

# MĀNADEVA SAMVAT : AN INVESTIGATION INTO AN HISTORICAL FRAUD

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*Nullius in verba*

Don't take anybody's words for granted.

*Motto of the Royal Society, London*

**There is no Mānadeva II, King or Feudatory**

Between Gaṇadeva (Samvat 479-487) and śivadeva I (Samvat 512-535) there is no king named Mānadeva. Although the gap is of about 25 years, there is no trace of “Mānadeva II” in Maṅgal Bazār, Pāṭan inscription of Bhāravi, dated Samvat 492, nor in Deśabhāṭṭārikā’s śaṅkhamūla inscription, dated Samvat 495. Had there been an outstanding king, able to found an epoch era with a name, Mānadeva, this era should have been used, by śivadeva I, in his Viṣṇupādukā Phedi inscription of Samvat 512. At least, Jayadeva II’s Paśupati inscription dated Samvat 157 should have mentioned him if there were an illustrious king able to found an epoch era which Jayadeva II himself had used.

“Mānadeva II” in the *Nepālavamśāvali*, Kirkpatrick, Lévi etc., is clearly a result of scribal error which has been handed down to all the 19<sup>th</sup> century *Bhaṣāvamśāvalis*. This is quite clear from the comparison of the details mentioned about Gaṇadeva in the *Gopālarājavamśāvali* and of “Mānadeva II” in *Nepālavamśāvali*, i.e., Gaṇadeva>Manadeva>Mānadeva. Based on Kirkpatrick’s summary of the *Nepālavamśāvali*, Lévi wrote,

Between Udayadeva and Gaṇadeva (Gṇakāmadeva), the Vamśāvalis place Mānadeva II, under this reign Nepal suffered for three years from a terrible drought; Mānadeva brought an end to it by offering all his treasures to Paśupati. The Vamśāvali of Kirkpatrick alone registers this tradition (Lévi, 1905 Vol II: 121).

This conclusion of Lévi is based on the following summary by Kirkpatrick, in his “Historical Sketch of Nepal”,

Maun Deo (the 2<sup>nd</sup>) 45 in whose reign Nepal was afflicted during three years with a severe drought, which ceased on the Rajah’s propitiating the god Pusputty by an oblation of all his reaches (1811: 260).

This summary by Kirkpatrick, in turn, is based on the following entry in the *Nepālavamśāvalī*,

*Rājā śrīmānadeva varṣa 45//tena paśupatibhāṭṭarakāya varṣa trayam  
nāvṛṣṭiḥ vṛṣṭiākaraśanāmma koṣaṃ maṇiyuktamca dattavān//* (folio 5b  
lines 3- 6)

This entry in NV is based on the misreading of the following entry in the *Gopālarājāvamśāvalī*,

*Rājāśrīgaṇadeva varṣa 45// tasya rājyem nepālabhūmi varṣatrayam  
anāvṛṣṭi vāriṣovṛṣṭi ākāṃkṣaṇāya kāmanenaḥ śrīpaśupatibhāṭṭarikāya  
mahānāga nirjityāḥ tasya maṇiyukte gaṇadeva nāma koṣa kritam  
praḥhokitam tatprabhāvāt mahāvṛṣṭi kritam prajā sukhi bhavati//*  
(folio 21a line 4- 21b line 1)

At least from that point onward, the contamination of the *Vamśāvalī* tradition goes on uninterrupted. Beginning with Pandit Guṇānanda's (A.D.1829) work (Wright, 1877), to the *Vamśāvalīs* compiled in the 1890s, most of them invariably insert a king named Mānadeva as a son of Udayadeva, between Udayadeva and Gaṇadeva (or the chronicler's Guṇakāmadeva). In Siddhimān Siṃha Basnet's work (dated A.D. 1878), published under the title *Rājabhogamālā* (the National Archives Cat. No IV 332, another copy in Leo E. Rose collection in the Berkeley Campus, University of California), this insertion is visibly done with the help of a correction mark at the bottom of folio 45a line 13, where the King's name is corrupted to Rājā Maṇḍeva with a rule of 53 years. In the Kaiser Library, there is an interesting vernacular chronicle (No 9/1276) offered to General Kaiser by Pandit Rāmnāth Čalīse of Mahottari. Here King Mānadeva is recorded as the son of Udayadeva, with 25 as reginal years. Similarly, another text of *Bhāṣā Vamśāvalī* (last record A.D. 1877) in our personal collection has the following entry,

śrīmānadeva, years of rule 45. On hearing the former story of Vīr Vikramāditya Sen, the King re- introduced the Vikram Saṃvat all over the eastern and western dominions and made it famous everywhere. (folios 91- 92)

Nearly the same text appears in the *Bhāṣā Vamśāvalī* Part II edited by Lamsal (1966:1) where the King appears as Rājā Nandadeva, with only 13 years' rule. Since every well- to- do family in Nepal has a copy of such chronicles the contamination went on multiplying with every new copyist, almost *ad absurdum*.

**Manadeva Saṃvat: A Bogus Interpolation in the Text**

“Māndevābda 304” is clearly a bogus interpolation in both the British Museum copy and the National Archives copy of *Sumatitantra*. There the interpolation, a faint line in a later hand inserted at the bottom of the page, is all too evident. The correction mark, a *haṃsapāda* at the top as well as at the bottom of the line 5 following the punctuation mark which concludes the line ending in *rājā krameṇatu*, is clearly visible. The post - colophon stray folio has “Mānndevsya rājyābda 304” by a recent scribe. In the British Museum copy, this is a prose line in the midst of verses in Anustubha metre. Probably, it is an elaboration of a verse similar to the modern *Sūrya Siddhānta*, Chapter I:23 which enjoins that

In the present twenty- eighth , Age, this Golden Age is past : from this point, reckoning up the time, one should compute together the whole number. (Burgess, 1860/1997: 13.)

As *Sumatitantra* is a *tantra*, its six ways of calculating *ahargaṇa* (literally, total number of mean civil days elapsed since the beginning of the Kali) begins from the start of the Kali Yuga, expressing the expired years of the Kali as “*bhaviṣyam sampravakṣāmi kalikañca yathākramam*” i.e. “introducing the future Kali years in a sequence.”

śāṅkaranārayaṇa (ca. A.D. 825-900) of Quilon, in Kerala, rose to eminence through his commentary on *Laghubbhāskriya*, and later appointed chief court astronomer of Ravivarman of the Cera dynasty of Kerala. He quotes a verse from ācārya Sumati in his *Vivaraṇa* on *Laghubbhāṣkariya* (dated A.D. 869), in connection with lunar and solar eclipses, ten years before the so- called Mānadeva Saṃvat 304. This line is clearly an interpolation in the *Sumatitantra* texts. These texts give the mean positions of the planets of mid- night of Saturday/Sunday, March 20/21, 505 A.D. in Avanti.

The *Sumatitantra* gives an R- Sine Table with 90 divisions of a quadrant, one for each degree of the arc. It is sometimes accurate up to the 12<sup>th</sup> decimal place (e.g., 889 for 15°, 1790 for 30°, 2431 for 45°, 2977 for 60°) whereas for other degrees the text only gives round figures by ignoring decimal points lower than 0.50, (e.g., 3321 for 75°). Most classics on Indian astronomy dated before Vāteśvara (b.800 A.D.) give 24 Sines for a quadrant , with the value of Radius= 3438. This is so in *Paitāmaha Siddhānta*, Aryabhaṭa I, Brahmagupta, Lalla, and modern *Sūrya Siddhānta*. The Sines for other degrees can, of course, be derived on the basis of the 24 Sine tables, and smaller decimal points are inevitable if lesser arcs are taken as units. Varāhamihira, on the other hand, gives Sines for a radius of 120 with 225” seconds as interval. As

the table differs from all others, including the one given by Varāhmihira, the text of *Sumatitantra* seems to be infested with interpolations by later hands.

Of the two available copies of the text, the copy in the National Archives is by three different hands, copied for the second time, as mentioned clearly in its colophon. In the British Museum copy, there are a number of folios with lines erased, added, and the whole folios erased after having copied them. A number of folios are also blank. A number of folios are post-colophon, such as 121a-b, 122a-b, 123a-b. The folio 124a-b has no corresponding equivalent in the National Archives copy. At the end of it comes another colophon which dates the text to 16 days later. The first colophon dates the text on *Samvat 476 Pauṣa śukla 9*; the second one dates on *Samvat 476 Pauṣa Kṛṣṇa 10*. There are 124 folios in this recension. All folios are numbered in letters consecutively on the left hand side and in numerals on the right hand side.

In the National Archives copy, on the other hand, there are 152 folios; folio 13a 13b are missing, and after 15a there are 3 folios which are unrelated to the context. Upto 143b folio there is consecutive numbering— first in letters upto folio 62b, then in decimal numerals up to the end. Decimal numbering is also used in the main text. This corrupt and contaminated manuscript is copied at least by two different hands on two different kinds of palm.

Unlike the popular Caitrādi expired śaka (computed from Tuesday, March 3, 78 A.D.) the so-called “Mānadeva Samvat” is none other than Kārttikādi current śaka which is to be computed from Thursday, October 18, 76 A.D. Kārttikādi śaka was also prevalent in Saurāṣṭra. It is referred to by Bhāṣkara I (A.D. 550-629) in his *āryabhatīya-bhāṣya* ( folio 127 of the transcript from the two manuscripts in Malayalam script in the collection of the Government Library of Oriental Manuscripts, Madras, No R- 14850 ). First used by Aṃṣuvarṃā and his successors, it is a *lokakāla*, with 500 dropped from the total current year. śaka Samvat, the astronomer’s era *par excellence*, too, was a *lokakāla*, begun with the figure for century left out in computation. Al-Biruni notes,

Common people in India date by the years of a *centennium* which they call *saṃvatsara*. If a *centennium* is finished, they drop it, and simply begin to date by a new one. This era is called *lokakāla* i.e., the era of the nation at large. But of this era people give such totally different accounts, that I have no means of making out the truth.

(Sachau, 1910, II; Chapter XLVIII. )

All current eras begin 1 year before the expired one. In Kārttikādi samvat, Kārttika comes before Caitra whereas in Caitrādi samvat Caitra comes before Kārttika. Only five months are common to both the systems i.e., Kārttika,

Mārgaśīrṣa, Pauṣa, Māgha, Phālguṇa, whereas uncommon ones are Caitra, Vaiśākha, Jyeṣṭha, aṣāḍha, śrāvāṇa, Bhādra, and āśvina. So the conversion of one era into another is not such a simplistic addition/subtraction arithmetical operation as made of it by some “authorities” (See Bhandari, *Purṇimā*, 103, VS 2058 Pauṣa, pp. 2-13).

Aṃṣuvarṃā, most likely under the influence of Harṣa Saṃvat which is also Kārttikādi, current, and *amānta*, began to use the then prevalent era with 500 left out since year 529. So far, in the last 144 years, we have not found a single inscription dated between Samvat 1 to 28. Nor is there any reasonable argument for launching an epoch era with Saṃvat 29. Obviously, Aṃṣuvarṃā just dropped the figure for hundreds and used the current epoch era. Several scholars had speculated such a possibility as early as Bhagwanlal Indrajī (1885:45). Aṃṣuvarṃā makes it more than clear when he installs a gold repousse *kvaca* image of Garuḍanārāyaṇa at Cāṅgu where the date is mentioned as

*Oṃ ekatṛiṃśattne varṣe vartamāne svasaṃsthayā  
māghaśuklatrayodaśyāṃpuṣyeṇa saviturdine*

The late Dhanavajra Vajrācārya as well as his guru, the late Pandit Nayarāja Pant, was both unable to interpret the correct meaning of the words *vartamane* and *svasaṃsthayā* because both believed in the so-called “Mānadeva Saṃvat.” They thought that the words qualified the *kvaca*, set up at present, rather than the epoch era. The current epoch years are qualified with words such as *pravartmāne* or *vartamāne* whereas expired ones are prefixed or followed by words such as *gate*, *atite*, *pratite*, *yute* etc. (On the subject of current year and expired year and their conversion, (See Sewell and Dikshit 1896:40; Pillai, 1922: 52–53; Ketkar, 1923: 18–19)

When Franz Keilhorn calculated 200 Vikrama Saṃvat inscriptions with weekdays from India and 29 Nepāla Saṃvat inscriptions with weekdays from Nepal, he found that some are verifiable as current years and others as expired ones, while a number of inscriptions, both from India and Nepal, have irregular dates that cannot be verified ( Kielhorn, 1890, January: 20–40; June:160-187, and November: 354–374; September: 1888, 246–253 )

Of the 29 Nepalese inscriptions with weekday, examined and computed by Kielhorn, 4 have years mentioned as expired. The words used are *gate*, *prayāte*, *yāte*, *yute*, 19 have expired years without any appellation; and 2 are dated according to current year, without mentioning this. Others were irregular ones. In the case of the Vikrama Era, of the 200 inscriptions Kielhorn examined, 50 have irregular dates: some are regular by one siddhānta, irregular by another; some dates are doubtful readings; some are with a wrong weekday; some will work only if the immediately following

year is taken into consideration. Some tally only if the preceding year is considered. Some work with *amāntamāna* others with *pūrṇimāntmāna*, both also have Southern and Northern variety. All these variations in dating the inscriptions are dated in the Vikrama Saṃvat.

It will, therefore, be a naive generalization if we assume that in all the Licchavi inscriptions, particularly with intercalation, the dates are all regular, uniform, and absolutely flawless renderings and readings. Not all the inscriptions are uniformly preserved. There is a serious problem of illegible and variant readings by different epigraphists – both in the case of numerals and ligatures (e.g., where Gnoli read Gaṇadeva, Dhanavajra reads Gaṅgādeva, in Capaligaon Inscription, dated Saṃvat 489 śrāvaṇa śukla 12). In some inscriptions or documents the same epoch year may be expired whereas in others they can be verified only as current years. This task is made less than surmountable by the fact that of the 200+ Licchavi inscriptions, only 2 have weekdays.

The current year begins with month 1 year 1, whereas the expired one begins with 0 year, day 1 of month 1 and becomes year 1 and month 13<sup>th</sup> in the 13<sup>th</sup> month only. As most inscriptions in Nepal or India do not *explicitly* mention whether the given year is current one or expired one, the only way to ascertain a given date is to compute all the available elements of *pañcāṅga*, i.e., *tithi*, *vāra*, *nakṣatra*, *karāṇa*, and *yoga*, if they are explicitly mentioned in an inscription. As Pillai puts it,

The weekday is the crucial test in the vast majority of verifiable Indian dates and in the absence of a weekday, an Indian date is usually pronounced unverifiable; unless there is an eclipse on that date. Where we have a date that merely gives a *tithi*, a *nakṣatra*, and a year without the week-day, we say that the day cannot be verified, i.e., proved free from the probability of error, because every year must contain such a *tithi*, and such a *nakṣatra*, we cannot assert with any degree of confidence that the year-data is free from error (Pillai, 1922: 4–5).

Or as Ketkar puts it,

Citations about *Saṃvatsaras*, months, *tithis* are not sufficient for the determination of a date. Details about the era: whether the *saṃvat* is current at the *Meṣādi* or at date; whether the date is expired or current; whether *Caitrādi* or *Kārtikādi*; whether the date is derived from the *Sūrya Siddhānta* or *Arya Siddhānta*, these details should be clearly and fully made out *before commencing the calculation*. These

*are the uncertainties that often beset the work of an epigraphist* (Ketkar, 1923:80-81).

Unfortunately for us, there are only two documents from ancient Nepal, one the gold repousse inscription dated Current Kārttikādi Saṃvat 31 Māgha śukla 13 Sunday when the Moon was in Puṣya nakṣatra (verified by Regmi, 1983: 268, for Sunday, February 4, 608, A.D.); the second one, a colophon dated Expired Kārttikādi Saṃvat 301 Vaiśakha śukla 7 Sunday, while the Moon was in Puṣya Nakṣatra and the Yoga was Siddha (verified by Petech, 1984:29 for Sunday 13, 878, A.D.; wrongly verified for Sunday April 23, 878 A.D. by Regmi, 1983: 268; but rightly verified by himself for A.D. 878 April 13, Sunday on p. 23) We believe that these two documents with weekdays were verified by the two historians by using Pillai's tables (1911/1922). We have also cross-checked both the dates by using Jacobi, 1892, Sewell and Dikshit, 1896, Ketkar, 1923, and Sewell, 1926. Except for a small variation of a few *ghatikās* and *palas*, their verifications are found as correct ones.

Of all the newly found Licchavi inscriptions, just a little over a dozen in the last 33 years, none has a weekday. Even if all other elements of Hindu calendar are mentioned, such as *nakṣatra* or *muhūrta* as in Cāṅgu Inscription of Mānadeva, dated Saṃvat 386 *Jyestha śukla Pratipad, Abhijit muhūrta*, with the Moon in the *Rohiṇi nakṣatra*, its date cannot be verified as totally free from error, because such astronomical conjunctions are not rare. So the late Pundit Nayarāj Pant's claim that he successfully calculated the date of this inscription on the basis of *Jyautiṣa vedāṅga* does not carry any significance. Similar claims had been made in the past by other authorities using different *siddhāntas*, and epoch eras.

For instance, Shankar Man Rājvaṃśī calculated these two Licchavi documents with weekdays by using his own theory of a Licchavi Era founded 22 years before the founding of śaka Era in 78 A.D. He came out with the following startling results: A.D. 442 April 27 Monday for Mānadeva's Cāṅgu inscription, A.D.584 February 19 Sunday for the Aṃśuvarma's repousse inscription, and A.D. 854 April 6 Sunday for the colophon of the *Sauśruti Saṃhitā Sahottaratantra*. He claimed that all the elements given in the inscription and the colophon match perfectly well with his own theory of the Licchavi Era founded in A.D. 56 and Aṃśuvarma Era founded in A.D. 552.(Rājvaṃśī: 1970:43-47.). In his *magnum opus*. NR Pant himself wrote,

In the past, all have claimed that they had verified the date in the Cāṅgu inscription of Mānadeva. Such date occurs 6-7 times within a century. So it is clear that conclusions cannot be drawn on the basis of such computations of dates (NR Pant et al., 1987:556).

### The Tibetan Text does not Mention “Mānadeva II”

Among the so- called four evidences in support of the “Mānadeva Saṃvat,” the Tibetan text does not mention Mānadeva at all. On the contrary, bSo nams rtse mo (A.D.1142–1182) mentions that Aṃśuvarma counted years from śaka 438 (probably a misinterpretation for 498, resulting out of misreading *candra* for *randhra*, because *candra* also means 3), and 242 years after the appearance of Aṃśuvarma, King Khri gtsugs lde btsan (Ral pa cen) came to power. The relevant quote from the text is the following:

The Buddha entered womb in the fire- rabbit year and was born in the iron- dragon year. He got the perfect enlightenment in the water- tiger year and entered Nirvana in the process of beginning the earth- mouse year (2133 B.C.). 137 years later, King Nanda appeared. This account occurred in *Tarkajvālā* (=Toh.3856). After 800 years from this King, Candragupta appeared. 132 years after him, King śūdraka appeared. After him, counting years, when 274 years passed by, the Nepalese continued to count years after it, and still after 438 (498 ?) years, King Aṃśuvarman appeared. After him, by counting years, when 242 years passed by , it reaches King Khri gtsugs lde btsan’s reign. (bSod names rtse mo:1968: folio 315b line 1– folio 316a line 4. )

Instead of lending support to “Mānadeva Saṃvat” this chronology completely falsifies it. Among Tibetan historians, there is a controversy as to when Ral pa cen actually came to power, in A.D. 814 (*The Blue Annals* by gZon nu dpal, compiled in A.D. 1476–78), or in 817 (*Bod kyi rgyal rabs*, compiled by Gras pa rgyal mtshan, in A.D.1545), or in A.D.823 (*Chos b’yung*, compiled by Buston, in 1322). The short chronology is based on the Buddha’s Nirvana in the year 2133 B.C. bSo nams rtse mo says that he noted down the chronology from the colophon of the Tibetan translation of Vāvaviveka’s (ca.450 A.D.) *Tarkajvālā* done by Atiśā and Jayaśila (*Nag lo cha ba*). It cannot, however, be traced in the T’angur, dbu- ma No 3856= Toh (or mDo Edition XIX 2 K 96/5256/19- 4- 7 on folio 40B7–329B2).

In Tibet, prior to the adoption of the system based on *Kālacakratantra*, derived from the 60- year cycle of Jupiter, there was a calendar named *me- kha- gya- tsho* (Skt. *agni- ambara- abdhi*, i.e., 403). As Lévi puts it,

the word is a compound of numeral symbols: *me*, the fire, expresses 3; *kha*, the space, 0; *gya- tsho*, the lakes, 4; *me kha gya tsho* signifies 403. Read according to the Indo- Tibetan method, *me kha gya tsho* signified 403, and 403 deducted from A.D. 1025 would then be A.D. 622. But I have already more than once pointed out to what extent

these expressions in numerical symbols lend themselves to inversion of figures. If one rephrases the hypothesis as *Kha me gya- tsho* one will read 430 instead of 403. It is the very date I was led to by astronomical calculation to the year A.D. 595 as the epoch year of the Thakuri Era (Lévi, 1905: II:154).

Lévi refers to one of the fundamental rules of Indian chronology, *anikānām vānto gatiḥ*, according to which the figures rendered by indicative words are to be counted backward, but the Tibetan historical tradition began to adopt this tradition only since mid- seventeenth century. So we have to calculate the numeral nominals according to the sequence of the given words. It would have resulted in (A.D. 1025- 304) A.D. 622– the date of founding of Hijri Era (July 15, 622 A.D.). That date would have upset Lévi’s own theory.

#### Petech’s Puppet Theory

The authenticity of this theory is just as doubtful as Luciano Petech’s own “puppet theory”. He claims that Aṃśuvarmā launched this epoch era by placing on the throne a puppet of his- - a “Mānadeva II.” In his own words,

In 576 Aṃśuvarman, then the man behind the throne, installed a puppet of his, Mānadeva, followed later by Guṇakāmadeva. Both are mentioned in Kirkpatrick’s *vamśāvalī* as the immediate predecessors of śivadeva... Then śivadeva was placed on the throne. But in 606 he was deposed or died, and Aṃśuvarman began to rule without a puppet king, employing (or starting) the era of his first protégée Mānadeva.... The Mānadeva of 576 was the first Buddhist king (Petech, 1961:230).

Why would an ambitious regent use his puppet’s epoch era is none too clear to us. In the whole Indian sub- continent there is hardly any evidence of a feudatory under a paramount ruler launching an epoch era.

#### Nayarāj Pant’s Vintage Theory : Mahāsāmanta Mānadeva II

The above theory is as good as Nayarāj Pant’s vintage theory that “Mānadeva II,” the imaginary founder of the epoch era, was a powerful *mahāsāmanta*, not a king.

In A.D. 576, when the reigning Kings were too weak, the chief feudatory (*mahāsāmanta*) Manadeva II, took power in his own hands and also founded an epoch era. This epoch era is known as Mānadeva Samvat. Its use continued for 300 years (Pandey and Pant, 1947: 13–14 ).

### The Rāguru's Theory: Epoch Era of Mānadeva I

Similarly, the late Hem Rāj Pandey thought that the epoch era mentioned in *Sumatitantra* was founded by Mānadeva I. "The Rājaguru was of the opinion that this Mānadeva for whom he supplied the date from the manuscript was the Mānadeva of Cāngu Nārāyaṇa and that it proved a Mānadeva Era which was the era used by Aṃśuvarmā" - - a theory which Kāshi Prasād Jayaswāl politely turned down (1936:36).

Distorting these historical facts, Nayarāj Pant and his school enlist the name of Hemrāj Pandey as the first proposer of the so-called "Mānadeva Samvat". Clearly, he was not proposing a Mānadeva II; he was proposing Mānadeva I as the founder of a new epoch era in śaka 498/A.D. 576.

### The Historian- Laureate's Theory : the Non- existent Rupavarmā

Almost similar is the nature of the late Historian- Laureate Kharidār Bāburām Acārya's theory that Mānadeva Saṃvat was founded by Aṃśuvarmā in the memory of his father, Rupavarmā who *probably* belonged to the royal line of Vṛṣadeva! (Acharya, 1949:8). He continued to believe in this theory in his essay on "Nepal's Relations with China and Tibet," where he wrote,

In Nepal, upto A.D. 576, all political power was controlled by the Ābhīras. In this very year Rupavarmā took the support of a Licchavi prince born in that family and suppressed the Ābhīras. Around A.D. 587 Aṃśuvarmā became a ruler succeeding the Licchavi prince. In A.D. 606 the coronation of Aṃśuvarmā took place, and he founded a new epoch-era beginning from A.D. 576. (Ācārya, 1956:8- 9).

Ācārya fails to explain why Aṃśuvarmā did not launch his epoch era from Year 1. We are kept in dark about what happened during the interval of Year 1 and 28. In an interview he gave to Professor T.R. Vaidya, the late Dhanavajra Vajracārya, Bāsudeva Tripāthi and Churāmani Bandhu, on April 23, 1970 at his residence, Acārya says,

In Saṃvat 528 Aṃśuvarmā came to power. After that for the convenience of computation, he dropped the century figure 5 and continued with number 28 and so on (Sharma, Vajracarya and Thakur, 1973:24-25).

Ācārya names the Saṃvat used by Mānadeva and his successors as Kośānu Saṃvat and the one used Aṃśuvarmā and his successors by dropping the century figure "Later Kośānu Saṃvat". Thus, in complete defiance of Āchārya's views as well as Hemrāj Pandey's view, Nayarāj Pant and his

school enlist both Bāburām Acharya and Hemarāj Pandey as the co-propounders of the so-called “Mānadeva Saṃvat”. The Pants have been hitherto cashing in on this concocted historical fraud. These distortions of facts were solely motivated by the urge to prove all other scholars wrong and himself and his school alone as right in everything they publish.

#### **Pandit Nayarāj’s Theory of “Mānadeva Saṃvat”**

While there is such a disappointing confusion among eminent scholars, NR Pant boldly wrote in the Preface to their edition/transcription of the *Sumatitantra*:

*Sumatitantrasyopalambhādamaṃsuvarmādibhiḥ prayuktaḥ saṃvatsaro mānadevasaṃvatsara iti naipālakā vidvāṃsaḥ svcakruḥ* (Pant et al. 1978:27).

As attested in the *Sumatitantra*, the Mānadeva Saṃvat used by Aṃśuvarmā and his successors is accepted by all Nepali scholars.

This is only a happy conclusion arrived at by a *mahāvidyāvāridhi*.

While we were working on a facsimile edition of the *Gopalarājavarṇasāvali* in 1984, we realized the need of verifying Mānadeva II Saṃvat for preparing an acceptable chronology of the Licchavis. (See Vajrācārya and Malla, 1985: 235). Vajrācārya already had doubts about a Mānadeva II, so that “it is somewhat inconvenient to call this epoch era as Mānadeva Saṃvat. But we have not been able to ascertain what happened during the time between śaka śaṃvat 498 and 512” (Vajrācārya, 1973: 299-300). Although both the editors had reservations on this issue, we let it go. In a couple of later publications as well, we saw no need to check the sources, particularly the Tibetan, because we took the words of a well-known Tibetologist and those of N.R. Pant for granted. Now we realize how wrong both of us were in assuming that there was a “Mānadeva II” who launched an epoch era in A.D. 576! This paper is only a small *prāyaścitta* for this big mistake.

#### **Historical Facts and Sumatitantra’s Figures**

The British Museum copy of the *Sumatitantra* has the following lines,

*Jāto duryodhano rājā kalisandhyam pravartate/  
Yudhiṣṭhiro mahārājo duryodhanastayopi vā//  
Ubhau rājau sahasre dve varṣantu sampravarttati/*

*Nandarājyaṃ śataśṭaīca ścandraguptastatopare/  
Rājyaṅkaroti tenāpi dvātrimśaccādhikaṃ śatam/  
Rājā śudrakadevaśca varṣasaptābdhi cāśvinou//  
śakarājā tatopaścādvāsurandhra kritantathā/  
Ityate bhāṣitam mahyaṃ jñāyā rājā krameṇa tu//  
Seṣa yutāśca kṛta ambarāgni 304 śrī mānadevābda pruyjyamānā etāni  
piṅḍa kali- varṣamāhuḥ// (Folio 2b- 3a)*

The above text has been transcribed, translated, and interpreted differently by different Nepali and foreign historians of Nepal, depending upon how, for instance, one translates the word, *sampravarttate*. Yet the fact remains that not a single of the figures for the six epoch eras mentioned in the *Sumatitantra* – (Yudhiṣṭhira 2000, Nanda 800, Candragupta 132, śudraka 247, śaka 498, and Mānadeva 304) matches with the known historical facts. In the first place, it is not clear from the various translations of the word *sampravartte* whether these figures refer to the duration of *the rule of a king* (as the text intends?), or of *the dynasty* (as Petech thought), or of *the use of the epoch year* (as the Pants think). If the intention was to specify the duration of a King's reign or rule (as suggested by *candraguptastatopare// rājyaṅkaroti tenāpi dvātrimśaccādhikaṃ śatam//*), i.e., thereafter Candragupta will rule for 132 years, then it is clearly a pious fabrication. Jayaswāl, who first published this text in 1936, claimed ,

It is clear that the author of the chronology took chief reigns as landmarks, and not always eras. There were Yudhiṣṭhira Era, Nanda, and śaka Eras, but there was no Chandragupta Era, there was no Sudraka Era. There is no trace of an Era of Mānadeva I (Jayaswal, 1936:42).

If the intention of the scribe was to indicate the *duration* of an epoch year, implying that śaka Saṃvat will last upto 498 only, clearly śaka Saṃvat continued to be used in Licchavi inscriptions from Saṃvat 512 to 535 by śivadeva and to Saṃvat 536, side by side with the so- called “Mānadeva Era” by Aṃśuvarṃā.

As known to modern historians, much of ancient Indian history before the invasion of Alexander the Great (328-326 B.C.) is mostly a core of hard facts surrounded by a thick pulp of disputable interpretations of the extant literary and archeological sources. Mahāpadma Nanda, the founder of the Nanda dynasty, ruled between ca. 362- 320. B.C. Candragupta Maurya , between ca. 321- 298 B.C. The Sātavāhan dynasty, founded by King Simuka, ruled between ca. 50 B.C. to 250 A.D. śudraka, the founder of Andhra Dynasty, ruled between ca. A.D. 350- 400. The Scythian Kuṣāṇas or śakas, used at

least three different eras. The first one was founded in 123 B.C., using Macedonian months and Greco- Chaldean method of date recording. In the first three centuries of their rule, the śakas used the old era with hundreds omitted. But they also began to use Indian months and Kharoṣṭhi script. The classical śaka era, starting from Tuesday, March 3, A.D. 78, is nothing but the old śaka era, starting from 123 B.C. with 200 omitted, so that the year 1 of Kaniṣka is year 201 of the old śaka era, though the qualification, śalivāhana, is attached to it much later. This epoch year itself is a *lokakāla*, an abridged one for śaka 201. Jayaswāl, who first published the *Sumatitantra* chronology was not too sure of its historical relevance because,

The year for the commencement of the Nanda- Rājya was hopelessly wide off the mark. The dates for the commencement of the Maurya kingdom and the Śatavāhana kingdom are short by about 22 years. (Jayaswāl, 1936:42)

In Licchavi Nepal, śaka era continued to be used, with the figure for the centuries omitted, till the beginning of Nepāla Saṃvat . (For early Indian Chronology and Calendar, See R. Morton Smith, "Ancient Indian Chronology," *Journal of the American Oriental Society*, Vol. 77 No. 2 (1957), pp. 276- 280; Van Lohuizen de Leeuw, *The "Scythian" Period*. Leiden: E.J. Brill, 1949; M.N. Saha, " Different Methods of Date Recording in Ancient and Medieval India, and the Origin of the śaka Era", *Journal of the Asiatic Society*, Letters Vol. XIX No 1, 1953; Etienne Lamotte, *Histoire du Bouddhisme Indien. Des origines a l' Era śaka*. Louvain: Institut Orientaliste de l' Universite de Louvain, 1958, and David Pingree, "A Note on the Calendars Used in Early Indian Inscriptions." *Journal of the American Oriental Society*, Vol. 102 No. 2 (1982), pp. 355–359).

#### From the Beginning of the Kali to the Composition of the Text

Although it is a tantra based on mathematical astronomy, the framework of the *Sumatitantra* is purāṇic. M.R. Pant's excavation of a brahmaṛiṣṭ, named Sumati from among the mourners lined up at the deathbed of Bhiṣmapitamaha in the Mahābhārata War is laudable on its own, but its use to defend the purāṇic veneer of the text is rather unfortunate. The purāṇic bias of the text is evident, not only from the opening verses, but also from its history, cosmogony, and geography.

The main function of the chronology planted in the *Sumatitantra* appears to be to add up to the total years lapsed between the beginning of the Kali Yuga (i.e., Friday 17/18 February 3101 B.C.) and the imagined date of composition of the text in question. The total comes out to be 3981 years, mainly to facilitate the computation of the *ahargaṇa*. The historical use of

these figures is virtually nil because these figures are based on the Purāṇic lists of various dynasties of the Kali Yuga. Despite Pargiter's (1913) admirable patience in attempting to reconstruct an acceptable chronology out of these Purāṇic lists, there is a virtual chaos among various *purāṇas* and *upapurāṇas*. For example, *Matsya Purāṇa* says that Mahāpadma Nanda ruled for 88 years whereas *Vāyu Purāṇa* says that he ruled for 28 years. Pargiter, (1922:287) assigns 80 years to the Nandas, and *Sumatitantra* claims that the Nandas ruled for 800 years. No sensible historian can take these figures too seriously. However, N.R. Pant was so credulous about the authenticity of these figures that he quotes the *Sumatitantra* to give the date of Candragupta Maurya ! (See his *Hindu Siddhānta- Jyautiṣa ra Greek Siddhānta Jyautiṣako Tulanā* (1990: 10). This is only an example of N.R. Pant's sanguinity and complete uncritical faith in his sources. It is not for nothing that R.G. Collingwood wrote in his classic, *The Idea of History*, saying, "In so far as an historian accepts the testimony of an authority and treats it as historical fact, he obviously forfeits the name of historian; but we have no other name by which to call him." (1941:252).

### Nepāla Saṃvat

Nepāla saṃvat was founded, not in the imaginary year 304, nor in śaka 802, as implied by *Sumatitantra*, but on Kārttika śukla Pratipad of current Saṃvat 303, i.e., Kārttikādi current śaka 803, i.e., on Tuesday, October 20, 879 A.D. On that day, the Moon was in the Anurādhā Nakṣatra for 20 hours and 23 minutes after the mean sunrise in Kathmandu, and śovana Yoga continued between lunation 1481- 1852. After the mean sunrise in Kathmandu, the śukla Pratipad tithi lasted for 22 hours 8 minutes. This date is 7 months later than the beginning of Caitrādi *expired śaka* 801. Lévi (1905, II:181-183) speculated that it was also a *lokakāla*, with 800 left out because the Nepalese thought that the number 8 was inauspicious.

The verses in the *Sumatitantra*, giving different fictitious numbers for different rulers, or eras, or the duration of a dynasty must have been an elaboration by a Nepali scribe, with a smattering of Jyautiṣavidyā, upon the original verse which probably gave a plain formula to arrive at the time duration between the beginning of the Kali and the composition of the given *Karāṇa*, not dissimilar to Chapter I Verse 23 of new *Sūrya Siddhānta* which explicitly enunciates: *ataḥ kālam prasaṅkhyāya saṅkhyāmekatra piṇḍyēt, i.e.,* add up *all* the past years between the present and the beginning of the Kali Yuga. At any rate, the figure 802, to be added or deducted from Nepāla Saṃvat to get an integer with śaka Saṃvat, is only a round figure for 801 year 7 months. This was necessary for all *pañcāṅga*- makers as well as for astronomers—the śaka era being the standard era in use among astronomers in India and Nepal.

### A Likely Copyist : An Hypothesis

On the basis of a preliminary digital scanning of the manuscripts copied by Jayaśihamalla Varman and the British Museum copy of the *Sumatitantra*, one is tempted to believe that these figures were added by the copyist Jayaśihamalla Varman of Nholā Vihāra, in Pāṭan because he was also the author of *Sumati-karaṇa*, the transcriber of *Khaṇḍakhādyaka* (Cat III Vi 52, dated NS 470 Bhādrapada 2–3), *Bṛhajjātaka* (Cat. Vi 262, dated NS 471 śāvāna sudi 4/5), *Bhojadevasaṃgraha* (dated NS 472 Kārttika Kṛṣṇa 5/6), and probably also of *Jyotirājakaṛaṇa* in the National Library ( No 699 Vi 30, dated śaka 1304/ A.D. 1382, copied by a later hand in NS 543 Bhādra śukla 10/A.D.1423.). Assuming such high-flown *virudha* as *bhagnarājasthāpanārtha*// *lubdharājagajānkuśa*/ *śaraṇāgatavajrapañjarā*, he also copied some literary texts such as *Hariścandropākhyāna*, *Mahitrāvāṇavadha*, and Dharmagupta's *Rāmāṅkanāṭikā*.

### The Equation of Kanyādvīpa with Nepālamāṇḍala

The late Pandit Nayarāj believed that the author of the *Sumatitantra* gave the latitude of *his* country as 27 degrees and its longitude as 1 ghatikā and 58 pala (47.2 minutes East of the Prime Meridian). If N.R. Pant was right then he was so only if *Kanyādvīpa* or *Kaumārdvīpa*, *Kanyākhaṇḍa* or *Kanyākhyah* was a mythical name for Nepal. However, nowhere in the text the name of the country *Nepāla* is mentioned. On the contrary, in a chapter on *tripraśnādhikāra* (Time, Place, and Direction) Sumati says that of the nine divisions of Bhāratavarṣa,

Kanyādvīpa lies to the south of Mount Meru and on its southern end lies the Malaya mountain; there flows the river Lavanāśru, i.e., salty waters. It is ruled by King Bhujagāsana. At its foot lies Laṅkā, the home of demons, with walls and archways made of gold, studded with various wonderful metals. (Folio 48b verses 6-7 in the British Museum copy)

Vaṭeśvara (b. A.D. 880) writes in his *Siddhānta*,

Laṅkā (then northwards) *Kumārī*, then Kāñci, Māṇāṭa, Aśvetapuri, then northwards, the śveta mountain, thereafter Vātsyagulma, the city of Avantī, then Gargarāṭa, Aśramapattana., Mālvanagara, Paṭṭaśiva, Rohitaka, Sthānviśvara, the Himalayan Mountains and lastly Meru, ... (these are situated on the prime meridian). For these places correction for longitude is not needed. (VS I.8. 1-2 in Kripa Shankar Shukla's translation).

śripati, (ca. A.D. 999) in his *Siddhanta-śekara* (II:995–996) lists the following places as lying on the prime meridian,

Lankā, *Kumāri*, Kāñci, Pānāṭa, Sitādri, ṣaḍāśya, Vatsagulma, Māhiṣmati, Ujjayini, Paṭṭaśiva, Gargarāṭa, Rohita, Sthāṇiśvara, Sitāgiri, and Sumeru.

Do these geographical descriptions fit Nepal? Certainly not, nor is Nepālamaṇḍala ever considered as the Prime Meridian in Indian astronomy.

What N.R. Pant had done with the Sumati's text, in the name of emendation, is an indefensible act of convenient rewriting: N.R. Pant had rewritten the text to suit his theory,

*Kanyākhaṇḍaikabhagasya dhṛtavarnāāśramasthiteḥ/  
Nepāladrōnyabhikhyasya deśasyāasya viśeṣataḥ//  
(Pant et al. 1978:14; 1987:128).*

For the following in the Sumati's text where there is no mention whatsoever of the Nepal Valley :

*Viśeṣena pravakṣyāmi kanyādvīpasya niścayam*

The *Sanskrit-Nepali Comprehensive Dictionary* published by Mahendra Sanskrit University, defines *Kumārikākhaṇḍam* (based on the *Skandapurāṇa*) as the terrestrial division which was given as a share to the daughter of King śataśrīṅga, after having divided the earth among eight sons of his (Pandey, 2000:306).

No known text or dictionary of place- names, purāṇic or otherwise, calls Nepal the *Kanyādvīpa* or *Kaumāridvīpa*, *Kumārikhaṇḍa* or *Kumārikhyah*. According to Apte's *Practical Sanskrit-English Dictionary*, *Kumārikāḥ* is the name of the southern extremity of the Indian peninsula. cf., the modern name Cape of Comorin (1957: 583).

If this is so, then the whole point of N.R. Pant's argument that *Kanyādvīpa*, *Kumāridvīpa*, *Kanyākhaṇḍa* is the Nepal Valley and that its latitude is 27 degrees North of Equator and 1.58 *ghatikā* East of Ujjayini stands as unfounded.

Why would ācārya Sumati call his country *Kanyādvīpa* or *Kaumāridvīpa*, a sort of euphemism for a country when Nepal was an already known place-name by the time of Samudragupta (A.D. 335-374) in India, or Vasantadeva A.D. 504–530) in Nepal, not to mention the references in the classical Indian texts of great antiquity such as Kṛṣṇa- Dvaipayana Vyāsa's *Mahābhārata*, Kauṭalya's *Arthaśāstra*, or Bharata's *Nāṭyaśāstra* or Varāhamihira's

*Bṛhatsaṃhitā*. *Nepāla*, certainly was not an unknown place- name at that time, nor was it a taboo word among the astronomers in the sub- continent (Malla, 1984b:63- 69). If by any chance, *Kanyādvīpa* or *Kaumāridvīpa* is Nepal, why cannot, for instance, the eastern region of Tibet be *Kanyādvīpa* because a 7<sup>th</sup> century Chinese source, *Fa-iouen- tchou- lin*, the famous *Encyclopedia of Buddhism* compiled and completed by Tao- cheu, in 668 A.D., notes the following about *Strirājya*,

Lately the orders of the (Chinese) Empire faded out of the Kingdom (of Nepal), and spread elsewhere in distant lands. Now, it is dependent on Tu- fan (Tibet). On the east, the Kingdom of Women is adjacent to Tu- fan.” (Lévi, 1900/1987: 60-61)

The Latitude and Longitude are of *Kanyādvīpa*, not of Nepalamaṇḍala  
There are scores of cities which lie 27 degrees North of Equator or 47.2 minutes East of a given Prime Meridian. In calculating the longitude of so- called *Kanyādvīpa*, the NR Pant resorts to an equally odd expediency : he mixes up the figures from two different authorities, Varāhamihira (A.D. 550) and Lakṣmīpati (A.D. 1758-1831) to arrive at the desired longitude of 47.2 minutes East of Avanti. Varāhamihira’s longitude for Vārānasi, as computed from Alexandria, is 9 *ghatikā*, and for Avanti /Ujjaini, 7 *ghatikā* and 20 *pala* (9.00-7.20= 1.40=100 *pala*). To these figures, N.R. Pant amputes Lakṣmīpati’s longitude for the Nepal Valley (19 *pala* for the Nepal Valley) to arrive at 2 *ghatikā* or 120 *pala*. All this quibbling with figures to suit one’s theory was totally unexpected of ‘a renowned mathematician,’ considered by some of his admirers as “the Socrates of Nepal.” Not dissimilar is his misleading calculation of the colophon of Saṃvat 301, where he added 1 to Saṃvat 301 and made it Saṃvat 302 by a stroke of the pen for *Vaiśakha Saptami* in a *Kārttikādi* year (Pant *et al.* 1987:19; 125–135).

### Sumati was not a Nepali

Nayarāj Pant claimed that Acārya Sumati composed his *tantra* in Nepal. In the wake of the nationalistic fervor of the 1960s, similar “nationalist” claims were also made by Pandit Buddhisaṃv: Farājūti in his introduction to *Bṛhatsūcīpatram*, Vol. I (1960: gha) He wrote that both Gavastidīpa and Tāmradvīpa were in Kaṣṭhamaṇḍapa because the *cara-prāṇa* (addition or subtraction of ascensional differences, between the meridian and a given latitude ) for *Meṣādi* 6 rāśis in the *Sumatitantra* are identical with those given by astrologers in Nepal. He also claimed that the *Sauśruti- saṃhitā- Sahottaratantra* of Saṃvat 301 was copied during the reign of Mānadeva I (Parājūti, 1966:19–21). Similarly, a year later, Lamsāl (1967), an acārya in

Indian astronomy, wrote that the *Sumatitantra* is the pride of Nepal and that it was written at the time of Mānadeva I and that the *Meṣādi cara-prāna* i.e., ascensional differences or corrections for *Meṣādi 6 rāśis* given in the text are identical with those used by Nepalese astrologers. However, Lamsāl carefully compared the astronomical constants given in the *Sumatitantra* with those given in Varāhamihira and other authorities, including the modern ones, mainly based on Sengupta's Introduction to Burgess' translation of the *Sūrya Siddhānta* (1935/1997:VI-LI). He noted that the corrupt copy we have in the National Archives *cannot be* the original one as it is so full of linguistic lapses. He also says that its astronomical parameters are based on ancient *Sūrya Siddhānta*, and that the text is of uncertain age as Sumati has ignored the precession of equinoxes. Notwithstanding his wild claim that the original text was written in Nepal *after* the founding of Mānadeva I's epoch era, Lamsāl's paper is a simple concise introduction available in Nepali to the theoretical base of Sumati. In less than 5 pages he succeeds in conveying his views on the text for which Nayarāj Pant took 60 odd pages! If that was the intellectual situation in the 1960s in Nepal, what could one expect of the copyists of the *Bhāṣā Vamśāvalis* in the 19<sup>th</sup> century or of the *Sumatitantra*-scribe in the 14<sup>th</sup> Century Nepālamaṇḍala?

We have given these details also because modern- minded specialists in Indian Astronomy are equally misled by false clues based on hearsay. For example, Kripā śaṅkar śuklā, in his edition of the *Sūrya Siddhānta* with Parameśvara's commentary, contends that

The old *Sūrya Siddhānta* continued to be studied in certain parts of India in some form or other till the end of the tenth century. About 800 A.D. an astronomer named Sumati of Nepal wrote two works on astronomy one entitled *Sumati-tantra* and the other entitled *Sumati-karaṇa*. In one of the opening verses of the first- mentioned work, Sumati writes: "This work, called *Sumatitantra*, has been extracted from the *Sūrya Siddhānta* like clarified butter from milk." It shows that Sumati based his Tantra on the *Sūrya Siddhānta*. The astronomical constants used by Sumati agree with those ascribed by Varāhamihira to the *Sūrya Siddhānta*. It, therefore, seems that Sumati based his work on the same *Sūrya Siddhānta* as was available to Varāhamihira. The other work, as the name implies, is a calendrical work. The works of Sumati show that in the end of eighth century A.D. the old *Sūrya Siddhānta* was considered by the astronomers of Nepal to be an important work on astronomy and its elements were used by them in the construction of the Hindu calendar. Sumati received wide publicity and his works traveled to the south as far as Travancore. Shankaranarayana, who belonged to Quilon in

Travancore, in his commentary on *Laghubhāṣkartya* of Bhāṣkara I mentions the name of Sumati and quotes a verse from his work. This commentary of Shankararayana, it may be mentioned, was written only 69 years after the composition of the *Sumatitantra*. (K.S. Shukla, 1957:27-28).

Yet another specialist in Indian sciences, H.J.J. Winter of Exeter University in the UK has contributed a chapter to A.L. Basham's *A Cultural History of India* (Delhi: Oxford University Press, 1975). The following paragraph by him is obviously based on K.S. Shukla, 1957,

According to Sumati (A.D. 800) whose work was known both in Nepal and in Kerala, and who wrote his *Sumatitantra* and *Sumati-karana* on the basis of an earlier version of the *Sūrya siddhānta*, it provided the essential elements used by Nepali astronomers in their construction of the Hindu calendar. Evolving during the period between A.D. 628 and 966, the later version gained greatly in popularity, especially in the twelfth century when Bhāṣkara II quoted from it and Mallikārjuna Sūri wrote commentaries on it, first in Telegu then in Sanskrit. (Winter, 1975:153.)

While this quotation ably summarizes śukla, neither of them seems to have really gone critically to the texts by Sumati. The date given by both for Sumati, i.e., A.D. 800 is based on the misreading of the colophon of the British Museum copy. Bendall (1902:193-194), not only misread *vasu randhra kṛta* as *vasu candra kṛta*, i.e., 418 for 498, so that śaka 418+78 - A.D. 496+Manadeva Saṃvat 304 - A.D. 800. He had also misinterpreted the title of the text as *Sumata Mahātanta*.

#### Lāṭadeva's Sūrya Siddhānta

The *Sūrya Siddhānta* that forms the theoretical basis of Sumati is the *ardharātrika pakṣa* of Aryabhata I as it was modified by his immediate pupil Lāṭadeva in the light of Aryabhata's *ardharātrika* system. In his *Indika*, Al-Beruni (A.D. 1030) says that Lāṭadeva was the author of the *Sūrya Siddhānta* (Sachau: Vol. I: 153).

Sengupta, too, believes that, "the old Sūrya Siddhānta was made up-to-date by replacing the old constants in it by new ones from Aryabhata's midnight system.... The date of original Sūrya Siddhānta becomes 384 A. D. It came from the *asura* or Babylonian sources. (Sengupta, 1935, p.xl). Nearly all of its astronomical constants are shared by Brahmagupta's *Khaṇḍakhādyā*, I, 1, 8- 13; II, 1-5, and Bhāṣkara I's *Mahābhāṣkartya* (See Kuppana Shastri's edition, Madras, 1957). The epoch of this *ardharātrika* version of *Sūrya*

*Siddhānta* is midnight of 20/21 March 505. However, in Chapter IX of Varāhamihira's *Pañcasiddhāntikā*, there is an evidence of an earlier *Sūrya Siddhānta* using noon epoch, and slightly different parameters for the mean motion of the Sun, the Moon, lunar apogee and ascending node. Neugebauer and Pingree think that it is the work of Lāṭadeva- - the *sarvasiddhānta guru*, i.e., the teacher of all scientific astronomy (O. Neugebauer and D. Pingree, 1970:13).

### Sumatitantra : A Contaminated Text

The *Sumatitantra*, in the form we have it today, cannot be the original text. Otherwise, how can "Mānadeva Samvat" 304 or A.D. 880 be mentioned in a text that is nearly three hundred years old in origin? Its language betrays the fact that it has already passed through the hands of generations of not- too-learned scribes and copyists. It is not an unusual process for anonymous Sanskrit texts to become an inclusive or "composite text" with contaminated deposits at different layers. The best example is the present *Sūrya siddhānta* which "became a composite growth from about 400 A.D. to 725 A.D. from the evidence of its star tables" (Sengupta, 1935: xxix). It has been subject to correction, emendation, and modification from time to time, and the present *Sūrya Siddhānta* is the latest redaction of the work which assumed the present final shape and size between A.D. 628- 966. In fact, the earliest date given for the text is A.D. 285. The dates of its three substantive revisions, as it were, are A.D. 285, 500 and 570 ( Saha and Lahiri, 1992/1995).

Petech (1984:12 footnote No. 3), however, claims that the *Sumatitantra*, in its main portion, (was) "compiled not after 850 A.D.:" He does not explain what he meant by "the main portion" from among its five chapters and a sixth incomplete one . We do not know how he had come to that conclusion.

### Can Sumatitantra be Dated?

Is it, then, possible to date the *Sumatitantra* on *any* scientific basis?

The late Pandit Nayarāj Pant believed that it *can be dated* on the basis of whether or not it gives a rate for the precession of equinoxes (*ayanāṃśa*). The Earth is not a perfect sphere, nor is its axis a perpendicular one. A continuous receding of the sidereal Zodiac, at the rate of 1 degree in 72 years, is caused by the gravitational pull of the Sun and the Moon on the central bulge of the Earth with a declined axis. It means that if the Vernal Equinox in 1997 is on March 21<sup>st</sup>, seventy- two years later it will be on March 20<sup>th</sup>. N.R. Pant claims, "how much precession is given in a text, or whether it is mentioned or not, enables us to determine the age of the text" (Pant *et al.*, 1978b: 137). Or, "There is no mention of the precession of equinoxes in the *Sumatitantra*. Therefore, it was composed in the Licchavi age before the knowledge of the

precession of equinoxes became common among the astronomers” (Pant *et al.*, 1983:19).

Some ancient astronomers in India, including Varāhamihira, believed that the sidereal Zodiac was moveable and that its movement was oscillatory and that such a movement was also ominous and inauspicious.

However, no ancient Indian astronomer before Muñjāla (A.D. 932), makes an *explicit mention of the rate*, nor of *the concept* of precession as such. Though the original work containing his views on the topic is lost there is only a reference to it in Bhāskara II’s *Vāsanābhāṣya* - - a self-commentary on *Siddhānta- śiromaṇi* ( A.D. 1150). In that text, he writes that precession is what was known as *krāntipāta* ( i.e., the intersection of the ecliptic and the equinoctial circles) in earlier works. He says that the earlier acāryas did not mention it *because* it was too negligible during their time. (Commentary on the verses 17, 18 and 19 of SS in the *Golabandhādīkāra*). Similarly,

From a stanza of Viṣṇucandra (A.D. 578), quoted by Pṛthudakasvāmī (A.D.864) in his commentary on the *Brahmasphuṭasiddhānta*, it appears that this subject was dealt with in the old *Sūrya Siddhānta*. (p. 38). According to the (new) *Sūrya Siddhānta*, the precessional motion is likened to liberation or oscillation of the equinoxes about a fixed point. According to this theory, the equinoxes, like the pendulum, at first move eastward, reach the maximum amplitude and then move westward. The maximum eastward deviation is 27 degrees whence the annual rate works out to 54 seconds as against the modern value of 50.25 seconds. (Jaggi, 1990:75–76).

David Pingree, one of the foremost Western authorities on Indian Mathematical Astronomy, published a terse treatment on the topic of *ayanāṃśa* with the title “Precession and Trepidation in Indian Astronomy before 1200 A.D.,” in the *Journal for the History of Astronomy*, Vol 3 (1972), pp. 27-35. He shows that there were three different accounts of it in the astronomical works before A.D. 1200: 1. trepidation with 27” x 2= 54” seconds, 2. trepidation with an amplitude of 59.9” seconds, and 3. the third account gives simple precession.

#### The Year of Zero Degree Precession and its Annual Rate

There is no unanimity of scholarly opinions on the exact *date of zero degree precession*, nor on its *annual rate*. The initial year of zero degree precession is considered to be A.D. 285 by the Calendar Reform Committee of India (1955). Cyril Pagan, a Western advocate of the Sidereal Zodiac as against Western Tropical Zodiac, believed that the Zero degree precession coincided

with A.D. 213. K.S. Krishnamurti, an Indian specialist in Oriental Astronomy, thought that in the year 291 A.D., the precession of the equinoxes was Zero. The current *Sūrya Siddhanta* gives A.D. 499 as the year of zero degree trepidation; Muñjala in his *Laghumānasa* gives A.D.527 as the year for zero degree precession, Bhoja (A.D. 1042) gave A.D. 522, Dāmodara, A.D. 420, and Pillai, A.D. 533.

Not only that there is such a diversity of opinions on the initial year, there is also no uniformity of opinions on the rate of precession. Muñjala thought that it was 59.9" seconds or nearly 1 minute of the arc whereas the modern *Sūrya Siddhanta* gives an oscillation rate of 54" seconds, i.e., 27" eastwards and then 27" westward. Modern astronomers since Newton give 50.25"seconds as the annual rate of precession.

We cannot, therefore, date an astronomical text simply on the basis of the presence or absence of a reference to the precession of equinoxes.

#### The Incidence of the Word *ayanāṃśa* in *Sumatitantra*

Pandit Nayarāj Pant believed that the *Sumatitantra* was written *some time* during the three centuries between A.D. 576- 879, between the so- called "Mānadeva Saṃvat" and Nepālā Saṃvat *because* Sumati does not mention the precession or its rate explicitly anywhere in the text. The first mention of *ayana- calana* (the shifting of equinoxes) occurs in *Vateśvara- siddhanta* (A.D.904) but he says that the astronomer who knows his spherical trigonometry should calculate his own precession rate. (VS II:25). Thus, in the British Museum copy, on several folios of the *Sumatitantra*, there is a mention of the word, *ayanāṃśa*. In the Chapter on the True Motions of the Planets, there occur the following lines

*Deśāntaranādi yojana 160 bunajya yojana 9600 bhāga 28812  
vikṣepakrānti ayanāṃśaṅca tena kārayet ( folio 24b)*

In the Chapter on Lunar Eclipses, we have the following lines

*akṣajyākarme guṇa 1561 bhāga 3438//ayanāṃśāṅcakarme guṇa 1398  
bhāga 3438// (folio 85b)*

In the Chapter on Solar eclipse, we have the following lines:

*Sparsa madhyānta pūrveṇa ayanāṃśaṅca sādhayet/  
Akṣasūtrāntathaivaṅca parilekhāni kārayet// (folio 107b)*

*grāsādi madhyānta divākareṣu/ krameṇa rāśitryasamṛiteṣu  
śadabhūtatareṣaṅkhaṅpareca yāmyām krāntijyamāniya yathaiiva  
pūrvvaṃ*

*bhānoyanāmsaṃmitti lakṣayitvā/ sasparśa madhya grahaṇānta kāle//  
pratyāya nāḍimasu piṇḍa kuryāt sumnyakhatrithena vibhakta  
labdham ( folio114b)*

*grāsādi madhyanta kramāyanamśā//akṣayanāmsau samadik yutamtau  
yojitam (folio 124b)*

The longitude of a planet for any given moment can be calculated by using a standard *pañcāṅga*. *Nirayana* (sidereal) longitude plus *ayanāmsā* gives the *sāyana* (tropical) longitude of the planet. However, the moot question here is: how come that the *word* is undeniably there in the text of *Sumatitantra* if there were no related *concept* embedded in it? Can we have the word without the related concept in any discourse? No, certainly, not; unless the word is, like the words in nonsense verse or *Alice in the Wonderland*, semantically vacuous.

#### Do We have the Whole of Sumatitantra Text?

Both the copies of the *Sumatitantra* end abruptly; the last 13/14 lines in the British Museum copy are missing from the copy in the National Archives, and in their stead there is a stray folio with only 7 lines, and it is numbered 162a (?) which follows folio 143b. This indicates the plain fact that there are at least 20 folios misplaced in the National Archives. However, it has some tables (folios 162a- 166b), giving the *śigraha* (epicycle) figures for each degree of the Planets—Mars, Mercury, Jupiter, Venus, and Saturn. On folio 165b we have a table for *Krāntikhaṇḍa* (Sine for Declination), *Lagna* (Rising Point of the Ecliptic), and *Triśavādi* (Three Transformations) for each of the 90 degrees of the quadrant. There are also 3 additional folios without page numbers, which give the summary of mean motions etc. as enunciated in the main text. Then comes the colophon. It dates the text, copied for the second time, on *Nepāla Saṃvat 495 Pauṣa śukla 13*. All the above Tables are missing in the British Museum copy. In that copy, the last 18 lines end abruptly with

*Evante kathiyinatra saptapātalakāni ca/yakramova...*

after which comes all of a sudden the colophon. The copyist seemed to have thought that the following descriptive section on the *saptapātāla* (seven circles of the Hell ) is not of day-to-day relevance. The first colophon has the following date: *//svādādicatvāḥ saha vatsareva māsā bhavā pauṣa sita navaṃmvaṃ i.e., NS 476 Pauṣa śukla 9....*

In the National Archives copy, the supplementary folios 11a,- b, 12a,-b, 13a- and b appear to represent what are folios 121a,-b, 122a-b, 123a,-b, 124a and b in the British Museum copy. In both copies these folios have little direct connection with the main running text, but they try to show the śaka Saṃvat calculations in the context of Nepāla Saṃvat. As such, these portions appear to be unsuccessful attempts at textual modification, amputation or interpolation.

Although all the topics enumerated at the beginning of the text in the Chapter I on the Mean Motions of the Planets are covered by the copies we have, we do not really know whether the copies we have contain the whole of the *Sumatitantra*. Above all, there is no star - table or a Chapter on *Nakṣatras* (asterisms), had there been one it would have made the dating of the text a less serious problem. However, the *Sumatitantra* (folio 20a-b) gives the *maṇḍocāṃśa* i.e., planetary longitudes for the higher apses in degrees, pertaining to the Equation of the Centre. These astronomical parameters are identical with those of *Mahābhāskariya*, VII:25-28a and *Khaṇḍakhādyaka*. The *pātāṃśa* or (longitude of ascending nodes of the Planets in degrees since the beginning of the Kali ) given in the *Sumatitantra* ( Folio 48a) are identical with those given in *Mahābhāskariya* (VII. 9–10). Similarly, *Vikṣepa* (the Celestial Latitude of the Planets) is given in folio 48a. All these astronomical constants are of about A.D. 505.

The following verse cited by śāṅkaranārāyaṇa (A.D. 825-900) in his *Vivaraṇa* on *Laghubhāskariya* (IV: 15–16) from Acārya Sumati, does not occur in the chapters on eclipses or elsewhere in the text,

*Prācyāṃ na ravergrahaṇaṃ vāruṇyāṃ cāpi śitakiraṇasya/  
prācyāṃ vṛṇoti candraṃ vṛṇoti sūryaḥ tathāparataḥ//*

Of the usual 500 verses in 14 chapters of the *Sūrya Siddhānta*, the *Sumatitantra* contains only six. We cannot, therefore, date the text simply on the basis of a single criterion, i.e., the presence or absence of any explicit reference to the annual rate of precession. The original text of the old *Sūrya Siddhānta*, as summarized by Varāhamihira (and modified by Lāṭadeva) in Chapters I, IX, X, XI, XVI and XVII of the *Pañcasiddhāntikā*, is no longer available. What we have in that book is only a modified version of the original theory. It is a great pity that the eminent team of editors/transcribers of the printed *Sumatitantram* (1978) did not have access to the British Museum copy, and they did all the so-called “emendations” without consulting the earlier copy (N.R. Pant *et al.*, 1978, Preface: 28). This is in total defiance of elementary principles of textual criticism.

**The Intercalated Months in the Inscriptions: Can these be a Criterion for Identifying the Epoch Era Used in the Licchavi Inscriptions?**

The late Pandit Nayarāj Pant's book, *Licchavisamvatko Nirṇaya*, (1987) was awarded the Madan Puraskār for Vikram Saṃvat 2043, and several national medals and prizes decorated him thereafter. Madan Mani Dixit, a distinguished Nepali writer on his own right, and also the then Vice-Chancellor of the Royal Nepal Academy, may not have had sufficient time to read the book, nor to grasp its methodological premises and framework. However, he wrote that the book was "a masterpiece of scientific reasoning—a work of great importance" (all harmless, but potentially vacuous, adjectives such as *Mahān*, *Viśāl*, *Vaijñānika* were merely piled up on the author and/or his books by most of the writers contributing to the volume or volumes without anyone critically assessing the theoretical or methodological bases). "It is such an important book that had not yet been written by any Nepali, then or now *Therefore*, Nayarāj Pant is the tallest Nepali," wrote Dixit in his Foreword.

In A.D. 2000, the late Pandit Nayarāj Pant was also honoured with an Honorary Doctor of Letters (*mahāvidyāvāridhī* i.e. "a-vast-ocean-of-knowledge" degree by Tribhuvan University. The "experts" who evaluated his work, such as Madan Mani Dixit, must have known the field better than we do. The fact, however, remains that Nayarāj Pant based his "conclusions" in the book on the following three shaky and disputable bases,

1. The chronology given in the *Sumatitantra*, with reference to the epoch era used by Mānadeva and his successors, on the one hand, and Aṃśuvarṃā and his successors, on the other hand;
2. The Intercalated Month/Expunged Month Tables prepared by Chatre (1860) or by Sewell and Dikshit (1896), and
3. A corrupt Nepalese manuscript on assorted topics dated NS 525 Mārga Krishna 3 (Tuesday Nov. 30, 1404), but of no age.

With the help of these three tools N.R. Pant and his team set out to refute the views of ten other historians from France, India, and Nepal, in pp. 183-540 of their *magnum opus*, only to conclude by "mathematically proving" that there was a "Mānadeva Saṃvat" founded in A.D. 576. Since the second set of inscriptions are dated in the so-called "Mānadeva Saṃvat", thus runs their argument, "the earlier inscriptions must have been dated in śaka Saṃvat because all historical events tally well." Neither of these conclusions is an example of "scientific reasoning."

More than a century ago, in the Gujarātī version of his work Bhagwānlāl Indrājī (1880) had interpreted the epoch era used by Mānadeva and his successors as śaka era, and the era used by Aṃśuvarṃā and his successors as

Harṣa Era founded in A.D. 606. At the behest of his English translator, Georg Buhler, he changed his view and re- interpreted it as Vikrama Era in the English version of his work (see Buhler's Preface to Bhagwanlal Indrajī, 1885). Twenty- three years later, Lévi (1908) evaluated the available evidence before him and conjectured the possibilities of śaka era being used in Licchavi inscriptions. In 1945, R.C Majumdar, (revised in 1959 and published in 1961: 47- 49 , under the title "The Eras of Nepal") considered the epoch era in early Licchavi inscriptions to be śaka and the era used by Aṃśuvarmā to be śaka with 500 left out. Echoing Majumdar's views, nearly forty years ago, D.C. Sircar (1965) wrote:

The inscriptions of Mānadeva and his successors, including the earlier records of Aṃśuvarman are dated in the śaka Era (Sircar, 1958: 886, Note 1). But the later epigraphs of Aṃśuvarman and his successors, probably bear dates in the śaka Era minus 500, i.e., śaka 501 = Year I of Aṃśuvarman's reginal reckoning (Sircar, 1965: 271).

Although he merely gave a new name to śaka Era, Bāburām Acārya already concluded in 1971 that the the epoch era used by Aṃśuvarmā is none other than the earlier era in use with the numeral for century dropped. In his brief paper published in the *Gorkhapatra* for September 2, 1972, "Aṃśuvarmāko Saṃvatmā eka Vicār," Historian Bhuwanlāl Pradhān, argued for the possibility of Aṃśuvarmā using śaka Saṃvat 527, 528, 529 as 27, 28, 29. "There is every possibility that he computed the day 1 of Saṃvat 529 as the day 1 of his Saṃvat 29," wrote Pradhān in his little noticed paper (Pradhān, 1972: 7).

We have, of course, no infallible criterion to test these views of eminent historians or *any other views* , for that matter, because, as we have discussed earlier, out of more than 200 Licchavi inscriptions, only 2 are with weekdays. Even for these two scanty pieces of available evidence, historians have given different A.D. equivalents. The time difference between the two documents is 270 years. Without any exception, all the newly found inscriptions do not have weekday in their dates. There are, however, 11 inscriptions with *intercalated months*. Pandit Nayarāj Pant and his now defunct school believe that these intercalated data can be used to verify the epoch era in use in Licchavi inscriptions. The following are the epigraphic data:

(*Saṃvat* 3)98 ? *prathama-aśāḍhe-śukladivā* 12, from Budhānilakaṇṭha, Viṣṇupādukā phedi. Shankar Mān Rājvarṣī read the last figure as 5, Dhanavajra and his colleagues as 6; during the six- years of his fifteen year tenure as a member of the Royal Nepal Academy, NR Pant finally decided that the last figure is neither 5 nor 6 , but 8 !).

*Saṃvat 435 Dvittiyā- Pauṣe śukladivā 5*, from Patan , Bahālakhu  
*Saṃvat 449 prathamāṣa(dha) śukladaśamyām*, from Kisipidi  
*Saṃvat 479 Dvittiyā aśāḍha*, from Brahma Tole , Kathmandu  
*Saṃvat 487 prathamāśḍhaśukladvittiyām*, from Devapātan  
*Saṃvat 517 prathamāśḍhaśukladivādvādaśyām* from Dharmasthali  
*Saṃvat 519 prathamapauṣaśukladivādvādaśyām*, from Satuṅgal  
*Saṃvat 31 dvittiyapauṣaśuklaśamyām*, Bhaktapur, Ināyaco  
*Saṃvat 34 prathamapauṣaśukladvittiyām*, Pātan, Sundhāra  
*Saṃvat 536 dvittiyapauṣaśuklapañcamyām* from Gokaṛṇa Bāluvā,  
*Pañcāśātāsamadhikesamvatsaraśatadvaye prathamāśḍhamāsasya*  
*dvittiyādivase, i.e., Saṃvat 250 prathamāśḍha 2*, from Motitār, Pātan

Evidently, in Licchivi Nepal, an ancient system of intercalation was observed in its luni- solar calendar based on mean reckoning. The differences between mean reckoning and true reckoning may vary from a minimum of 7 hours 18 minutes to the maximum of 14 hours 12 minutes in the ending moment of a *tithi*—the most important factor in Indian chronology. It is a system unattested in civil calendar anywhere else in the Indian sub-continent, then or now. According to this system, when a *saṅkrānt* is missing in any synodic month within an *ayana*, the last month of the *ayana* was intercalated, i. e., the first month was called *prathama*- and the following intercalated one, *dvittiyā*. The intercalated month is either *aśāḍha* in the middle of a five- year cycle or *Pauṣa* at the end of it. This general rule is, however, violated by a number of Licchavi inscriptions such as the inscriptions dated *Saṃvat 517* and *Saṃvat 519* where we have two intercalations within a gap of 16 months, or by *Pauṣa* intercalation both in *Saṃvat 31* and *Saṃvat 34* at a gap of 36 months and in *Saṃvat 536* at a gap of 24 months. Normally, an intercalated month coincided with the 31st lunar month in a cycle of 62 synodic months. So the irregularity of intercalation at the gap of 36 synodic months seems to have been adjusted by an intercalation at the gap of 24<sup>th</sup> month in the *Saṃvat 536* inscription. Thibaut surmised that, “the mistake was corrected at irregular times when too great deviations between the real beginning of the season and the traditional chronological calculation made this necessary.” (1899:23) Though the ancient Nepali civil calendar begins from the *Kārttika śukla Pratipad*, the initial five-year cycle was computed from *Māgha śukla Pratipad* of A.D. 76. In the *Bṛhatsaṃhitā* (VIII: 27) *Varāhamihira*, says,

When Jupiter rises in the month of *Māgha*, having arrived at the first portion of *Dhaniṣṭhā*, then commences the first year of the 60- year cycle, by name *Prabhava*, auspicious to living beings.

“Clearly, the cycle is held to have begun in 76 A.D. with Jupiter at the beginning of *nakṣatra Dhanīṣṭhā* in the month of Māgha. According to a statement in the *Paitāmaha Siddhānta* (Chapter XII, Stanza 2 of the *Pañcasiddhāntikā*), a five - yearly yuga began in A.D. 81 (expired śaka 2 = A.D. 81) which is exactly 5 years after A.D. 76 (Deb,1931, 271–283).

Pandit Nayarāj Pant believed that the intercalated data from Licchivi inscriptions can be used for the verification of Licchavi epoch era. On Wednesday September 16, 1981, he issued a two- page handout published by the Royal Nepal Academy, consisting of a table on “the Epoch Era Used by Aṃśuvarṃā and His Successors,” where he used the chronology of the *Sumatitantra* to verify the two inscriptions with intercalated months (our No. 8 and No. 9) and two documents with weekday, dated Saṃvat 31 and Saṃvat 301. This table is reproduced on pages 29–30 of Pant et al., 1987. He showed in a tabular form how only his view was correct and those of other seven historians were wrong. Their book, (should anyone call it a book because there is a cover on it?) *Licchavisamvatko Nirṇaya* (1987) written in collaboration with Devī Prasād Bhaṇḍari and Keshav Chandra Neupāne, is just an enlarged verbal *tour de force* based on that classic handout. However, as we have seen above, there are only two possibilities or variables in intercalary months: it is either Pauṣa or āṣāḍha for as many as *twelve* months of *any year*.

One cannot verify these data with the help of Sewell and Dikshit’s Tables (1896) *because* they are based on Ārya Siddhānta, Caitrādi, current śaka year using mean reckoning. On the other hand, the tables prepared by Kero Lakṣmaṇa Chatre, *Grahasādhankoṣṭhakam*, first published in a Marathi monthly, *Jñānaprasārika* Vol I, No 12 (1860), reproduced happily since by many scholars such as Nayarāj Pant, without checking, are not of much use either. Chatre’s tables are based on the *new Sūrya Siddhānta* using *true reckoning* based on Caitrādi expired śaka. They cannot be of much relevance in the study and interpretation of Licchavi inscriptions *because* we have no record of expunged month before Nepāla Saṃvat 577. Besides, for śaka 532, Chatre’s Tables give the month of Kārttika as *both adhika māsa* as well as *kṣaya māsa*. This is just impossible because the same month cannot be both *kṣaya* and *adhika māsa*. There are more than a dozen such instances of expunged Kārttika and Mārga months in Chatre’s tables. According to true reckoning, Pauṣa can never be an intercalated month. It can only be an expunged one.

On the above three debatable bases, Nayarāj Pant et al. conclude that the epoch era used by Mānadeva and his successors was śaka era and the epoch era used by Aṃśuvarṃā and his successors was “Mānadeva Saṃvat” which they claim as was founded in śaka 498/A.D. 576. With the help of such a methodological framework, N.R. Pant tried to refute the views of all other

historians, covering about 400 pages of his book. As Petech had once put it rather bluntly,

The Bhāradvāja system utilized two months only for intercalation. (It) was used in medieval Nepal, and it prevailed also at this early period. This system is a lineal descendant of the Jyotiṣa Vedāṅga. (In this system), whenever one of the first six lunar months contains no saṅkrānti, whichever that month may be, it is always aṣāḍha which is duplicated as an intercalary month; when one of the last six lunar months contain no saṅkrānti, whichever that month may be, it is always Pauṣa which is duplicated as an intercalary month. ... The fact that Bharadvāja system is followed in these inscriptions precludes all possibilities of utilizing the intercalation for determining the starting point of the era, as it has been attempted again and again since the time of Lévi. Beyond this point we cannot go. By no Siddhānta, by no system, with no era, can we get intercalations at the intervals (attested in Licchavi inscriptions). Petech 1961:229–230).

#### Adhimāsa Sūtra: Which Version is Authentic?

Intercalation is an occasional adjustment in the luni- solar calendar so that divergence between a purely solar calendar and a purely lunar calendar is minimized. At least, during the early Malla period, the astrologers seemed to have vacillated between the two systems of time reckoning. A tangible evidence of it is the so-called *adhimāsasūtras* as found in the *Dharmanirṇayatithisārasaṅgraha* (Cat.I 1634. 11, folio 21b- 22a NGMPP No. B 33/20).

There is no acceptable and satisfactory translation of the corrupt text of the oft-quoted *Adhikamāsaprakaraṇa* of the *Dharmanirṇayatithisārasaṅgraha* (DNTSS), first published by Petech in 1958. Its origin or textual source is unknown and obscure as Bharadvāja and Nārada are not too well known astronomers with a *siddhānta* of their own. Both are, however, mentioned by Varāhamihira in the *Bṛhatsaṃhitā* (Kern, 1916: 95- 96- 103). Dealing with several topics the text, of which the verses form a very small part, is dated NS 525. Although it is a palmleaf manuscript, paleographically, it is not older than the late sixteenth century. At least, it is not written in Bhujimola script. Consisting of seven and a half verse, the chapter enunciates the views of Nārada based on Caitrādi lunar months, the first half starting from Spring equinox and latter half starting from Autumn equinox. Bhāradvāja's views are based on Māghādi solar year, the first half starting from winter solstice, the second half starting from summer solstice. However, the translation and

interpretation of the last verse, in particular, is problematic and controversial. This will be evident from a comparison of Petech's and Shankar Mān Rājvaṁśi's translation of the verse:

*Adhimāsa yadānastā ra (a)yaṇe dve sucintayet/  
Dvirāṣāḍho dvipauṣaśca bhāradvājasya vacanam yathā//*

which Petech translates as

The intercalary months, if they (wise men) consider well, the two half years of the non-existent (*saṃkrānti*, are) a second āṣāḍha and a second Pauṣa, according to the precepts of Bhāradvāja (Petech, 1984, p.14–15).

It is difficult to guess what Petech may have meant by the above enigmatic sentence. Rājvaṁśi, on the other hand, translates the verse as the following—a translation clearly influenced by the modern practice based on true reckoning:

When there is an expunged month in an *ayana* then in both the *ayanas* both āṣāḍha and Pauṣa are intercalated (Rājvaṁśi, 1973: 11).

In the *Sumati Siddhānta*, (Kaiser Library No 82, palmleaf, 69 folios in Bhujimola script, with entries from N.S. 456-573 / A.D. 1336-1453), unfortunately so poorly transcribed by Pant et. al. 1978, there are at least three different versions of *the adhiḥkamaśasūtra*. On folio 13 / 34, we have a two-stanza-text. It begins with a Newari sentence: *lā tamṇeyā thathyam jurom*, i.e., this is how months are intercalated : the first half of the year begins with makara- rāśi (solar Māgha) and ends with *mithuna-rāśi* (solar āṣāḍha). If the transition of the Sun is missing in any one of these lunar months within *uttarāyana*, then the month of Pauṣa is intercalated. The second half of the year begins with karkaṭa rāśi (solar śrāvaṇa) and ends with dhanuṣa rāśi (solar Pauṣa). If the transition of the Sun is missing in any of these lunar months in *dakṣiṇāyana*, then the month of āṣāḍha is intercalated. This part of the text ends with a Newari statement *iti lā tamṇeyā prapāti thathyam jurom//0//* It may roughly be translated as the following:

This is the tradition of intercalating months.

However, on folio 3a there are still other versions of the *sūtra*. It begins with, *adhiḥkamāśaka sūtraṃ iti*. And then goes on to enunciate the views of Nārada. He stipulates that if the transition of the Sun is missing between the

synodic months of Caitra and Bhādra, then the month of aṣāḍha is intercalated. If the transition of the Sun is missing in any month between the synodic month of āśvina and phālgua, then the month of Pauṣa is intercalated. Then a disturbing statement in Newari comes:

*lā taṃneyā thva pāṭha pramāṇana taṇa tu jiva jurom  
nhātho pāṭhana majiva//0//  
Caitrādi tyādi thva pāṭhana mālvā lā taṃneḥ thathyem jiva jurom.*

A tentative translation of this stilted medieval Newari statement into English would perhaps be the following : “This textual proof for intercalation of months is correct; the earlier one is not. The correct version is the one that begins with Caitrādi etc”. We must not forget that the Nepali civil calendar begins from Kārttika śukla pratipad. So far so good. Then on folio 3a the text has yet another version. It begins with Meṣa rāśi (solar Vaiśākha), ending the first half of the year with kanyā rāśi. (solar āśvina). If there is no transition of the Sun in any of the above lunar months, the month of aṣāḍha is intercalated. The latter half of the year begins with Tulā rāśi (solar Kārttika) and ends with the Sun in Mīna rāśi (solar Caitra). If there is no transition of the Sun in any of these lunar months, the month of Pauṣa is intercalated. At the end, again, comes a caveat in Newari which says: “The intercalation of months has been written down. Months have to be intercalated according to this textual evidence.” Now we are at once in a state of confusion on which of these different versions was intended as *the authoritative textual evidence*. The version one of the sūtra has purely solar months with the first half beginning with the Sun’s entry in the Makara rāśi and the second half beginning with the Sun’s entry into Karkāṭa rāśi. In second version of the sūtra in *the Sumati Siddhānta*, representing Nārada’s precepts, the first half of the year begins with the lunar month of Caitra and it ends in Bhādra which leads to an intercalation in aṣāḍha. The second half begins with āśvina and ends in Phālgua. If the transition of the Sun is missing in any of these synodic months it will lead to intercalation in the month of Pauṣa.

These versions are, again, different from the one given in a brief table in the *Sumatikaraṇa*, a paper manuscript in the National Archives (I 1173/ B 356/16). On folio 23a of t nunciating an aṣāḍha intercalation in Uttarāyaṇa and Pauṣa intercalation in Dakṣiṇāyaṇa. All these divergences in textual recensions are reduced by Petech, 1984 to two versions only: hat manuscript, we have a *Māghādi* year based on the rāśi system indicated by numerals, eNārada’s precepts based on a Caitrādi year and Bhāradvāja’s precepts based on ayana. He generalizes these recensions in *the Sumati Siddhānta*, as “a parallel text” which merely gives the same version “ in terms of solar

months". This simplification of the textual evidence may be because Petech was unable to consider and interpret the significance of Newari caveat.

The crucial question is: which of these distinct as well as conflicting versions of the *adhikamāsaśūtra* was followed in Licchavi Nepal, or did different versions prevail during different periods?—it would just be impossible to decide because only two months, Pauṣa and aṣāḍa, were intercalated. It would be a senseless assumption to believe that in Licchavi Nepal there were no astronomical disputes between rival schools of the Royal Astrologers or village astrologers on when to observe an intercalated month—in Pauṣa or in aṣāḍa. Whenever it is observed, an intercalated month disrupts, not only the ritual life, but also the secular timeframe of a society. Both sacred and secular life of the common people are affected by an intercalated month. Therefore, historical notes from the Later Malla period have a number of entries for dates when disputes among astrologers took place. Even today, notwithstanding the learned interceptions of the *Pañcāṅga Nirmāyaka Samiti*, there are fierce and vocal disputes among the astronomers/astrologers on when to observe the *Mahānavami*, *Vijayādaśami*, or *Lakṣmī Pūjā*, or *Govardhana Pūjā*, on whether to follow one system as against others. Newspaper columns are at times full of angry rejoinders from one another, all citing *smṛtis*, *sūtras*, *śāstras*, and, of course, *nibandhas*. Most of the current *pañcāṅgas* are based on diverse sources, as diverse as Gaṇeśa Daivajñā (b. 1507), Makaraṇḍa (ca. 1438), Rāmabhaṭṭa's (1600) *Rāmavinoda* and Ketkar (1878). This may be one of the several reasons why the four different houses of astrologers, representing diverse *siddhāntas* (?) or branches of astronomy assemble at a resting place near the palace to decide upon the auspicious moment for the Chariot Festival of the Lord of Buṅga.!

### Confessions as Conclusions

Evidently, there is no connection between a system of intercalation and an epoch era in use just as there is no germane connection between the Vikrama Era and the intercalation system we follow now. The very fact that the same ancient system of intercalation was continued both during the Licchavi Period and the Early Malla Period, even after the founding of Nepāla Saṃvat, shows that there can be no inalienable connection between an epoch era and a system of intercalation. On the basis of intercalation, say, in the month of śrāvaṇa it is all but impossible to tell which epoch era was used in a document dated Saṃvat 2054 if such a document were to be unearthed a millennium or two later by archaeologists. With such dubious premises and tools as the *adhimāsaprakaraṇa* of the *Dharmānirṇayatitihisārasaṃ-graha*, (DNTSS), there is no wonder if N.R. Pant's 640 - page book ends with the following disappointing confessional statements;

1. No use has been made of the astronomical calculations from the *Sumatitantra*; only its historical essence has been fully used in this work (p. 566). (Does *Sumatitantra*, then, contain some historical secrecy unrevealed so far?)
2. As the second epoch era has been verified, the first epoch era cannot be any other than śaka. This is almost certain, but it has not been proved mathematically (p. 571).
3. No matter whichever Saṃvat one considers, no matter howsoever one computes one is not able to verify the intercalated months mathematically (p. 572). (By using *adhimāsaprakaraṇa* of the DNTSS, ? or *adhimāsasūtras* of the *Sumati Siddhānta*?)
4. In *Vedāṅga Jyautiṣa*, the months of Pauṣa and āṣāḍha alone are intercalated. As such a system of calculation based on śaka era is given by Varāhamihira, one tends to believe that in Mānadeva's time, *Vedāṅga Jyautiṣa* was prevalent (p. 572). ( Then why don't we also say that Vedāṅga jyautiṣa, not any other well- known siddhāntic texts such as Brahmagupta's *Khaṇḍakhādyaka* (A.D. 665) and śātananda's *Bhāṣvati- Karaṇa* (ca. A.D. 1099), prevailed in Nepal till NS 576? Till then no month other than āṣāḍha and Pauṣa was intercalated.)
5. One cannot interpret all the (49) verses of *Vedāṅga Jyautiṣa*, nor are there any examples available. There is a wide diversity of opinions among the explicators. We seemed to have found some examples (of the use of the system), but one cannot be too sure to speak authoritatively. (p.573) (Which of the three versions of *Vedāṅga Jyautiṣa* are we talking about, the ṛg version with 36 verses, or Yajuṣa version with 49 verses of which only 30 are common to the ṛg version, or Atharvaṇa version with 162 verses, including the 93rd arcā clearly enumerating all the 7 *Vāras* with their presiding deities? Pant et al. 1987 quote 8 verses on the computation of days, *ayana* and intercalation from Yajuṣa version and 9 verses on *tithi* and *karaṇa* from the Atharvaṇa version.)
6. So far I have not myself understood the meaning of (all the 36 or 49 verses of) *Vedāṅga Jyautiṣa*, let alone teaching it to others. There is no authoritative ancient exegesis on *Vedāṅga Jyautiṣa*. When will I be able to make out the meaning of *Vedāṅga Jyautiṣa* with the help of *Siddhānta śiromaṇi* ? (p. 575). (See śivarāj Acārya Kaundinyayana's *Svadharmasamdeśa* No 4, pp. 15-19, 2001 for an incisive criticism of N.R. Pant's readings).

Coming as they do at the end of the book and its 36- page “Concluding Chapter” these statements are a surprising revelation, particularly in a book entitled *Licchivisaṃvatko Nirṇaya*. authored by the progenitor of the Itihāsa

Samśodhana movement, with the assistance and collaboration of knowledgeable historians such as Mahes Rāj Pant, Dines Rāj Pant, and, of course, Gyānmañi Nepāl, whose last-minute rescue operations gave the semblance of a book to this unseemly compilation of talks, tables, translations and contributions of assorted writers. As a matter of fact, in all sanguinity, the title of the book should have been *Licchavisamvatko Annyola* (Confusion in the Views about Licchavi Era). The sum and substance of the 640-page book may be summarized in a few sentences. Nearly a similar conclusion had already been reached by Petech in 1961, a conclusion which he rephrased in just four brilliant lines:

The dates with intercalary months found in the Licchavi inscriptions hitherto published have only āṣāḍha and Pauṣa. *But they cannot be verified by any known system, the medieval Nepalese not excluded.* The question ought to be the subject of a special study. (Petech, 1984: 20. Footnote 1)

Although it was in use for *ritual purposes* for more than a millennium, Lagadha's *Jyautiṣa vedāṅga*, "containing an *inaccurate scheme* for intercalating two synodic months in every five years, was probably never used to regulate a civil calendar in India, where the beginning of each month was expected to coincide as closely as possible with the sunrise which follows the true conjunction of the Sun and the Moon" (Pingree, 1982:355; also Pingree, 1973: 1-12 ).

An intercalary month, or *adhimāsa*, was from time to time added to the normal twelve months of the year, presumably in order to make the beginnings of the sun's *ayanas* fall in the correct months. Even after observing two intercalated months in every five years, there would still be a whole month's discrepancy between solar calendar and lunar calendar in every 40 years. "Despite the efforts of many scholars to prove the contrary, *no systematic intercalation scheme can be attributed to this period*" (Pingree:1978:535.).

### The Final Dismal Leap in Logic

The most unnerving "conclusions" one comes across in the whole book by Pant et al. are the following unbelievable high jumps in logic. The quotations are all from Pant et al., 1987: 179- 180. Unless specified otherwise, all English translations in this paper are by me,

1. The dates in Amśuvarma's and his successors' inscriptions can be verified only with the help of the chronology given in the *Sumatitantra*.

(As we have seen, this chronology has no basis in historical facts just as its geographical descriptions are of no use at all).

2. Aṃśuvarṃā was the first one to use weekday in inscriptions. (Except in one inscription, he did not use weekday, nor did his successors for the next 270 years. The use of the weekday cannot be a watershed for dividing the *Vedāṅga* and Siddhāntic systems of astronomy in India, and there is nothing else in Aṃśuvarṃā's inscriptions to do so in Nepal. All the presiding deities of seven weekdays are enumerated in the *Atharvaṇa Jyautiṣa*, arca 93<sup>rd</sup>).
3. Both Sumati and Aṃśuvarṃā were the devotees of śiva. (That does not prove that the Sumati system was followed by Aṃśuvarṃā. Although he styled himself as the one who was "favoured by the grace of the feet of Lord Paśupati," he did not exercise any discrimination among śaiva, Vaiṣṇava, śākta, and Baudha religious foundations).
4. Aṃśuvarṃā was the one who started to compute time according to *Sumatitantra* in Nepal. (There is no evidence for the use of the *Sumatitantra* in Licchavi period. The system of *āṣāḍha / Pauṣa* intercalation is propounded, not only in *Vedāṅga Jyautiṣa*, it is common to *Paitamaha Siddhānta* (where the 5-year cycle began from A.D. 76 when both the Sun and the Moon were in *Dhaniṣṭhā Nakṣatra* (Alpha Delphini) on *Māgha śukla Pratipad tithi*), in Droṇa's *Smṛtismuccaya*, and Jain *Sūrya Prajñapti*. Astronomer Bhāradvāja, whose views on intercalation at the end of an *ayana* held sway in ancient and early medieval Nepal, was still in vogue in early medieval Nepal Valley during Nepāla saṃvat ca. 132-570 (A.D. 1011-1449) This tradition was probably abandoned or replaced by other systems based on true reckoning since NS 577 only )
5. The author of the *Sumatitantra* called his country *Kanyādvīpa* because Varāhamihira considered that among all the nine climes of Bhāratavarṣa, the *Varṇāśrama* system prevailed only in *Kanyādvīpa*. (Both Sumati and Varāhamihira were talking about *Kanyādvīpa*, wherever it be, *not* about Nepal).
6. As Aṃśuvarṃā considered himself an adherent of *ārya-maryādā* (i.e., the four stages of Hindu life and the caste system, among other things) he was the one who constructed a *pañcāṅga* according to the *Sumatitantra* in Nepal. (There is no inherent connection between a society's adherence to the *varṇa* system and *Sumatitantra*. No social system has to follow one in order to follow the other. There is nothing unique in the inscriptions of Aṃśuvarṃā to arrive at such a conclusion because most ambitious rulers in āryavarta, including Mahārāja Jang Bahādur Rāṇa, made *exactly similar claims*. The *ārya- maryādā* was only an ideal to which the ruling elites in Jambūdvīpa wished to approximate their social realities. In

Nepal, where even after two millennia of Hinduisation, more than half the population still follow animism and faith-healing, *The Constitution of Nepal, 1991* defines Nepal as a Hindu Kingdom, since it is ruled by the Shaha Monarchy which is an adherent of Aryan culture! (See Thapar, 1978.)

Pant devotes 420 pages (pp. 180–540) of the book to refute the views of ten other historians who held different views, including one of his own star disciples, regarding the epoch era used in ancient Nepal. The main burden of the work is to prove everyone, other than N.R. Pant and his ardent disciples, wrong. To anyone who is familiar with the elementary principles of Indian/Nepalese epigraphy or of Indian astronomy, or ancient Nepali history, this is a most bizarre exercise in pedantry based on the assumption that the 11 intercalated epigraphic data can be used for verifying the epoch year of the era used in early Nepal. Because of the use of mean reckoning and the Bhāradvāja system of intercalation it is all but impossible to do so by using the *adhikamāsaprakaraṇa* of the DNTSS, or the Sewell tables, or Chatre tables, or the *Sumatitantra* chronology. As history, the book by Pant et al. contains nothing new, and as astronomy it has ended as a futile exercise leading to inconclusive confessions, happily oblivious of modern researches in Indian astronomy accomplished in India and in the West.

#### External Evidence: The Chinese and Tibetan Sources

There are, however, some kingpins and key chronological landmarks, mainly culled from *external sources* which serve as indispensable signposts for determining the chronology of early inscriptions from Nepal. The travelogue of Hsuen Tsang (A.D. 629–645) refers to Aṃśuvarṃā as the late, wise, learned, and famous ruler who had also composed a work on *śabdavidyāśāstra*. Based on various accounts of the Chinese missions to India and Nepal during A.D. 643–657, the references to Nepal contained in the T'ang Annals, both the old and new editions, and the brief reference to Nepal contained in the Dun Huang Chronicle are of invaluable help. The last inscription we have of Aṃśuvarṃā is dated *Samvat 44 Jyeṣṭha śukla* and the first inscription we have of Udayadeva has *Samvat 45 āṣāḍhakaṛṣṇadvadaśī*. So Aṃśuvarṃā must have passed away between *Jyeṣṭha Kṛṣṇapakṣa of Samvat 44* and *āṣāḍha śuklapakṣa of Samvat 45*. If we calculate these dates with an epoch-year of A.D. 76 and consider Aṃśuvarṃā's years as a *lokakāla*, i.e., Samvat 44 = Samvat 544, then it works out as A.D. 620. This does not contradict Hsuen Tsang's observation about Aṃśuvarṃā as "the late ruler."

Similarly, the Dun Huang Chronicle records that in A.D. 641 (the year of the arrival of the Chinese Princess Wen Shing Kon-jo), *Yu-sna-kug-ti*

(Viṣṇugupta) was killed (*bkum*), and *Na-ri-ba-ba* (Narendradeva) was installed the King (*rgyal phor bchug*) with the help of T'u-fan (Tibet) where he was in political asylum after the overthrow of his father, Udayadeva, by his own brother, Dhruvadeva. (See Bacot, Thomas, and Toussaint, 1940:12; also Spanien and Imeda, *Paul Pelliot* No 1288, 1979). We have Bhitmārjunadeva-Viṣṇugupta's inscription upto *Samvat 65 Phālguna śukla 2*. The first inscription of Narendradeva is dated *Samvat 67 Pauṣa śukla 2*. So any time between *Phāguṇa śukla 3* to *Samvat 65 āśvina 30*, Viṣṇugupta must have been killed in the battle with Narendradeva. In A.D. 643, when the Chinese mission, headed by Li Y- Piao, visited Nepal, Narendradeva was already on the throne of Nepal. The date *Samvat 65* is equivalent to A.D. 641. (565+76= 641). As the major source of political chronology, the limitations of ancient Nepalese inscriptions are that they do not ordinarily mention such important historical landmarks and political upheavals. Here the Tibetan and Chinese sources are a great relief to fill up the gaps in our knowledge of ancient Nepalese political and cultural history. It was Levi (1905- 8) and Petech (1958/1984) who first published and analyzed these materials.

#### Where Did *Sumatitantra* Come From?

Wherever *Sumatitantra* may have been written, it certainly was *not* in Nepal by a Nepali astronomer. Notwithstanding the mid 7<sup>th</sup> century Chinese compliments for the Nepalese (saying that they were “clever in the art of the Calendar- maker or they understand fairly well calculation of destiny and researches in physical philosophy”), whenever the *Sumatitantra* was compiled it certainly was *not* in “Mānadeva Saṃvat “304.= A.D. 880 ! The *Sumati* texts were, in all likelihood, brought to Nepālamaṇḍala, from Simrāungarḥ. So many texts on Indian sciences, particularly Astronomy, seem to have arrived from there. (See *Vṛhatsūctpatram* Vol. 1, which include, among others, Spujidvaja' *Yavanajāataka*, in engraved devanāgarī on palmleaf, Varāhamihira's *Yogayātrā* in Gupta script on palmleaf, Somayāji Sūryadeva's Commentary on śrīpati, palmleaf in engraved devanāgarī, Kalyāṇavarmā's *Sārāvali*, palmleaf in engraved devanāgarī, the commentary on the *Sūrya Siddhānta* by Maithila-vājapeya-somayāji-śrīcandeśvara ācārya in Maithili script, Brahmagupta's *Khaṇḍakhādyam*, palmleaf in engraved Ancient Nāgarī). They may have been brought from Kaṇṇāṭaka, South India where Indian Astronomy continued to thrive till very late in the day. The practice of naming the solar months as Meṣa Māsa, Vṛṣa Māsa etc is prevalent in Kerala, Kaṇṇāṭaka, Mithilā, and Bengal. It is from that route that the *Sumatitantra*, *Sumati Siddhānta*, and *Sumatīkarāṇa* too must have entered the Nepal Valley. The arrival of the entourage of learned scholars from Smirāungarn, following the Muslim ravage of the city, may have been a

principal factor for the transmission of these texts. As the Dowager Queen-regent, Devaladevi (1326-1366), the wife of Simarungarha's ruler Harasimhadeva, ruled for forty years almost single-handed in Bhaktapur, her maternal home town. Among the several aspects of the Maithil culture assimilated by the Nepal Valley thereafter, one may very well be the arrival of the Siddhānta Jyautiṣa of diverse schools.

There are a large number of astronomical texts in the Bodleian Library, Oxford donated as a bequest by Candra Shumshere Rāṇa. This holding is at present being catalogued by Professor David Pingree of Brown University, USA. Part I of this catalogue came out from Oxford in 1983. There are some 320 manuscripts on Astronomy/Astrology (some of these are in palmleaf in Maithili/Bengali script) in the Asha Archives which have already been digitalized and scanned. So far not a single siddhanta text or a tantra text composed by a Nepali astronomer has been discovered. The Nepalese astrologers merely adapted some of the texts brought here to their own needs, at times producing their own *Sārīṇī* or *Karaṇa*, such as the one dated NS 582, in which the integers between Jyotirāj's *karaṇa* and Sumurti (i.e., *Sumati karaṇa*) are spelt out both in word numerals as well as in numerals. The more competent of them ventured to write commentaries, such as Balabhadra's on śatānanda's *Bhāsvatī*, Lakṣmīpati's on Maheśvra's *Vṛttaśatakam*, Kulānanda's on Varāhamihira's *Mihiraprakāśa*, and Devidatta Pant's on *Makaranda*.

#### The Relevance of Aṃśuvarṃā's Gokarṇa Inscription

A firm evidence for the *lokakāla* is Aṃśuvarṃā's inscription from Bāluwā village in Gokarṇa, dated *Samvat 536 dvitīyā pauṣa śukla pañcamī*, found in March 1990 by Shyām Sunder Rājvaṃśī, a promising epigraphist at the Department of Archaeology, HMG. Coming as it does *after* Aṃśuvarṃā's inscriptions dated *Samvat 29, Samvat 30, Samvat 31, Samvat 32, Samvat 34,* and *before* his Taukhel inscription of *Samvat 37*, this inscription as well as śivadeva I's Jyābāhāla inscription *dated Samvat 535 śrāvāṇa śukla saptamī* are the most tangible evidence of the fact that *there was only one epoch era in use in Licchavi Nepal*. The "the so-called Mānadeva era" (by the way, this is Petech's phrase used in his thoroughly, revised Second Edition of *Mediaeval History of Nepal*, 1984: 12 ) is only a *lokakāla* (abridged) form of the Kārttikādi current śaka which has to be computed from Thursday, October 18, 76 A.D. The Gokarṇa inscription of Aṃśuvarṃā has finally sealed the fate of the late Naya Rāj Pant's favourite theory that there was a powerful feudatory called "Mānadeva II" because there is the so-called Mānadeva *Samvat*. That might be why Dineś Rāj Pant wrote "the swan-song" of their theory in the following words:

The inscription from Gokarṇa Bāluvā also sheds some new light on the history of Licchavi period; new facts will be known about Aṃśuvarṃā....However, this inscription *sheds no light on the epoch eras in use in Licchavi period* (Dineś Rāj Pant, 1997: 3)

D.R. Pant jumps to such a desperate conclusion because in Chatre's tables for the expired śaka 535, there is an intercalation attested in Bhādra, or in Sewell's table for current śaka 536, in āśvina. Both should, according to Bhāradvāja's precepts as enunciated in the *adhimāsaprakaraṇa* of the DNTSS result in Saṃvat 536 āśaḍha intercalation. In the Aṃśuvarṃā's inscription from Gokarṇa, however, the intercalated month is Pauṣa. Unfortunately, neither the late N.R. Pant nor his disciples felt any need to verify the texts of *the adhimāsaprakaraṇa* to find out how many different versions are enunciated in *Sumati Siddhānta*. The fact that in the Gokarṇa inscription the intercalated month is Pauṣa, not āśaḍha, does not, in any way, prove "mathematically" that there was a King named Mānadeva II in Licchavi Nepal who founded the so-called "Mānadeva Saṃvat" in śaka 498.

This was a sad finale of N.R. Pant and his inmates' 57-year old dismal enterprise and intellectual somersaults to prove "mathematically" that there was a feudatory or King called "Mānadeva II" because *Sumatitantra* (OR 3564, NS 467; NGMPP No-B20/23, NS 495), *Harivaṃśa* NGMPP No. E6959; E 338/8 E 339/1, NS 775), and, of course, *Jātakajyā* (NGMPP No E 2051/16, NS 802) colophons mention a "Mānadeva Saṃvat". Parodying what Engels once wrote about Hegelian dialectics, it seems the late N.R. Pant, an acārya in Siddhānta Jyautiṣa, made ancient Nepali history "walk on its head."<sup>1</sup>

#### Note

1. "The dialectic of Hegel was placed upon its head; or rather, turned its head, on which it was standing, and placed upon its feet." Frederick Engels, "Ludwig and Frederick Engels, *Selectd Works*. Vol. II. Moscow: Foreign Languages Publishing House, 1951, p. 350

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