nakṣatra* Citrā.

( Arcturus).<sup>17</sup>Dhruva (the north star) shining fearfully has moved to south. The ruddy planet (Mars), having covered the constellation Brahmarāsi, ... with its uneven motion, overpowers the *nakṣatra* Śravaṇa.<sup>18</sup> The two blazing planets, Jupiter and Saturn both, have stayed for one whole year near the *nakṣatra* Viśākhā. ... The planet Mercury sets with a terrible appearance indicating fearful happenings ahead."

Vyāsa goes on to add:

चतुर्दशीं पञ्चदशीं भूतपूर्वा च षोडशीम् ।  
इमां तु नाभिजानामि अमावास्यां त्रयोदशीम् ॥  
चन्द्रसूर्यावुभौ ग्रस्तावेकमासे त्रयोदशीम् ।  
अपर्वणि ग्रहावेतौ प्रजाः संक्षपयिष्यतः ॥

M.B. 6.3.28-29

'An *amāvasyā* (new moon) [usually] falls on *caturdaśī* (14th day), *pañcadaśī* (15th day), and in the past [it has fallen] even on a *ṣoḍaśī* (16th day) [after a full moon]. But this I have not known that an *amāvasyā* [can also] fall on *trayodaśī* [an interval of 13 days from a full moon], i.e. on an *aparvan*, [improper day] The Moon and the Sun have been eclipsed in one month at an interval of 13 days. These two celestial bodies [therefore] will destroy the populace."

### The First Day of Battle

Sañjaya says:

मेघावनद्धमाकाशं सोमस्तद्दिनं प्रत्यपद्यत ।  
दीप्यमानाश्च संपेतुर्दिवि सप्त महाग्रहाः ॥<sup>19</sup>

M.B. 6.17.2 (footnote)

"The sky clouded over that day, and the seven great planets began to shine like fire in the sky."<sup>20</sup>

### The Death of Karṇa

On the 16th day when Karṇa, the celebrated hero fell, the poet observes:

हते स्म कर्णे सरितो न स्रवन्ति जगाम चास्तं कलुषो दिवाकरः ।  
ग्रहश्च तिर्यग्ज्वलितार्कवर्णो यमस्य पुत्रोऽभ्युदियाय राजन् ॥

M.B. 8.68.47

17. It is not clear what is meant by "fierce planet." However, its most likely meaning is Venus as we will point out later.

18. It is not obvious as to what is meant by Brahmarāsi here.

19. In a number of mss. "*meghāvanaddhamākāśam*" is replaced by "*maghāviṣayagaḥ somah*" Bhandarkar, M.B. 6.17.2. We have rejected "*maghāviṣayagaḥ somah*" i.e., "the Moon was in the *nakṣatra* Maghā." Instead we have taken the interpretation "*meghāvanaddhamākāśam*" that "the sky was clouded over the day" found in one of the Bhandarkar mss.

20. The seven planets include Sun and the Moon and the five well known planets.

सकाननाः साद्रिचयाश्चकम्पुः प्रविव्यथुर्भूतगणाश्च मारिष ।  
वृहस्पती रोहिणीं संप्रपीड्य बभूव चन्द्रार्कसमानवर्णः ॥

M.B. 8.68.49

"Your majesty! [the king Dhṛtarāṣṭra] at the death of Karna, the rivers stopped flowing, The Sun turned dark and set (in the west). The son of Yama (Mercury), with its color of fire, appeared (in the sky). The mountains with forests upon them began to tremble, and the creatures of the world became (terribly) upset. Jupiter, shining like the Sun and Moon, arose oppressing the *nakṣatra* Rohiṇī."

### Balarāma's Observation

On the last day of the war, Balarāma, the elder brother of Kṛṣṇa, appeared and watched the mace battle between the last surviving Kaurava, Duryodhana, and one of the Pāṇḍava brothers, Bhīma. Balarāma observed that

चत्वारिंशदहान्यद्य द्वे च मे निःसृतस्य वै ।  
पुष्येण संप्रयातोऽस्मि श्रवणे पुनरागतः ।  
शिष्ययोर्वै गदायुद्धं द्रष्टुकामोऽस्मि माधव

M.B. 9.33.5

"O Kṛṣṇa, I left (on pilgrimage) in *nakṣatra* Puṣya, 42 days ago and have now returned in the *nakṣatra* Śravaṇa. I am desirous to watch the mace battle of my two disciples."

### Death of Duryodhana

Duryodhana received a mortal wound in the mace battle and fell. At that moment the poet reports:

राहुश्चाग्रसदादित्यमपर्वणि विशां पते ।  
चकम्पे च महाकम्पं पृथिवी सवनद्रुमा ॥

M.B. 9.55.10

"The Rāhu, in spite of it being an *aparvan* (improper day), attacked the Sun. The earth with its trees and forests began to tremble."

### Bhīṣma's Remarks before He Passed Away

Some 50 days after the last day of the war, Bhīṣma, the grand-sire of the Kauravas, who was still alive, observed:

दिष्ट्या प्राप्तोऽसि कौन्तेय सहामात्यो युधिष्ठिर ।  
परिवृत्तो हि भगवान्सहस्रांशुर्दिवाकरः ॥  
अष्टपञ्चशतं राज्यः शयानस्याद्य मे गताः ।  
शरेषु निशिताग्रेषु यथा वर्षशतं तथा ॥

मासोऽयं समनुप्राप्तो मासः पुण्यो युधिष्ठिर ।

त्रिभागशेषः पक्षोऽयं शुक्लो भवितुमर्हति ॥ <sup>21</sup>

M.B. 13.153.26-28

By good fortune, O son of Kuntī, Yudhiṣṭhira !, you have come here with all your councilors. The thousand-rayed lord, the Sun, has resumed its northerly course. I have been lying on my bed of arrows here for 58 nights. Stretched on these sharp-pointed arrows I have felt this period to be as if it were a century. O Yudhiṣṭhira, this auspicious month has come. This is a bright *pakṣa*, and three-fourth part of it [the month] is still to go (according to my reckoning)."

### ***The Astronomical Knowledge at the Time of Mahābhārata***

Before any analysis of the astronomical data is attempted, it will be useful to review briefly the astronomical knowledge of the M.B. age. To begin with, there are reasons to believe that at the time of the M.B., the Vedāṅga Jyotiṣa was in use.<sup>22</sup> For instance : It is the rules of the Vedāṅga Jyotiṣa that Bhīṣma cites while counting the number of years the Pāṇḍavas had spent in the forest, including their time in hiding.<sup>23</sup>

The day of an event, in the epic, is pointed out by describing the *nakṣatra* of that day. However, we do not know the exact domain of a *nakṣatra*, as understood by the ancients at the time of the epic.<sup>24</sup> It is possible the *nakṣatras* system was used merely to indicate an approximate position of a heavenly body in the sky. We only know for certain that the ecliptic was divided into 27 parts, each of which was identified by a single star, group of stars, or *nakṣatra*. It is also uncertain if all *nakṣatras* were 13°20' wide each as we know them today.

Solar eclipses have been mentioned at several places in the epic by stating that Rāhu had swallowed the Sun. It is doubtful, however, if the true nature of the solar eclipse had been known then, because Rāhu, the

21. In a number of mss. the first line of this verse has the following version :

"*māgho 'yaṁ samanuprāpto māsaḥ puṇyo yudhiṣṭhira*"

"The auspicious month of Māgha has arrived, O Yudhiṣṭhira." This version does not agree with the analysis of this paper. See Bhandarkar, M.B. 13.153.28. The second part of the verse is found in nearly all the mss. consulted by Bhandarkar. *Ibid*.

22. *Vedāṅga jyotiṣa of Lagadha, in its Rk and Yajus recensions*, Kuppanna T.S. Sastry; ed., K.V. Sarma; (New Delhi, 1985).

23. *Ibid*, p. 65.

24. David Pingree and Patrick Morrissey, "On the Identification of the Yogatārās of the Indian Nakṣatras." *Journal of history of astronomy*, xx, (1989). 99-119.

lunar node, has been described in the epic not as a point on the ecliptic but a distinct body having finite dimension.<sup>25</sup>

### Analysis

We will attempt the analysis of the astronomical data elaborated earlier with the Vyāsa's observation prior to the war as it is more elaborate. The planetary positions indicated by Vyāsa are shrouded in poetic metaphors. In the following his description is rearranged in its bare essentials in a tabular form. Henceforth, this table will be called the Vyāsa table. For this table, the words that a planet afflicts, overpowers, threatens, oppresses, devourers, and attacks a *nakṣatra* will be interpreted to mean a close proximity of a subject body with its object *nakṣatra*.

**Table 1. Vyāsa table :**

The planetary positions described or implied by Vyāsa in his conversation with the king Dhṛtarāṣṭra on the eve of the battle. The letter R in the table indicates a retrograde motion.

Body	Location
1. Moon	a. near Kṛttikā (by inference) <sup>26</sup> b. Near Saturn in Rohiṇī (aldebaran or Antares)
2. Dark planet (Rāhu <sup>27</sup> )	a. Jyeṣṭhā
3. Venus	a. Between Pūrva Bhādrapadā and Uttara Bhādrapadā, R. b. Citrā
4. Mars	a. Maghā, R. b. Śravaṇa, R.
5. Saturn	a. Rohiṇī b. near the Moon (Bhagam) c. Stayed near Viśākhā for one year, R.
6. Jupiter	a. Śravaṇa, R. b. Near Viśākhā for one year together

25. Rāhu, the lunar node, has a diameter of 12,000 *yojanas* (approx. 16,000 Km.) according to the M.B. and is not a geometrical point. Compared to Rāhu the diameter of the Sun is merely 10,000 *yojanas* (approx. 14,000 Km). M.B. 6.13.40-43.

26. See ref. 13.

27. We have interpreted "dark planet" as Rāhu, because it is an invisible object.



7. A comet<sup>28</sup> with the planet Saturn, R.  
 a. Puṣya  
 8. Fierce planet (?) Between Citrā and Svātī

A close examination of the Vyāsa table indicates that it describes two kinds of observations for a given planet : one, a drawn out event in time, such as retrograde motion, observed over several weeks or months and the other its location within a *nakṣatra* on a particular day before the war. For instance: the planet Saturn is described as having stayed near the *nakṣatra* Viśākhā for a year then observed at the *nakṣatra* Jyeṣṭhā. The drawn out events of the Vyāsa table are summarized in the following table:

**Table 2. Drawn out events of the Vyāsa table**

- |            |  |
|------------|--|
| a. Venus   | undergoing a retrograde motion between Pūrva Bhādrapadā and Uttara Bhādrapadā.   |
| b. Mars    | undergoing a retrograde motion in Maghā, and also in Śravaṇa.  |
| c. Jupiter | stays near the <i>nakṣatra</i> Viśākhā for a year along with the planet Saturn.<br>undergoes a retrograde motion in the <i>nakṣatra</i> Śravaṇa. |
| d. Saturn  | stays for one year near the <i>nakṣatra</i> Viśākhā  |

### *Planetary Positions and Planets' Retrograde Motions*

#### **Venus**

There are two positions for Venus described in the Vyāsa table, one, in the Bhādrapadās and the other near Citrā. Venus can be found in Bhādrapadās (343<sup>0</sup>-10<sup>0</sup>) from mid-January to mid-May (Gregorian) only, whereas, the war took place sometime in October-November, or during the seasons of Hemanta or Śiśira.<sup>29</sup> Thus it is reasonable to assume that when the conversation of Vyāsa with Dhṛtarāṣṭra took place Venus was near Citrā and not in one of the Bhādrapadās.

28. Because a comet can appear in the sky at any time, it is of not of much help to the analysis of this paper.

29. Kṛṣṇa went on his peace mission in the month of *Kārtika* (Fall season). Secondly, the Sun's northward journey, the *uttarāyana*, took place 68 days after the commencement of the war. These two independent facts indicate that the conversation of Vyāsa with Dhṛtarāṣṭra, just before the war, must have taken place sometime in October (Gregorian), and not between January and May (Gregorian).

## Mars

In the Vyāsa table, there are two different positions of the planet Mars described—one in the *nakṣatra* Maghā and then the other in Śravaṇa, and at both of these locations the planet is reported to be undergoing a retrograde motion.<sup>30</sup> A third retrograde motion of the planet is described by Karṇa in Jyeṣṭhā during his conversation with Kṛṣṇa a few weeks before Vyāsa's dialogue with Dhṛtarāṣṭra. A retrograde motion of Mars takes place once every 780 days. Any two consecutive retrograde motions of this planet normally occur in two adjacent *nakṣatras*. Therefore it is impossible to observe three separate retrograde motions of Mars in three widely separated *nakṣatras* in the sky in a matter of weeks before the war. For the analysis of the Vyāsa table, we will assume, therefore, that only one retrograde motion of Mars was observed in one of the three *nakṣatras* and that its final location was noted in either Maghā or Śravaṇa.

## Planet Saturn and the *nakṣatras* Rohiṇī and Bhagam

The Vyāsa table describes the planet Saturn in the *nakṣatra* Rohiṇī. In literature two *nakṣatras* are identified by Rohiṇī : the star Aldebaran in the constellation of Taurus and the star Antares in the constellation of Scorpio. The star Antares is also called the *nakṣatra* Jyeṣṭhā in literature. We believe that it is the *nakṣatra* Jyeṣṭhā which is referred to in the Vyāsa table. The planet Saturn having stayed near Viśākhā for a year will take only a few months to reach the *nakṣatra* of Jyeṣṭhā. Whereas, it will take 16-17 years to reach the star Aldebaran in Taurus from Viśākhā, which appears to be an unreasonable length of time.

In the mss. consulted by Bhandarkar, both *bhāgyam* and *bhagam* are found in relation to the planet Saturn as pointed out earlier.<sup>31</sup> The term *bhāgyam* (fate) has no relevance here, and *bhagam* has several meanings to it. It means *nakṣatra* Uttara Phalgunī as well as the Moon. However, the planet Saturn will take at least 5 years to travel from Uttara Phalgunī *nakṣatra* to the *nakṣatra* Jyeṣṭhā. Hence this interpretation does not seem reasonable. We interpreted, therefore, *bhagam* to mean the Moon. That is, the Moon was near the planet Saturn or in Jyeṣṭhā on the day when the alleged conversation between Dhṛtarāṣṭra and Vyāsa took place.

30. It should be pointed out that in earlier literature, such as Taittirīyasaṁhitā and Atharvaveda, Maghā *nakṣatra* is Maghās, a plural, signifying a group of several stars together. David Pingree and Patrick Morrissey, Op. Cit. (ref. 24).

31. Bhandarkar, M.B. 6.3.14.

### The Location of the Sun

Vyāsa says that a few days before his meeting with the blind king. Dhṛtarāṣṭra, there was a full Moon in Kṛttikā. A full moon in Kṛttikā, implies the Sun to be in Anurādhā, 180° apart. Fifteen days later, when the Moon is in Jyeṣṭhā, the Sun will also move down to Jyeṣṭhā the next *nakṣatra* east of Anurādhā.

### The Solar Eclipses

Vyāsa talks about a solar eclipse just before the war and then another after the death of Duryodhana. However, two solar eclipses at an interval of one month observed from the same location are impossible. The epic describes many other solar eclipses in additions to the ones at the time of the war, which all fell on improper days or "*aparvaṇi*," i.e. not on an *amāvasyā*, or a new moon. The report of each and every one of these eclipses may not be taken seriously.<sup>32</sup> In fact, the account of the eclipses may be the least reliable of all astronomical reports in the epic. Ancient authors all over the world had a tendency to drag in an eclipse or two whenever fierce battles were fought or the fortunes of dynasties changed hands.<sup>33</sup> Further, the statement such as "Rāhu (the node of the Moon) constantly eclipses the Sun," indicates that the cause of a solar eclipse was not fully grasped by the author of the epic.

### The Discarded facts of Vyāsa Narration

In Vyāsa's narration as well as in Karṇa's narration, there are statements of purely imaginary nature that may be disregarded altogether. For instance, in the context of bad omens they add, "The sign of the deer on the Moon has moved from its usual place; the star Dhruva (the north star) has shifted toward south."<sup>34</sup>

32. For instance, when the Pāṇḍavas were going to the forest after Yudhiṣṭhira had lost the gambling duel, there was an eclipse.

"*rāhuragrasadādityamaparvaṇi viśāṃ pate*"

"The Rāhu attacked the Sun on an 'improper day'." Bhandarkar, M.B. 2.71. 26.

33. The reliability of eclipse reports in the ancient literature has been discussed by Robert Newton. See R. Newton, *Ancient astronomical observations and the accelerations of the earth and Moon*, (Baltimore, 1971), 43-47.

34. The statement regarding the star Dhruva could be of a later period as in prehistoric times there was no star that could be called a pole-star as the Polaris is these days. Around 2600 B.C. the star Thuban in constellation Draco, was close enough to be called the Pole star. Around 1000 B.C. the star Thuban would have been 23° away from the pole. In 1500 B.C. it must have been 16° and in 2000 B.C. about 9°. Further, the shift of the pole of the earth is so slow, (taking 26,000 for one complete circle, or nearly 72 years for 1° shift) that it is impossible for someone to notice the shift within a period of few months.

### The Dates Satisfying the Vyāsa Table

The location of planets in *nakṣatras* according to Vyāsa at the time of his conversation with Dhṛtarāṣṭra must have been in one or the other of the two following combinations in which Mars has two different positions.

**Table 3. The Planetary distribution in *nakṣatras* according to Vyāsa at the time of his conversation with Dhṛtarāṣṭra.**

	Saturn	Jupiter	Mars	Venus	Mercury	Sun
1.	Jyeṣṭhā	Śravaṇa	Śravaṇa	Citrā	open <sup>35</sup>	Jyeṣṭhā
2.	Jyeṣṭhā	Śravaṇa	Maghā	Citrā	open	Jyeṣṭhā

### Methodology<sup>36</sup>

In order to find computer generated dates satisfying the planetary distribution of Table 3, we limited the time frame between 4000 B.C. and A.D., and used the Julian calendar. The two time limits, we argued, adequately cover the possible period of the events of the epic. We did all our computations for the coordinates of modern Hastinapur (29;10 N, 78; 01E)<sup>37</sup>. In our calculations the longitudes of the planets were reduced to a fixed point on the ecliptic, the vernal equinoctial point of 1956 by applying a correction for precession.<sup>38</sup> That is, the longitudes of the planets in our analysis are "*nirayana*" longitudes.

Having found a set of dates satisfying the planetary distribution in Table, we next searched for the date or dates for which retrograde motion of the planets as enumerated in Table 2 applies. For this exercise, a period of two to four years prior to the dates of Table 3, was arbitrarily chosen. We argued that any observation prior to a four-year limit would have

35. Since no clear position of the planet Mercury has been indicated, we have considered its position "open" for this combination.

36. An interpretation differing from this paper is given by the author in Virendra Nath Sharma, "Model of planetary configurations in the Mahābhārata : An exercise in archaeoastronomy," *Archaeoastronomy*, ix, numbers 1-4, (1986), 88-98. The paper elaborates upon an interpretation that the Vyāsa table is a result of dialogues between Vyāsa and Dhṛtarāṣṭra at three different times.

37. It is surmised that the north Indian city of Hastinapur described in the M.B. must not have been very far from the modern town by the same name.

38. Because the *nakṣatras* do not shift with precession, their longitude has been calculated from a fixed point on the ecliptic. This fixed point is taken as the vernal equinoctial point of 285 A.D. The tropical longitude of this initial point has been adopted as 23;15;11 for the 21st March, 1956. *The Indian astronomical ephemeris*, (published yearly), (Delhi, 1981), 413. See the appendix.

little or no astrological significance to the author of the epic for the forthcoming events, the impending war. Next we applied the "13-day *pakṣa*" condition.<sup>39</sup> Then we searched for the date when the Moon was in the *nakṣatra* Mṛgaśirā as called for by the observation of Balarāma, after it had been observed near the planet Saturn in Jyeṣṭhā by Vyāsa. From the date of the Moon in the *nakṣatrā* Mṛgaśirā we checked if there was an *uttarāyaṇa*, or the Sun's northerly motion after the winter solstice, 68 day later as implied by Bhīṣma. The possibilities of eclipses were searched next. After that the conditions elaborated by Karṇa in his conversation with Kṛṣṇa, and the appearance of the planets after the death of conversation between Vyāsa and Dhṛtarāṣṭra were deduced.

When the computer program was run, considering the modern *nakṣatra*-domain distribution, given in the Appendix, we immediately ran into a difficulty; as no date could be found within the time frame of 4000 B.C. and 500 A.D. that would satisfy the planetary spread of Table 3. We suspected that perhaps the domains of the *nakṣatras* at the time of the Mahābhārata had been different than the modern ones. However, since a number of *nakṣatras* are identified in the M.B. by prominent stars as they are done today, their domains in the M.B. days could not have been much different than the modern.<sup>40</sup> At best the domain of a *nakṣatra* might have shifted to its left or to its right by one *nakṣatra* span, say about 13°, since the days of M.B.

Therefore we searched, as a first step, for the set of dates satisfying Table 3 arbitrarily within  $\pm 20^\circ$  from the mid-point of the modern *nakṣatra* domains. The span of a *nakṣatra* is taken as 13°:20. For instance: the domain of Maghā was taken to be anywhere between 130°-170°.<sup>41</sup>

### Trial 1

For this trial, we searched the dates for which the planetary longitudes were within the range given in the table below. The search was confined for the period 4000 B.C. and 500 A.D. as pointed out earlier.

39. The duration between a full moon and a new moon, or vice versa, is called a *pakṣa*.

40. For example, the *nakṣatra* Citrā is named after a star by the name Citrā, ( $\alpha$ -Virginis).

41. Throughout this paper, the *nakṣatra* domains reported are modern as given in the Appendix unless specified otherwise.

**Table 4. A planetary distribution in *nakṣatras***

	<i>nakṣatra</i>	Longitude
Sun	(open) <sup>42</sup>	180° ± 180°
Mercury	(open)	180° ± 180°
Venus	Citrā ± 13°	205° ± 20°
Mars	Śravaṇa ± 13°	310° ± 20°
Jupiter	Śravaṇa ± 13°	310° ± 20°
Saturn	Jyeṣṭhā ± 13°	26° ± 20°

The following set of dates satisfied the above conditions. They appear to repeat somewhat every 617 years except between 2785 B.C. and 3022 B.C.; and 1551 B.C. and 1017 B. C.

**Table 5. Dates satisfying the planetary configuration of Table 4.**

	Year	Period
1.	3639 B.C. (Julian) <sup>43</sup>	Oct. 24 - Nov. 1
2..	3022	Oct. 13 - Nov.3
3.	2785	Oct. 11 - Oct. 20
4.	2168	Sept. 29 - Oct. 31
5	1931	Sept. 25- Oct. 4
6.	1551	Oct. 25- Nov. 3
7.	1314	Sept. 14 - Oct. 14
8.	1017	Oct. 19 - Nov. 10
9.	460	Aug. 26 - Sept. 9
10.	400	Oct. 16 - Nov. 19
11.	163	Oct. 2 - Oct. 25
12.	218 A.D.	Oct. 19 - Nov. 8
13.	455	Oct. 4 - Oct. 28

A typical set of dates satisfying the conditions of the Table 4 is given in Table 6.

- 
42. In order to consider broader possibilities of the dates, we have taken the position of the Sun as open, rather than in the *nakṣatra* Jyeṣṭhā.
43. We will use B.C. throughout this paper instead of - A.D. Negative A.D. is easier for calculations compared to B.C. Between B.C. and -A.D., there is a difference of one year. For example : 11 B.C. equals - 10 A.D.

**Table 6. Set of days in 3022 B.C.satisfying the planetary configuration of Table 4.**

Date	Sun	Mercury	Venus	Mars	Jupiter	Saturn
Oct. 13	$247^0 \pm 1^0$	$257^0 \pm 1^0$	$215^0 \pm 1^0$	$291^0 \pm 1^0$	$305^0 \pm 1^0$	$257^0 \pm 1^0$
14	248	259	215	291	305	257
15	249	260	215	292	306	257
16	250	262	215	293	306	257
17	251	263	216	294	306	257
18	252	265	216	295	306	257
19	253	266	216	295	306	257
20	254	268	217	296	306	258
21	255	269	217	297	307	258
22	256	271	218	298	307	258
23	257	272	218	298	307	258
24	258	274	219	299	307	258
25	259	275	219	300	307	258
26	260	277	220	301	308	258
27	261	278	220	302	308	258
28	262	280	221	302	308	258
29	263	281	221	303	308	259
30	264	283	222	304	308	259
31	265	284	223	305	309	259
Nov. 1	266	285	223	305	309	259
2	267	287	224	306	309	259
3	268	288	225	307	309	259

### Jupiter and Saturn Near Viśākhā

We interpreted the statement of Vyāsa that "Jupiter and Saturn, after approaching the *nakṣatra* Viśākhā had become stationary for one year" to mean that they were observed between the star Spica (Citrā) on the west and the *nakṣatra* Anurādhā on the east of Viśākhā, or between  $203^0$  and  $240^0$ . This region of space is rather devoid of bright stars. The two very bright planets in this region would be very conspicuous. The slow movement of the two planets coupled with their retrograde motions must have made them appear stationary in this region for a long time, say for a year.

We searched for a simultaneous presence of the two planets in a time period of 2-4 years prior to the dates in Table 5. We found that this

condition was satisfied more or less for just about every date of the table. For example, for 3022 B.C. date, the two planets stayed together between  $203^0$  and  $240^0$  from 3026 B.C. October 25 until 3024 B.C. January 15, .

### **Retrograde Motion of Planets**

With the assumption that the domain distribution of *nakṣatras* in the M.B. days might have been different than it is today, as pointed out earlier, we considered the retrograde motion of the planets within a region of  $\pm 20^0$  from the midpoint of the object *nakṣatra*.

#### **Retrograde Motion of Venus**

Vyāsa reports a retrograde motion of the planet Venus within the *nakṣatras* Uttara Bhādrapadā and Pūrva Bhādrapadā.<sup>44</sup> This condition is satisfied for five dates of Table 5. Venus retrogrades within  $\pm 13^0$  of the two Bhādrapadās for the dates: 3639 B.C., 3022 B.C., 1931 B.C., 1314 B.C., and 163 B.C. For instance, For the date 3022 B.C. the retrograde motion begins  $10^0$  east of Uttara Bhādrapadā, in Revatī, and ends within Uttara Bhādrapadā. Venus undergoes a second retrograde motion in 3022 B.C. between August 30 and Oct 10, in Svātī. The motion ends  $4^0$  from the star Citrā. However, Vyāsa does not mention this retrograde motion.

#### **Retrograde Motion of Mars**

For its final location in Śravaṇa Mars is supposed to undergo a retrograde motion in the *nakṣatra* or star group Maghās ( $143^0$ - $157^0$ ). Mars retrogrades by about  $16^0$ - $20^0$  every 780 days or 2.17 yr. while going around the Sun as pointed out earlier. We found that for the date, 3639 B.C., its retrograde motion takes place within and around Maghā. For 3022 B.C., the retrograde motion of the planet begins on 3023 B.C. December 24, at  $184^0$  in Hastā,  $27^0$  to the east of Maghā. It ends at  $166^0$  in Pūrva phalgunī about  $9^0$  to the east of Maghā.<sup>45</sup> For the date 2785 B.C. it takes place at distance of  $15^0$  also to the east of Maghā. For all other dates in Table 5, it is no closer than  $48^0$  to the *nakṣatra* Maghā.

#### **Retrograde Motion of Jupiter**

According to the Vyāsa table, Jupiter undergoes a retrograde motion in the *nakṣatra* Śravaṇa. Jupiter retrogrades every 399 days or 1. 1 yr while journeying around the Sun. We found that except for the date 218

44. Venus undergoes a retrograde motion every 584 days or 1.6 yr roughly for about three months covering a distance of nearly  $15^0$ - $16^0$ .

45. See ref. 30.



A.D., the planet underwent a retrograde motion within  $\pm 11^0$  of the *nakṣatra Śravaṇa* for all other dates. For the date 218 A. D., its retrograde motion approached within  $15^0$  to the east of the *nakṣatra Śravaṇa*. For the date 3022 B.C., the planet underwent a retrograde motion between 3022 B.C. April, 19, and 3022 B.C. August 9, from  $307^0$  in *Śravaṇa* to  $297^0$ , a distance of  $6^0$  west of *Śravaṇa*.

### The Thirteen Day Pakṣa

In his description of inauspicious omens before the war, Vyāsa points out a thirteen day *pakṣa*. A lunar month is divided into two *pakṣas* dark and bright. A dark *pakṣa* begins after a full moon and ends at the next new moon, and a bright *pakṣa*, on the other hand, beginning after a new moon, ends at the following full moon. As the Sun and Moon travel with varying speeds, the length of a *pakṣa* can be anywhere between 14 to 17 days. The average length of a *pakṣa*, however, is 15 days. According to the *Siddhānta Hindu Jyotiṣa*, a 13 day *pakṣa* is possible, in principle at least, because of this varying speed of the Sun and the Moon<sup>46</sup>.

We did not find any 13-day *pakṣa* around the dates of Table 5, according to the *Siddhānta Hindu Jyotiṣa*. It is not known how *amāvasyā* (new moon) and the *pūrṇimā* (full moon) were calculated in the days of the Mahābhārata. We suspect that in the M.B. days, the "astrologers" relied primarily on their visual observations to ascertain a new moon or a full moon. It is rather easy to decide when the Moon is new as there is no light in it that night. However, in the case of a full moon it is difficult to judge when the Moon is 100% illuminated. A simple criterion can eliminate the uncertainty, however, whether the day had been indeed a full moon. The criterion is to watch the rise time of the Moon in relation to the setting of the Sun. If the Moon rises just before sunset, the day is a full moon or a *Pūrṇimā*, and if it rises just after the sunset, the day is one day past the full moon or one day past the *pūrṇimā*.<sup>47</sup> Using this criterion, we found four dates in Table 4 for which there were a 13-day *pakṣa* "Prior to the war" as called for by Vyāsa.

46. The *tithi* of a day, according to the *Siddhānta Hindu Jyotiṣa*, is calculated at the time of sunrise for the longitudinal difference of the Moon and the Sun. The number of *tithis* elapsed by a day equal to the complete digits of the fraction: (longitude of the Moon - longitude of the Sun)/12. However, no *tithis*, other than those referring to an *amāvasyā* (new moon), are mentioned in the epic at the time of the war. It seems that in the days of the Mahābhārata, people relied primarily on visual observation rather than on observing longitudes of the Sun and the Moon with instruments.

47. This agrees with the *Siddhānta Jyotiṣa* reckoning of *Pūrṇimā*, i.e., if the Moon rises after sunset, its longitude difference with the Sun will be greater than  $180^0$ , and thus 15 *tithis* would have elapsed, and the *tithi* of that day will be one day past *pūrṇimā*.

for example, we found that for 3022 B.C., the *pakṣa* between September 27, (new moon) and October 10 (full moon), had 13 days to it. On the night of September 27 there was no light in the Moon, and on October 11, the Moon rose 3 minutes after the sunset at Hastinapur. Thus October 11 could be technically called the day after *pūrṇimā*, and October 10<sup>48</sup>, the *Pūrṇimā* or a full moon.<sup>49</sup> The *Pakṣa* therefore had 13 days. Similarly the *pakṣas* between 2785 B.C. October 16 (new moon) and October 29 (full moon); 1314 B.C. September 14 and 27, and October 14 and 27.; 455 A.D. September 27 and October 11, all had 13 days to them.

### The Moon on the First Day of Battle and Solstice Thereafter

The date of the first day of the war is calculated from a statement of Balarāma. On the eighteenth day of the war, Balarāma who had just returned from a pilgrimage, observed that the *nakṣatra* on the day of his return was Śravaṇa ( $310^{\circ} \pm 7^{\circ}$ ). Calculating backward from Śravaṇa, the Moon on the first day of the war, 17 days earlier, then must have been in Mṛgaśīras ( $83^{\circ} \pm 7^{\circ}$ ). Further, in his conversation with the blind king, Vyāsa reports that the Moon on the day of his conversation was near saturn in Jyeṣṭhā First, we calculated the dates for which the Moon would be in the *nakṣatra* Jyeṣṭhā, for the set of Table 5. Then we determined the dates for which the Moon would be in the *nakṣatra* Mṛgaśīras next, a few days later, on the first day of the war. Having calculated the dates of the first day of the war for the set of Table 5, we calculated next the number of days to the forthcoming winter solstice from these dates. For example: for the set of dates for 3022 B.C. (Table 6), the Moon was in Jyeṣṭhā on Oct 27. In other words, the conversation between Vyāsa and Dhṛtarāṣṭra took place on Oct 27, and the first day of war was on November 9 of that year as the Moon approached Mṛgaśīras. The next solstice occurred on 3021 B.C. January 13.

Bhīṣma, a celebrated hero of the epic, was mortally wounded on the tenth day of the war as mentioned earlier. He lived on for another 58 days and passed away just after the winter solstice, when the Sun had resumed its northward journey or underwent *uttarāyaṇa*. Thus according to the epic, the journey of the Sun to north or the *uttarāyana* was observed 68 days after the first day of the war, when the Moon was in Mṛgaśīras. The

48. At midnight of October 10-11, the Moon was in the *nakṣatra* Kṛttikā and 99% illuminated.

49. It is debatable if this criterion was indeed used by the M.B. people.

first day of battle and solstice thereafter, for the dates of Table 5, are summarized in the following Table.

**Table 7. The first day of the war and the next winter solstice**

Date	First day of Battle : (Moon in Mṛgaśirā $\pm 7^0$ )	Winter Solstice	No. of Days since the first day of war until the solstice
3639 B. C.	Nov. 19 $\pm 1$ day	Jan. 17, -3637 B.C.	59 $\pm 1$ day
3022	Nov. 9	Jan. 13, - 3021	65
2785	Oct. 29	Jan. 10, -2783	71
2168	Oct.19	Jan. 6, -2166	77
1931	Oct. 12	Jan. 5, - 1929	86
1551	Nov. 7	Jan. 2, - 1549	57
1314	Oct. 29	Jan. 1, -1312	64
1017	Nov.13	Dec. 29, -1016	47
460	Sept.12	Dec. 26, - 459	106
400	Nov.2	Dec. 25, - 399	54
163	Oct. 24	Dec. 24, - 162	62
218 A.D.	Oct. 23	Dec. 21,218 A.C.	59
455	Oct. 15	Dec. 20, 455	67

As pointed out, Bhīṣma breathed his last after the northerly motion of the Sun, or when the *uttarāyana*, had been observed. A naked eye observer will notice a shift in the position of the Sun from its solstitial position only when it has moved by at least one arc-minute. One arc-minute is considered to be the resolving power of an average eye. Near a solstice, it takes the Sun about three days to move by one arc-minute. Thus *uttarāyana*, or the northerly journey of the Sun should have been observed after three or more days only, after the winter solstice. With this reasoning, three dates in the above table, namely, 3022 B.C., 1314 B.C. and 455 A.D. are the only ones that satisfy the condition that there was *uttarāyana* of the Sun 68 days after the first day of the Mahābhārata battle.

### The Pakṣa at the Time of Solstice

Bhīṣma, just before his death, observes, "the *pakṣa* at the time must be the bright one (*śukla*), and three parts of it [ the present month] are still

remaining."<sup>50</sup> However, for the three dates, for which the solstice condition is satisfied, the *pakṣa* turns out to be dark (kṛṣṇa) and not bright (*śukla*). It is not known if the month during the M.B. days ended on full moon (*pūrṇimānta*), or on a new moon (*amānta*).<sup>51</sup> However, for a *pūrṇimānta* month ending on a full moon, and for the date 3022 B.C., the month is Phālguna. When *uttarāyana* or the northerly motion of the Sun is observed 22 days, or nearly three-fourth of this month, remain, as pointed out by Vyāsa, On the other hand, for an *amānta* month ending on a new moon only one-fourth of the month of Māgha remains. For the other two dates, 1314 B.C. and 455 A.D., it is 20 days, and 16 days that remain in the month respectively.

### Lunar and Solar Eclipse at an Interval of 13 Days

Vyāsa describes a lunar eclipse followed by a solar eclipse 13 days later. Considering the minimum length of a modern day *pakṣa* to be 13.8 days and the maximum duration of lunar and solar eclipses to be 6 hours and 4 hours respectively, it can be shown that a lunar eclipse followed by a solar eclipse at an interval of 13 days is not possible. A pair of eclipses in which the solar eclipse occurs first and a lunar eclipse less than full 14 days later is possible.<sup>52</sup> However, we did not find any such pair of eclipses for the set of dates in Table 5.<sup>53</sup> The date of 3022 B.C., for which most

50. This statement is found in all mss. collected for the Bhandarkar edition of the M.B.

51. There are reasons to believe that in the days of M.B., the months culminated on a full moon, or were *pūrṇimānta* Kṛṣṇa journeyed to the Kaurava's court in the month of Kārtika whose full moon fell on 3022 B.C. Oct. 11. The full-moon-ending, or *pūrṇimānta* Kārtika, occurred between 3022 B.C. Sept. 11 and Oct. 11. An *amānta*, or a new-moon-ending Kārtika, on the other hand, would occur between Sept. 27 and Oct. 27 of the same year. Since Kṛṣṇa was at the Kaurava's court before Sept. 27, the month of Kārtika must have been a *pūrṇimānta*.

52. We used several programs for our search of eclipses :

1. a. *LodeStarplus*, b. *CalMaster 2000*, c. *SunTraker*, d. *EclipseMaster plus*, e. *EclipseComplete*, (Pittsburgh).
2. *Canon of lunar eclipses: 1500 B.C. - A.D. 3000*, Bao-Lin Liu and Alan D. Fiala, (Richmond).
3. M. Kudlek, Univ. of Hamburg, Germany, private communication.

It should be pointed out that the results of different eclipse programs matched quite well down to 800 B.C. Beyond that, around 2000 B.C., their accuracies deteriorated rapidly, and difference of one to two hours in predicted events were common. The difficulty lies in the fact there are no data available to verify the results of various programs beyond 800 B.C. in the past.

53. Mehra *et al* calculated the solar and lunar eclipses taking place in northern India between 3500 B.C. and 20 A.D. They looked for the conditions that will give a rare *pakṣa* of 13 days flanked by solar and lunar eclipses. They found only three dates which satisfy the desired conditions : 170 B.C., 2293 B.C., and 2922 B.C. Anjani K

of the conditions in Table 8 are satisfied had three eclipses in succession.<sup>54</sup> It is not clear if all these were visible at the location of Hastinapur. These dates are given in the following table.

**Table 8. The eclipses in 3022 B.C.**

- a. October 27 Partial Solar eclipse
- b. November 10 Total Lunar eclipse
- c. November 25 Partial Solar eclipse

### *Trial-2*

Next we considered the second planetary combination of Table 3, for which the planet Mars's final location is in the *nakṣatra* Maghā, after it had undergone a retrograde motion earlier in the *nakṣatra* Śravaṇa. The planetary positions for this search are as follows.

**Table 9. Planetary combinations 2<sup>55</sup>**

Planet	<i>nakṣatra</i>	longitude
Sun	open	$180^{\circ} \pm 180^{\circ}$
Mercury	open	$180^{\circ} \pm 180^{\circ}$
Venus	Citrā	$205^{\circ} \pm 20^{\circ}$
Mars	Maghā	$150^{\circ} \pm 20^{\circ}$
Jupiter	Śravaṇa	$310^{\circ} \pm 20^{\circ}$
Saturn	Jyeṣṭhā	$260^{\circ} \pm 20^{\circ}$

The set of dates satisfying these conditions are as follows.

**Table 10. Set of dates satisfying conditions of Table 9.**

3935 B.C.	July 3 - July 28
3638	Aug. 8 - Aug. 23
2784	July 21 - Aug. 10
2726	Oct. 17 - Oct. 27

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Mehra, and Virendra Nath Sharma, "Ancient Indian chronologies and solar and lunar eclipse calculations," Paper read at the International Symposium, "Ancient Indian chronology" (Hyderabad, 1994).

54. These eclipses were predicted by the program *CalMaster 2000*, (ref. 52), and not repeated by any other programs. According to the *Lunar tables and programs*, the Sun and Moon missed each other by 51', on October 27, 3022 B.C., which was within the accuracy of the program of  $\pm 1^{\circ}$  for that far back in the past.
55. In order to find all possible positions of Mercury and the Sun, their coordinates are taken "open" in this search also.

2607	Aug. 11 - Aug. 16
2109	Oct. 8 - Nov. 7
1930	July 18 - July 28
1753	July 24 - Aug. 3
1492	Oct. 19 - Oct. 24
1255	Oct. 15 - Oct. 25
958	Oct. 16 - Nov. 15
341	Sept. 8 - Nov. 21
104	Oct. 8 - Nov. 2

### ***Retrograde Motion of Planets***

In the set of Table 10, there were no dates satisfying the retrograde motion of Mars in Śravaṇa and of Venus in Bhādrapadās. The retrograde motion of Jupiter in Śravaṇa was satisfied for nearly all the dates, except one. The details are as follows.

#### **Retrograde Motion of Mars in Śravaṇa**

Mars should have undergone a retrograde motion in Śravaṇa, if its final position is in the *nakṣatra* Maghā. We found that retrograde motion of Mars does not take place in Śravaṇa for any of the dates in this set. However, for the date 1753 B.C., Mars approaches within 17° of Śravaṇa, and for all other dates it retrogrades much farther than that.

#### **Retrograde Motion of Venus in Uttara and Pūrva Bhādrapadās.**

For the date 1255 B.C., the retrograde motion of Venus comes as close as 35° to Uttara Bhādrapadā. For all other dates, it is much farther than that.

#### **Retrograde Motion of Jupiter in Śravaṇa**

Jupiter undergoes a retrograde motion in Śravaṇa for all dates except 3638 B.C. for which it takes place in Dhaniṣṭhā-Śatābhiṣaja, at a distance of 15° from Śravaṇa.

Thus the second combination of the planets in Table 3 does not have any promising dates satisfying the retrograde conditions of the Vyāsa table.

#### ***Retrograde Motion of Mars in Jyeṣṭhā according to Karṇa***

For our exercise we have chosen Śravaṇa or Maghā, as the final destination of Mars. During his conversation with Kṛṣṇa, Karṇa points out Mars retrograding in Jyeṣṭhā. With its final location in Śravaṇa, Mars undergoes a retrograde motion in Jyeṣṭhā for the date 1551 B.C. only out

of all the dates to Table 5. With its final location in Maghā, on the other hand, Mars does not undergo a retrograde motion in Jyeṣṭhā for any of the dates of the Table 10. However, for the date 1930 B.C. of Table 10, retrograding in Viśākhā, the planet comes as close as 20° to the west of Jyeṣṭhā.

### ***The Date 3022 B.C.***

Our analysis thus far indicates that for the date 3022 B.C., a large number of planetary conditions elaborated by Vyāsa during his conversation with Dhṛtarāṣṭra with some limitations, are satisfied.

### **Date 3022 B.C., and Karṇa's Observation**

For the date 3022 B.C., for which most of the conditions of the Vyāsa table are met, we looked for the date when the conversation of Karṇa with Kṛṣṇa must have taken place. We found that the conversation must have taken place around 3022 B.C. September 20. The planetary configurations for 20 September are as follows :

**Table 11. The planetary configuration according to Karṇa<sup>56</sup>**

Planet	Longitude	Nakṣatra Expected	Dist. from the Expected Nakṣatra
Mars	271°	Jyeṣṭhā	8° to the east of Jyeṣṭhā
Mercury (A planet) <sup>57</sup>	219°	Svāṭī	9° to the east of Citrā
Saturn	252°	Jyeṣṭhā or Prajāpati	11° east of β, δ, π Scorpii, the stars of Prajāpati <sup>58</sup>

Seven days later, on 27 September, there was a new moon as Kṛṣṇa points out to Karṇa and the *nakṣatra* that day turns out to be Viśākhā which was ruled by Indra as called for by the observation of Kṛṣṇa.<sup>59</sup>

### **Planets at the Time of Karṇa's Death**

The epic says that at the time of Karṇa's death, the planet Mercury appeared in the sky and the planet Jupiter threatened the *nakṣatra* Rohiṇī.

<sup>56</sup>. This table will be called "Karṇa Table" henceforth.

<sup>57</sup>. We have interpreted "a planet" to mean Mercury here.

<sup>58</sup>. See (ref. 10) for Prajāpati. It is possible that some stars of the *nakṣatra* Jyeṣṭhā were also included in the constellation Prajāpati.

<sup>59</sup>. Allen, *Op. Cit.* (ref. 10), 175.

However, our analysis does not support this.<sup>60</sup> Mercury will be a morning star on 3022 B. C. November 25, the 16th day of the war, when Karṇa fell. Besides, it will be 7° from the Sun and with 5% illumination only, too difficult to be seen in the morning twilight. Jupiter, on the other hand, will be in Śravaṇa then, nearly 60° from Rohiṇī and thus can hardly be called threatening the *nakṣatra* Rohiṇī.

### Rāhu in the Vyāsa Table

In the Vyāsa Table we have identified the "dark planet" As Rāhu. For the date 3022 B. C. October 27, the day of conversation of Vyāsa with Dhṛtarāṣṭra, the lunar node, Rāhu falls at 275°, or 12° to the east of Jyeṣṭhā.

### The Nakṣatras Shifted by 6° - 10° and the Planets

A close examination of the planetary distribution according to the tables of Vyāsa and Karṇa for the year 3022 B. C. reveals that a number of planets lie just outside the present day *Nakṣatra* domains given in the Appendix. However, if the *Nakṣatras* are shifted by 6° - 10°, primarily to the east, the planetary positions fall within the expected *Nakṣatras*. This fact suggests that when the epic was written, the domain distribution of the *Nakṣatras* had been different than it is today in the canons of Hindu astronomy. Table 12 below elaborates this fact.

**Table 12. The *Nakṣatras* shifted by 6° - 10° and the planets.**

Planet	Date	Longitude	<i>Nakṣatra</i> Shifted to east by 8°	Table
Mercury	3022 B. C. Sept. 20	219°	Citrā (207°-220°)	Karṇa
Venus	3022 B. C. Oct. 27	220°	Citrā (207°-220°)	Vyāsa
R. Motion of Venus	3023 B.C. Jan. 22 to March 9	19°-3°	P. Bhādrapadā- U. Bhādrapadā (353° - 20°)	Vyāsa

Planet	Date (3022 B. C.)	Longitude	<i>Nakṣatra</i> Shifted to east by 10°	Table
Mars	Sept. 20	270°	Jyeṣṭhā (258°-271°)	Karṇa
Saturn	Oct. 27	258°	Jyeṣṭhā (258°-271°)	Vyāsa

60. The verse containing the statement that "Jupiter threatened Rohiṇī" could be of a later addition to the epic.



Rāhu Oct. 27 275°<sup>61</sup> Jyeṣṭhā (258°-271°) Vyāsa

Planet	Date (3022 B. C.)	Longitude	Nakṣatra Shifted Table to west by 6°
Mars	Oct. 27	302°	Śravaṇa (297°-311°) Vyāsa
Jupiter	Oct. 27	308°	Śravaṇa (297°-311°) Vyāsa
R. Motion	April 9 to of		
Jupiter	Aug. 9	307°-297°	Śravaṇa (297°-311°) Vyāsa

### Maghās and Prajāpati

According to Vyāsa, before the war, between 3023 B. C. Dec. 24 and 3022 B. C. March 10, Mars undergoes a retrograde motion from 184° to 166°, in the star group Maghās. It is not known what stars were included in the asterism Maghās during the M. B. days. If the asterism included stars within 184° and 166°, somewhat 9° or more to the east of the *nakṣtra* Maghā (143°-157°), the Vyāsa condition would be satisfied. Similarly, if Prajāpati included stars 11° east of  $\beta$ ,  $\delta$ ,  $\pi$  Scorpii, the observation of Karṇa would also be met.

### Fierce Planet

Vyāsa says, "A fierce planet has come between Citrā and Svātī." The model points to Venus to be this "Fierce planet" as according to Table 12, Venus falls exactly between the *nakṣtras* Citrā and Svātī.

### Critique of the Exercise

The model developed in this paper shows that most of the conditions specified in the epic are met by the date 3022 B.C. However, a number of questions may be raised about this date.

### Jupiter and Saturn

According to the model developed in this archaeo-astronomical exercise, Jupiter and Saturn stay together for nearly a year around Viśākhā, as required by the statement of Vyāsa, between 3026 B.C. October 25 and 3024 B.C. January 15, full 2<sup>3</sup>/<sub>4</sub> years before his meeting with the blind king Dhṛtarāṣṭra in October of 3022 B.C. A question may

61. The longitude of Rāhu, 275°, on October 27, 3022 B.C. is a calculated value. Since Rāhu is an invisible object, someone, relying primarily on visual observations, can easily make an error of few degrees. Thus an error of 4° beyond Jyeṣṭhā (258°-271°) in the position of Rāhu is not unreasonable.

be raised, "Why something that happened nearly three years earlier is considered astrologically important by Vyāsa"? The model has no answer to the question.

### **The Second Retrograde Motion of Venus**

The second retrograde motion of Venus takes place just prior to the war in 3022 B.C., between August 30 and October 10, but Vyāsa makes no mention of it during his conversation with the blind king.

### **The Pakṣa at the Time of Winter Solstice**

According to our model, the war started on 3022 B.C. November 9 when the Moon was full and in *nakṣatra* Mṛgaśiras. Sixty days later, at the time of the solstice, the *pakṣa* then will be "dark" and not "bright" as pointed out by Bhīṣma before he passed away<sup>62</sup>.

### **Constellation Brahmarāśi**

The model does not identify the constellation Brahmarāśi in the Vyāsa table.

## **Conclusions**

The archaeo-astronomical exercise undertaken for this paper is based on a number of assumptions. One, the astronomical reports in the epic belong to the earliest version of the epic; and two, that they are based on visual observations and not on astronomical computations. Three, that the domain distributions of the lunar mansions of the Hindu astronomy, the *nakṣatras*, were different in the ancient times than they are today.

### **Nakṣatra Domains**

The second assumption above is supported to some extent by the planetary events for the date 3022 B.C. for which most of the planetary conditions described in the epic are satisfied<sup>63</sup>. For this date, the reported retrograde motions of the planets Venus, Mars, and Jupiter as reported by Vyāsa (Table 4), and the positions of the planets, Mars, Mercury or Venus, and Saturn as reported by Karṇa (Table 11), all fall 8°-12° to the east of the modern domains. This suggests that the domain boundaries of the *nakṣatras*, when the epic was written, were 8°-10° to the east of their present *nakṣatra* boundaries as reproduced in the Appendix. Thus if the

62. It should be pointed out that some scholars have doubted that Bhīṣma of the epic was a real person. M.N. Saha, "The age of the Mahābhārata." *Science and culture*, (1939), 482-488.

63. This date agrees with the traditional date of the Mahābhārata events.

domains of the *nakṣatras* are shifted to the east by about 8°-10°, all the planets fall within their prescribed *nakṣatras*. The *nakṣatra Śravaṇa* appears to be an exception to this rule, however. The final location of Mars and the retrograde motion of Jupiter is to the west of Śravaṇa by 1° and 6° respectively. This suggests that the domain of *nakṣatra Śravaṇa* could have been a few degrees to the west of what it is today. Similarly, the star group Maghās could have included a few stars of two Phalgunis somewhat 9° to the east of modern *nakṣatra* of Maghā.

### **The War and the Date 3022 B.C.**

According to this exercise, most of the planetary configuration described in epic before the war match for the year 3022 B.C., suggesting, therefore, that the dialogue between Vyāsa and the blind king Dhṛtarāṣṭra took place on October 27 and the war started on November 9, ending 17 days later on 3022 B.C. November 26. (Julian)<sup>64</sup>.

Did the war really took place in 3022 B.C., the date for which most of the conditions of the epic are satisfied ? Unfortunately, the analysis of the paper cannot answer this question with certainty. All one can say, with some degree of certainty, is that in October of 3022 B.C., the configuration of the planets in the sky had been the same as given in Table 6 and that this configuration of planets matches with the Vyāsa table.

The answer regarding the war, in a way, hinges on the time when the epic was written. If the events of the epic, particularly the ones regarding the planets, were observed and jotted down by a contemporary author, such as Vyāsa, as asserted by the epic, the analysis has considerable merit. On the other hand, if Vyāsa was not a contemporary witness of events, but someone like Homer, who generations after the events, compiled and elaborated oral traditions and bardic tales into an elaborate poem, the analysis of the paper is no more than an interesting exercise in archaeoastronomy, and the date, 3022 B.C., just a coincidence.

### **Acknowledgements**

The author wishes to thank Anjani K. Mehra for the discussions he had with him. The computer program for the analysis of the Vyāsa table was written by Bill Bultman. The author appreciates his assistance.

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64. The Julian day number corresponding to 9 November 3022 B.C. (Julian) is 617950.

## APPENDIX

The first points and the mid-point of the *nakṣatras* according to modern classification, are as follows.

	<i>nakṣtra</i>	First Point	Mid-point
1.	Āsvinī	23;15	29;55
2.	Bharaṇī	36;35	43;15
3.	Kṛttikā	49;55	56;35
4.	Rohiṇī	63;15	56;35
5.	Mṛgaśiras	76;35	83;15
6.	Ārdrā	89;55	96;35
7.	Punarvasu	103;15	109;55
8.	Puṣya	116;35	123;15
9.	Āśleṣā	129;55	136;35
10.	Maghā	143;15	149;55
11.	Pūrva Phalgunī	156;35	163;15
12.	Uttara Phalgunī	169;55	176;35
13.	Hasta	183;15	189;55
14.	Citrā	196;35	203;15
15.	Svātī	209;55	216;35
16.	Viśākhā	223;15	229;59
17.	Anurādhā	236;35	243;15
18.	Jyeṣṭhā (Rohiṇī)	249;55	256;35
19.	Mūla	263;15	269;55
20.	Pūrva Āṣādhā	276;35	283;15
21.	Uttara Āṣādhā	289;55	296;35
22.	Śravaṇa	303;15	309;55
23.	Dhaniṣṭhā	316;35	323;15
24.	Śatabhiṣaj	329;55	336;35
25.	Pūrva Bhādrapadā	343;15	349;55
26.	Uttara Bhādrapadā	357;35	3;15
27.	Revatī	9;55	16;35

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## ARCHITECTURE IN THE AGNI-PURĀṆA

By

R. C. SHARMA

[ पुराणवाङ्मये भारतीयधर्मतिहास-संस्कृति-दर्शन-समाज-भूगोलादिसर्वविध-विषयाणां वर्णनं प्राप्यते । पुराणानि वेदोपबृह्मणानि इति सर्वत्र वाङ्मये समाप्तात् । पुराणपञ्चलक्षणानि—सर्ग-प्रतिसर्ग-वंश-मन्वन्तर-वंशानुचरितरूपाणि प्राधान्य-व्यपदेश-मात्राण्येव । एतदतिरिक्तं विद्यते सर्वविधविषयस्य सद्भावः पुराणेषु । एषु पुराणेष्वपि पुराणत्रयं-गरुड-अग्नि-नारदीयपुराणानि विश्वकोशात्मकरूपमावहन्ति । एषु पुराणेषु सामान्यपुराणविषयातिरिक्तं कोश-व्याकरण-रत्नपरीक्षा-वास्तु-चिकित्सादिनानाविषयाणां समाहारो वर्तते । अस्मिन् निबन्धे विदुषा लेखकेन अग्नि-पुराण-वर्णितवास्तुनिरूपणस्य समीक्षात्मकं विवरणं प्रस्तुतम् ]

The **Agni-Purāṇa** is one of the important eighteen *mahāpūāṇas* and of encyclopaedic nature. It appears to have developed during a few centuries in the post-Gupta period and as R. C. Hazra thinks, between 700 and 1000 A.D. (*Puranic Records on Hindu Rites and Customs*, 1948, pp. 134-40). Besides a detailed narration of a number of arts, sciences, technological details, rituals, religious tradition, etc., the book also furnishes a detailed and valuable account of architecture. While doing so, it appears to follow the earlier tradition of **Matsya-Purāṇa** which again depends on some chapters of **Viṣṇudharmottara** (Gangadharan, N., *The Agni Purāṇa*, part I, 'Introduction', 1984, p. xxii).

Out of the three hundred eighty two or 383 chapters, at least nineteen (38, 39, 41, 42, 43, 61, 64, 65, 67, 93, 94, 95, 100, 101, 103, 104, 105, 106 and 327) are stocked with valuable data on architecture directly or indirectly. The architecture, iconography, sculpture, temple building all go hand in hand and one finds useful but scattered references of these aspects. The overlapping of one branch with another has to be studied rather carefully for sweeping out the desired material on one aspect.

### Benefits of Constructing a Temple

A student of Indian culture is well aware of the fact that the post-Vedic tradition assimilated the folk and popular cults including the image-worship and subsequently its installation in a shrine or a temple. This was

supposed to be an act of great merit (*puṇya*). The **Agni-Purāṇa** (ch.38<sup>th</sup>) records a number of verses on the subject. One is naturally inclined to be free from sins and attain merits. The erection of temple awards the benefit of freedom from sins in thousand births (38.1).<sup>1</sup> It is also proclaimed that the *puṇya* which cannot be attained through sacrificial rites (*yajña*) can be obtained by the construction of a shrine (38.6)<sup>2</sup> This hints that the age of *yajña* was almost gone and the society was eager for gaining that benefit through building the abodes of gods. This has also been stated that the builder of one temple goes to heaven, of three temples to the abode of Brahmā, of five temples to Śivaloka and of eight temples to the world of Viṣṇu (38.8). Even Yama (god of death) highlights the benefits of erection of temples and installation of images of deities. The builders and installers never enter the hell but go direct to heaven (38.35.36).<sup>3</sup> This is to be compared with the description in the **Viṣṇudharmottara-Purāṇa** (ch. 341) which details the attainment of merit in different ways and also suggests that a temple can be made in clay, wood, stone, iron, copper, silver, gold and gems but the fortune will multiply several times respectively (341.8-11).

The architecture as described in the **Agni-Purāṇa** is not confined not to the religious nature but secular or mundane dwellings have also been discussed. The difference however, lies in the fact that attention was generally focussed on the construction of a divine edifice as lot of merit was accrued out of it. On the other hand, a personal house or residential place did not allow such religious benefits. It is probably for this reason that the shrines, temples and other monuments of religious nature were made of stronger material to last long and many of them withstood the ravage of time. The residential and dwelling places are rare to be seen and can be discovered under earth through excavations.

The **Agni-Purāṇa** suggests that of the proposed city, village, fort, house or a temple should be worshipped in eighty-one squares for prosperity (105.1) Beside gods and goddesses demons and demonesses like

1. वासुदेवाद्यालयस्य कृतौ वक्ष्ये फलादिकम् ।  
चिकीर्षोर्देवधामादि सहस्रजनपापनुत् ॥ 38.1
2. फलं यन्नाप्यते यज्ञैर्द्धर्मकृत्वा तदाप्यते ।  
ब्रह्महत्यादि पापौघघातकं देवतालयम् ॥ 38.6
3. देवालायाद्यकर्तार आनेयास्ते तु गोचरे ।  
विचरध्वं यथान्यायन्नियोगो मम पाल्यताम् ॥ 38.36

Carakī, Skandavikaṭa, Vidāri, Pūtanā, Jambha, Pāpa and Pili-piccha should also be worshipped outside in the north east (105.13).<sup>4</sup>

### City Planning

The book provides a good account of town planning in Chapter 106 where interesting details are given. The reflection of earlier works and particularly the Town Planning chapter of **Kauṭīliya Arthaśāstra** is clearly discernible. The land selected may be of one *yojana* or half *yojana* or one-fourth of *yojana* (106.1).<sup>5</sup> The worship of the presiding deity of the city has been prescribed before taking up planning of a town (106.2) The land may be divided into a number of squares for accommodating various places. It is preferred to have four gates of the city of which the eastern one should be dedicated to Sūrya, the southern gate to *Gandharvas*, the western gate to *Varuṇa* and the northern gate to *Soma* (106.3). The doors of the gates may be six cubits wide to allow even the elephants (106.4).<sup>6</sup> Worship of Viṣṇu, Śiva, Sūrya and other deities has been suggested (106.6).

The chapter furnishes some details about the allocation of direction to different stocks of people. It goes as under.

South-east	goldsmiths, blacksmiths (106.6), regiments of army (106.10), images Agni, Mātṛkās, Yama, goblins (39.11).
South	dancers, courtesans (105.7), officers attending ladies (106.10). military men (106.12), cremation ground (106.13) Caṇḍikā (39.11)
South-west	actors, potters, fishermen (106.7), royal camps (106.10), demons (39.11)
West	war-chariots, weapons, swords (106.8), chief ministers, treasurers, architects (106.11), tradesmen, śūdras, cattle sheds (106.13), temples in west but facing east (106.15), temple of <i>Varuṇa</i> (39.11)
North-west	distillery of liquor, government servants (106.8)
North	brāhmaṇas, ascetics, holy men (106.9), man of judiciary (Brāhmaṇa), eminent men (106.11), farmers (106.13)
North-east:	fruit sellers, merchants (106.9) temple of <i>Candīśa</i> and <i>Viṣṇu</i> (39.13)
East	commanders (106.10), <i>Lakṣmī</i> , <i>Kubera</i> (106.14)

4. चरकीं स्कन्दविकटं विदारिं पूतनां क्रमात् ।

जम्भं पापं पिलिपिच्छं यजेदीशादि बाह्यतः ॥

105.13

5. नगरादिकवास्तुं च वक्ष्ये राज्यादिवृद्धये ।

योजनं योजनाद्धं वा तदर्थं स्थानमाश्रयेत् ॥

106.1

6. येनेभादि सुखं गच्छेत् कुर्याद् द्वारं तु षट्करम् ॥ ....

106.4

All directions physicians, horses, army (106.12).  
Angular points foreigners (106.14).

The statement gives an interesting record of the texture of the society and the placement of the people as per their rank, aptitude and utility.

### Site-selection

Chapter 39 of **Agni-Purāṇa** deals with the procedure of construction of temples, preference of site and measurements. In the beginning, it gives a detailed list of the works on the subject i.e. *vāstusāstra*. These are as under:-

Hayaśiṛṣatantra, Trailokyamohana, Vaibhava, Pauṣkara, Prahlāda, Gārgya, Gālava, Nārādīya, Śrīpraśna, Śaṅḍilya, Aiśvarya, Śaunaka, Vāśiṣṭha, Janasāgara, Svāyambhuva, Kāpilya, Tārksya, Nārāyaṇīyaka, Ātreya, Nārasīṁha, Ānanda, Aruṇa, Baudhāyana, and Viśva (39.2-5).<sup>7</sup>

While selecting a site it has been advised that it should not be just adjacent to the already existing temple. Atleast, a distance of double of the elevation should be left between the earlier edifice and the proposed one (39.14)<sup>8</sup>

### Measurements

Different measurements as per their proportion have been mentioned and accordingly, the eight *paramāṇus* are equal to one *rathāṇu*, 8 *rathāṇus* make one *trasareṇu* and 8 of them are equal to one *bālāgra* which multiplied by 8 is equal to a *likhyā*. Again, its eight times becomes one *yūka*, the multiplication of its eight *yavamadhyama* and its eight times is one *aṅgula*, four of which are equal to *padmahastaka* and 24 of *aṅgulas* make one *kara* (hand) (39.19).<sup>9</sup> For installation rite of a temple,

- |   |       |
|---|-------|
| 7. व्यस्तानि मुनिभिलोके पंचविशति संख्यया ।<br>हयशीर्षं तन्त्रमाद्यं तन्त्रं त्रैलोक्यमोहनम् ॥     | 39.2  |
| वैभवं पौष्करं तन्त्रं प्रह्लादङ्गार्यगालवम् ।<br>नारदीयं च सम्प्रश्नं शाण्डिल्यं वैश्वकन्तथा ॥    | 39.3  |
| 8. समं वाप्यधिकं वापि न कर्तव्यं विजानता ।<br>उभयोर्द्विगुणां सीमां त्यक्त्वा चोच्छ्रयसम्मिताम् ॥ | 39.14 |
| 9. परमाण्वष्टकेनैव रथरेणुः प्रकीर्त्यते ।<br>रथरेण्वष्टकेनैव त्रसरेणुः प्रकीर्त्यते ॥             | 39.19 |
| तैरष्टभिस्तु बालाग्रं लिख्या तैरष्टभिर्मता ।<br>ताभिर्युक्ताष्टभिः ख्याता ताश्चाष्टयवमध्यमः ॥     | 39.20 |
| यवाष्टकैरंगुलं स्याच्चतुर्विंशद्गुलः करः ।<br>चतुरङ्गुलसंयुक्तः स हस्तः पद्महस्तकः ॥              | 39.21 |



a Brahmin from the middle country, *madhya deśa*, is preferred. At the same time the Brahmins from Kaccha, Kāverī, Koṅkaṇa, Kāmarūpa, Kāliṅga, Kāñcī, Kāśmīra and Kośala have to be avoided (39.6-7).

The **Agni-Purāṇa** at one place prescribes 81 squares for house and 100 squares for a temple (105.14).<sup>10</sup> The temple should be a square one of 28 X 28 cubits (105.17) *kara* (elbow to tip of middle finger). The circumference should be 22 and width of wall 9 and same measurements are for a pavilions known as Śisīrāśraya, Śivākhyā, Rudrahīna and Sadobhaya (105.18).<sup>11</sup> The pavilion of Sāvitra type is 18 X 15. The Bhadra class should have passage on three sides and on front only entrance. The Śrījaya type should not have passage on any side (105.21).<sup>12</sup>

### The Plan

One has to decide which type of temple is to be constructed, i.e. single chamber, double chamber or tri-chamber. Same is the case for elevation and for Viṣṇu a seven-storeyed temple has been recommended (65.3).<sup>13</sup> There are some technical terms for measurements like *vyaya* and *āya* which have nothing to do with expenditure and income in the present day context but these hint to the proportion of measurement as per Gārgya vidyā (65.5-7).<sup>14</sup> The *vyaya* may be taken as a measurement of hand multiplied by 8 and again multiplied by 3 and then divided by 3 (65.6-7).<sup>15</sup> Similarly, the word *dhvaja* also denotes a measurement although it

- |   |        |
|---|--------|
| 10. एकाशीतिपदं वेश्म मण्डपश्च शतांग्रिकः ।<br>पूर्ववदेवताः पूज्या ब्रह्मा तु षोडशांशके ॥  | 105.14 |
| 11. सदिग्विंशत् करैर्दैर्घ्यादष्टाविंशतिविस्तरात् ॥<br>शिशिराश्रयः शिवाख्यश्च रुद्रहीनः सदोभयोः ।<br>रुद्रद्विगुणिता नाहाः पृथुष्णोभिर्विना त्रिभिः ॥ | 105.18 |
| स्याद् ग्रहद्विगुणं दैर्घ्यात् तिथिभिरश्चैव विस्तरात् ।<br>सावित्रः सालयः कुड्यास्तथा त्रिंशांशतः पृथक् ॥   | 105.19 |
| 12. भद्रे तुल्यं च वीथीभिर्द्वारवीथीं विनाग्रतः ।<br>श्रीजयं पृष्ठतो हीनं भद्रोऽयं पार्श्वयोर्विना ॥  | 105.21 |
| 13. निर्मलः कुलमुद्गत्य कर्ता स्वर्गे विमोदते ।<br>अनेन विधिना कुर्यात् सप्तभौम हरेर्गृहम् ॥  | 65.3   |
| 14. त्रिशालं वा द्विशालं वा एकशालमथापि वा ।<br>व्याधिकं न कुर्वीत व्ययदोषकरं हि तत् ॥   | 65.5   |
| 15. सप्तार्चिषा हृते भागे गर्गविद्याविचक्षणः ।<br>अष्टधा भाजिते तस्मिन् यच्छेषं स्वययोगतः ॥   | 65.7   |

does stand for flag too. The site has to be divided into a number of squares as 64 or 81 as per proposed building.

Before constructing the temple, three basic elements must be taken care of, i.e. *ātmatattva* (soul or spirit), *vidyātattva* (knowledge) and *Śivatattva* (Bliss or Ānanda). These should be consecrated on the door of the temple at the level of pedestal, middle and high (100.6-7).<sup>16</sup> At the door or the temple gateway a good number of auspicious items like barley, white mustard, *krāntā*, *ṛddhi*, *vṛddhi*, *mahātila*, *gomṛta*, mustard, *rājendra mohani*, *lakṣmaṇa*, *amṛta*, *racanā*, *rug*, *vacā*, *dūrvā* and *poṭālī* should be placed. This is necessary for the protection of the god's abode and while doing so, *Om* should be repeatedly (100.4-5).

Beside the consecration of the gateway, the foundation laying ceremony of the temple has also been discussed in the subsequent chapter (Ch. 101). Accordingly, a pitcher made of gold and other metals should be placed on the eastern side and filled with *pañcagavya* (five items prepared through the cow). The pitcher should be placed on five gems and adorned with garland cloth, etc. (101.23).

The shape of the temple has been projected in chapter 104 which suggests that the ground should be divided into four parts (104.1). The main part of the temple (sanctum) should occupy  $1/7^{\text{th}}$  of the ground and the pedestal should be  $1/4^{\text{th}}$  of the sanctum. The pedestal should also occupy the central part of the ground which should further be divided in four parts (104.2).<sup>17</sup> Different views have been given with regard to the sanctum or adytum. If a plot is divided into six parts, the walls should have one part of such proportion. The height of the temple has been prescribed as double of the breadth and sometimes  $1/3^{\text{rd}}$  of the ground plan (104.4-6). The inside circumference should be less than the area of the temple (about one quarter less) while the outer circumference may be  $1/3^{\text{rd}}$  (104.7).

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16. द्वारमुत्तरतः किञ्चिदाश्रितं सन्निवेशयेत् ।  
आत्मतत्त्वमधन्यस्य विद्या तत्त्वञ्च शाखयोः ॥  
शिवमाकाशदेशे च व्यापकं सर्वमङ्गले ।  
तथो महेशनाथं च विन्यसेन्मूलमन्त्रतः ॥  
17. चतुर्भागीकृते क्षेत्रे भित्तेर्भागेन विस्तरात् ॥  
अद्रिभागेन गर्भः स्यात् पिण्डिका पादविस्तरात् ।  
पञ्चभागीकृते क्षेत्रेऽन्तर्भागे तु पिण्डिका ॥

100.6

100.7

104.1

104.2

## Classification of Temples

Five classes of temple have been discussed as *vairāja* which should be square in shape, *puṣpaka* rectangular, *kailāśa* circular, *maṇika* oval and *triviṣṭapa* octagonal (104.11-13).<sup>18</sup> This main division has been further classified and fructified into multiple forms.

The *vairāja* type has *meru*, *mandara*, *vimāna*, *bhadra*, *sarvatobhadra*, *cāruka*, *nandika*, *nandīvardhana* and *śrīvatsa* (104.14-15). Nine types belong to *puṣpaka*, namely *valabhī*, *gṛharāja*, *śālāgṛha*, *mandara*, *viśāla*, *brahmamandira*, *bhavana*, *prabhava*, and *śibikāveśma*. The *kailāśa* category temples are subdivided into *valaya*, *dundubhi*, *padma*, *mahāpadma*, *vardhanī*, *uṣṇīṣa*, *śaṅkha*, *kalaśa* and *khavṛkṣa* (104.16-17). The *maṇika* group has nine variations, namely, *gaja*, *vṛṣabha*, *haṁsa*, *garutmāna*, *ṛkṣanāyaka*, *bhūṣaṇa*, *bhūdhara*, *śrījaya* and *pṛthivīdhara*. They are all oval shaped (104.18-19). The fifth group also has nine sub-divisions, such as *vajra*, *cakra*, *svastika*, *vajrasvastika*, *citra*, *avastika-khaḍga*, *gadā*, *śrikaṇṭha* and *vijaya* (104.20-21). The detailed discussion of major groups and their multiple varieties indicates that the temple architecture had become a very elaborate and complicated science of building and it was left to the donor or his preceptor to opt a variety as per his faith and capability.

Same is the case with the doors which have been named as *uttama* (excellent), *madhyama* (average or middle) and *kanīyas* (inferior) Beside their length and breadth, their decoration and grandeur were also considered (104.26-28).<sup>19</sup> With regard to the directions some names have been suggested. The temple facing west is Śiva, facing east is Yamasūryaka, east and north Daṇḍa, east and south Vāta and facing north west as Bali and a house without eastern wing is called Sukṣetra bringing prosperity (105.25-26).<sup>20</sup> A Śūlī type house does not have southern rooms and a house without a room in west is harmful to the progeny and also creates enemies (105.27).

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|--|--------|
| 18. वैराजः पुष्पकश्चान्यः कैलासो मणिकस्तथा ॥                 | 104.11 |
| प्रासादः प्रथमो मेरुद्वितीयो मन्दरस्तथा ॥                    |        |
| विमानश्च तथा भद्रः सर्वतोभद्र एव च ॥                         | 104.14 |
| 19. उत्तमान्यपि चत्वारि द्वाराणि दशहानितः ॥                  | 104.26 |
| त्रीण्येव मध्यमानि स्युस्त्रीण्येव कन्यसान्यत ।              | 104.27 |
| 20. प्राक् सौम्यस्थे च दण्डाख्यं प्राग्याम्येवात् संज्ञकम् । | 105.25 |
| पूर्वशालाविहीनं स्यात् सुक्षेत्रं वृद्धिदायकम् ॥             | 105.26 |

## YOGA IN MĀRKAṆḌEYA PURĀṆA

By

G.K. PAI

[ भारतीयदर्शनसंप्रदायेषु योगदर्शनस्य महत्त्वं विशिष्टं वर्तते । दर्शनमेतत् शरीरशोधनद्वारा चित्तशुद्धेः मार्गं प्रदर्शयति । इत्थमस्य दर्शनस्योपयोगित्वं सर्वत्र वर्तते । अस्य वर्णनं योगदर्शनग्रन्थातिरिक्तं केषुचित् पुराणेष्वपि प्राप्यते । अस्मिन् निबन्धे लेखकेन मार्कण्डेय-पुराणवर्णितयोगदर्शनस्य विवेचनमन्यपुराणानामुल्लेखपूर्वकं कृतम् ]

Almost all the major Purāṇas deal with Pātāñjala Yoga as a means to salvation (the cessation of pain and suffering) though with minor differences here and there. Some of them (but not Mār.) incorporate principles of Haṭha-Yoga too in the discussion of Yoga.

Mār. traces the origin of duḥkha (pain) to association of the egoistic mind with the objects of the sense. One who is desirous of salvation must therefore arrest this association at the very outset.

ममेति मूलं दुःखस्य न ममेति च निर्वृतिः ॥

Mār. 35.6.

In the absence of this association the ego would be destroyed. Non-egoism would lead to happiness. But it is vairāgya (detachment) that brings into view the drawbacks (of association). Detachment sprouts up from knowledge; knowledge precedes detachment.

निर्ममत्वं सुखायैव वैराग्याद्दोषदर्शनम् ।

ज्ञानादेव च वैराग्यं ज्ञानं वैराग्यपूर्वकम् ॥

Mār. 36.4.

It is this same association (identification) that is mentioned by Patañjali in the sūtras:

दृष्टदृश्ययोः संयोगो हेयहेतुः । YS. II. 17.

स्वस्वामिशक्तयोः स्वरूपोपलब्धिहेतुः संयोगः ॥

YS. II. 23.

Patañjali mentions Avidyā (want of true knowledge) as the cause of saṁyoga and also prescribes vivekakhyaṭi (proper discrimination or discriminatory knowledge) as the only means to destroy it. For Patañjali's 'vivekakhyaṭi' the term used by Mār. is 'saṁyagjñāna', true knowledge.

Yoga or union with Brahman is described by Mār. as

ज्ञानपूर्वो वियोगो योऽज्ञानेन सह योगिनः ।  
सा मुक्तिर्ब्रह्मणा चैक्यमनैक्यं प्राकृतैर्गुणैः ॥

Mār. 36.1.

i.e. a yogi's removal of ignorance by the attainment of knowledge is 'mukti' (salvation): this is union with Brahma and disassociation from the qualities of nature. Yoga is the means of salvation and is accomplished by means of true knowledge. cf.

मुक्तिर्योगात्तथा योगः सम्यग्ज्ञानान्महीपते ॥

Mār. 36.2.

The yogi, according to Mār., must at the very outset conquer the ātman which is difficult to be subdued. The means to the same are Prāṇāyāma, Dhāraṇā, Pratyāhāra, etc. which are described in detail. This does not mean that the Yamas and Niyamas which form the first two aṅgas of Pātañjala - Yoga have no place in the yoga described by Mār. The Yamas (restraints) and Niyamas (observances) are basic to all yogis (excepting perhaps the Tāntrikas) and as such are included by the Mār. also in its enumeration of the principles of conduct that should guide a Yogī.

### Yama and Niyama.

According to Amarakośa, Yamas and Niyamas are the obligatory actions and nonobligatory actions respectively. cf.

शरीरसाधनापेक्षं नित्यं यत्कर्म तद्यमः ।  
नियमस्तु स यत् कर्म नित्यमागन्तुसाधनम् ॥

- Amarakośa Kāṇḍa II. Brahmavarga.

i.e. Yamas are obligatory actions depending upon the body as the means for being carried out, whereas Niyamas are acts which are not obligatory and which do not depend upon external aids for their performance.

The YS. II. 29 enumerates the eight aṅgas of yoga as

यमनियमासनप्राणायामप्रत्याहार-  
धारणाध्यानसमाधयोऽष्टाङ्गानि ॥

Further, Patañjali uses the terms 'Yama' and 'Niyama' in a technical sense and defines them as:

अहिंसासत्यास्तेयब्रह्मचर्यापरिग्रहाः यमाः । YS. II.30 .

शौचसन्तोषतपःस्वाध्यायेश्वरप्रणिधानानि नियमाः ॥

YS. II.32.

The BDS uses the two terms mahāvratā (greater vow) and upavratā (lesser vow) for the terms 'Yama' and 'Niyama' respectively and also mentions the five vows. ef.,

भिक्षोर्हि द्विविधानि व्रतानि भवन्ति । महाव्रतान्युप-  
व्रतानि च । तत्र महाव्रतान्याचष्टे । अहिंसासत्यमस्तैत्यं  
मैथुनस्य च वर्जनं त्याग इत्येव ॥ - BDS II. 10.18.2.

The Purāṇas and the Yogopaniṣads also mention the Yamas and the Niyamas. The Vā. substitutes the term 'vrata' for the term 'mahāvratā' used by the BDS and mentions the 'vratas' to be followed by a Bhikṣu as

अस्तेयं ब्रह्मचर्यं च अलोभस्त्याग एव च ।  
व्रतानि चैव भिक्षूणामहिंसा परमार्थितः ॥  
Vā. 16.17.

Following Vā, Mār. also uses the term 'vrata' and enumerates them as

अस्तेयं ब्रह्मचर्यं च त्यागोऽलोभस्तथैव च ।  
व्रतानि पञ्च भिक्षूणामहिंसापरमाणि वै ॥  
Māi. 38.16

Asteya (non-stealing), brahmacharya (celibacy), tyāga (renunciation), alobha (absence of greed) and ahimsā (non-injury) are the five vows to be observed by the Bhikṣus. This enumeration of 'vratas' made by Vā and Mār is a blend of both Baudhāyana and Patañjali. It differs with the Yamas of Patañjali in two respects— 1) whereas Patañjali's 'aparigraha' means only non acceptance, 'tyāga' is abandonment of all possessions. Tyāga seems to have been borrowed by Vā. and Mār. from the BDS. Though the Mār does not include 'satya' among the vows, it is found mentioned elsewhere while dealing with the code of conduct of a Yati (infra). Alobha (noncovetousness) is newly introduced among the vows. Though it is found mentioned among the vows in Vā, the same is mentioned neither by Baudhāyana nor by Patañjali. Still Baudhāyana, Patañjali, Mār. and Vā. have a common factor on which their Yamas are based in as much as the performance of these Yamas does not require any external aid; they are more mental than physical.

The Amarakośa defines Niyama as

नियमस्तु स यत् कर्म नित्यमागन्तुसाधनम् ।

Amarakośa Kāṇḍa II, Brahmavarga

The Kṣīrasvāmī ṭikā explains it as:

आगन्तु बाह्यं मृज्जलादिसाधनं यत्रेति । अत एव कृत्रिमं कर्म यदाह शौच-  
सन्तोषनियमाः ॥

Thus Niyamas are those acts or deeds which are performed with some external aid like mud, water, etc. Patañjali mentions the Niyamas as śauca (cleanliness), santoṣa (contentment), tapas (austerities), svādhyāya (self-study) and īśvarapraṇidhāna (surrender to God). cf. YS. II.32 quoted above.

The BDS (II 18.2-3) enumerates the two classes of vows to be followed by a Bhikṣu, viz., mahāvratā and upavratā. The principles underlying this division seems to be the same as that of Patañjali in his division of Yamas and Niyamas. The Mahāvratas of Baudhāyana have been discussed above. The niyamas which he calls as upavratas are also five: cf.,

पञ्चैव उपव्रतानि भवन्ति । अक्रोधो गुरुशुश्रूषाऽप्रमादश्शौचमाहारशुद्धिश्चेति ॥

BDS. II. 10.18.3.

Akrodha (non-anger), guruśuśrūṣā (service to teacher), apramāda (cautiousness), śauca (cleanliness) and āhāraśuddhi (purity of diet) are the lesser vows.

Manu seems to have had knowledge of Yamas and Niyamas in their technical sense. Moreover Manu holds Yamas to be more important than the Niyamas. cf.

यमान् सेवेत सततं न नित्यं नियमान् बुधः ।

यमान्पतत्यकुर्वाणो नियमान् केवलान् भजन् ॥

Manu. IV 204.

i.e. One should constantly practise the Yamas but not so the Niyamas. He who always follows the Niyamas ignoring the Yamas, thereby causes his own downfall. In this, Manu seems to follow BDS in his classification of mahāvratas and upavratas, who is also followed by Patañjali. Among the five Niyamas of Patañjali, śauca is found mentioned even in BDS (quoted above). The second Yama of Patañjali namely 'santoṣa' is the positive aspect of the idea of 'akrodha' of Baudhāyana. Patañjali drops altogether the concept of 'apramāda' and 'āhāraśuddhi' mentioned in BDS and substitutes them with 'tapas' and 'svādhyāya'. A number of major Purāṇas like Vi, K, N, Sk, L, G and Ag more or less closely follow Patañjali in the enumeration of Niyamas. The Vā. and Mār. on the other hand seem to be more faithful to Baudhāyana than to Patañjali in the

enumeration of Niyamas. Mār. enumerates them while prescribing the code of conduct for yogīs. cf.,

अक्रोधो गुरुशुश्रूषा शौचमाहारलाघवम् ।  
नित्यस्वाध्याय इत्येते नियमाः परिकीर्त्तिताः ॥

Māv. 38. I T.

Though akrodha (non-anger) is not mentioned in Patañjali's Niyamas (wherein we find the positive aspect of it, viz. santoṣa) the same is found mentioned by Baudhāyana (supra). Similarly Guruśuśrūṣā (service to teacher or parents) is also found mentioned by Baudhāyana. Whereas Patañjali's Niyamas are based on self-effort, the idea of 'guruśuśrūṣā physically involves more than one person. Svādhyāya (self-study or vedic-study) and śauca (cleanliness) are also included by Patañjali among the Niyamas though the former i.e. svādhyāya is not mentioned by BDS (which has apramāda in its stead). Thus the Mār. enumeration of Niyamas seems to be a blend of the upavratas of BDS and Niyamas of Patañjali.

The BDS, Patañjali, Yāj (3.312) and the major Purāṇas (including Mār.) mention śauca among Niyamas (lesser vows). But the YY (1.50), VS (1.38), DU (I.6), TBU (32-33), VU (V. 12-13) and SU (I.1.4) include it under Yamas. cf.,

अहिंसा शौचमस्तेयं ब्रह्मचर्यं दयार्जवम् ।  
क्षमा घृतिर्मिताहारः शौचं त्वेते यमा दश ॥

YY. I. 50

अहिंसा सत्यमस्तेयं ब्रह्मचर्यं घृतिः क्षमा ।  
दयार्जवं मिताहारः शौचं चैवं यमा दश ॥

VS. I 38

अहिंसा सत्यमस्तेयं ब्रह्मचर्यं दयार्जवम् ।  
क्षमा धृतिर्मिताहारः शौचं चेति यमा दश ॥

DU. I. 6= TBU 32-33=VU. V. 12-13

तत्राहिंसा सत्यास्तेयब्रह्मचर्यदयार्जवक्षमा-  
धृतिर्मिताहारशौचं चेति यमा दश ॥

ŚU. I. 1.4

As to the desirability of śauca, N. states:

शौचे यत्नः सदा कार्यः शौचमूलो द्विजो स्मृतः ।

शौचाचारविहीनस्य समस्तं कर्म निष्फलम् ॥

N. 27.8.



Thus though several texts like YY, VS, etc. uphold the idea of śauca, the BDS followed by Patañjali and Yāj include it only among the lesser vows. Though Mār. does not explain the Niyamas it speaks of the two kinds of śauca viz. bāhya (external) and ābhyantara (internal) the performance of which must necessarily precede Pratyāhāra (withdrawal of senses) : cf.,

सबाह्याभ्यन्तरं शौचं निष्पाद्याकण्ठनाभितः ।

पूरयित्वा बुधो देहं प्रत्याहामुपक्रमेत् ॥

Mār 36.34-35.

According to GDS. (VIII. 24) śauca is one of the ātmaguṇas. The BDS and Smṛtis like those of Hārīta, Dakṣa etc., and the major Purāṇas divide śauca into two viz. bāhya (external) and āntara (internal), the first being effected with water and earth whereas the latter is purity of sentiments. cf.

शौचं च द्विविधं प्रोक्तं बाह्यमाभ्यन्तरं तथा ।

मृज्जलाभ्यां स्मृतं बाह्यं भावशुद्धिस्तथान्तरम् ॥

Dakṣa V. 3.

मनःशुद्धिरन्तश्शौचम् .

BDS. I 5.8.3.

Major Purāṇas like N and L dwell much upon this topic in order to emphasize the relative importance of the latter type of śauca viz., mental. In so far as śauca requires some external aids like water or loose earth for its performance, it is only fit to consider it a Niyama (lesser vow) as is done by Baudhāyana, Yāj and major Purāṇas and not as a Yama (major vow) which texts like YY, VS, DU, TBU, VU and SU consider it to be. For, according to Amarakośa (quoted above) the acts which are not obligatory and which depend upon external aid for their performance are Niyamas.

Āhāralāghava is another Niyama mentioned by Mār. Though Patañjali does not mention it in his Niyamas, BDS mentions āhārasuddhi (cf. BDS quoted above). Govindasvāmin explains it as:

आहारदोषोऽपि त्रिधा भवति जात्याश्रयनिमित्तै-

र्लसुनपतितकेशादिभिस्तदाहारशुद्धिः ॥

Dakṣa V. 3.

Impurity of food is caused in three ways viz., jāti (on account of its being a particular species forbidden as such in smṛtis) like lasuna (garlic), āśraya (contact) like that of a patita and nimitta (by reason of an occasion or chance reason) viz, that defiled by hair, etc. One who avoids food forbidden for the above reasons is said to be pure so far as diet is

concerned. But āhāraiāghava of Mār. seems to mean moderate diet, limited food or temperance in diet which is variously mentioned by the Smṛtis, Yoga-Upaniṣads and haṭha-Yoga texts as laghvāhāra, mitāhāra, or mitabhojana. cf.

मिताहारो नाम चतुर्थांशवशेषकसुस्निग्धमधुराहारः ।

ŚU I. 1.13.

i.e. mitāhāra is eating well lubricated and sweet food, leaving a quarter (of the stomach) empty. Though mitāhāra was reckoned to be a Yama neither in aṣṭāṅga-yoga of Patañjali nor in the major Purāṇas and nor even in the majority of Yogopaniṣads, it is reckoned not only as Yama (VS, DU and HP) but as the most important one by some of the texts. cf.,

तत्राहिंसासत्यास्तेयब्रह्मचर्यदयार्जवक्षमाधृति-

मिताहारशौचानि चेति यमा दश ॥ ŚU. I. 1.4.

लघ्वाहारो यमेष्वेको मुख्यो भवति नेतरः ॥ YTU. 28.

अहिंसा सत्यमस्तेयं ब्रह्मचर्यं क्षमा धृतिः ।

दयार्जवमिताहाराः शौचं चैव यमा दश ॥ HP. I. 55.

Patañjali's Yamas and Niyamas had some underlying principle; no such principle seems to have been adhered to by the above-quoted texts which include śauca and mitāhāra in the Yamas. Patañjali's Yamas do not require any extraneous aid for their performance. But mitāhāra and śauca (which are included among the Yamas by the above texts) involve some extraneous aid for their observance. Still, the texts quoted above show that there was a tradition which not only included mitāhāra among the Yamas but also considered it to be the most important of the Yamas. Similarly, YTU, Hārīta quoted in Kṛtyakalpataru (Gṛhasthakāṇḍa 303) and Dattātreya Yogaśāstram are the only texts that include ahiṁsā among the Niyamas and consider it as the most important of them whereas an overwhelming majority of texts following the example shown by Baudhāyana and Patañjali consider it to be one of the Yamas.

### Āsana

Patañjali defines āsana as a posture of the body which could be maintained with ease for a prolonged period., cf.

स्थिरसुखमासनम् ॥ YS. II. 46.

Almost all Yoga treatises maintain that the aspirant must be seated in a particular posture. Though later Yoga works name several Āsanas, Mār. names only three of them which are mentioned by other yoga works as the most important. Mār. states that the aspirant may adopt any appropriate Āsana like the Padma or Svastika or Ardhāsana. cf.

युञ्जतश्च सदा योगी यादृग्विहितमासनम् ।  
 पद्ममर्धासनं चापि तथा स्वस्तिकमासनम् ।  
 आस्थाय योगं युञ्जीत कृत्वा च प्रणवं हृदि ॥

Mār. 36:27-28.

Nothing more is said about the Āsanas.

### Prāṇāyāma.

Mār. defines Prāṇāyāma as follows:

प्राणानामुपसंरोधात्प्राणायाम इति स्मृतः ॥

-Mār. 36.40.

Prāṇāyāma is so called because Prāṇas are restrained. The restraint of Prāṇa and Apāna is called Prāṇāyāma. The successful restraint of Prāṇa is the first process which must be perfected by an aspirant. cf.

प्रथमं साधनं कुर्यात्प्राणायामस्य योगवित् ।  
 प्राणायामनिरोधस्तु प्राणायाम उदाहृतः ॥

-Mār. 36.12.

Depending upon the time taken by Prāṇāyāma it is divided into three types viz. laghu (mild), madhyama (medium) and uttama (intense). The Prāṇāyāma of twelve mātrās in duration is called laghu; of twenty four mātrās madhyama and of thirtysix, uttama (intense). A mātrā (unit of time) is duration of the winking of eye. cf.

लघुमध्येत्तरीयाख्यः प्राणायामस्त्रिधोदितः ।  
 तस्य प्रमाणं वक्ष्यामि तदलर्कं शृणुष्व मे ॥  
 लघुर्द्वादशमात्तस्तु द्विगुणः स तु मध्यमः ।  
 त्रिगुणाभिस्तु मात्राभिरुत्तमः परिकीर्तितः ॥  
 निमिषोन्मेषणे मात्रा कालो लघ्वक्षरस्तथा ॥

-Mār. 36.13-15.

By these three categories of Prāṇāyāma the yogī is said to overcome perspiration, agitation, and dejection. cf.

प्रथमेन जयेत्स्वेदं मध्यमेन च वेपथुम् ।  
 विषादं हि तृतीयेन जयेद्दोषाननुक्रमात् ॥

-Mār. 36.16

All the faults of a yogī are burnt up by the performance of Prāṇāyāma cf.

प्राणायामेन युक्तस्य विप्रस्य नियतात्मनः ।  
सर्वे दोषाः प्रणश्यन्ति सत्त्वस्थश्चैव जायते ॥

-Vā. 10.90.

Regarding the definition of Prāṇāyāma, the division of Prāṇāyāma into three categories depending upon its duration, etc. both Vā. and Mār. are of identical views.

Neither Patañjali nor any of the Haṭha texts speak of the four states of Prāṇāyāma mentioned by Mār. viz. Dhvasti, Prāpti, Saṁvit and Prasāda. When the fruits of good and bad action die away and the mind attains pellucidity, it is called 'dhvasti' (cessation of consequences of action); when the aspirant continuously resists his desires of this world and of the other, like those of covetousness (greed) and infatuation (delusion), that is 'prāpti' which is ever-lasting; when the aspirant by dint of his knowledge perceives the past and future, remotely concealed meanings of the moon, sun, stars and planets, that state is called 'saṁvid'; that state in which the mind, five vāyus, the sense organs and their objects become serene, is called 'prasāda'<sup>1</sup>.

Though Mār. considers them to be four states of Prāṇāyāma these seem to be the result of Prāṇāyāma for, the Vā. which has similar text regards the four viz. śānti, praśānti, dīpti and prasāda as the fruits of prāṇāyāma. cf.

अत ऊर्ध्वं प्रवक्ष्यामि प्राणायामप्रयोजनम् ।  
फलं चैव विशेषेण यथाऽहं भगवान् प्रभुः ॥  
प्रयोजनानि चत्वारि प्राणायामस्य विद्धि वै ।  
शान्तिः प्रशान्तिर्दीप्तिश्च प्रसादश्च चतुष्टयम् ॥

-Vā. 11.3-4

1. श्रूयतां मुक्तिफलदं तस्यावस्थाचतुष्टयम् ॥  
ध्वस्तिः प्राप्तिस्तथा संवित्प्रासादश्च महीपते ।  
स्वरूपं शृणु चैतेषां कथमानमनुक्रमात् ॥  
कर्मणामिष्टदुष्टानां जायते फलसंक्षयः ।  
चेतसोपकषायत्वं यत्र सा ध्वस्तिरुच्यते ॥  
ऐहिकामुष्मिकान् कामान् लोभमोहात्मकान्स्वयम् ।  
निरुध्यास्ते सदा योगी प्राप्तिः सा सार्वकालिकी ॥  
अतीतानागतानर्थान्विप्रकृष्टतिरोहितान् ।  
विजानातीन्दुसूर्यर्क्षग्रहाणां ज्ञानसम्पदा ॥  
तुल्यप्रभावस्तु यदा योगी प्राप्नोति संविदम् ।  
तदा संविदिति ख्याता प्राणायामस्य सा स्थितिः ॥  
यान्ति प्रसादं येनास्य मनः पञ्च च वायवः ।  
इन्द्रियाणीन्द्रियार्थाश्च स प्रसाद इति स्मृतः ॥

-Mār. 36.2-26.

As stated earlier these four terms are not seen used by Patañjali or by the Major Purāṇas. But some of the results of Prāṇāyāma mentioned by Vā. and Mār. are mentioned by Patañjali as the results proceeding from saṁyama. cf. III. 26-28.

By constant practice of Prāṇāyāma the Prāṇa of the yogī obeys his command and is led forth by him as he pleases just as the mahout leads an intoxicated but tamed elephant. cf.

वश्यं मत्तं यथेच्छातो नागं नयति साधितम् ।

-Mār. 36. 18.

Mār. is silent over the technique of performing Prāṇāyāma and also about the different types of Prāṇāyāma. Still it seems to refer to the Kumbhaka type of Prāṇāyāma when it states

सबाह्याभ्यन्तरं शौचं निष्पाद्याकण्ठनाभितः ॥

पूरयित्वा बुधो देहं प्रत्याहारमुपक्रमेत् ।

-Mār. 36. 34-35.

### Pratyāhāra.

Pratyāhāra has been defined by Patañjali as

स्वविषयासम्प्रयोगे चित्तस्य स्वरूपानुकार

इवेन्द्रियाणां प्रत्याहारः ॥ Ys. II. 54.

i.e. The withdrawal of the senses from their respective objects whereby they assume the original nature of citta is pratyāhāra.

The same has been defined by Mār. as

शब्दादिभ्यः प्रवृत्तानि यदक्षाणि यतात्मभिः ।

प्रत्याहियन्ते योगेन प्रत्याहारस्ततः स्मृतः ॥

Mār. 36.41-42.

i.e. Pratyāhāra is the withdrawal through Yoga of the senses which respond to sound and the like. The Nāradiya Purāṇa defines it as :

विषयेषु प्रसक्तानि इन्द्रियाणि मुनीश्वराः ।

समाहृत्य निगृह्णाति प्रत्याहारस्तु स स्मृतः ॥

-N. I. 32. 129.

i. e. that by which the senses absorbed in their objects are brought together and withdrawn is known as Pratyāhāra. How one should proceed to perform Pratyāhāra is also stated by Mār. cf.

इन्द्रियाणीन्द्रियार्थेभ्यः प्राणादीन्मन एव च ॥

निगृह्य समवायेन प्रत्याहारमुपक्रमेत् ॥

-Mār. 36.32-33.

i.e. Pratyāhāra must be performed by restraining the Prāṇa, manas and also the senses from their objects. One who has not subjugated the senses by means of Pratyāhāra, cannot practise concentration. cf.

अनिर्जित्येन्द्रियग्रामं यस्तु ध्यानपरो भवेत् ।  
मूढात्मानं च तं विद्याद्धानं चास्य न सिध्यति ॥

-N. I. 33.131.

i.e. He must be considered ignorant who engages himself in meditation without bringing the senses under control. He will never succeed in meditation.

On the other hand one who performs meditation only after bringing the senses under control is sure to succeed in Yoga cf.,

यस्तु प्रत्याहरेत् कामान् सर्वाङ्गानीव कच्छपः ॥  
सदात्मरतिरेकस्थः पश्यत्यात्मानमात्मनि ॥

-Mār. 36. 33-34.

i.e. one who withdraws all the wishes (of the senses) like the tortoise withdraws its limbs, and remains aloof enjoying the bliss of one's own soul, surely perceives the ātman within one's own self.

All these aṅgas of Yoga beginning from Yamas and ending with Pratyāhāra are aimed at controlling the body, prāṇa and senses. The last three aṅgas viz. Dhāraṇā, Dhyāna and Samādhi of the aṣṭāṅga-Yoga of Patañjali are aimed at controlling the mind.

### **Dhāraṇā, dhyāna, Samādhi.**

The Mār. defines Dhāraṇā as

धारणेत्युच्यते चेयं धार्यते यन्मनो यया ॥

-Mār. 36. 41.

i. e. "that by which the mind is held (arrested or restrained) is called Dhāraṇā. According to G, Dhāraṇā is steadiness of mind. cf.

धारणा मनसो धृतिः ॥ G. I. 49. 35.

Manu, Dakṣa and Śaṅkha refer to Dhāraṇā. The Gītā uses two terms Dhṛti and Dhāraṇā. Though the Yogadhāraṇā mentioned in Gītā is a more complicated process,<sup>2</sup> steadiness of the mind seems to be the main performance meant by the term dhāraṇā."

Patañjali defines it as

देशबन्धश्चित्तस्य धारणा ॥

Ys. III.1.

2. cf. My paper titled Dhāraṇā published in "Vimarśa" - Vol. I part I. 1972.

i. e., "Dhāraṇā is the fixation or steadiness of mind in some place or object". Dhyāna according to him is contemplation on the same object of the exclusion of others (or without interruption). cf.

तत्र प्रत्ययैकतानता ध्यानम् ॥

Ys. III. 2.

Thus the same object served for both Dhyāna, the intensity alone increasing. But some of the Major Purāṇas and some Yoga-Upaniṣads give a peculiar definition of Dhāraṇā cf.

तथा द्वादशमात्रस्तु प्राणायामो विधीयते ।

धारणा द्वादशायामो योगो वै धारणाद्वयम् ॥

-Vā. 11-21-22

Prāṇāyāma is of the duration of twelve mātrās. Dhāraṇā is of the duration of twelve Prāṇāyāmas and Yoga (i.e. Dhyāna and Samādhi) is of the duration of two Dhāraṇās.

धारणा द्वादशायामा ध्यानं द्वादश धारणाः ।

ध्यानं द्वादशकं यावत्समाधिरभिधीयते ॥

-Ag. 375.4.

i.e., Dhāraṇā is (of the duration) of twelve Prāṇāyāmas, Dhyāna of twelve Dhāraṇās: that which is of twelve Dhyānas is known as Samādhi.

Mār. follows Vā. and defines Dhāraṇā and Yoga (meditation and concentration) more or less in a similar vein. cf.

प्राणायामा दश द्वौ च धारणा साऽभिधीयते ।

द्वे धारणे स्मृते योगे योगिभिस्तत्त्वदर्शिभिः ॥

-Mār. 36. 35-36.

i.e., Dhāraṇā is of the duration of twelve Prāṇāyāmas and Yoga is of the duration of two dhāraṇās. All these definitions are based on the time factor alone and not on the intensity of contemplation. Thus whereas in the YS the difference between Dhāraṇā and Dhyāna is qualitative, in Mār (Vā. and Ag. ), the difference is quantitative.

Moreover Patañjali does not specify the objects or places on which the mind is to be fixed. The object could be external to the body. But Vā. (11. 26-28) and Mār (26. 44-45) speak of Dhāraṇā in places like the navel, heart, throat, chest, face, tip of nose, eye, the space in between the eyebrows, centre of the head and a little above that, the last being the highest. type. cf.

प्राङ्नाभ्यां हृदये चाथ तृतीये च तथोरसि ।

कण्ठे मुखे नासिकाग्रे नेत्रभ्रूमध्यमूर्धसु ।

किञ्च तस्मात्परस्मिंश्च धारणा परमा स्मृता ॥

Mār. 36.44-45.

All these ten places (spots) on which the yogī is directed to fix his mind seem to be regions of the body.

The Śāntiparvan (cr. ed. 228. 13-15) mentions seven Dhāraṇās cf.,

सप्त यो धारणा कृत्स्नाः वाग्यतः प्रतिपद्यते ।

पृष्ठतः पार्श्वतश्चान्या यावत्यस्ताः प्रधारणाः ॥

क्रमशः पाथिवं यच्च वायव्यं खं तथा पयः ।

ज्योतिषो यत्तदैश्वर्यमहङ्कारस्य बुद्धितः ॥

अव्यक्तस्य तथैश्वर्यं क्रमशः प्रतिपद्यते । Śānti. 228. 13-15

The seven Dhāraṇās mentioned here are of the five elements viz., earth, air, ether, water and light and of ahaṅkāra and buddhi.

The yogī is said to attain success over the elements by performing Dhāraṇa over these one by one.

The Vā. and Mār. also describe the seven Dhāraṇās. According to Mār. the seven subtle dhāraṇās are those of earth, water, fire (light), air, ether, manas and intellect; by contemplation on these subtle elements the yogī comprehends the subtlety of these and relinquishes flavour, taste, form, touch and the activity of sound (of earth, water, fire, wind and the sky respectively), and his mind becomes subtle; he gains and relinquishes the seven subtle things after which there is no retrogression; he proceeds to supreme bliss<sup>3</sup>.

Vā. (12.17-28) holds similar views.

Vā. (11. 36-55) and Mār. (36.52-61) also prescribe Dhāraṇās, curative in nature. Thus Mār.<sup>4</sup> prescribes curative Dhāraṇās for diseases

3. सूक्ष्मास्तु धारणाः सप्त भूराद्या मूर्ध्नि धारयेत् ।  
धरित्रीं धारयेद्योगी तत्सौक्ष्म्यं प्रतिपद्यते ॥  
आत्मानं मन्यते चोर्वीं तद् गन्धं च जहाति सः ।  
तथैवाप्सु रसं सूक्ष्मं तद्वद् रूपं च तेजसि ॥  
स्पर्शं वायौ तथा तद्वद्विभ्रतस्तस्य धारणाम् ।  
व्योमनः सूक्ष्मां प्रवृत्तिं च शब्दं तद्वज्जहाति सः ॥  
मनसा सर्वभूतानां मनस्याविशते यदा ।  
मानसीं धारणां विभ्रन्मनः सूक्ष्मं च जायते ॥  
तद्वद् बुद्धिमशेषाणां सत्त्वानामेत्य योगवित् ।  
सम्यग् विज्ञाय योऽलर्कं तस्यावृत्तिर्न विद्यते ॥  
एतासां धारणानां तु सप्तानां सौक्ष्म्यमात्मवान् ।  
दृष्ट्वा दृष्ट्वा ततः सिद्धिं त्यक्त्वा त्यक्त्वा परां ब्रजेत् ॥ Mār. 37. 17-23.

4. विघ्नाय तस्य वै दोषा जायन्ते तन्निबोध मे ।  
बाधिर्यं जडता लोपः स्मृतेर्मूकत्वमन्धता ॥  
ज्वरश्च जायते सद्यस्तत्तदज्ञानयोगिनः ।  
प्रमादाद्योगिनो दोषा यद्येते स्युश्चिकित्सितम् ॥  
तेषां नाशाय कर्तव्यं योगिनां तन्निबोध मे ।  
स्निग्धां यवागूमत्युष्णां भुक्त्वा तत्रैव धारयेत् ॥  
वातगुल्मप्रशान्त्यर्थमुदावर्ते तथोदरे ।  
यवागूं वापि पवनं वायुग्रन्थिं प्रतिक्षिपेत् ॥  
तद्वत्कम्पे महाशैलं स्थिरं मनसि धारयेत् ।



like vātagulma (gout or rheumatism), (g-) udāvartta (disease of bowels), kampa (tremor), mūkatva (dumbness), bādhīrya (deafness), smṛtilopa (lapse of memory), etc. In the case of gout or rheumatism he must eat well-lubricated and warm rice-gruel and practise dhāraṇā. In case of disease of bowels the yogī must eat rice gruel and curd and regulate the wind (and practise dhāraṇā on the forehead). Tremor must be cured by dhāraṇā on a mountain (which is stable), dumbness by fixing the mind on the faculty of speech and deafness by dhāraṇā on the ear, fever by a cooling thought and cold by a heating thought. Dhāraṇā on wind and fire which pervade heaven and earth is said to cure a yogī from the evil effects caused by a non-human being. In case a non-human being enters the body of a yogī, he must burn it by Dhāraṇā of wind and fire. By these means the yogī must protect himself. Patañjali does not refer to Dhāraṇās of curative nature.

The aspirant might face some obstacles<sup>5</sup> in the form of his worldly desires such as for woman, fruit of dāna, knowledge, riches, heaven, overlordship of gods, longevity, power to walk in air, on the surface of water or through blazing fire or in the form of fruits of śrāddha, dāna, worship of gods, etc. performed by him. The yogī must with effort

विघाते वचसो वाचं वाधिर्ये श्रवणेन्द्रियम् ॥  
 यथैवाग्नफलं ध्यायेत्तृष्णात्तो रसनेन्द्रियम् ।  
 यस्मिन्मस्मिन्नरुजा देहे तस्मिंस्तदुपकारिणीम् ॥  
 धारयेद्धारणामुष्णे शीतां शीते च दाहिनीम् ।  
 कीलं शिरसि संस्थाय काष्ठं काष्ठेन ताडयेत् ॥  
 लुप्तस्मृतेः स्मृतिः सद्यो योगिनस्तेन जायते ।  
 द्यावापृथिव्यौ वाय्वग्नी व्यापिनावपि धारयेत् ॥  
 अमानुषात्सत्त्वजाद्वा बाधास्त्विति चिकित्सितम् ।  
 अमानुषं सत्त्वमन्तर्योगिनं प्रविशेद्यदि ॥  
 वाय्वग्निधारणेनैव देहसंस्थं विनिर्देहेत् ।  
 एवं सर्वात्मना रक्षा कार्या योगविदा नृप ॥

-Mār. 36. 52-61.

5. उपसर्गा प्रवर्तन्ते दृष्टे ह्यात्मनि योगिनः ।  
 ये तांस्ते संप्रवक्ष्यामि समासेन निबोध मे ॥  
 काम्याः क्रियास्तथा कामान्मानुषानभवाञ्छति ।  
 स्त्रियो दानफलं विद्यां मायां कुप्यं धनं दिवम् ॥  
 देवत्वममरेशत्वं रसायनवयःक्रियाम् ।  
 मरुत्प्रपतनं यज्ञं जलाग्रावेशनं तथा ॥  
 श्राद्धानां सर्वदानानां फलानि नियमांस्तथा ।  
 तथोपवासात्पूर्त्तच्च देवताभ्यर्चनादपि ॥  
 तेभ्यस्तेभ्यश्च कर्मभ्य उपसृष्टोऽभवाञ्छति ।  
 चित्तमित्थं वर्तमानं यन्नाद्योगी निवर्तयेत् ॥  
 ब्रह्मसंगि मनः कुर्वन्नुपसर्गात्प्रमुच्यते ।

-Mār. 37. 1-6 a

retrieve his mind from such thoughts and direct it to contemplation on Brahman whereby he would be freed from the obstacles.

Mār<sup>6</sup> names five other hindrances to yoga viz., Prātibha (Pratibhā according to Vā), Śrāvaṇa, Daiva (Devadarśanam according to Vā), Bhrama and Āvarta and describes them as follows:

When the meaning of the Veda, Kāvya and Śāstra and all other lores like śilpa become clear to a yogī it is known as Prātibha which is hindrance to yoga accomplishment. Śrāvaṇa is the ability of a yogī to hear the sounds from a distance of a thousand yojanas and to understand the meaning of the sound. Daiva is the power of vision of a yogī in perceiving the eight celestials (the deities of the quarters ?) around him. When the mind of a yogi who has abandoned all customs, wanders without any support, it is known as Bhrama. Āvarta is the whirlpool of knowledge of a yogī which might destroy the citta caught in it (cf. YS. III. 37). Meditation on Brahman is the only means of removing these hindrances. Thus after curing the diseases and overcoming the drawbacks like moha the yogi progresses to the higher planes. In due course he acquires the eight superhuman powers viz., aṇimā, mahimā, etc. which are indicatory of his progress towards salvation. Finally by the fire of Yoga, the Yogī attains union with Brahman (cf. kaivalya of Patañjali) never to be distinguished again from Brahma, like fire thrown into fire or water added to water. cf.

यथाग्निरग्नौ संक्षिप्तः समानत्वमनुब्रजेत् ।  
तदाख्यस्तन्मयो भूतो न गृह्येत विशेषतः ॥  
परेण ब्रह्मणा तद्द्वत्प्राप्यैक्यं दग्धकिल्बिषः ।

6. उपसर्गैर्जितैरिभिरुपसर्गास्ततः पुनः ॥  
योगिनः संप्रवर्तन्ते सात्त्वराजसतामसाः ।  
प्रातिभः श्रावणो दैवो भ्रमावर्तो तथापरौ ॥  
पञ्चैते योगिनां योगविघ्नाय कटुकोदयाः ।  
वेदार्थाः काव्यशास्त्रार्था विद्याशिल्पान्यशेषतः ॥  
प्रतिभान्ति यदस्येति प्रातिभः स तु योगिनः ।  
शब्दार्थानखिलान्वेत्ति शब्दं गृह्णाति चैव यत् ॥  
योजनानां सहस्रेभ्यः श्रावणः सोऽभिधीयते ।  
समन्ताद्दीक्षते चाष्टौ स यदा देवयोनयः ॥  
उपसर्गं तमप्याहुर्दैवमुन्मत्तवद् बुधाः ।  
भ्राम्यतो यन्निरालम्बं मनो दोषेण योगिनः ॥  
समस्ताचारविभ्रंशाद् भ्रमः स परिकीर्तितः ।  
आवर्त इव तोयस्य ज्ञानावर्तो यदाकुलः ॥  
नाशयेच्चित्तमावर्त उपसर्गः स उच्यते ।

योगी याति पृथग्भावं न कदाचिन्महीपते ॥

यथा जलं जलेनैक्यं निक्षिप्तमुपगच्छति ।

तथात्मा साम्यमध्येति योगिनः परमात्मनि ॥ Mār. 37-40-42

The Mār. also utilizes one chapter (ch. 38) in prescribing the code of conduct for a yogī. The principles that constitute this code are the same laid down for a Bhikṣu by the ancient Smṛtis and Dharmaśūtras .

Yoga texts are generally silent over the portents from which a yogī can infer the time of his death. Works like Vā, Brahmavaivarta Purāṇa, (Gaṇeśakhaṇḍa, ch. 34. 10-40) Pāñcarātrīya Paramasaṃhitā (ch. 11. 27-63), VS, etc. describe the external signs from which death can be inferred and the description given by Mār. (40.1-58) generally conforms to the descriptions given by the works mentioned above.

#### ABBREVIATIONS:

Ag	-	Agnipurāṇa
BDS	-	Baudhāyana Dharmasūtra
Daksa	-	Dakṣasmṛti
DU	-	Darśanopaniṣad
G	-	Garuḍapurāṇa
HP	-	Haṭhapradīpikā Ed. By M. L. Gharote and Parimal Devnath. Pub. Lonavla Yoga Institute, Lonavla - 41.
K	-	Kūmapurāṇa
L	-	Liṅgapurāṇa
Manu	-	Manusmṛti
Mār	-	Mārkaṇḍeyapurāṇa
N	-	Nārādīyapurāṇa
Sk	-	Skandapurāṇa
SU	-	Śāṇḍilyopaniṣad
TBU	-	Trisikhibrahmaṇopaniṣad
Va	-	Vāyupurāṇa
Vi	-	Viṣṇupurāṇa
VS	-	Vasiṣṭhasaṃhitā-yogakāṇḍa
VU	-	Vārāhopaniṣad
Yaj	-	Yajñavalkyasmṛti
YS	-	Yogasūtra of Patañjali
YTU	-	Yogatattvopaniṣad
YY	-	Yogayājñavalkya

# CONCEPT OF CRIME AND PUNISHMENT IN PURĀṆAS

By

GANGADHAR PANDA

[ पुराणेषु महाभारते कौटिल्यार्थशास्त्रे च अपराधानां तन्निमित्तकराजदण्डस्य च विवरणं प्राप्यते । अपराधानामस्ति पापसंज्ञाऽपि पुराणादिग्रन्थेषु । अपराधानां नाना प्रकाराः तदनुसारेण च दण्डानामपि विविधप्रकाराः यथा मृत्युदण्डः, अङ्गच्छेदोऽङ्ग-वैरूप्यकरणं च, अर्थदण्डः कारापातनं च वर्णिताः सन्ति । राजदण्डातिरिक्तं विविधापराधकृते विविधप्रायश्चित्तानां शापादीनां च वर्णनं प्राप्यते । अत्र एतेषां विषयाणां संक्षेपतो वर्णनं कृतम् । ]

The purāṇic concept of crimes and punishments are different to some extent from what have been described in the Arthaśāstra. In the Arthaśāstra, the king is considered as monarch who works for the happiness and welfare of his subjects. He takes active role in the administration. Sometimes, he gets the administration controlled by his ministers who are responsible to him. Special cases are decided by the king only with the help of *sabhā*.

Punishment was given according to the level of crimes committed. This may broadly divided into five categories :

## 1. Fine

Fine starts with two *paṇas* and varies to any amount. Even fines were taken in lieu of corporal punishment and mutilation of limbs.

## 2. Mutilation of limbs

This type of punishment was given to set examples before such offenders who may not dare to commit the crime again. Theft at holy places was considered serious offence. In this case cutting of fingers or a fine of 54 *Paṇas* was prescribed. In case of adulterer a fine upto 1000 *paṇas* and for women cutting of ear and nose were ordered.<sup>1</sup>

## 3. Exportation from the kingdom

If the spies appointed by the king, detect somebody having unusual income and he advises the punishment according to the level of offence,

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1. Arthaśāstra

they were ordered banishment from the country. Similarly, if the secret persons are found dishonest, they are also given punishment to be exiled.<sup>2</sup>

#### 4. Punishment for transgression (अतिचार दण्ड)

The chapter 13, (*Adhikaraṇa*) deals this subject which consists punishment taking food or drink not allowed for their caste. Outraging the modesty of a lady was considered as serious crime and he got the punishment of cutting his generating organ.<sup>3</sup>

#### 5. Capital punishment

Threatening to kill, attacking a person and a robbery on highways, etc. were considered serious crime for which death sentence without torture was prescribed in chapter 4.11. This type of punishment was given before the public so that others were cautioned not to commit such crime.

Later, we find some revision of punishment prescribed by Manu, Yājñavalkya, Śukra and Kāmandaka.

Like Dharmaśāstra, the purāṇic texts also deal with sins and expiations (*prāyaścitta*). Agnipurāṇa gives a detailed account on this. Broadly there are three kinds of sins - i. *mahāpātakas*, ii. *upapātakas*, iii. *atipātakas*. Here only *mahāpātakas* are dealt. In the beginning, Agnipurāṇa proclaims that one should do expiation for the sins committed knowingly or done inadvertently without any prior thinking of committing the same.

दण्डं कुर्यात् नृपो नृणां प्रायश्चित्तमकुर्वताम् ।  
कामतोऽकामतो वापि प्रायश्चित्तं कृतं चरेत् ।

Agni. 168/1

There are five kinds of *mahāpāpa* -

ब्रह्महत्या सुरापानं स्तेयं गुर्वङ्गनागमः ।  
महानिव पातकान्याहुः संयोगश्चैव तैः सह ॥

Agni. 168/24

##### i. Slaying of a brahmin (ब्रह्महत्या)

A man who slays a Brahmin ought to prepare a cottage in the forest and stay there for twelve years begging alm with any part of the dead body slain by him or his head. Later he has to blaze himself into the fire.

2. Ibid.

3. Ibid.

ततः प्रभृति पापानां प्रायश्चित्तं वदामि ते ।  
 ब्रह्महा द्वादशाब्दानि कुटीं कृत्वा वने वसेत् ॥  
 भिक्षेतात्मविशुद्ध्यर्थं कृत्वा शवशिरोध्वजम् ।  
 प्राश्येदात्मानमग्नौ वा प्रसिद्धे त्रिरवाक्शिराः ॥<sup>4</sup>

## ii. Drinking of wine (सुरापानम्)

Drinking wine is considered as one of the greatest sins. For expiation he has to drink hot wine, the urine of the cow and water respectively according to his caste.

सुरां पीत्वा द्विजो मोहादग्निवर्णां सुरां पिबेत् ।  
 गोमूत्रमग्निवर्णं वा पिबेदुदकमेव वा ॥<sup>5</sup>

## iii. Theft of gold (सुवर्णस्तेयम्)

In this case the culprit should approach the king by admitting the sin. Thereafter the king kills him by an iron rod.

सुवर्णस्तेयकृद्विप्रो राजानमभिगम्य तु ।  
 स्वकर्म ख्यापयन् ब्रूयान्मां भवाननुशास्त्विति ।  
 गृहीत्वा मुसलं राजा सकृद्धन्यात्स्वयंगतम् ।  
 वधेन शुद्ध्यते स्तेयो ब्राह्मणस्तपसैव वा ॥<sup>6</sup>

## iv. Sexual relation with teacher's wife (गुरुतल्पगः)

Technically this is called "*gurutalpa*". Under this category, sister, wife of the teacher, wife of the brother and sister of the mother are counted. If one keeps sexual relations with them he is called *gurutalpaga*. The expiation prescribed for him is that he should cut his sexual organ along with testicle and walk on the street in south direction till death.

गुरुतल्पो निकृत्यैव शिश्नं च वृषणं स्वयम् ।  
 निधाय चाञ्जलौ गच्छेदनिपाताच्च नैर्ऋतिम् ॥<sup>7</sup>

Now a days we are very much careful for the preservation of environment. To maintain equilibrium in the environment, the scientists are advocating for plantation. Our ancient seer were much worried of deforestation. Therefore, cutting of tree for fuel was considered as an offence.

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4. Agnipurāṇam
  5. Ibid.
  6. Ibid.
  7. Ibid.

इन्धनार्थमशुष्काणां द्रुमाणां चैव पातनम् ।  
योषितां ग्रहणं चैव स्त्रीनिन्दकसमागमः ॥<sup>8</sup>

Besides, so many other minor sins and their expiations are dealt in Purāṇas. For non-vegetarians only five animals - śaśaka, sallakī, godhā, khaḍga, and kūrma are prescribed. Taking meats of other animals having five nails are considered as sins:

शशकः सल्लकी गोधा खड्गः कूर्मस्तथैव च ।  
भक्षया पञ्चनखाः प्रोक्ताः परिशेषाश्च वर्जिताः ।

### Curse ( शापः )

In so far crime is considered, curse given by the seers and sages to culprits are main aspects dealt in Purāṇas. The number of such incidents are hundreds. Few of them are narrated here.

#### i. Indra

Indra was several times cursed in different occasions. After destroying the chastity of Ahalyā he was cursed by Gautama. On account of which he had got the sin of thousand female organs in his body. Later he was called Sahasrākṣa. He had done many kind of expiations after killing *viśvarūpa* and *Vṛtra*.

#### ii. Brahmā

Once Brahmā and Viṣṇu went to see Śiva and saw a shining phallus before them. It was very big in size. To know the beginning and end of this both of them went to find downwards and upwards separately and returned without reaching the top and bottom. They pleased Śiva by penance who asked them to desire any boon. Brahmā asked Śiva to take birth as his son Śiva instead of giving boon cursed that no body would worship him for this extravagant desire. Viṣṇu asked that he should be servant at Śiva's feet. So Viṣṇu incarnated as Śiva's śakti.

#### iii. Dilīpa

Once Dilīpa had paid a visit to heaven. While returning he saw Kāmadhenu sleeping under the shade of Kalpavṛkṣa. He did not pay any regards as if he had not seen her. He was, thus, cursed by her that he would be childless. Later, under the advice of Vasiṣṭha he served her daughter Nandinī and was blessed with a child named Raghu.

8. Ibid.

#### iv. Rāvaṇa

Originally he was the gatekeeper of Vaikuṅṭha and he denied Sanatkumāra to meet Mahāviṣṇu. The hermit cursed him and his brothers that they had to take three births as *asuras*. Accordingly, they were born as Hiraṇyakaśipu and Hiraṇākṣa in Satya yuga and in second birth they were Rāvaṇa and Kumbhakarṇa. During this birth Rāvaṇa was further cursed by many seers and chaste women. In third birth, they were Śiśupāla and Dantavakra who were killed by lord Kṛṣṇa.

#### v. Śakuntalā

Śakuntalā was cursed by Durvāsā when she was in serious thinking for Duṣyanta and could not attend the sage begging alm. Later the curse was minimized that her husband could accept only after production of any token of recognition.

#### vi. Karṇa

Karṇa was cursed by his revered teacher Paraśurāma when he came to learn his lineage of *Kṣatriya* origin. Because, Paraśurāma had declined to teach any *kṣatriya*, Karṇa became a disciple saying he was from Brahmin origin. On account of the curse, he forgot his learning while fighting with Arjuna.

In this way, there are hundred of episodes of curse depicted in Purāṇas. Some curses are also minimized when it was known that the culprit had not committed the sin knowingly.

#### Naraka

According to Dharmaśāstra and Purāṇas the living beings, after death, get the place on the basis of their vices and virtues. Yama who is also called Dharma, has power to assess the virtues and vices of the people and assign suitable punishment. Sinners are sent to different narakas by Yama according to the nature and seriousness of their sins.

Manusmṛti refers to twenty one narakas while twenty eight narakas are mentioned in different Purāṇas. They are:

##### 1. Tamisram (तमिस्रम्)

Those who rob others of their wealth, wives, children, etc., are bound with ropes by Yama's servant and cast into the *naraka* known as Tamisram. Sinners are given sound beating until they faint.

##### 2. Andhatamisram (अन्धतमिस्रम्)

This is given to the wife and husband who take food after deceiving each other. The punishment is the same as that of tamisram except the beating.



### 3. Rauravam (रौरवम्)

Ruru is a kind of dreadful serpent. This naraka is called Raurava because there are plenty of rurus here. Those who enjoy other's property by cheating are sent to this naraka and they are also made serpents.

### 4. Mahauravam (महारौरवम्)

Those who deny the legitimate heirs are squeezed to death by these terrible serpents.

### 5. Kumbipākam (कुम्बीपाकम्)

This is a naraka for those who kill and eat birds and animals. The servants of Yama put the culprit in the boiled oil.

### 6. Kālasūtram (कालसूत्रम्)

The people who do not respect their parents and elders are given this punishment. They are kept in the unbearable heat.

### 7. Asitapatram (असितपत्रम्)

This is the hell for those who give up svadharma and accept paradharma. They are flogged by Yama's servants with whips made of Asitapatra (sharp-edged) sword leaves. Then they are stabbed with knives made of Asipatra.

### 8. Śūkaramukham (शूकरमुखम्)

In this hell, kings who neglect their duties and subjects are crushed to a pulp by beating until they fall down unconscious. When recovered they are given again the same punishment.

### 9. Andhakūpam (अन्धकूपम्)

Those who oppress Brāhmaṇas, gods and pors are given this hell. The sinners have to endure the constant attacks of the creatures like tigers and bears etc.

### 10. Kṛmibhojanam (कृमिभोजनम्)

The Brahmins who take their foods without worshipping gods and honouring the guests are thrown into this hell. In this *naraka* the insects and serpents eat the bodies of the sinners.

### 11. Taptamūr̥ti (तप्तमूर्ति)

Those who steal others gold, jewels, ornaments and money are cast into the furnaces which are built of iron and always hot with blazing fire.

### 12. **Sālmali** (शाल्मलि)

Those who have committed adultery are given this punishment. In this hell, the victim is asked to embrace red hot iron.

### 13. **Vajrakaṇṭakam** (वज्रकण्टकम्)

The people who are accustomed with unnatural intercourse with cows and other animals are given this punishment. Sinners are asked to embrace iron image full of diamond needles.

### 14. **Vaitaraṇī** (वैतरणी)

This is a hell for the kings who have violated the ordinance of Śāstra. Vaitaraṇī is a river filled with human excreta, urine and blood etc. There are various kinds of ferocious beasts in it. The sinners are thrown into this river and are attacked by these animals.

### 15. **Pūyodakam** (पूयोदकम्)

Brāhmaṇas and other who have done intercourse with the woman of low caste are thrown into a well full of excreta, urine, blood, phelgm etc.

### 16. **Prāṇarodham** (प्राणरोधम्)

The Brāhmaṇas who keep dogs and other animals and kill animals for food are given this punishment. Yama's servants cut the limbs with their arrows.

### 17. **Viṣāśnam** (विषाशनम्)

The people who perform yāga by killing cows are given punishment under the constant flogging of Yama's servants.

### 18. **Lālabhakṣam** (लालभक्षम्)

Lālabhakṣam is a sea of semen. Those lustful people who ask their wives to swallow semen are thrown to this sea for eating semen.

### 19. **Sārameyāśanam** (सारमेयाशनम्)

Those who had engaged themselves in poisoning food, mass slaughter and raining the country etc. are given the flesh of dogs as food in this hell.

### 20. **Avīci** (अवीचि)

The sinners who had given false witness and false swearing etc. are given this punishment. They are hurled into Avīci from a mountain. As soon as they fall into it they are smashed into dust.

### 21. **Ayaḥpānam** (अयःपानम्)

If the first three castes, i.e. Brāhmaṇa, Kṣatriya and Vaiśya indulge themselves in drinking *soma* and *surā* etc. are thrown into this hell and they had to drink melted iron in liquid form.

**22 Kṣāarakardamanam** (क्षारकरदमनम्)

The people who had insulted the noble persons are put into this *naraka*. Here the sinners are kept upside down and tortured in various ways.

**23 Rakṣobhakṣam** (रक्षोभक्षम्)

The meat eaters are given this punishment. All the living beings killed by meat-eaters before would have arrived here in advance. They would join together in attacking, biting and mauling these sinners.

**24 Śūlaprotam** (शूलप्रोतम्)

Those who have taken the life of others who have done no harm to them are thrown into Śūlaprotam hell. The sinners are fixed up on the top of the trident till they complete the period of punishment.

**25 Dandasūkam** (दन्दसूकम्)

People who persecute fellow creatures like venomous serpents are given this punishment. There are wild beasts and hooded serpents who eat the sinner alive.

**26 Vaṭārodham** (वटारोधम्)

The persons who persecute the creatures living on mountain-peaks, dense forests and in trunk of the trees are given this *naraka*. The sinners are tortured with fire, snake and poison, etc.

**27 Paryāvartanakam** (पर्यावर्तनकम्)

A man who denies food to a person who comes to his house at meal time and abuses him is sent to this *naraka*. His eyes are pierced with the beaks of cruel birds like crow and eagle etc.

**28 Sūcimukham** (सूचीमुखम्)

Miser and proud people who denies to spend money in bare necessities are sent to this hell. Those who do not repay the money borrowed by them are also given this *naraka*. The bodies of the sinners are continuously pierced with needles.

**Conclusion**

When we peep into Purāṇas we find the concept of crime and punishment is rather based on self-punishment. Broadly, we can divide this into three categories. Firstly, several expiations are prescribed for different sins. The society was governed by Dharma and the people were themselves doing expiations without any force by the rulers. Secondly, the

punishment was governed by curses not by the rulers but by the seers and sages. Thirdly, the punishment was thought after end of the life. Due to fear of the punishment after death people were forced not to commit any sin while living in this mundane world.

Crimes and punishment constitute a topic of Dharmaśāstra and Arthaśāstra. The Pūrāṇas however, have dealt with those topics in keeping with their all-encompassing encyclopaedic nature.

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## TWO INCORRECT PURĀṆA TEXTS

By

UPENDRA NATH ROY

[ पुराणेषु केषाञ्चित् पाठानां सम्यक् समीक्षणं पौर्वापर्यसंबन्धेन सम्यगर्थनिर्धारणं चावश्यकम् । विशेषतः ऐतिह्यनिर्धारणप्रसङ्गे अस्य महती आवश्यकता वर्तते । अस्मिन् निबन्धे लेखकेन प्रतिपादितं यत् उभयोरेतादृशपुराणपाठयोः समीक्षा आवश्यका यतः अनयोर्द्वयोः पाठाधारेण ऐतिह्यविद्वैभ्रान्तिरुत्पादिता । लेखकेन अस्या भ्रान्तेरत्र निरसनं कृतम् । ]

The prejudiced seek support for their pet theories often in obscure and incorrect texts. They ignore the obvious in pursuit of their bias. We find two texts in the Purāṇas which can not be supported by any internal evidence of the Purāṇas or external source. And yet, they provide stuff for controversy. They are as follows :

1. अष्टत्रिंशाधिका सम्यग् वर्षाणां शतपञ्चकम्<sup>1</sup>

((The Śuṅga rule in Magadha will last 538 years in the Kaliage).- J.Matsya

2. काण्वायना इमे भूमिं चत्वारिंशच्च पञ्च च ।  
शतानि त्रीणि भोक्ष्यन्ते वर्षाणां च कलौ युगे ॥<sup>2</sup>

(The Kāṇvāyanas will enjoy the earth for 345 years in the Kaliage). - Bhāgavata

The first of these statements has been eagerly picked by Mankad to esolve the problem of the three republics mentioned in the classical accounts. That is badly needed by him as he subscribes to the current misidentification of Palibothra with Pāṭaliputra. He argues that the word "republic" may mean a "kingless period" or "absence of imperial dynasty". Then he contends that there was "a period of foreign rule between the Mauryas and the Śuṅgas" and again foreigners overran the country in the intervening period between the Śuṅgas and the Kaṇvas.

Of the three republics mentioned by the classical authors, the time lengths of the two only are given as 300 and 120 years. Taken together,

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1. F. E. Pargiter, The Purāṇa Text of the Dynasties of the Kali Age (DKA), LONDON, 1913, Page 33, foot note 50 .
  2. De, p. 35, footnote 42.

they yield a total of 420 years and this is exactly what Mankad discovers in the first statement given above. Thus he observes the following about the conventional Purāṇas : "The usual figure for the Śuṅgas is 112 years and, as is pointed out by Pargiter (P.30), if we include months, then 118 years. Now J mt (J manuscript of Matsya) gives 538 years to the Śuṅgas (see pargiter's texts, P. 33, fn.50), i.e. exactly (538-118) 420 years more than the usual figure. This, I suggest, includes the 420 years of the kingless periods".<sup>3</sup>

K.D. Sethna agrees with the above with a modification. Thus, he remarks : "Mankad not reading Arian in the reverse order we have surmised, makes the post-Mauryas "republic" last 300 and the post Śuṅgas 120 years. We would have to go the other way around."<sup>4</sup> The third republic according to Sethna refers to the intervening period of 75 years between the end of the Andhras and the rise of the Guptas in 315 B.C.<sup>5</sup> Now let us see what happens if the first statement is taken for granted. Starting from the birth of Parikṣita in 3137 B.C. we have to allow 1000 years for the Bārhadhratha dynasty in Magadha, 138 years for the Pradyotas, 362 for the Śiśunāgas, 136 years for the Nandas and 538 years for the Śuṅgas and the two republics. That gives 826 B.C. for the beginning of the Kaṇva rule.

But if we admit the first statement, there is no justification for discarding the second one. Instead of assuming that the third republic lasted for 75 years only and followed the Andhra rule, we may well contend that it preceded the Andhra rule and followed the Kaṇvas. Its duration in that case would be not less than (345-45) 300 years because the Kaṇvas did not rule for more than 45 years.

The result will be quite disastrous for both Mankad and Sethna. The minimum figure for Andhra rule according to them is 411 years. According to the second statement the rule of the Andhras would not begin before  $826-345 = 481$  B.C. Nor would it end before  $481-411 = 70$  B.C. So the Guptas must come after 70 B.C.

Judging from the style of the Purāṇas, the statements appear quite aliens. The intervening periods are never added to the duration of a dynasty whether they precede it or follow it. But in the figure 538, both the periods preceding and following the Śuṅg rule are allegedly added to the duration of the Śuṅga rule. The second statement has so far remained

3. D. R. Mankad, Puranic chronology, Anand, 1951, P. 12.

4. K. D. Sethna, Ancient India in a new light, New Delhi, 1989; P. 121.

5. De, P. 118

ignored and no such explanation has been put forth. But whether the extra 300 years in the figure 345 preceded or followed the Kaṇva rule, the style of the Purāṇas forbids their inclusion in the time-length of a dynasty.

When the rule of a dynasty is interrupted at some point and restored after a while, the Purāṇas ignore the interruption in describing the dynasty and include the period of the invaders or usurpers in the total duration which, in such a case, is inevitably greater than the total of individual reign figures. An instance to the point is that of Śiśunāgas, where a gap of about twelve years occurred between Udayī and Nandivardhana.<sup>6</sup> Nothing of the kind is reported to have happened in case of the Śuṅgas or the Kaṇvas.

The Yugapurāṇa does not say that the invasion of the Yavanas during the reign of Śāliśūka resulted in the occupation of Pāṭaliputra for a long while. One of the lines in the Yugapurāṇa is read as

यवना स्थापयिष्यन्ति नगरे पञ्च पार्थिवान्

(the Yavanas will instal five kings in the city) to promote the theory of the Yavana occupation of Magadha. But as D. C. Sircar has shown, the manuscripts have invariably the nominative form पार्थिवाः in the line and the verb is क्षपयिष्यन्ति (will burn or Destroy). So the line really means, "The five Yavana chiefs will burn (houses, shops etc.) in the city"<sup>7</sup> Murder, plunder and arson were the characteristics of the Yavana *in road*. It was short lived and did not lead to occupation for a long time.

It is relevant to note that Patañjali, who mentions the sieges of SĀKETA and MADHYAMIKĀ does not notice the siege and occupation of Pāṭaliputra and we have get no other source to throw light on. Then the Purāṇas are unanimous in declaring that Puṣyamitra killed the last ruler of the Maurya dynasty and founded the Śuṅga dynasty. We have got the testimony of Bāṇabhaṭṭa to support it. How can then we conclude that the Śuṅgas did not follow the Mauryas immediately?

Nor can we admit that there was a gap between the end of the Śuṅgas and the Kaṇvas. It is clear from the Purāṇas that Vāsudeva the minister of the last Śuṅga ruler Devabhūmi founded the Kaṇva dynasty by killing his master. So a long hiatus between the Śuṅgas and the Kaṇvas is inconceivable. Even a possibility of interruption and occupation by the

6. UPENDRA NATH ROY, THE ŚIŚUNĀGAS OF MAGADHA, PURĀṆA, VOL. XLI NO. 2 PP. 172 - 183.

7. D. C. Sircar, Studies in the Yugapurāṇa and other texts, Delhi 1974, PP. 2-7

foreigners during the Śuṅga age is ruled out because the evidence of the *mālavikāgnimitram* points to the contrary.

Even the possibility of a hiatus between the Kaṇva rule and the Andhra rule is ruled out as the Purāṇa texts are unanimous in declaring that SIMUKA (aka, SINDHUKA or ŚÍSUKA) founded the Andhra dynasty by killing the last Kaṇva ruler SUŚARMĀ. We can not dismiss such explicit statements as lies to uphold the statements contained in dubious texts.

Neither Mankad nor Sethna care to explain why the figures 300 and 120 allegedly belonging to two different kingless periods were lumped together and added to the duration of the Śuṅgas. Does that make any sense?

The assumption that there was hiatus between the Mauryas and Śuṅgas is rooted in a misidentification of the ĀGNIVEŚYAS mentioned in the *Yugapurāṇa*. The Śuṅgas did not belong to the Agniveśa gotra and the *Yugapurāṇa* does not mention the Śuṅgas anywhere. An impartial study of the undistorted version of the *Yugapurāṇa* will bear me out.

It has been conclusively proved now that PALIBOTHTHA cannot be equated with PĀṬALIPUTRA, it stood for PALIBHADRĀ in Greek and Latin works. Identifying the kings of Palibothra with the kings of PĀṬALIPUTRA has led the historical research to a blind alley.<sup>8</sup> It is time to look beyond PĀṬALIPUTRA now.

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8. UPENDRA NATH ROY, THE LOCATION OF PALIBOTHTHA, VISHVESHVARANANDA INDOLOGICAL JOURNAL, VOL. XXVII NO. i-ii PP. 210-220.



# राजत्वस्य उद्गमः :मूलस्रोतः वैदिकमेव

माधवी कोल्हटकर

[Divine origin of Kingship is vividly described in the Epics, Purāṇas and Smṛti texts. Here in this article the learned authoress has discussed that this divine origin of Kingship is rooted in the Vedas and specially in the Brāhmaṇa texts. To establish this fact she has quoted the Brāhmaṇa texts.]

वैदिकसाहित्ये राजत्वस्वरूपविषयका बहवो निर्देशाः सन्ति । संहितासु ऋग्वेदसंहितायाम् राजा त्रसदस्युः अर्धदेव इति वर्णितः । अथर्ववेदे च 'यो देवो मर्त्या अति' इत्येवं राजा स्तुतोऽस्ति ।

ततः परम् ब्राह्मणेषु एतद्विषयकाः बहव्यः आख्यायिकाः वर्तन्ते । ऐतरेयब्राह्मणे राजनिर्वाचनसंबन्धिनी एका कथा एवमस्ति, देवासुरा वा एषु लोकेषु समयतन्त । त एतस्यां प्राच्यां दिशि अयतन्त तांस्ततोऽसुरा अजयन्.....ते देवा अब्रुवन् अराजतया वै नोजयन्ति राजानं करवामहा इति तथेति ते सोमं राजानमकुर्वस्ते सोमेन राज्ञा सर्वा दिशोऽजयन् (ऐ. ब्रा. 1.14)

तैत्तिरीयसंहितायामपि सदृशी कथोपलभ्यते । सा यथा—“दैवासुरा वा संयत्ता आसन् । ते देवा अब्रुवन् यो नो वीर्यावत्तमस्तमनु समारभामह इति त इन्द्रमब्रुवन् त्वं वै नो वीर्यावत्तमोऽसि त्वामनुसमारममहा इति । सोऽब्रवीत् तिस्रो मे इमास्तनुवो वीर्यावतीस्ताः प्रीणीथ असुरानभिभविष्येति ।” वै (तै.सं. 2.4.2)

तैत्तिरीयब्राह्मणीया कथा तु प्रजापतिद्वारा इन्द्रस्य निर्माणं वर्णयति राऽश्रुच निर्माणं सूचयति । तत्रोक्तम् (2.2.1.2) प्रजापतिर्देवासुरानसृजन । स इन्द्रमपि नासृजत । तं देवा अब्रुवन् । इन्द्रं नो जनयेति । सोऽब्रवीत् । यथाहं युष्मांस्तपसासृक्षि । एवमिन्द्रं जनयध्वमिति । ते ततोऽतप्यन्त । त आत्मन्निन्द्रमपश्यन् । तमब्रुवन् । जायस्वेति । सोऽब्रवीत् । किं भागधेयमभि जनिष्य इति । ऋतून्यसंवत्सरम् । प्रजाः वशून् । इमान्लोकानित्यब्रुवन् । तं वै माहुत्या प्रजनयतेत्यब्रवीत् तं चतुर्होत्रा प्राजनयन् ”

राजत्वस्य उद्गमम् परामृशद्भिः विद्वद्भिः प्रामुख्येन एताः कथाः उद्धृताः ।<sup>1</sup> घोषालमहोदयेन पुनस् तैत्तिरीयब्राह्मणतः अन्यापि एका उद्धृता दृश्यते । सा एवमस्ति ।

1. राजत्वस्य उद्गमसंबद्धा तत्स्वरूपसंबद्धा च चर्चा मुख्यत्वेन एतेषु ग्रंथेषु उपलभ्यते—  
—Basham, A.L. 1991. *The wonder that was India* (Reprint), Calcutta pp.82 ff.  
—Dandekar, R.N. 1958. *Sources of Indian Tradition* . (Ed. Theodor de Bary, et al). Columbia University Press, New York, pp.242 ff.  
—Ghoshal, U.N. 1959. *A History of Indian Political Ideas*. Oxford University Press, Oxford. pp. 20 ff.  
—Jayaswal, K.P. 1924. *Hindu Polity*. (2 vols in 1). Calcutta, Part II, pp. 4 ff.  
—Kane, P.V. *History of Dharmashastra*. Vol. III. Pune. pp. 21 ff.

(तै. ब्रा. 2.2.10.1) प्रजापतिरिन्द्रमसृजतानुजावरं देवानाम् तं प्राहिणोत् । परेहि । एतेषां देवानामधिपतिरेधीति । तं देवा अब्रुवन् । कस्त्वमसि । वयं वै त्वच्छ्रेयांसः स्म इति । सोऽब्रवीत् । कस्त्वमसि वयं वै स्वच्छ्रेयांसः स्म इति मा देवा अवोचन्निति । अथ वा इदं तर्हि प्रजापतौ हर आसीत् । यदस्मिन्नादित्ये । तदेनमब्रवीत् । एतन्मे प्रयच्छ । अथाहमेतेषां देवानामधिपतिर्भविष्यामीति । ..... तदस्मै रुक्मं कृत्वा प्रत्यमुञ्चत् । ततो वा इन्द्रो देवानामधिपतिरभवत् । य एवं वेद । अधिपतिरेव समानानां भवति ।

घोषालमहोदयेन अन्यापि एका कथा उद्धृता । सा पञ्चविंश ब्राह्मणे एवमस्ति । वरुणः प्रजापतिः वरुणसाम प्राप्नोति । तद्द्वारा सः देवैः राजत्वेन स्वीक्रियते । अथ घोषालमहोदयेन जैमिनीयब्राह्मणगता अन्यापि एका कथा निर्दिष्टारस्ति । सा एवम् - पुरा देवाः वरुणम् राजा इति नामन्यन्त । अतः सः वर्षशतं ब्रह्मचर्यमन्वतिष्ठत् । ततः प्रजापतिः तस्मै वरुणसाम अददात् । तद् दृष्ट्वा देवाः तं राजासन्दीम् उपावेशयन् राजत्वेन च अभ्यषिञ्चन् । इति ।

“सेयं कथा मानुषस्य शास्तुः दैवीमुत्पत्तिं सूचयति । स च राज्ञः दैवोत्पत्तिसिद्धान्तः तत उत्तरं कतिपयेभ्यः वर्षशतकेभ्यः अनन्तरं मनुप्रणीते भीष्मप्रणीते च सिद्धान्ते उपलभ्यते । राजा देवेनैव निर्मितः देवत्वेन विभूषितः अथ वा राजा तु स्वयम् देव एव इत्येव एषा कथा सूचयति ।” इति घोषालमहोदयः (1954, पृ. 28)

वस्तुतस्तु उपरि निर्दिष्टासु कयासु एतादृशानि वाक्यानि वर्तन्ते यानि प्रजापतिद्वारा राज्ञः निर्मितं कथयन्ति सूचयन्ति वा । किन्तु प्रायः सर्वेऽपि विद्वांसः एतद्विषये मनुवचनमयवा मत्स्यपुराणोक्तिमेवोद्धरन्ति । तेषाम् मतेन तत्रैव प्रथमः निर्देशः उपलभ्यते यत् देवानामंशान् गृहीत्वा तेभ्यः राजा निर्मित इति (द्र. दांडेकर, 1958, पृ. 475) ।

मनुस्मृतौ राजधर्मकथनात् प्राक् राज्ञः निर्मितविषये कथितमास्ति—राजधर्मान्प्र-  
वक्ष्यामि यथावृत्तो भवेन्नृपः ।

संभवश्च यथा तस्य सिद्धिश्च परमा यथा ॥

अराजके हि लोकेऽस्मिन्सर्वतो विद्रुते भयात् ।

रक्षार्थमस्य सर्वस्य राजानमसृजत् प्रभुः ॥

इन्द्रानिलयमार्काणामग्रेश्च वरुणस्य च ।

चन्द्रवितेशयोश्चैव मात्रा निर्हृत्य शाश्वतीः ॥

यस्मादेषां सुरेन्द्राणां मात्राभ्यो निर्मितो नृपः ।

तस्मादभिभवत्येष सर्वभूतानि तेजसा ॥ मनुस्मृति 6.9.3-5

मत्स्यपुराणे एवमुक्तम्—

दण्डप्रणयनार्थाय राजा सृष्टः स्वयंभुवा ।

देवभागानुपादाय सर्वभूतादिगुप्तये ॥ 22.9

एतद्विषये घोषालमहोदयः कथयति यद् याज्ञवल्क्यस्मृत्याम् प्रथमाध्यायस्य पञ्चाशदधिकत्रिंशत्तमस्य श्लोकविवरणप्रसंगे विश्वरूपः एकम् परिच्छेदमुद्धरति । तत्परिच्छेदस्य भाषानुसारेण अनुमातुम् शक्यं यद् स परिच्छेदः कस्माच्चिद् ब्राह्मण-ग्रन्थादुद्धृतः । स एवम्— “आम्नायश्चा सह वा इदमभवत् । देवाश्च मनुष्याश्च ते यदोपकारैर्न शेकुर्मनुष्यानात्मीकर्तुम् अथ देवास्तिरोबभूवुः । तान्प्रजापतिरब्रवीत् । कः प्रजा पालयिता भुवि सर्वेऽन्तर्हिताःस्थ । असंरक्ष्यमाणाः प्रजा अधर्मादितास्त्यक्षयन्तीतः प्रदानमुपजीवनमस्माकमिति । ते देवाः प्रजापतिमब्रुवन् । पुरुषमूर्तिं राजानं करवाम सोमाद्रूपमादायादित्यात्तेजो विक्रममथेन्द्राद् विष्णोर्विजयं वैश्रवणात् त्यागं यमात् संयम-नमित्यादि । “एतदुद्धृत्याथ घोषालमहोदयः वदति” अयं परिच्छेदः राजत्वस्य उद्गमस्य प्रगतं अभ्युपगमं व्यनक्ति । तादृशः अभ्युपगमः अद्यत्वे उपलभ्यमानासु यजुःसंहितासु ब्राह्मणे वा नोपलभ्यते इति (1959, पृ. 29)

किंतु नैतत्सत्यम् । राजत्वं तस्य उद्गमं च परिशीलयत्सु विद्वत्सु घोषालमहोदयः तु एक एव येन जैमिनीयब्राह्मणगता वरुणाभिषेककथा उद्धृता । किंतु तस्य पुरतकं तु एकोनषष्टनुअरएकोनविंशतिशतलमे वर्षे प्रकाशितम् । संभवतः लेखनसमये संपूर्णं जैमिनीयब्राह्मणं नोपलब्धं भवेत् । केवलं कलान्दमहाशयेन (Caland) संपादितो अंशः एव उपलब्धः भवेत् । अतः स्वाभाविकमेवैतद् यत् जैमिनीयब्राह्मणे वर्तमाना राजत्वसंवन्धिनी द्वितीया कया तेन नोद्धृता ।

जैमिनीयब्राह्मणस्यान्तिमं प्रकरणं विश्वोत्पत्तिविषयकम् । तत्पश्चादेव राजत्वस्योद्गमं कथयन्ती एका आख्यायिका । एषा अति चित्तहरा । तां संक्षेपतः कथयामि ।

‘एवं देवता स्तोमा छन्दांसि ऋतवः ग्रहाश्च निर्मिताः । देवाः सन्ति वसवः मरुतः साध्याः आप्त्याः इत्यादयः । ते चान्योन्यस्य श्रेष्ठताया नातिष्ठन्त । ते सर्वे प्रजापतिं गत्वा अब्रुवन् तं इच्छामहे यो न ईशालता इति । तदा प्रजापतिरब्रवीत् यदेव मम तेजः इन्द्रियं वीर्यमासीत् तस्माद् युष्मान् असृजम् । अधुना तु न वर्तते मयि किंचिद् । तर्हि संवत्सरं तपः कुरुत । ततः आगच्छत मत्समीपे । ते तथा अकुर्वन् । संवत्सरादूर्ध्वं यद् ते अध्यगच्छन् तदेकैकशः मन्यौ इन्द्रस्य योनौ असिञ्चत् । तत इन्द्रः समभवत् । स शिरो निर्हृत्य बहिरपश्यत् । अब्रवीच्च । इमौ वासन्तिकौ मासौ मह्यम् प्रयच्छ । स (प्रजापतिः ?) तस्मै तौ अददात् । अथ इन्द्रः अन्नं अन्नमिति पतित्वा प्राच्याः दिशः तौ मासौ रथन्तरं भाश्च आदत्त । एवं क्रमशः सः प्रैष्णौ मासौ, वार्षिकौ मासौ तथा च शारदौ, हेमन्तौ, शिशिरौ मासौ अगृह्णात् । द्वादशानां वीर्यं च प्राप्नोत् छन्दांसि भाश्च ।

ततः सोऽचिन्तयत् कथं नु इमान् गृहणीयाम् इति । अथ स उत्तानः अरोत । स विविधैः अङ्गैः इमान् ऋतुमासादीन् गृहीत्वाधस्तात् पर्यौहत । से एव ऋतुषु च संवत्सरे चैतस्यां श्रियां अध्यूढः तपति । स पुनरनेन सर्वेण प्राविशत् मन्युम् । तं तदा सः (?प्रजापतिः) अब्रवीत् एकं वाव त्वाग्रे नाशक्रोम् उद्यन्तुम् । न वै त्वानेन सह सर्वेण शक्नोमि उद्यन्तुम् । तस्मात् त्वमेव जायस्वैवेति । स तदा आपः अपश्यत् तांश्च प्रयच्छेति अब्रवीत् । तस्मै आपः प्रायच्छत् । अन्ततः सः अजायत । तं जातं सर्वे उपामदन्

तेजोऽजनि इन्द्रियमजनि वीर्यमजनि ब्रह्माजनि क्षत्रमजनि इत्यादि । तस्मै जाताय राजासंदीम् न्यदधुः । तस्यामेनमभ्यषिञ्चन्त । वसवो राज्याय रुद्रा वैराज्याय विश्वे देवा साम्राज्याय मरुतसु सार्ववश्याय साध्याश्चाप्त्याश्च पारमेष्ठ्याय ।

अथोत्तरम् अस्याः कयायाः उत्तरांशं याथातथ्येन पठामि तस्यांशस्य असुबोधत्वात् । 'तमेवं सन्तं पिता प्रजापतिरम्येवाशयत् । स वसूनब्रवीद् इमं मे प्रयच्छतेति । तेऽब्रुवन् न शक्ष्यामः पितरं प्रजापतिं हिंसितुम् इति । रुद्रान् अब्रवीत् नाकामयन्त । आदित्यान् अब्रवीन् नाकामयन्त । विश्वान् देवान् अब्रवीन् नाकामयन्त । साध्यांश्चाप्त्यांश्चाब्रवीन् नैवाकामयन्त अथ मरुतोऽब्रवीत् किम् अस्माकम् तत स्याद् इति । यन् म इदं निष्केवल्यं माध्यंदिनं सवनं तन् मे युष्माभिः साधारणं भविष्यतीति । तथेति । तम् अस्मा अभिप्रद्य प्रायच्छन् । तस्यैतच्च चन्द्रं म इत्यब्रवीत् तस्मात् चंद्रमाः । तस्य ह स्म यत् पुनर् आदते स ह स्म तादृश एव परिशिष्यते । तस्माद् एतस्याप्य् अद्यारुप् एवाभा । यथैष एतद् दिवा एवं रात्रिं भाति । तम् अवैद् अक्षय्यो वा अयम् इति । तम् उदारजत । तम् अब्रवीन् मा मात्वं ततः प्रत्यातप्सीर् इति । नेत्यब्रवीत् प्रत्येव तप्स्यानीति । तस्माद् एतमुभयोरहोरात्रयोः पश्यन्ति । प्रति हैनं तद् आतपन्ति । तौ हैतो पितापुत्रौ एव यच्चन्द्रमाश्चादित्यश्च । पिता चन्द्रमा आदित्यः पुत्रः । परश्चन्द्रमा अपर आदित्यः । तौ हैतौ सर्वासां देवतानां श्रेष्ठतां गतौ । तद् यथैतौ सर्वासां देवतानां श्रेष्ठतां गतावेवमेव स्वानां श्रेष्ठतां गच्छति य एवं वेद 'इति । एषा आख्यायिका । निष्कर्षाः— १) प्रथमस्तावद् — एवं राजत्वस्य उद्गमस्य मूलस्रोतः वैदिकमेव । तद् च जैमिनीयब्राह्मणम् भवति । तद्गता एका आख्यायिका सविस्तरं वर्णयति यद् देवानाम् अंशतः इन्द्रो निर्मितः जातः राजत्वेन च अभिषिक्तः ।

२) द्वितीयः— अस्याः आख्यायिकायाः अन्ते द्वयोः प्रसिद्धभारतीयराजवंशयोः निर्माणविषयक निर्देशः वर्तते । तौ तु सूर्यवंशः चंद्रवंशश्च । प्रजापतितः चंद्रवंशः इंद्रानु सूर्यवंशस्य निर्मितः ।

द्वेऽपि वंशावल्यौ मत्स्यपुराणे भागवतपुराणे च निर्दिष्टे किंतु शब्दकल्पद्रुमः ते विरादं वर्णयति । तत्र चन्द्रवंश-चन्द्रस्य वंशः अन्ववायः । चन्द्रसन्तानः । यथा— ब्रह्मणः पुत्रः अत्रिः तस्य पुत्रश्चन्द्रः तस्य बुधः तस्य वैवस्वतमनुकन्यायां इलायां भार्यायां पुरुरवाः ... तस्योर्वश्यां षट् पुत्रा आयन् तेषां आयुर्ज्येष्ठः । तस्य पुत्रो नहुषस्तस्य ययातिश्चक्रवर्ती । ... देवयान्यां ययातेर्द्वौ पुत्रौ यदुःतुर्वसुश्च । शर्मिष्ठायां त्रयः पुत्राः दुह्युः अनुः पूरुश्च ।..... यदुरतीव धर्मशीलस्तद्वंशे.. श्रीकृष्णोऽवतीर्णः ।..... पूरोः पुत्रो जनमेजयः...देवापिः... स कलौ चंद्रवंशे लुप्ते कलेरन्ते पुनः सत्ययुगे चंद्रवंश भावभिष्यति । तत्र शान्तनू राजा आमवत् । शान्तनोर्दाश- कन्यायां द्वौ पुत्रौ .....चित्रांगदः विचित्रवीर्यश्च । ..... 'इत्येषा परम्परा । अथ सूर्यवंशः — 'सूर्यस्य सन्तानः । तद्विवरणं यथा । परमेश्वरात् ब्रह्मा जातः । तस्य पुत्रो मरीचिः । तस्य कश्यपः । तस्य सूर्यः । तस्य वैवस्वतो मनुः । सत्ययुगे मनुरेव राजासीत् । त्रेतायुगे तस्य पुत्रः इक्ष्वाकुः अयोध्यायां राजासीत् । ..... त्रेताद्वापरयोः संधौ श्रीरामचन्द्रो दशरथसुतरूपेण अवतीर्णः । ..... इत्यादि ।

एतत्तु निर्देशार्हं यद् ईक्ष्वाकुशब्दः अखिले संहितावाङ्मये केवलं ऋग्वेदसंहितायामेव दृश्यते, तत्रापि दशममण्डलस्य षष्ठितमे सूक्ते चतुर्थे मन्त्रे । दशमं मण्डलं तु अन्यमण्डलतुलनया अर्वाचीनतरम् गण्यते । एनं निर्देशं वर्जयित्वा अखिले वैदिके साहित्ये अयं शब्दः केवलं जैमिनीयब्राह्मणे एव (3.95; 168; 238) त्रिवारमागच्छति । लुप्तशास्त्रायनके च । (43.16.; 66.1 : 43.15) । परश्चन्द्रमा अपर आदित्यः इति आख्यायिकागतो उल्लेखः अपि संभवतः एतयोः वंशयोः ऐतिहासिकस्वरूपं स्पष्टीकुर्यात् ।

३) अथ तृतीयः— जैमिनीय ब्राह्मणगतेष्वेतेषु परिच्छेदेषु राज्ञः सूर्यस्य, इंद्रस्य च उद्गमः तेषां व्यक्तिविशेषाश्च परस्परं मिश्रिताः दृश्यन्ते) इन्द्रस्य ऋतुभिः मासैः वर्षेण सह संबन्धः वास्तवतस्तु सूर्येण सह संबद्धः किंतु अत्र सः इन्द्रमध्यारोपितः दृश्यते । विष्णुस्तु वैदिकसाहित्ये निसर्गदेवता सूर्यदेवता अथवा फलनसंबन्धिनी देवता इति मन्यन्ते । अपि शक्यमेतद् वक्तुम् यत्तेषाम् अन्योन्यारोपणम् एव भाविकल्पनां जनयति नाविष्णुः पृथिवीपतिरिति ?

४) चतुर्थोऽप्यस्ति निष्कर्षः लक्षणीयः । वेदपुराणयोः संबंधविषये बहुभिः बहुविधं कथितं वर्तते ।<sup>2</sup> इतिहासपुराणाभ्यां वेदं समुपबृंहयेत् इत्येतद् वचनं तु प्रसिद्धमेव । उपरि कृता चर्चा तु एतद् निर्दिशति यत् अतिशयोक्तिपूर्णम् एतद्वचनं शोभनोक्तिरिति वा वास्तवतः तु पुराणानि वेदानुजीवीनि । वेदाः उपजीव्यं तेषाम् । वेदेभ्यः एव अंशमंशम् उद्धृत्य तस्यांशस्थ उपबृंहणं पुराणैः क्रियते ।

५) पञ्चमस्तावत् — जैमिनीयब्राह्मणस्य भाषाशैलीमनुसृत्य तद् ब्राह्मणं प्राचीनम् इति मतं कैश्चिद् विद्वद्भिः उपस्थापितम् परं तथा नास्तीति दृश्यते । एष ब्राह्मणग्रंथ इतरब्राह्मणग्रंथेभ्यः अर्वाचीनः भवेदिति पुराणजैमिनीयब्राह्मणसम्बन्धबलात् अनुमातुम् शक्यम् ।

परं एकं तु सुनिश्चितं यद् जैमिनीयब्राह्मणं परिशीलनीयम् मनोहरं च वर्तते ।

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## 2. मुख्यत्वेन —

—Rocher, Ludo. 1986. *The Purānas*, Otto Harrassowitz, Wiesbaden. pp. 13 to 17,

—Smith, Frederik M. 1994 "Purānāveda", in Authority, Anxiety and Canon, ed.

Laurie Patton. State University of New York Press. pp.97 ff.

## OBITUARY

(1)

### **SHRI YOGENDRA NARAIN THAKUR**

Shri Yogendra Narain Thakur, the General Secretary of the All India Kashiraj Trust expired on January 23, 2004 at the ripe age of about 85. Shri Thakur was born in 1915 and graduated from Benares Hindu University. After his graduation he joined the office of the erstwhile Benares State. Later he rose to office superintendant of the Fort. After the creation of the Maharaja Benares Vidyamandir Trust he was appointed its Secretary. As Secretary of the Vidyamandir Trust he laboured hard and spared no pains for the creation the museum of the Trust. He visited many museums in the country and with the help and guidance of the experts of the National museum he established the museum of the Maharaja Benares Vidyamandir Trust. The Late Maharaja Kashinaresh Dr. Vibhuti Narain Singh had his full confidence in Sri Thakur and for all responsibilities of the Fort he was his choice. After the demise of Sri R.C. De he was appointed the General Secretary of the All India Kashiraj Trust. He was also appointed the Secretary of the Maharaja Balwant Singh Degree College Gangapur. Under the tenure of his General Secretaryship of the All India Kashiraj Trust the Silver Jubilee of the trust was organised. Smt. Indira Gandhi, the then Prime Minister of India was the Chief Guest in the function and many dignitaries including Sir C.P. N. Sinha, then Governor of U.P. and Sri Sripati Mishra Chief Minister of U.P. were present in the Silver Jubilee function The Varāha Purāṇa was published and released during this period.

For about twenty five years Sri Thakur was the Secretary of the Maharaja Balwant Singh Degree College Gangapur. During this period the college rose to the level of Post Graduate level and many new departments were started. Many convocations were also held during this period.

Sri Yogendra Narain Thakur was Palace member of the Benares State for more than thirty years. The office of the Palace Member is responsible for all personal activities of the Benares house. This office is hold by a person in whom Maharaja puts his sole confidence.

Shri Thakur had the deep knowledge of rules and regulations and was very methodical in his administrative duties. Every body including the Maharaja was aware that he would not allow any irregularity. As a man he was a devout religious person and observed all the Vratas and Pūjās prescribed in the Śāstras. The Late Maharaja and the present Maharaja took care of all his personal requirements upto his obsequial rites.

May his soul rest in eternal peace.

**—Ganga Sagar Rai**

(2)

## **DR RAMA KANT JHA**

Dr. Rama Kant Jha, an erudite scholar of Sanskrit passed away on 19.5.2004. In his death our society has lost a great scholar in the areas of Sanskrit grammar, philosophy and literature as well as an emotional, polite, plainspeaking and helpful human being. He spent his whole life in study, creative literary work and in worship to God .

Dr. Jha was born in Tetari Bazar village of Begusarai Distt in the province of Bihar on 9 th July 1928. He hailed from a well to do land lord family. His early education in the Sanskrit Pathaśālā of Patsa was under the guidance of the great shaivite scholar and 'Sadhak' Mahamahopadhyay Pandit Rameshwar Jha. Later on he studied in Varanasi under the guidance of Pandit Ugranand Jha and obtained his 'Acharya' degrees with a gold medal. He also obtained the B.A. and M.A. degrees from B.H.U. passing in the first class. He also earned a Ph. D. degree.

He first taught at Arya Mahila College in Varanasi but later on became the Principal of Brahmarshi Sanskrit Mahavidyalaya at vill. Reotipur Distt Ghazipur. He served in the Purāṇa Deptt. of Kashiraj Trust for a short period. He retired from active service as Head of the Department of Sanskrit at Sagra Mau P.G. College in Jaunpur Distt. After his retirement he was engaged in U.P. Sanskrit Śansthan as an assistant to Acharya Baldeo Upadhyay in the project on the editing of Great Sanskrit History in many volumes. During his association with this project 12 volumes of this history have appeared. He stayed in Varanasi after his retirement from this project and continued his scholarly activities. During this period he contributed also to Purāṇam.

Dr. Jha was not only a great scholar of grammar, philosophy, literature but was also a highly effective teacher who was a pastmaster as transforming knowledge to his disciples. He was a highly reputed orator. He was devoid of ego and maintained cordial relations with his teachers, students and friends. He was my classmate in B. A. and M.A. classes and maintained his friendly attitude towards me throughout his life. He was much elder to me as he had come to study in BHU after completing his studies in the oriental schools. He was also suffering from heart trouble for past several years but this did not diminish his activity and relationships. He has two sons who are good scholars of Sanskrit and are carrying his



tradition of study and scholarship. Such a noble soul has been assured by the Lord in his own words कौन्तेय प्रतिजानीहि न मे भक्तः प्रणश्यति

Some of his main contributions are as follows :

1. आश्चर्यचूडामणि Critical edn. with Sanskrit and Hindi coms.)
2. विदग्धमाधवम् (With Sanskrit and Hindi commentaries)
3. शुकनासोपदेश With Hindi translation
4. अष्टावक्रगीता with Hindi translation.
5. सूतसंहितामीमांसा

He was prolific writer of Sanskrit articles and poems which were published in reputed journals.

**-Ganga Sagar Rai**

## **ACTIVITIES OF THE ALL INDIA KASHIRAJ TRUST**

(January- June 2004)

### **Garuḍa Purāṇa work**

Printing of the critical edition of the Garuḍa Purāṇa, was continued during this period. Final proof of the first 20 Adhyāyas were finalised

### **Visitors to the Purāṇa Department**

Many scholars and students came during this period for their research work and necessary informations were given to them. Some foreign scholars also visited the Purāṇa Department.

### **Purāṇa Bulletin**

During the year two issues of the Purāṇa Bulletin ( Vol. XLVI. Nos. 1 and 2) were published It is satisfying that foreign scholars are also contributing to the Purāṇa Bulletin.

### **Activities of the sister Trusts**

#### **1. Maharaja Benares Vidyamandir Trust**

##### **1. Dhrupad Mela**

Dhrupad Mela was organised by this trust this year on three consecutive nights on February 16-18,2004 at Tulsighat in Varanasi, His Highness Kashinaresh Maharaja Sri Anant Narain Singh inaugurated the mela in the evening of February 16 by lighting the lamp. His Highness emphasised the need of promoting the Dhrupad system of Indian music. The mela ended on Śivarātri night on February 18,2004. Almost all the important artists of the Dhrupad system participated in the Mela and performed their arts. A good number of music lovers attended the Mela. Foreign scholars were also present in the Mela.

##### **2.Mangalotsava**

On the first Tuesday after Holi Mangalotsava was held in the fort. Famous artists and musicians of Varanasi participated and performed their art in the function. Eminent citizens and officers were present in the function.

**2. Maharaja Udit Narain Singh Manasa Prachar Nidhi  
Navāha Pārāyaṇa and Pravacana of Rāmacarita Mānasa**

This Trust organises every year Navāha Pārāyaṇa and Pravacana (recitation and discourses) of the Rāmacaritamānasa of Tulasīdāsa at Kali mandir, Chakiya from Vaiśākha Śukla Dvitiya to Daśamī. This year it was organisted on April 21 to April 29, 2004. Eminent Vyāsas gave their discourses. A large number of public attended the discourses. His Highness Kashinaresh Maharaja Sri Anant Narain Singh was daily present in the discourses.

**3. Maharaja Kashinaresh Dharmakarya Trust**

This Trust conducts all the religious activities throughout the year. Besides the religious activities, this Trust runs a chain of educational institutions from lower classes upto Post Graduate level. All the educational institutions, are maintaining the good standard of teaching and discipline.

# सर्वभारतीयकाशिराजन्यासस्य कार्यविवरणम्

(जनवरी-जून २००४)

## गरुडपुराणकार्यम्

अस्यामवधौ गरुडपुराणस्य मुद्रणकार्यं प्रचलितम् । प्रारम्भतः विंशाध्यायानां अन्तिमप्रूफसंशोधनं जातम् ।

## पुराणविभागे समागता विद्वांसः

वहवो विद्वांसोऽनुसन्धित्सवः छात्राश्च तेषामनुसंधानकार्यप्रसङ्गे पुराणविभागे समागताः । तेभ्यो वाञ्छिताः सूचनाः प्रदत्ताः । केचन वैदेशिका विद्वांसोऽपि समागताः ।

## पुराणम् पत्रिका

'पुराणम्' पत्रिकाया षट्चत्वारिंशद्वर्षस्य द्वौ अङ्कौ (जनवरी-जुलाई) अनेनाङ्केन पूर्णतां गतौ । अयं संतोषविषयो यद् वैदेशिका विद्वांसोऽपि पत्रिकायां निबन्धान् प्रेषयन्ति ।

## सहयोगिन्यासानां कार्यविवरणम्

### १. महाराज बनारसविद्यामन्दिरन्यासः

#### १. ध्रुपदमेलापकः

अनेन न्यासेन वाराणस्याः तुलसीघट्टे सततं त्रिरात्रिषु फरवरीमासस्य १६-१८ दिनाङ्केषु ध्रुपदमेलापकस्य आयोजनं कृतम् । १६ फरवरी २००४ दिनाङ्कस्य सायं समये तत्र भवन्तः काशिनरेशा महाराजाः श्री अनन्त नारायणसिंह शर्मदेवाः दीपप्रज्वलनेन मेलापकस्योद्घाटनं कृतवन्तः । काशिनरेशाः स्वभाषणे भारतीयसंगीतस्य ध्रुपदविधायाः प्रचारस्य संरक्षणस्य चावश्यकतां प्रदर्शितवन्तः । मेलापकस्य समाप्तिः शिवरात्रिदिने संजाता । प्रायः सर्वे प्रमुखध्रुपदकलाकाराः मेलापके सम्मिलता आसन् स्वकलां च प्रदर्शितवन्तः । बहुसंख्याकाः संगीतानुरागिणः मेलापके उपस्थिता जाताः । वैदेशिका विद्वांसोऽपि मेलापके उपस्थिता आसन् ।

#### २. मङ्गलोत्सवः

होलीपर्वान्तरं प्रथमभौमवासरे अनेन न्यासेन मङ्गलोत्सवस्यायोजनं कृतम् । अस्मिन् उत्सवे वाराणस्याः प्रमुखसंगीतकलाकाराः गायनं वादनं च कृतवन्तः । विशिष्टा नागरिका अधिकारिणश्चायोजने उपस्थिता आसन् ।

## 2. महाराज उदितनारायण सिंह मानस प्रचार निधि:

### रामचरितमानसस्य नवाहपाठः प्रवचनं च

अनेन न्यासेन चकियानगरस्थे कालीमन्दिरे प्रतिवर्षं गोस्वामितुलसीदासस्य रामचरितमानसस्य नवाहपाठस्य प्रवचनस्यायोजनं वैशाखशुक्लद्वितीयातिथिमारभ्य वैशाखशुक्लदशमीतिथिपर्यन्तं क्रियते । अस्मिन् वर्षे २१ अप्रैल २००४ दिनाङ्कमारभ्य २९ अप्रैल २००४ दिनांकं यावत् एतद् आयोजनं संपन्नम् । विशिष्टव्यासैः प्रवचनं कृतम् । तत्रभवन्तः काशिनरेशा महाराजाः श्री अनन्तनारायणसिंहशर्मदेवाः प्रतिदिनं प्रवचने उपस्थिताः आसन् ।

### ३. महाराज काशिनरेश धर्मकार्यनिधि:

अनेन न्यासेन वर्षपर्यन्तं सर्वेषां धर्मकृत्यानां संपादनं क्रियते । धार्मिककृत्य-संपादनातिरिक्तं अनेन न्यासेन बहूनां शिक्षणसंस्थानानामपि प्राथमिकस्तरतः स्नातकोत्तर-कक्षापर्यन्तं संचालनं क्रियते । सर्वाणि शिक्षणसंस्थानानि पाठनस्यानुशासनस्योच्चमर्यादां निर्वहन्ति ।



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I, Anant Narain Singh, hereby declare that the particulars given above are true to the best of my knowledge.

**Anant Narain Singh**  
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