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# BOOK REVIEW

**The Jaina Path of Purification** by Padmanabha S. Jaini, published by Motilal Banarsidass, Delhi, 1979, pp IX+374. Price Rs. 70.00.

Padmanabha S. Jaini's book is addressed to the general readers who may be interested about the Jaina Path. As the present work is stated to be the first Indian Edition with copyright held by the Regent of the University of California, it may be presumed that the American edition has already been released in the USA. To help the professionals, the "Specialists", he has "included a large amount of canonical and commentarial material, in the original language, among the foot notes" because the author fears that such material may be difficult to find in libraries outside of India. Let us hope, the general reader can make use of it.

The title of the book is somewhat misleading since it has a Buddhistic flavour of the "middle path". Clearly, the goal therein is the elevation of life through an eight-fold programme, and not its negation which is Jainism. Even comparable items in Jainism, viz., *vratas*, *samitis* and *guptis* contribute to liberation of the soul, not purification of life. Since the western readers are familiar with Buddhism over a longer period and since to them Jainism is recent excursion, the title is likely to create a wrong impression of Jainism being a variant of Buddhism or just its junior contemporary.

Another point of reviewer's serious dislike is the opening paragraph in which the author describes a recent event of virtual self-immolation by a Jaina monk which is likely to scare, or at least create a severe distaste, for this particular religion. The Jaina ideal of courting death bravely at one's own volition rather than allowing it to overtake or swallow its victim may be a lofty goal and may go well with the English maxim, 'Cowards die a thousand times before their death', but it remains to be asked, how many Jaina monk as well as laity die or court death in this manner ? It would have been better not to include an item like this in a text meant dominantly for the Western readers or at the most make it a foot-note in the section dealing with this topic at pp.181 and 227 et seq.

To be impartial to the two main streams of Jainism, the Svetambara and the Digambara the author has made free use of textual material from both the sources blending them in his chapters in a manner which will

neither please the one nor the other. If a blend could have been prepared at the orthodox level, which means that if the orthodoxy had ceased to be orthodox, the reviewer would surely have welcomed it ; but that is not going to be so that whatever joint activities (not much) alluded to by the author between the two sects which appeared only on the surface in 1975, the year of the 2500th anniversary of Mahavira but which marred the deliberations of the National Committee headed by the Prime Minister soon evaporated and the two sects, in the sacred name of Bhagavan Mahavira, stood almost as much apart immediately thereafter as they did at any time in the past.

The author's presentation of the subject is something more than ordinary, particularly his discussion on *samyak darśana* (p.141 et seq.) but the English rendering of the term as 'first awakening' somewhat runs it down, unless one is very careful. Generation after generation, the Jaina Acaryas have viewed *darśana* as *sāmānya jñāna* or very ordinary or superficial knowledge and *jñāna* as being something deeper but the Jina's ordering is *jñāna* first which is bare knowledge, followed by *darśana* which is faith or unshakable conviction about the knowledge, followed by *cāritra* which is its incorporation in everyday conduct. In this order then *darśana* occupies a loftier place than *jñāna*. As the author has made it a topic for deeper discussion, it shows that he comes nearer to what the Jinas really intended to convey by this term rather than what the Acaryas have made it to be. Read carefully the last paragraph at pp. 144-45 which states, inter-alias, as follows : "The significance of *samyak darśana* in the life of the soul is second only to that of attaining Jinahood itself." A line like this was long over due.

There are, however, certain points about which the reviewer begs to disagree with the learned author. At pages 1-2, the author's description of a Jina and a Tirthankara is likely to create the impression that the terms are synonyms which they are not. All Tirthankaras are Jinas but the reverse is not true. At pages 17-18, the author seems to agree with P. K. Modi's thesis that *cāturyāma* is a virtual sham if not the four modes, viz., mind, words, body and senses, and that there is a "single great restraint" called *sāmāyika cāritra* which has been preached by all the Tirthankaras, including Parsva and Mahavira. This would readily appeal to a rational mind but negate the whole chapter in the *Uttarādhyayna* entitled 'Kesi Gotamiya'. Although there may be a grain of truth in Modi's thesis, a controversial item like this should have been kept out or at least the author should not have sided with the weaker side. In this connection, the citation of *jhānam* which is about *sanyama*, not *vrata*, does not seem to impart additional strength.

According to the author (p.33), the religion of the Jinas did not have any link with the pre-Aryan Indic Civilisation, as some historians including non-Jaina, have sought to establish, his logic being that "the geographical location of at least its two most recent teachers does not suggest an origin in the Indus Valley". The logic is too sweeping and inconclusive since why should we jump to a conclusion on the basis of any two of its most recent teachers from whom at least Jainism did not originate. One may ask, what about the 22nd Arhat Nemi, who hailed from Saurashtra, not far from the seat of the Indic Civilisation? Can anyone suggest from the dominant location of Christianity in Europe and America today that its origin could not have been outside these two continents?

The point is that not even the Jainas claim that the religion of the Jinas originated in the Indus Valley. They attribute it to Rsabha, the first law giver who hailed from Ayodhya. But this does not prevent the religion from migrating to any part of the country, as it did even in the historical time after Mahavira. There is reference in the Jaina texts that even Mahavira paid a hurried visit which was almost like a miracle, to Sindhu-Sauvira. If some of the seals discovered in the Indus Valley bore images which happened to be the emblems of the Tirthankaras, as described in the Jaina texts, the historians who surmised from that the existence of the Jaina religion in the Indus Valley did not stand altogether on sand.

Equally misleading is his agreement with the Late A. N. Upadhye that Jainism along with the Ajivika sect, Buddhism and antiritualistic (and spiritually speculative) Upanisadic tradition was "a distinct Magadhan religious complex, developed at the foot of the Himalayas where Aryans from the Punjab encountered the non-Vedic cultures of the Ganges valley" (pp.33-34).

The description may be true of the other three religions cited but not surely of Jainism, since not a many Tirthankaras except perhaps Mahavira hailed from the Magadhan region. Sramana cult was a very old one which existed in India for a very long time even prior to its encounter with the Aryan emigrants and something which is older in time could not be described to be a reaction against Vedicism. Thus Sramana cult was never anti-Vedic but non-Vedic and leading names in it hailed from different parts of the country. It was an accident that Mahavira was a Magadhan prince, but it is debatable if he was a party to the Magadhan religious complex. This is the reason why the religion revived by Mahavira which was not a reaction continues to live while all others including Buddhism which were reactions or compromises have died and disappeared.

The reviewer is particularly intrigued by the following observation at p. 46 which states that attaining *Kevala jñāna* is a virtual disqualification for one to hold the spiritual chair. Here is the line :

“Since the Kevali neither administers nor preaches Sudharman must have assumed the leadership of the Jain order upon Indrabhuti Gautama’s attainment of Omniscience.”

If this be correct, then the whole lot of the Tirthankaras would be disqualified because omniscience had come to them. According to the *Kalpasūtra*, at the time of Mahavira’s passing away, only two out of eleven Ganadharas, viz., Gautama and Sudharman, were alive, and Gautama was the seniormost of the lot. According to the same source, Gautama was removed by the express order of Mahavira from the spot where he was delivering his last sermon, and as Sudharman was being installed to Mahavira’s seat, Gautama lay at a distance in a state of virtual coma, which in present context was *kevala jñāna*. A grand array of facts which speak many things not yet candidly spoken. In the Digambara view which rejects the eleven *Āṅgas* of the Svetambaras, it was not difficult to hold that Gautama, not Sudharman, was the immediate successor of Mahavira (which perhaps does not rationally stand), but such a view goes against their own faith that an omniscient personality has no worldly activity nor even bodily function (p.43). The reviewer feels that the learned author should give a second thought to this sweeping statement about Sudharman’s succession which, from any angle whatsoever, needs justification.

And finally to the question which has been repeated by many writers, what is it that makes Jainism going, while the whole of the so-called Magadhan religious complex has disappeared from this country ? On this all writers, including the present one have harped on the same items, royal patronage, interest in lay followers, integration with the surrounding, and so on. But it is doubtful if they really answer the question. Such factors do exist in any religion and Jainism is no exception. As for royal patronage, Buddhism received it to the extent of which not even a fraction came to Jainism. Jaini writes about the efforts of Somadeva and Jinasena to introduce the *pūjā* form in Jainism and Jainize certain pan-Indian social norms but these were efforts at knocking Jainism of its pedestal and giving it a theistic bias with temple going *pūjā*, prayer and all that and providing it a look like the younger brother of Hinduism, a distinct disservice. They have killed the very spirit of Jainism which is liberation through own efforts. According to the reviewer, two factors which exist in the text but have not been highlighted in this context, one objective

and the other subjective, are especially important. They are, first, that Jainism has had no *mahāyāna* (p. 88)) which means that whatever the vicissitudes, the Jainas both Svetambara and Digambara alike, have retained the unity of their doctrines. This does not mean that there have not been commentaries of and interpretations by scholars and Acaryas in different ages, but this whole lot of literature, somewhat stupendous in size, has been nick-named as exterior to the *Āṅgas* (*Āṅgabāhya*). This much on the objective plane. Coming to the subjective plane, there have always been some souls, who have the capability for liberation (*bhavyatva*). In the words of the author, "It is sort of invert catalyst, awaiting the time when it will be activated and thus trigger an irrevocable redirection of the soul's energy : away from delusion and bondage, towards insight and freedom." (p.139)

It is the urge of these to be free that has kept alive the need for a religion like that of the Jinas. It is this that has kept Jainism alive through ages and adversities, no matter what the size of the Jaina community and how imperfectly they fulfil their rituals Jainism is the third alternative of theism and materialism and this is why with the gradual breakdown of the barriers of ignorance, the desire to know more about this alternative is increasing all the world over.

**Poet Buchraj and His Contemporary Poets** (in Hindi), Editor : K. C. Kasliwal, published by Sri Mahavira Granth Akadami, 1979, pp. XV+300. Price Rs. 30.00.

Digging back into the past is a part of the country's cultural renaissance which is going on with a vengeance during the past quarter century and may be it will take many years more before the task is complete. Not that many books in this series are worthy of the zeal with which they are published, since not many beside the editor really makes use of them but still they serve a purpose, viz, that they give a span of life to our decaying wealth of manuscripts scattered all over the country which because of age would soon be lost, so the practice is, if not creative, at least conservative. The book under review which takes notice of five medieval Jaina poets who lived between 1560-1600 falls in this category.

A publication like this serves another purpose which is the winning of a place for the Jaina poets in the History of Hindi literature which they have been denied so far. This is really a gap but we cannot blame the writers of this History since the Jaina poets and writers in Hindi have so long remained buried under the dust of private archives and Jaina tradition has not produced a poet of the stature of Tulsidas who could have

lived in oral tradition. The result has been the sort of fate that has overtaken them. Now that the vast treasure of this underground material is being unearthed and brought to light, it will give satisfaction to all concerned.

**Influential Acaryas in Jaina Religion**, (in Hindi) by Sadhvi Sanghamitra, published by Jain Visva Bharati, Ladnun, Rajasthan, 1979, pp. XX+432. Price Rs. 25.00.

Sadhvi Sanghamitra deserves congratulation for having accomplished a highly laborious job she assigned herself on the occasion of the 25th Centennial of Bhagavan Mahavira which was observed in 1975. In fact, this is one of the 25 items which the Terapanth Sangh assigned for its learned monks and nuns to work out to mark the occasion. The reviewer has no hesitation to say that Sadhviji has performed her assignment with care and competence.

Gleaning from sundry sources, she has presented the life-sketch of 37 Acaryas of the Agamic period, of 55 Acaryas in the Growth period and of 28 Acaryas of the New period, according to her classification. In doing so, she has worked with objectivity, without letting her work being tinged by the views of innumerable denominations called *gaṇas*, *gachhas*, *kulas*, *śākhās* into which Jainism after Mahavira got divided. This makes her production pleasant since we meet together so many illustrious persons who have given a glorious name to Jainism on the pages of History.

Some of these names, particularly of the Agamic period and for some time the period immediately following, are known to the readers of the *Kalpa Sūtra* which has a chapter entitled 'Theravali', but there they are mere names and do not satisfy one who wants to know more about them or their achievements. Even such a celebrity like Acarya Bhadrabahu who happens to be its illustrious author, finds a scant mention. Now, in the work of Sadhviji, we have a dependable information about the whole lot, and even though not comparable in strict sense, her work reminds one of Acarya Hemacandra's *Triṣaṣṭīśālākā-puruṣa-caritra*.

—K. C. Lalwani



# Certain Peculiarities of Jaina School of Astronomy

SAJJAN SINGH LISHK

In February, 1978, under the guidance of Dr. S. D. Sharma, the author got his Ph. D. degree with his thesis on mathematical analysis of post-Vedanga pre-Siddhantic data in Jaina Astronomy. This analysis was mainly based on the study of astronomical texts as extant in Jaina canon of sacred literature. Several scholars have asked why we have called this astronomical system as Jaina School of Astronomy. Here an attempt has been made to expose certain peculiar characteristics of this astronomical system which we have called as Jaina astronomical system because its results are mainly based on the study of Jaina canonical literature. It cannot be denied that sometimes certain parallel references have also been found in some Puranic and Buddhistic literature. However, it is worthy of note that most of Puranic and Buddhistic texts are yet to be studied exhaustively from an astronomical point of view. In the light of researches hitherto made, here stress is laid upon the peculiar developments of astronomical thought as exhibited in the so-called Jaina School of Astronomy, e.g., the evolution of the system of graduating the zodiacal circle, the gnomonic technique of measuring the fraction of the day elapsed at any instant, etc. etc. It is significant to note that all such developments have been found free from Greek, Babylonian and any other foreign influences.

Certain peculiar characteristics of Jaina School of Astronomy are dealt with as below :

## 1. Units

There had been a great diversity of systems of units of time, length and of division at different times in different parts of ancient India.

### (i) Time-units :

Atharva Veda Jyotisa contains an unique thirty-fold divisions system of time-units<sup>1</sup> which may conveniently be called as 'Trigesimal system'.

<sup>1</sup> Lishk, S.S. and Sharma, S.D. (1976), 'Time-Units in Ancient Indian Astronomy', *Tulsi Prajna*, Vol.2, Nos. 7-8, pp. 100-108, Ladnun.

Although Jainas had developed their peculiar system of time-units<sup>2</sup> which is quite different from the parallel Vedic and Buddhistic systems of time-units,<sup>3</sup> yet Jaina astronomical system worked as an efficacious via media in paving the way for the probable course of conversion of trigesimal system of time-units into sexagesimal system. However, some more investigations are yet to be made in this direction.

(ii) Length-units :

There exists a great diversity of magnitudes of the ancient popular length-unit *yojana*.<sup>4</sup> However, a particular account of the length of a *yojana* is found in Jaina canonical literature, wherein *Anuyogadvāra Sūtra*, one of the *Cūlikā Sūtras*, describes three systems of length-units viz. *Pramāṇa*, *Ātma* and *Utsedha* systems. Accordingly we have<sup>5</sup>

$$\begin{aligned} 1 \text{ Pramāṇa } yojana &= 500 \text{ Ātma } yojanas \\ &= 1000 \text{ Utsedha } yojanas, \text{ and} \\ &= 8 \text{ Tiloya Paṇṇatti } yojanas. \end{aligned}$$

This type of classification of systems of length-units has not hitherto been found anywhere in Puranic or Buddhistic literature.

(iii) Units of arc-division :

The evolution of the system of units of arc-division or graduation of the zodiacal circumference is chiefly credited to the exponents of Jaina School of Astronomy.<sup>6</sup> The zodiacal circumference was graduated in time-degrees days of a *nakṣatra* month (lunar sidereal revolution) and subsequently in time-degrees *muhūrtas* (1 *muhūrta* = 48 minutes) of a *nakṣatra* month, 54900 *gagana khaṇḍas* (celestial parts) (numerically equal to 54900 *muhūrtas* of a five-year cycle) and finally in 360 *Saura* days (a *Saura* day means the time taken by the Sun to traverse 1/360th

<sup>2</sup> *Ibid.*

<sup>3</sup> See also Kumar, Mahendra (1974), 'Quantization of Time', Paper read at 5th Seminar on Jaina Studies, JVB, Ladnun. See *Ganitanuyoga*, Intd., compiled by K.L. Kamal, Sanderao, Rajasthan.

<sup>4</sup> Lishk, S.S. and Sharma, S.D. (1979), 'Length-Units in Jaina Astronomy', *Jain Journal*, Vol.13, No.4, pp. 143-154, Calcutta.

<sup>5</sup> *Ibid.*

See also Lishk, S.S. and Sharma, S.D. (1975), 'The Evolution of Measures in Jaina Astronomy', *Tirthankar*, Vol.1, No.7-12, pp. 83-92, Indore.

<sup>6</sup> Lishk, S.S. and Sharma, S.D. (1979), 'Zodiacal Circumference as Graduated in Jaina Astronomy', *Indian Journal of History of Science*, Vol. 14, No.1, pp. 1-14, INSA, New Delhi.

part of zodiacal circle). Consequently the concept of 360 modern degrees of arc might have been developed.

## 2. Cosmography

Like many other ancient peoples, Jainas had also some peculiar notions viz. the notion of circular flat earth,<sup>7</sup> the notion of the theory of two Suns and two Moons,<sup>8</sup> the notion that the Moon is 80 *yojanas* higher than the Sun.<sup>9</sup> As regards the dimensions of the mount Meru placed at the centre of Jambudvipa (an isle of Jambu tree), different accounts are found in Puranic literature. But the dimensions as extant in Jaina canonical literature form a mathematically consistent picture.<sup>10</sup> It may be emphasized that such strange notions were the outcome of their constant striving for the formulation of the real world around.<sup>11</sup> For delving deep into the secrets of scientific concepts implied in the development of such strange notions, one has to develop a framework of mind alike to that of exponents of Jaina School of Astronomy.

## 3. The Science of Sciatherics

However, we find the earliest gnomonic data in Atharva Veda Jyotisa wherein an attempt had been made to measure shadow-lengths as a function of time and *muhūrta* (=48 minutes) was standardized as the fundamental unit of time.<sup>12</sup> Jainas measured time as a function of shadow-

<sup>7</sup> Lishk, S.S. and Sharma, S.D. (1976), 'Notion of Circular Flat Earth in Jaina Cosmography', *The Jaina Antiquary*, Vol.28, No. 1-2, pp. 1-5, Arrah.

<sup>8</sup> According to L. C. Jain, the theory of two Suns and two Moons was surely devised for certain mysterious calculations. (See Jain, L.C., 1975, 'Kinematics of the Sun and the Moon in Tiloya Pannatti', *Tulsi Prajna*, Vol.1, No.1, pp.60-67. Now this theory is being properly resolved. Since the length of an year does not consist of whole number of *ahoratra*s (days and nights), so in order to account for the phase difference in southward and northward journeys of the Sun, this theory of two Suns was formulated. For more details, see Sanskrit and English Commentaries of *Surya Pannatti*, under the principal investigation of Dr. S.D.Sharma, financed by Vardhamana Kendra, Ahmedabad.

<sup>9</sup> Lishk, S.S. and Sharma, S.D. (1975), 'Latitude of the Moon as Determined in Jaina Astronomy', *Sraman*, Vol.27, No.2, pp. 28-35, P.V. Research Institute, Varanasi.

<sup>10</sup> Lishk, S.S. and Sharma, S.D. (1978), 'Notion of Obliquity of Ecliptic Implied in the Concept of Mount Meru in Jambudvipa Prajnapti', *Jain Journal*, Vol.12, No.3, pp. 79-92.

<sup>11</sup> Lishk, S.S. and Sharma, S.D., 'Some Strange Notions in Jaina Astronomy'. Paper presented at Seminar on Jaina Studies, Mahavira Chair for Jaina Studies, Punjabi University, Patiala (October, 1979).

<sup>12</sup> Lishk, S.S. and Sharma, S.D., 'Standardization of Time-Unit Muhurta through the Science of Gnomonics in Atharva Veda Jyotisa', *Indian Journal of History of Science* (to appear).

lengths and thus they could determine the time of day directly from the tables of shadow-lengths versus the corresponding parts of the day elapsed as the practice is still in current among some sects of Buddhistic monks in Ceylon etc.<sup>13</sup> Jainas had also employed the use of shadow-lengths for the determination of seasons.<sup>14</sup> Such parallel gnomonic data, though with slight variations, have also been found in some Buddhistic texts like *Sārdulakaraṇāvadāna*.<sup>15</sup> It is, however, worthy of note that the evolution of the science of gnomonics is well-traced through the study of Jaina astronomical system. Moreover, Jainas had advanced in measuring shadow-lengths to such an extent that Summer solstice was determined upto thirty *muhūrtas* of one day.<sup>16</sup>

#### 4. Kinematics of the Sun and the Moon

As regards the kinematical studies of the Sun and the Moon, Jainas had determined the spiral paths of their motions whose equations are akin to that of the Archimedian spiral. Such a kinematical model of solar or lunar motion owes its provenance to the concept of a solar or lunar *maṇḍala* (diurnal circle) which implied a notion of declination.<sup>17</sup> The notion of declination has not been found in Vedāṅga Jyotiṣa. We have not yet come across any such findings in Puranic or Buddhistic texts.

#### 5. Kinematics of Venus

In Vedāṅga Jyotiṣa, kinematical studies of the Sun and the Moon only were undertaken but in Jaina texts we find that the kinematical studies of Venus also form a peculiar feature of Jaina School of Astronomy. The average relative velocity of Venus in heliacal combustion in different parts of lunar zodiac was compared with some conventionally known relative as well as discrete velocities like those of a snake, horse, elephant

<sup>13</sup> Lishk, S.S. and Sharma, S.D. (1976), 'The Time of Day Measured through Shadow-Lengths in Surya Prajnapti', *The Mathematics Education*, Vol. 10, No.4, pp. 83-89.

<sup>14</sup> Lishk, S.S. and Sharma, S.D. (1977), 'Seasons Determination through the Science of Sciatherics in Jaina School of Astronomy', *Indian Journal of History of Science*, Vol.12, No.1, pp. 33-44.

<sup>15</sup> Singhal, B.M., Sharma, S.D., and Lishk, S.S., *Seasonal Sciatherics in Sardulakaranavadana* (in the press).

<sup>16</sup> Lishk, S.S. and Sharma, S.D. (1974), 'Post-Vedāṅga Pre-Siddhantic Indian Astronomy'. Paper presented at Summer School on History of Science, INSA, New Delhi. To appear in *K.C. Shastri Memorial Volume*, Jabalpur.

<sup>17</sup> Lishk, S.S. and Sharma, S.D., 'Notion of Declination Implied in the Concept of Mandala (Diurnal Circle) in Jaina School of Astronomy', *Ganita*, Lucknow University (to appear).

etc. etc. and the corresponding *vithis* of Venus were specified among the stars. Thus the phenomena of heliacal rising and setting of Venus seem to have been keenly observed. The relative north-south directions of *vithis* (lanes) of Venus also imply Jainian trends towards notion of geocentric latitudinal motion of Venus.<sup>18</sup> Such kinematical studies of Venus are parallel to those of planetary ephemerides of Seleucid and Menomides periods. Some parallel references have also been found in some *Samhitā* texts like *Samāsa Samhitā* etc. However, an exhaustive account of planetary kinematical studies is found in *Bhadrabāhu Samhitā*<sup>19</sup> which we aim to analyse in full measure.

## 6. Jaina Calendar

The quinquennial cycle of Vedanga Jyotisa remained in vogue during Jaina astronomical period but with different solstices i.e. winter solstice occurred at Dhanistha ( $\beta$  Delphini) during Vedanga Jyotisa period and at the beginning of Abhijit ( $\alpha$  Lyrae) during Jaina astronomical period. Jainas might have strived for the reformation of the five-year cycle as they had conceived some other planetary cycles like twelve-year cycle of Jupiter, twenty-eight-year cycle of Saturn and later a cycle of sixty Jovian years. Besides, the beginning of the five-year cycle had shifted from winter solstice in Vedanga Jyotisa to summer solstice in Jaina astronomical system. Any such change is not unearthed in *Mahā-bhārata* period when the winter solstice occurred at Sravana ( $\alpha$  Aquilae).<sup>20</sup>

Jainas had dealt with *nakṣatras* (asterisms) in much detail. They had classified them into *kula* (category), *upakula* (sub-category) and *kulopakula* (sub-sub-category) *nakṣatras* depending upon their positions with respect to Moon's position among asterisms at syzygies. Thus the

<sup>18</sup> Lishk, S.S. and Sharma, S.D., 'Kinematics of Venus in Jaina Astronomy', *Ganita* (to appear).

<sup>19</sup> *Bhadrabāhu Samhitā*, edited with Hindi commentary by Nemichandra Shastri (1959). Bhadrabāhu, the author belongs, to a period of about 313 B.C. There was also an earlier Bhadrabāhu (468 or 467 B.C.) to whom is ascribed *Kalpa Sutra* as contained in *Dasarutaskandha*, one of the six *Cheda Sūtras* of Jaina canonical literature. For more details see Lishk, S.S. and Sharma, S.D., (1977). 'Sources of Jaina Astronomy', *The Jaina Antiquary*, Vol 29, Nos. 1-2, pp. 19-32. Here it may be mentioned that Dr. S.S. Lishk has taken up the study of planetary kinematics in *Bhadrabāhu Samhitā* in full measure for his post-doctoral research programme. These researches will further pave the way for bridging a big gap between Vedanga Jyotisa and Siddhantic astronomy.

<sup>20</sup> Lishk, S.S. and Sharma, S.D., 'A Note on Jaina Calendar' (in the press). See also Lishk, S.S. and Sharma, S.D., 'Similarities between Jaina Astronomy and Vedanga Jyotisa', *Pracya Pratibha* (to appear).

five-year cycle of sixty-two lunar months was fixed on the sidereal lunar zodiac. It is worthy of note that the theory of classification of *nakṣatras* into *kula*, *upakula*, and *kulopakula* does not fit exactly the theory of Jaina five-year fixed calendar based on mean motion of the Moon. It seems plausible that the five-year fixed calendar was used for regulating their religious life whereas the concept of classification of *nakṣatras* into *kula* etc. was devised to study lunar motion for astronomical purposes. Such classification of *nakṣatras* has not hitherto been found anywhere else.

### 7. Cycles of Eclipses

Jainas had found out a unique cycle of eclipses depending upon two component cycles, viz. forty-two eclipse months cycle of lunar eclipses and forty-eight eclipse years cycle of solar eclipses. These cycles of eclipses were based upon observation of periodic repetition of eclipses in five different colours irrespective of any accurate knowledge of true motion of Rahu (lunar ascending node). Jainian eclipse cycles are completely free from any foreign influences of Chaldean Saros or Metonic cycle.<sup>21</sup>

### 8. Lunar Occultations and Conjunctions with Nakṣatras (Asterisms)

It is revealed that the concept of direction of lunar conjunction with a *nakṣatra* implies the notion of position of identifying star or the *nakṣatra* with respect to the region where the Moon moves among the stars. Thus any *nakṣatra* situated inside the belt of lunar zodiac occults the Moon from both the northern and the southern directions depending upon the position of lunar nodes. Some other *nakṣatras* lying southward (northward) to the belt of lunar zodiac occult or combine with Moon always from the southern (northern) direction. This suggests some Jainian trends towards the notion of celestial latitude of the Moon.<sup>22</sup>

Besides, *chatrātichatra yoga* (lunar occultation with Citra or Virginis) deserves a special mention. Out of ten *yogas* (weal and woe conjunctions), only this *yoga* is defined in Jaina canonical texts. Its description implies that the positions of the Moon and the Sun had been used to be, for some time, determined with respect to cardinal points. Even these days α Virginis is given much importance in the present day Citrapaksiya School of almanac-making according to which Citra has celestial longitude 180° and the zero point of zodiac is exactly opposite to it. It is surmised that that might have been the time when

<sup>21</sup> Lishk, S.S. and Sharma, S.D. (1976). 'Cycles of Eclipses in Jaina Astronomy', *Sumer Chand Memorica Volume*, pp.40-48, Jabalpur.

<sup>22</sup> Lishk, S.S. and Sharma, S.D. (1975), 'Occultations of the Moon in Jaina Astronomy', *Tulsi Prajna*, Vol.1, No.3, pp. 64-69. See also ref. No.9.

reckoning of the first point of zodiacal circumference was shifted from winter solstice to Vernal equinox and consequently Abhijit ( $\alpha$  Lyrae) was replaced by Asvini ( $\beta$  Arietis) to head the list of *nakṣatras*.<sup>23</sup>

### 9. Set Theoretic Approach

The notion of set theoretic approach as developed by Jainas is exhibited in the classification of *Jyotiṣikas* (astral bodies). Besides, L.C. Jain has clearly exposed the set theoretic approach in Jaina School of Mathematics. Such an approach had also diffused into the Jaina School of Astronomy.<sup>24</sup>

### 10. Measurement of Celestial Distances

Celestial angular distances were measured in *yojanas* (basically, linear measures of length) in terms of corresponding distances projected over the surface of the earth, e.g. celestial latitudes of the Moon and other planets have been determined in terms of earth distances in *yojanas* expressed as heights of astral bodies from *samatala bhūmi* (earth having a plane surface, denoting a circular area with centre at the projection of pole of ecliptic).<sup>25</sup> It is, however, worthy of note that the Babylonian ephemerides of 'System A' measure the latitude of the Moon in units called "Barley Corn" (=Se) related by  $72 \text{ Se} = 1^\circ$ . Similarly all other units of angular measurements are originally measures of length.<sup>26</sup>

### 11. Use of Zigzag Functions

Jainas had made an extensive use of linear zigzag functions, e.g., in the computation of length of the day as the Sun moves southward or northward. The Babylonian influence upon the use of linear zigzag functions is quite questionable. However, more researches are still in progress.

### 12. Observation of the Celestial Phenomena

Jainas had a keen sense of observation. They measured precisely the time as a function of shadow and determined time of the day through shadow-lengths of a gnomon. They had observed linear occultations, determined Summer solstice upto thirty *muhūrtas* or one day only, studied the phenomena of heliacal combustion of Venus, determined

<sup>23</sup> Lishk, S.S. and Sharma, S.D. (1976), 'Chatratichatra Yoga in Surya Prajnapti', *Tirthankar*, Vol.2, No.1, pp. 27-35, 41.

<sup>24</sup> Lishk, S.S. and Sharma, S.D. (1977), 'Classification of Jyotisikas in Jaina Cosmology', *Dilip*, Vol. 14, No.2, pp.29-31.

<sup>25</sup> See ref. No.9.

<sup>26</sup> Neugebauer, O. (1975), *A History of Ancient Mathematical Astronomy*, p.514.

latitude of the Moon and shapes of *nakṣatras*. The Jainian cycles of eclipses are based on the periodic observation of colours of (*parva*) Rahu denoting Jainian concept of shadow causing an eclipse. The categorization of *mahāgrahas* (great planets) and *tārakāgrahas* (star planets), the classification of *nakṣatras* into *kula* (category), *upakula* (sub-category) and *kulopakula* (sub-sub-category) in relation to their conjunctions with Moon at different syzygies in a five-year cycle also exhibit their trends towards skilled observation of the celestial phenomena.

Besides, classification of *lakṣana samvatsaras* (symptomatic years) exhibits their trends towards the study of celestial phenomena in relation with natural phenomena on earth.

### 13. *Astronomical Instruments*

A passing reference may also be made to the use of astronomical instruments. Besides gnomon, some sort of clepsydra (water clock), star clock such as acronical risings of stars used in determination of seasons etc. might have also probably been used.

### *Conclusion*

Obviously there are certain aspects which are similar to both Vedanga Jyotisa and Jaina astronomy, e.g., five-year cycle, four time measures viz. *savana* (civil), *saura* (solar), lunar and *naksatric* (sidereal), use of zigzag functions and variation of length of daylight etc. But Jaina astronomical system exhibits a stage far advanced than Vedanga Jyotisa period. However, there are several unique developments in Jaina astronomical period, e.g., notions of declination, celestial latitude and obliquity of ecliptic; method of measurement of celestial distances projected over the surface of the earth; systems of units of time, length and arc-division; the use of shadow-lengths for the determination of seasons and time of the day elapsed at any instant. These developments appear to be made quite independent of any foreign influence and they had paved the way for the development of Siddhantic astronomy.<sup>27</sup> Consequently, Pingree's views about the Mesopotamian origin of ancient Indian Mathematical Astronomy become quite questionable.

The author expresses his deep sense of gratitude towards his revered teacher Dr. S. D. Sharma, for several valuable suggestions in preparation of this paper. Thanks are due to Dr. C. S. Khurana, Head, Department of Physics, for providing necessary facilities. Thanks are also due to R. N. Doshi, Secretary, Vardhamana Kendra, Ahmedabad, for his keen interest in our research activities and financial support.

<sup>27</sup> Lishk, S.S. and Sharma, S.D. (1977), 'Role of Pre-Aryabhatta I Jaina School of Astronomy in the Development of Siddhantic Astronomy', *Indian Journal of History of Science*, Vol.12, No.2, pp. 106-113.



# The Badali Inscription of Samvat 84

RAM BALLABH SOMANI

The Badali inscription is one of the important lithic records of the Northern India. It is in Brahmi script. In 1912 A.D. when G.H. Ojha was touring in the district of Ajmer, he noticed this fragment<sup>1</sup> on the *maṇḍapa* of the Bheruji, which stands in the field about a mile from the village Badali near Bijayanagar, district Ajmer. This stone was used for grinding tobacco by the Bhopa (temple priest). From there, G.H. Ojha brought it to Ajmer and got it preserved in the Rajputana Museum.

It is a part of a hexagonal pillar, which was split in twain. The inscription is engraved on one side of the split portion. It covers  $13'' \times 10\frac{1}{2}''$  space. The letters of the middle and left side are well preserved and clearly incised. But the letters of the right hand side have mostly become blurred.

This inscription is one of the much debated epigraphs of the Northern India. A group of scholars named G.H. Ojha, K.P. Jayasawal, R.B. Pandey, etc., regard it as pre-Mauryan record. G.H. Ojha's reading of the first two lines of this inscription is *virāya bhagavate 80(4) caturāsiti va (se)*, which means that it was engraved after 84 years of the death of Lord Mahavira. K.P. Jayasawal did not agree with the above conclusion.<sup>2</sup> He thinks it of the Nanda era counted from 458 B.C. But his arguments about Nanda era were generally not accepted by the scholars. R.B. Pandey endorsed the views of G.H. Ojha.<sup>3</sup> Among the scholars, who do not take this inscription as pre-Mauryan record, the name of D.C. Sircar stands quite notable.<sup>4</sup> The arguments of these scholars are as under :

- (i) No early record contains the use of Mahavira Nirvana era. Its use in Rajasthan, specially within a century of Mahavira's death, is extremely doubtful.

<sup>1</sup> G. H. Ojha, *Bharatiya-Lipi-Mala* (Ajmer), p.2 fn, /I.A., LVIII, p.21.

<sup>2</sup> K. P. Jayasawal, "An Important Brahmi Inscription—Badali Stone with Plate" published in the *Journal of the Bihar and Orissa Research Society*, March 1930, Vol. XVI, Pt.I, pp. 67-68.

<sup>3</sup> R. B. Pandey, *Indian Palaeography*, p.21.

<sup>4</sup> D.C. Sircar, *Indian Epigraphy*, p.240/ *Journal of Bihar and Orissa Research Society*, Vol. XXXVIII, pp. 34-38.

- (ii) Practice of recording specific eras actually started at much later date.
- (iii) The word “*caturāsiti*” is perhaps used to indicate certain geographical limits.
- (iv) The inscription belongs to Sunga period and pertains to the reign of King Bhagavata.
- (v) No genuine epigraph anterior to Asoka is known from any part of India. Therefore, it seems that the origin of the Brahmi script took place in the early period of the Mauryan Kingdom.<sup>5</sup>

In this way the date of Badali inscription comes at much later date than ascribed by Ojha.

The moot point about this inscription pertains to the reading of its first letter. G. H. Ojha takes it as “*ṽ*”<sup>6</sup> and suggests that the medial sign attached to this letter is a style of long medial “*i*”, which was according to him prevalent in pre-Asokan era. K.P. Jayasawal also takes the letter as “*vakāra*”<sup>7</sup> but denied the mark as a sign for long medial “*i*”. According to him the loop on the top of “*va*” is evidently a vowel mark and has much affiliation with similar marks in the Kalsi inscription. Thus according to him it is “*vi*” and not “*ṽ*”. D.C. Sircar on the other hand takes this letter with its upper vertical stroke as a compound letter “*dva*” or “*dvam*”<sup>8</sup> which according to him is a shortened form of the *siddham*. The suggestions of D.C. Sircar were categorically rejected by several scholars like Dani, T.P. Varma, C.S. Upasaka, etc. They all unanimously maintained that the form of “*da*” opening on the right is not seen in the early period. However Dani and T. P. Varma could not suggest any definite reading.<sup>9</sup> C.S. Upasaka had other view. He says that the medial sign of “*i*” seems to have been attached wrongly as no such use is seen in other records. He thus considers the long medial “*i*” attached with the letter “*va*” as a scribal mistake.<sup>10</sup> But this view cannot be accepted. This inscription

<sup>5</sup> S.R.Goyal's paper “Brahmi—An Invention of Early Maurya Period” published in the *Origin of Brahmi Script*, edited by S.P.Gupta and K.S.Ramachandran (Delhi 1979), pp. 1-49.

<sup>6</sup> G.H.Ojha, *op.cit.* p.2 fn.

<sup>7</sup> K.P.Jayasawal, *op.cit.*, p.67.

<sup>8</sup> D.C.Sircar, *op.cit.* p.240/ *Journal of the Bihar and Orissa Research Society*, Vol. XXXVIII, pp. 34-38.

<sup>9</sup> Thakur Prasad Varma, *The Palaeography of Brahmi Script* (Varanasi 1970), p.76.

<sup>10</sup> Chandrika Singh Upasaka, *The History and Palaeography of Mauryan Brahmi Script* (Nalanda, 1960), p.186.

contains a few letter quite short in comparison to other letters. The shortening of length of a letter owing to the presence of vowel mark is also visible in other letters of this inscription. It may be retaining some earlier forms of writing or it may be some provincial variations. Thus, we cannot rule out these possibilities simply by saying a scribal mistake. The letter apparently seems to be long “vi”. In this way the reading comes as :

line	left	middle	right
(1)	<i>vī</i>	<i>rāya bhagava</i>	( <i>te</i> )
(2)	80 (4)	<i>caturāsiti - va</i>	( <i>se</i> )
(3)	<i>nā ye</i>	<i>sāli mālini</i>	( <i>ye</i> )
(4)	<i>rām ni (va)</i>	<i>the majhlmikā</i>	( <i>ye</i> )

The purport of this inscription is not clear. Sali Malini, appearing in the third line, seems to be a proper name of a lady, who had some relation with Madhyamika, a town situated near Chittor. As succeeding letters of this inscription are missing no correct meaning can be traced out. From the first two lines it is clear that in the year 84, of some era, this inscription was got engraved. It perhaps refers to the construction of Jaina structure by Sali Malini. D.C. Sircar suggests its date as 1st century B.C., basing on the date of Sunga Bhagavata's inscription of Bhilsa. C.S. Upasaka takes it not earlier than second century B.C. G.H. Ojha ascribes it to 443 B.C., while K.P. Jayasawal gives its date as 374-373 B.C. In this way the following problems are still connected with this inscription.

- (i) Whether this inscription is connected with Jainism?
- (ii) Whether it is a Pre-Mauryan record?

The word “*vīra*” is apparently connected with Lord Mahavira. Therefore, the inscription relates to Jainism. Recently from Darah (Dist. Kota) inscriptions datable to 2nd century B.C. mentioning the names of some Sramanas are noticed.<sup>11</sup> This also indicates that the Jainas were having close relations with the Southern Rajasthan. No other meaning of first letter can be taken.

It is very difficult to conclude about specific date of this inscription. According to our present state of knowledge no such definite inference can be taken. A good number of scholars take the Mahasthan stone

<sup>11</sup> “सिपित्तेन समणो भद्ल अपरा देसबासी”—This inscription was recently noticed by Giriraj Kumar.

plaques inscription, the Sahayaura copper plate, the Piparahwa Buddhist vase inscription, the Taxila coin Brahmi legend and the Bhatti-prollu rock casket inscription including this Badali stone inscription as the Pre-Mauryan records.<sup>12</sup> Their main arguments are based on palaeographical details and its variations. They believe that the Brahmi script of the time of Asoka was consciously improved from some earlier Brahmi scripts. Therefore, whole problem is to be studied without any pre-conceived ideas. The theory that the Brahmi script was invented during the reign of Asoka was ably challenged by numerous scholars who, on the basis of vast literary evidence proved that the Brahmi script existed even earlier than Candragupta Maurya. Another important point connected with the date of this inscription is the use of the words "*catu-rāsiti-va (se)*". The suggestion of some scholars that this word is indicative of some geographical area is untenable.<sup>13</sup> This date is recorded both in numerals and syllables. Such system was obviously apparent for recording the dates only. G.H. Ojha has suggested that this date pertains to the Mahavira Nirvana era, which remained quite popular for ecclesiastical reckoning among the Jainas.<sup>14</sup> D.C. Sircar and others have objected that this era is not yet known from any early records. But I think, no much credence ought to be given on negative evidence. From Southern Rajasthan use of some unknown eras are noticed as under :<sup>15</sup>

- (i) From Devani-Muri situated near the southern borders of Rajasthan an inscription datable to 3rd century A.D. mentioning some Kathika era was noticed. This is the solitary evidence about the use of this era. Before its finding no one had the knowledge of this era.
- (ii) From Kalyanapura (near Rikhavdevji, Udaipur) several records datable to 6th century A.D. in some unknown era are noticed. So far no definite clue about the beginning of this era is known.

Therefore we cannot rule out the possibility of the use of Mahavira Nirvana era in this inscription, simply on the plea that its use was unknown in earlier records. Apparently the Jainas have repeatedly used

<sup>12</sup> R.B.Pandey, *op.cit.*, pp. 19-21.

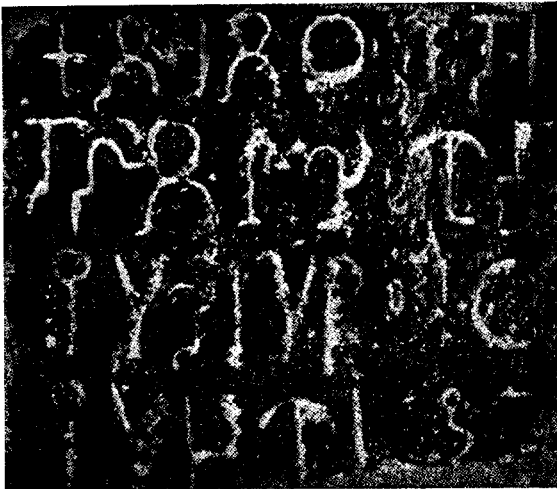
<sup>13</sup> It is clear that the word "*caurasi*" is still popular for a group of the villages in the area round about Badali. But the use of numerals and syllables together for recording the dates proves that it was used for mentioning the years. Such system was quite popular in ancient India.

<sup>14</sup> G.H.Ojha, *op.cit.*, pp. 2-3 fn.

<sup>15</sup> *Journal of the Oriental Institute of Baroda*, Vol. XII No.2, pp. 173-176/Vol. XIV No.3-4, p.410/Vol. XV No.1, pp. 71-72/ *The Vishweshwaranand Indological Journal*, Vol. III No.1, pp.101-104/*Vidhya* (Gujrati), Vol. XI No.1, 103-112.

this era in literary sources from the earlier times.<sup>16</sup> It can also be argued that the date of the inscription may pertain to some unknown era. We cannot say definitely on this point, so long no definite historical dates are known. D.C. Sircar's suggestion that the territory round about Badali was ruled by the Sungas is also not corroborated from any sources.<sup>17</sup> From Ahara (Udaipur) two seals bearing the legends "*pālitasa*" (3rd century B.C.) and "*vihitamvisa (ya)*" (2nd century B.C.) were noticed.<sup>18</sup> The battle of the Sunga king against the Yavana king as mentioned in the *Mālavikāgnimitram* took place on the right bank of the Sindhu river (perhaps Kali Sindhu flowing in the northern Malwa and Hadoti). It has little concern with the area near Badali. In this way inference taken by D.C. Sircar requires further evidence.<sup>19</sup> Thus we may conclude that :

- (i) The Badali inscription is a Jaina record. It perhaps mentions the construction of some structure for worship of Jaina Tirthankara Mahavira by Sali Malini, who might be the resident of Madhyamika.
- (ii) The era used in this inscription is not clear. It may refer to the Mahavira Nirvana era or some other unknown era. As we have mostly to depend upon the palaeographic details, no definite fact can be adduced.



<sup>16</sup> *History of Mewar* by the Author, pp. 71-72.

<sup>17</sup> D.C.Sircar, *The Guhilots of Kishkindha* (Calcutta 1950), p. 40/*Journal of the Bihar and Orissa Research Society*, Vol. XXXVIII, pp.34-38.

<sup>18</sup> H.D.Sankalia, *The Excavation at Ahara* (Poona 1959), pp.13-14.

<sup>19</sup> *History of Mewar* by the Author, pp.19-20.

# REVATI

GANESH LALWANI

Standing under the shade of Kovidara tree, Revati, wife of Gathapati Mahasataka was looking at the Pausadhasala with wistful eyes. As if there was no end of that looking. For inside the walls of that room Mahasataka had almost imprisoned himself. Taking initiation from Mahavira he was living a religious life for more than twelve years. So he had freed himself from all mundane activities.

But Revati had not freed herself like this. Nor she had given up all kinds of pleasure of the world. She was in need of her husband's nearness, close understanding, warmth of his heart. Heart of young Revati was not like a desert. In her eyes was the dream of mating, in her heart thirst for the pleasure of love. But... She had even no right to enter into that chamber.

Days passed by, so the months, even the years rolled away. But her joyless days were hard to pass, as if they will never end. Time and again this thought would come to her mind: How could Mahasataka engross himself in religious practices by ignoring the longing of her eyes ? Was there no desire to have her in his mind ? If that was so it would be useless to tire her legs in going to meet him. It would be vain to go near him for quenching the deep thirst of the body afflicted by love. But no—she would not allow her youth to be wasted like the moonbeam fallen on dust. She would arouse him, beckon him to take a dip in her youthfulness to cool his heated body. Would he be able to refuse?

At last she made up her mind.

It was mid-night. The end of night is still far off. Cooing of the Koels had died out in the garden. There was no sound except a stillness. It was all darkness inside that room. In that room Mahasataka was sitting alone and was deep in meditation. Suddenly the floor of that room began to vibrate with the jingling sound of anklets. Ignoring all impediments and restrictions she stood before Mahasataka with all the fragrance of her seductive beauty like a heavenly damsel decorated with hundreds of ornaments.

But Mahasataka was still as before without any movement.

Cutting asunder the stillness of the night by her loud laugh Revati asked, 'Do you recognise me, my Lord ?'

Her maid had lit the lamp full of scented oil. The light was radiating. In that light her long shadow was falling on the body of Mahasataka. But no reply came.

With still louder laugh Revati broke to pieces the natural peace and silence. She said, 'My love, look at me for once by opening your eyes. I am your married wife. If you look at me you will not fall from your virtue.'

Still Mahasataka remained silent.

By gracefully raising up her arms she loosened the coil of her hair studded with gems, removed the flimsy scarf that endeavoured to cover her breasts, pearls of the necklace began to fall in a stream.

Coming still nearer to Mahasataka she said, 'My love, look at me but once. Seeing this woman are you not feeling any temptation ?'

Mahasataka gave no reply.

Revati was dying within herself. Couldn't the beauty of a woman's form attract a man ?

The wistful look of her tearful eyes suddenly flared up like the flash of lightning. Laughing disdainfully she said, 'If you are not tempted, it matters little. Merchant Supriya is tempted. If you are refusing, then I will go to his pleasure garden. He will take me on his broad chest. These clothes and ornaments are his presents. I will take refuge today in the gem-studded bed of generous Supriya.'

Eyes of Mahasataka opened automatically. He gazed at the face of Revati. Boisterous and loudly laughing Revati suddenly fell at the feet of Mahasataka like a torn creeper. She said, 'My love, make me yours but for once, for a moment only. I am only yours. Whatever I have spoken now is not true. Look, look at my face but once.'

Mahasataka raised his eyes, but in his eyes there was no love, no hatred, no consolation, no rage. That look was without desire and attachment. He said, 'Go to your chamber, Revati.'

Placing her head on his feet she said, 'I haven't come here to go back. I want the shelter of your broad chest.'

Mahasataka said, 'And then.....'

'Then, .....you and I.'

'That is not possible', said Mahasataka.

By lifting her body Revati stood erect. Gently looking for a while she burst in loud laughter. She said, 'Virtue will give you what that I cannot give. Are the embraces of heavenly damsels more pleasant than mine ?'

But Mahasataka didn't raise his eyes.

Revati continued to laugh loudly like that. Then as if to control her breathing, she became quiet for a while, then like an amorous woman raising her eyebrows laughing vehemently she called her maid and said, 'Maid, decorate me with new clothes, bring me my new necklace made of the dust of Indranila gem.'

The maid who was waiting outside entered into the room and looked questioningly.

Revati said laughingly, 'What are ye looking at ? Bring me that golden anklet, the tinkling of which is sweeter than that of the call of the swans. And that light cloth...'

The maid began to laugh. She said, 'My lady, whom ye will offer thyself by decorating thy body with all thy ornaments ?'

'Him whose pleasure garden is anxiously waiting for me. Do ye know my maid, I am standing as if before the thirsty eyes of my god-like lover. Don't ye see being loosened all my ornaments, my armlets, my necklace, my girdle of pearls are falling down ?' Then she looked at Mahasataka from the corner of her eyes.

No more could Mahasataka remain quiet. He said, 'Are ye drunk Revati ?'

Revati laughed in a mysterious way. She said, 'Yes, I have drunk that country wine which is burning in the veins of my body. But why?'

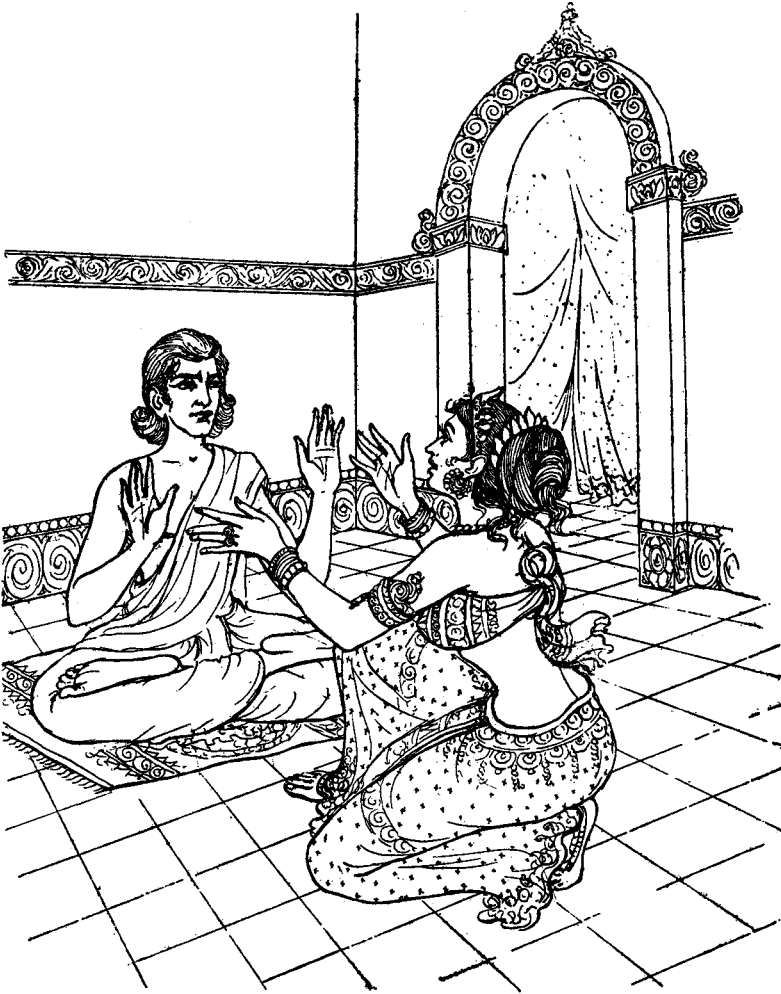


Religion ? Fie! I accept not that religion which crushes the finer sentiments of my heart.'

Mahasataka was silent.

Looking at him with her piercing eyes she said, 'My lord, still there is time. Call me by your side. Give me shelter in your lap.'

Mahasataka gave no reply.



But Mahasataka stopped her by rude gesture of his hands.

Standing unsteadily she began to look at Mahasataka. She began to think, was there no love behind that broad chest ? Was it in vain, the blueness of his lotus eyes ? Was he not feeling the pangs of her heart ? Was his resolution as hard as the thunder-bolt ?

Step by step she came very near him. Then bending her knees like a creeper she wanted to grasp by her arms his youthful body unshaken as a Devadaru tree.

But Mahasataka stopped her by rude gesture of his hands. Said he, 'Don't be so foolish, Revati. I can see you will die of cholera within a week.'

Revati rose trembling with fear. She was going to say something, but voice failed her. A cold fear of death spread all over her body. Her blue eyes began to feel the burning sensation of lightning. Her eyebrows began to feel the warm wind of the summer.

Cried out the inner self of Revati, 'No-No-No, but ...'

She could not wait there any more. She ran away.

It was dawn. The sky was radiant by the rays of the new Sun. The forest was resounding by the chirping of birds and humming of the bees. But those rays of light and joy entered not into the closed door of the sleeping chamber of Revati.

Unexpectedly arrived Arya Gautama at the door of the Pausadhasala.

Mahasataka stood up and then bowed to him from a distance.

Taking his seat Gautama said, 'Mahasataka, I have come from the Lord with a message. Your behaviour to your wife Revati was far from blameless. You should repent for your evil utterance.'

Mahasataka hung his head down.

# Nivvanam Paramam Jai Ghayasitti Vva Pavae

RAM PRAKASH PODDAR

The third chapter of the *Uttarājjhayanāsutta* elaborates upon the four important factors of life which are gradually more and more difficult to be attained. They are: human life, knowledge, faith and steadfastness in right conduct. Of all lives human life is the most difficult to be attained. The sinners are born as the denizens of hell and as lower animals. No one can be born as a human creature without a certain degree of piety. Human life having been attained, only the doubly blessed ones get the true knowledge. But knowledge too, without faith draws nectar in a sieve. For knowledge to be fruitful, faith is essential. Now faith also having been attained, what yet remains to be attained is steadfastness in right conduct. Human life, knowledge and faith all put together cannot bring emancipation from the bondage of the *karmas* unless the aspirant is steadfast in his right conduct. So what counts most is steadfastness in practising self-control, the latter being the essential factor in the pursuit of right conduct.

Thus all the four factors viz. human life, knowledge, faith and steadfastness in self—control enable one to stop further inflow of the *karmas* and to get rid of the already accumulated ones.

At this stage there occur in the text the following lines :

*sohī ujjuyabhūyassa,  
dhammo suddhassa citṭhai,  
nivvāṇam paramam jāi  
ghayasitti vva pāvae.*

A literal translation of these lines may be rendered as follows :

There is purity for him who tends in a straight direction  
and righteousness stays with him who is pure,  
Such a one goes to final extinction  
like a fire sprinkled with ghee.

Here “purity” may be further explained as freedom from the dirt of the *karmas* and tending in a straight direction may mean an unflinching hence steadfast pursuit of the right conduct. Thus everything goes well except the simile of fire going to final extinction on being sprinkled with ghee, for fire sprinkled with ghee blazes forth. Thus it seems that the term “*nivvāṇa*” does not agree with the simile “*ghayasitti vva pāvae*”.

The commentators, right from the beginning, are aware of this problem. In the Nagarjuni branch the entire structure of the verse has been changed, probably to banish the rebel term “*nivvāṇa*” and to substitute instead, such ones as agree with the simile of fire sprinkled with ghee. They read the verse as follows :

*cauddhā sampayam laddhum  
iheva tāva bhāyate,  
teyate teyasampanne  
ghayasitti vva pāvae.*

These lines may be translated as :

Having attained the wealth of the four essential factors,  
they shine forth in this very world,  
They blaze forth with their spiritual fire,  
as a fire sprinkled with ghee.

But the language of this verse smacks of artificiality in the above context and the ideas too stagger. The first foot contains a repetition of the idea already expressed in the previous verses which already state that one who has attained human life, knowledge, faith and steadfastness in penances, is protected from the further inflow of *karmas* and rids himself of the already accumulated ones. From “*bhāyate*” (shines forth) to “*teyate*” (blazes) the meaning hovers round the same point instead of making any progress. Moreover the idea of shining forth in this very world does not fit appropriately in the context whereas the idea of “*nivvāṇa*”—end of the cycle of birth and death, makes a perfect sequence with stopping the inflow of *karmas* and getting rid of the accumulated ones, of the previous verse.

Commentators, in a bid to reconcile “*nivvāṇa*” with the phrase “*ghayasitti vva pāvae*” have assigned to the former, meanings other than extinction. Santyacara, and following him, Nemicaṇḍracarya and others have interpreted “*nivvāṇa*” of this verse as “*jīvanmukti*”. They vouchsafe that “*nivvāṇa*” means “*mukti*”. But the same being obstructed

here on account of its comparison with a fire sprinkled with ghee, they have chosen to interpret it as “*jīvanmukti*”, a state of worldly existence which is absolutely free from ill-will and attachment. They further explain that in such a state the soul blazes forth with the flame of penances like “a fire sprinkled with ghee”.

A modern authentic edition of the *Uttarajjhayanāsutta*,<sup>1</sup> annotating upon the term “*nivvāṇa*” in this context says that this term here should rather mean blazing forth than extinction—end of the cycle of birth and death. The commentator further explains that the term “*nivvāṇa*” embraces the following meanings :

- (1) Emancipation — *mukti*,
- (2) Emancipation in life — *jīvanmukti*, and
- (3) A state of physical health and well-being.

All the three states, the commentator adds, correspond to a state of spiritual blaze. Thus according to this commentator “*nivvāṇam paramam jāi, ghayasitti vva pāvae*”, means goes to a state of great spiritual blaze, like a fire sprinkled with ghee.”

Following this line a recent translation<sup>2</sup> renders “*nivvāṇa*” as “a state of spiritual blaze”. In any case the term “*nivvāṇa*” in this context has somehow to denote “blaze” to agree with the simile “a fire sprinkled with ghee” for, as the former annotator confesses, the general meaning of the term “*nivvāṇa*” viz. extinction, does not agree with the simile “a fire sprinkled with ghee”.

A famous indologist<sup>3</sup> tried to tilt the table the other way in a seminar. So far efforts were made to impose the sense of blazing upon the term “*nivvāṇa*”. This scholar tried to elicit the sense of “extinction” from the final foot of the verse. He suggested that the term “*ghayasitti vva*” may be “*ghaṭasitti vva*” and may mean “sprinkled with pitcherfuls” (of water). It seems to be an off-hand suggestion and does not call for any serious consideration for “*ghaṭa*” instead of implying pitcherful of water may as well imply pitcherful of ghee or oil or any other liquid. As a matter of fact fire can only be sprinkled with some liquid and not

<sup>1</sup> Published by the Terapanth Mahasabha.

<sup>2</sup> By Sadhvi Sri Chandanaji.

<sup>3</sup> Alsodort (at a Seminar in Poona)

with pitcher or any other pot. But in spite of the inadmissibility of this suggestion, the move here is in the right direction. It is better to err in this direction than to sever “*nirvāṇa*” from its most general and accepted denotation of extinction.

Dictionaries give two etymologies of the word “*nirvāṇa*”—*nir* +  $\sqrt{vā}$  = to blow and *nir* +  $\sqrt{vr}$  = to cover up. But from the abundant usages of the term “*nirvāṇa*” in the Pali literature one concludes that it rather means going out of fire by itself than its being put out by some external means like blowing or covering up. Its metaphorical usages suggest that the fuel of the *karmas* being consumed to the last bit, “*nirvāṇa*” or going out of the fire of birth and death follows. Its other meanings like “health” and “spiritual well-being” are rooted in this metaphor. A state of health or physical well-being may result from the passing away of restlessness, of the feverish condition. Similarly a state of spiritual well-being may follow from the dying out, in the heart, of the three-fold fire of *rāga* (lust), *dveṣa* (ill-will) and *moha* (stupidity). Thus one may conclude that in all its usages the term “*nirvāṇa*” is associated with the idea of extinction, going out of a lamp or fire. Hence to dissociate it from this meaning is unwarranted.

Now a state of extinction or going out by itself, in case of fire, may come quickly if fuel to be consumed is in a small quantity or the fire which consumes, is somehow incited. A weak fire may go out by itself without consuming the fuels in their entirety. In this case the extinction will not be the final one for the unburnt or half burnt fuels will retain the potentiality of a second ignition thus bringing into existence the fire for a second time. The state of final extinction may come quicker if the fuel is reduced or the fire is incited. A line quoted in the Pali Dictionary of Rhys Davids to illustrate the meaning of “*parinirvāṇa*”, final extinction, mentions both the conditions — “*khināsavā jutimanto loke parinibbutā*.” The idea that a total combustion of all existing fuels will be hastened and also doubly insured if the fire is somehow incited, is too plain to need much elaboration. Phrases such as “*parama nirvāṇa*” or “*nitya nirvāṇa*” denote final extinction in which state the entire fuel—the cause of combustion — being consumed to the last bit, there remains in them no potentiality for any further combustion. The idea of an absolute and permanent extinction following from a complete combustion of all fuels in a strong fire, is expressed in the following verse of the *Garuḍa Purāṇa*—

*yogāgni dagdhasamasta kleśa samcayah  
nirvāṇam paramam nityam prāpnotyeva na samsayah.*

In this light it is plausible that ghee should be sprinkled on the fire to incite it so that the entire fuel in it is burnt out once for all and there remains in it no further possibility of combustion and consequently it results in an absolute and permanent extinction.

Here the figure called “*virodhābhāṣa*” (paradox) has been used in which there is a perfect internal harmony of ideas in spite of an apparent discordance. Another such paradoxical statement in the *Uttarājīhayāna* itself is—

*chandam nivohēṇa uvei mokkham  
āse jahā sikhīya vanmayārī.*

“By putting restriction upon free movements one attains freedom as a horse well trained and armoured.” Here the ideas “putting restraint upon free movement” and “attaining freedom” are apparently discordant. But they are in perfect internal harmony since a trained horse does not move in the battle-field in a wayward manner. On the contrary he keeps himself in perfect discipline and thereby comes out unhurt from it. In the same way persons who keep their wayward passions in control attain freedom from the bondage of birth and death. Poetry of the *Siddhas* and the saint poets of Hindi abounds in such paradoxical expressions. Kabira says, “a mountain is hidden behind a mustard seed”. A seventeenth century English Poet John Donne, in a holy sonnet, puts forward very bold concepts of paradoxical nature which are almost similar to the latter citation from the *Uttarājīhayāna*. He addresses God and says :

“Take me to you, imprison me, for I  
Except you enthrall me, never shall be free,  
Nor ever chaste, except you ravish me.”

Here the ideas of becoming free on being enthralled and becoming chaste on being ravished are apparently discordant. But in the context they have a perfect internal harmony. In the same way the ideas of final extinction and blazing brightly, in the verse under discussion though apparently discordant, have a perfect internal harmony for a blazing fire can burn all the fuels quickly and completely so much so that the possibility of further combustion being exhausted the state of final extinction is achieved.

# Drink Boiled Water

Dr. J. C. Baid, MS

The medical research has proved that in true sense water is never pure. It contains certain impurities, both dissolved and suspended. The dissolved are hydrogen sulphide, carbon dioxide, ammonia and nitrogen, all gases and salts of calcium and magnesium, the minerals. The suspended impurities are clay, silt, sand and mud. The other impurities which we cannot see by naked eyes are natural impurities derived from atmosphere, catchment area and the soil.

Men's health can be affected by ingestion of contaminated water either directly or through food. The diseases caused by ingestion of contaminated water are viral hepatitis (jaundice), poliomyelitis, cholera, typhoid, dysenteries, gastroenteries, infantile diarrhoea, amebiosis, giardiasis (worm), roundworm, whipworm, threadworm, hydatid disease, guineaworm and tapeworm infestation, etc. These diseases sometimes need surgical intervention and may take life of the patient. Otherwise they remain with the patient throughout his life in some form or other.

In the present day life drinking boiled water is still more important because of fast growing human activity—urbanization and industrialization. The sources of pollution in addition to diseases listed above are sewage, industrial and trade wastes and physical pollutants, viz. heat and radioactive substances. Chemical pollutants of diverse nature derived from industrial and agricultural waste are increasingly finding their way into public water supplies. These pollutants include detergent solvents, cyanides, heavy metals, minerals and organic acids, nitrogenous substances, bleaching agents, dye-pigments, sulfides, ammonia, toxic and biocidal organic compounds of great variety.

W.H.O. is very serious about limiting water pollution. Government of India passed Water Pollution Act in 1974. These days consumption of drugs for the treatment of water born diseases is more, e.g. amebiosis and different types of intestinal worms. Newspapers often report epidemics of cholera, jaundice, gastroenteries and dysenteries in some parts of the country from time to time because of water pollution.



My purpose of writing this paper is, when there are so many life threatening hazards because of water contamination and scientists all over the world are worried, how to prevent these diseases; simple Jaina philosophy can solve it by asking people to drink boiled water. The problem which we are facing today was solved thousands of years ago by Jaina saints.

Now probably there is a query in the minds of readers, when we boil water, probably we kill lives of many organisms already present in the water and hence it is against the principles of Jainism or "Ahimsa". I tell my friends that for about eight hours or so after boiling the water the organism do not grow in the boiled water, but in unboiled water, each organism multiply continuously, so we drink ten times more organism in unboiled water. Therefore, "Himsa" is more in taking unboiled water.

It is advised in Jaina religion that water which is boiled must be consumed within seven or eight hours and thereafter we must use freshly boiled water for another seven or eight hours.

In this way, for drinking purposes boiled water is advised on medical grounds. The thought which appears new today is as old as Jaina religion.



He picks his trumpet from the dust. The awakening of Indrabhuti.

## Gautama Prccha

—A Drama on An Ancient Thought and Dialogue—

P. C. DASGUPTA

Some time about 2500 hundred years ago Indrabhuti Gautama, a very renowned Vedic scholar and priest expressed before Mahavira, the Nirgrantha Jina, his doubts about the existence of soul i.e. the *ātman*. In reply to his question lying deep in the heart of Indrabhuti, Mahavira explained how there must be a governing element that integrates all the senses, remains separate and can never perish like the physical form. This is soul in its true meaning, it is pure for ever unborn and free of death. A conversation like this echoes as if from distant past across the landscape of civilizations. Such a dialogue on the soul and what is transcendental is the central theme of the drama *Gautama Prcchā* (literally, 'the Questionnaire of Gautama') which has been composed by the eminent

play-wright and poet Sri Ganesh Lalwani on the basis of the accounts of the *Triṣaṣṭīśālākāpuruṣacaritra*. When the drama was staged in the Ahimsa Prachar Samity Hall at 34/35, Cotton Street, Calcutta by the young girl students of Jain Siksalya it appeared singularly captivating. The translation of the play from original Bengali to Hindi done by Sm. Rajkumari Begani truthfully conveyed the murmuring flow of the episode with its moments of challenge, perception and peace.

The opening scene of the drama showed the worship of the sacred fire at the *yajñasālā* of Arya Somila at Pava. The performance of the ritual was in full conformity with the Vedic practice. One Brahmin priest was chanting an auspicious hymn from the *Suklayajurveda* praying for great deities of the universe while Somila and other priests were pouring oblations on the holy fire that was aflame on the altar. Sitting close by pious Indrabhuti was watching the progress of the ritual and was at the moment expecting like his companions the appearance of Indra and other gods in their celestial cars since the harvest on earth, the source of life would always require their benediction. But, the high priests of the rite were surprised to have a vision of an array of heavenly cars, the *vimānas*, all resplendent, as proceeding towards the Mahasena Garden where Mahavira was residing. Observing the divine spectacle the kind of which manifests within the border of legends Indrabhuti hastened to the presence of the Tirthankara who was then sitting beneath a tree amidst a multitude of audience. Whom Indrabhuti imagined as a magician or a speaker of artful language now appeared as a saint or a Yogasiddha, the one who has established his communion between the Self and Eternity. After a dialogue with Mahavira his doubts with regards to the existence of soul were dispelled and the great Vedic scholar surrendered himself to the Tirthankara whose love and understanding knew no bounds. The scenes of the drama went on unfolding the episode of the meeting, how Indrabhuti's younger brothers Agnibhuti and Vayubhuti, also great scholars took this surrender as a defeat and entered into arguments with the Master but in the same way bowed to the omniscience of the *Jina*. At the end Somila and Sunanda were the only ones who were left at the place of their ritual. Both of them were contemplating the circumstances and the explicable glory of Mahavira. When Vayubhuti, the youngest brother bade farewell to challenge Mahavira like his elder ones Somila questioned Sunanda about the prospect. The latter had no hesitation to answer that none would return from him.

The drama was superbly enacted by the young artistes, the students of Jain Siksalya. It can be said that the part played by Sm. Rajkumari Sethia as Mahavira glowed with natural sublimity by her confidence and

repose, soft looks and delicate form. While she was sitting in the attitude of meditation beneath a tree the glory of the Master's presence was unconsciously redolent by a sculpturesque shadow that fell at the background due to the effect of lighting. Such a situation was extremely artistic in appeal and may be yearned after by devotees. To individuals the shadow could be more appealing than any histrionics on stage. The parts played by Sm. Chandraprabha Kochar as Indrabhuti and by Sm. Swapna Lunia as Somila were also fascinating especially during moments of uncertainty and inner conflicts. The roles of Sm. Mina Sethia and Sm. Sangita Bothra respectively as Agnibhuti and Vayubhuti were also faithful in respect of the occasion when an Aryan religion of unmeasured past that registered its faith in the Vedas had been challenged by a thinker of warrior-clan who preferred to propagate his views in the Prakrit, the language of the masses instead of in Sanskrit, 'the language of the gods'. Herein lies the difference between the *symposium* of Plato and the dialogue of Mahavira. Actually, the drama *Gautama Pṛcchā* has beautifully reminisced an important moment of the past. The roles of Metarya, Vyakta, Acalabhrata, Sunanda and the stranger played respectively by Sm. Laksmi Surana, Sm. Promila Kochar, Sm. Promila Baid, Sm. Usha Gupta and Sm. Sarita Jain will also deserve praise. While due credit should go to Sri Kanti Srimal and Sm. Rajkumari Begani for their direction of the stage-version of the drama that evinced a considerable artistry the entire performance had been charmingly accompanied by the undertones of music as produced by Sri Robi Biswas and his party. The costumes supplied by Rupayan, Calcutta, and the lighting arranged by Sri Anil Saha duly added to the grace and dignity of the performance.

The drama *Gautama Pṛcchā* will remain memorable for its theme that enlivens an episode of the past that is both sublime and scintillating.

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