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ART. I.—On the Jaina Poem *Rāghavapāṇḍaviya* : a Reply
to Prof. Max Müller. By K. B. PATHAK, B.A.

[Read 19th July 1909.]

Prof. Max Müller, in his letter prefixed to the English translation of I-tsing's record of Buddhist practices in the West,¹ attributes to me a statement which needs correction. After telling his readers that Vāmana, the author of the *Kāvya-lankāra-sūtras*, quotes the *Rāghavapāṇḍaviya* of Kavirāja, the Professor proceeds to say : " Pathak in the *Indian Antiquary*, 1883, p. 20, tries to ascribe the poem to Ārya Śrutakīrti, Śaka 1045." This statement is obviously due to the learned Professor's ignorance of the fact that there are two Sanskrit poems called *Rāghavapāṇḍaviya*. The one that the Professor is speaking of is the Brahminical work of that name, which contains 13 cantos. It was composed by Kavirāja, a contemporary of King Kāmadēva of the Kadamba dynasty, who reigned at Jayantīpur or Banavāsi in the North Kanara District.² The other poem of the same name, which is divided into 18 cantos and which forms the subject of my introductory remarks in the *Indian Antiquary*, is the work of the well-known Digambara Jaina author Dhanañjaya. These facts were clearly stated by me in a footnote to my paper³ ; and it is therefore a matter for deep regret that the learned Professor should have fallen into the error of supposing that I tried to ascribe the Brahminical work to the Jaina author Ārya Śrutakīrti. It is the Jaina poem with which I was concerned in my paper on the Terdāl Inscription ; and the views which I expressed there concerning the date and the authorship of the Jaina work have since received an interesting confirmation from facts which have recently come to light.

In the inscription at Terdāl Māghanandi Saiddhāntika is spoken of as a famous Jaina ascetic of Kolhāpura. His teacher was Kuṣha-chandra and his disciples were king Sāmanta Nimbha, Kanakanandi and Śrutakīrti-traividya. If we turn to the Inscription No. 40 at Śrāvāna Belgoḷa, we find that this same Jaina ascetic Māghanandi Saiddhāntika is described therein with all the above particulars. We are told ;

तस्य श्रीकुळभूषणाख्यमुनेद्विस्राप्यो विनेयस्तुन-
स्सङ्गुनः कुळचन्द्रदेवमुनिपरिसङ्गान्तविद्यानिधिः ।
तच्छिष्याऽजानि माघनन्दिमुनिपः कोल्लापुरे तीर्थकुव-
राङ्गान्तापर्ववपारगोऽचळधृतिश्चारित्र्यक्रेष्वरः ॥

TRANSLATION.

The disciple of that good ascetic named the holy Kuḷabhūshana was the great ascetic Kuḷachandradēva, whose conduct was good and who was the repository of scriptural learning. His disciple was the eminent ascetic Māghanandi, who was born at Kolhāpura, who was well versed in the ocean-like doctrines of Tirthaṅkara, whose courage was unshaken and who was a very emperor in good conduct.

This inscription supplies some interesting literary information. It says :—

Śrutakīrti-traividya- |
 vrati Rāghava-Pāṇḍaviyamaṃ vibudha-chamat- |
 kṛiti yenisi gata-pratyā- |
 gatadiṃ pēḍa amala-kīrttiyaṃ prakāṣidam ॥

TRANSLATION.

The ascetic Śrutakīrti-traividya achieved a brilliant fame by composing the Rāghavapāṇḍaviya which must be read forwards and backwards and which is the wonder of the learned.

From this verse it is clear that Śrutakīrti-traividya wrote the Jaina Rāghavapāṇḍaviya and we also learn from the same inscription that he had Devakīrti for his colleague. The last-named ascetic⁵ died in Śaka 1085. Now the verses in the Śravaṇa Beḷgoḷa inscription, which ascribe the poem to Śrutakīrti are quoted from the well-known Kanarese work, the Pampa-Rāmāyaṇa, the date of which, as I have pointed out, is Śaka 1076. This date has now been accepted by Mr. Rice in his introduction to the second edition of that interesting Kanarese work. We have now three important facts before us :—

- (1) The Terdāḷ Inscription mentions Śrutakīrti-traividya in Śaka 1045, but is silent as regards his authorship of the Rāghavapāṇḍaviya.
- (2) Abhinava-Pampa⁶ ascribes the poem to Śrutakīrti-traividya in Śaka 1076.
- (3) The Śravaṇa Beḷgoḷa Inscription (No. 40, Śaka 1085) quotes Abhinava-Pampa's verses ascribing the poem to Śrutakīrti-traividya and identifies the latter with the ascetic of that name mentioned in the Terdāḷ Inscription.

From these facts it is easy to conclude that Śrutakīrti's work had not yet been composed in Śaka 1045, whereas between Śaka 1076 and 1085 it was regarded as a well-known poem. It is also interesting to note that Pampa speaks of it as "the wonder of the learned, by which

Śrutakīrti had achieved a brilliant reputation." From these expressions it is allowable to infer that Pampa knew of only one Jaina poem called Rāghavapāṅḍaviya, which was praised by every body. Now in Vikrama Samvat 1197 or Śaka 1062, Vardhamāna, the author of the Gaṇaratnamahōdadhi and a distinguished Jaina scholar, frequently quotes⁷ the Rāghavapāṅḍaviya of Dhanañjaya. We must also remember that Durgasiṃha, a contemporary of the Chalukya king Jagadēkamalla II. (Śaka 106-72), says⁸ that Dhanañjaya became the lord of Sarasvatī by composing the Rāghavapāṅḍaviya. This must be identical with the work of Śrutakīrti who was living in Śaka 1045. It would be absurd to suppose that two Sanskrit poems bearing the same title and having a double meaning, could have been produced by two Jaina writers of the Digambara sect in the short interval between Śaka 1045 and 1062. If such had been the case, Śrutakīrti's work would have ceased to be "the wonder of the learned" in Śaka 1076. It is therefore clear that Dhanañjaya was another name of Śrutakīrti, and that the composition of his work must be placed between Śaka 1045 and 1062. I need hardly add that Dhanañjaya was a distinguished Jaina author of the Digambara sect and mentions⁹ Akalaṅkadēva and Pūjyapāda as his predecessors. These facts will not fail to convince Sanskrit scholars that the Jaina Rāghavapāṅḍaviya, which is also called Dvisandhānakāvya, is the work of Dhanañjaya who was also known to his contemporaries as Śrutakīrti-traividya, that it was composed between Śaka 1045 and 1062 and that it is altogether different from the poem ascribed to Kavirāja.

¹ I-tsing's Records of Buddhist practices in the West, translated by J. Takakusu, B.A., Ph.D. 1896.

² Kavirāja's Rāghavapāṅḍaviya, Canto I.

³ *Ind. Ant.*, Vol. XIV., p. 14.

⁴ Inscriptions at Sravaṇa Belgol, ed. by Mr. Rice, No. 40.

⁵ *Ibid.* No 39.

⁶ Spoken of as Abhinava or new Pampa to distinguish him from an older author of the same name. Introduction to ŚabdĀnuśāsana, ed. by Mr. Rice.

⁷ Dr. Bhandarkar's Report for 1884-87, p. 20.

⁸ Durgasiṃha's Introduction to his Kanarese Pañcātanta.

⁹ Dhanañjaya-kōśa.

ART. II.—*The ancient name of Sanjân.* By JIVANJI
JAMSHEDJI MODI, B.A.

[Read 23rd August 1900.]

Sanjân is a small town on the B. B. and C. I. Railway, 90 miles from Bombay. The subject of this paper is to ascertain whether it is the Sindân of the Arab geographers of the 10th and 11th centuries as stated by the *Bombay Gazetteer* (Vol. XIV Thana), and whether it is the town of Hanjamana (हजमन) referred to in the three Silhâra grants¹ of the 10th and 11th centuries.

Sanjân is a town well known in the history of the Parsees. As the *Bombay Gazetteer*² says, "it was here that, about the year 720, a band of Persian refugees settled." Kisseh-i-Sanjân, i.e., the episode or story of Sanjân, is the name of a small Persian poem, written, not in very elegant verses, by one Bahman Kekobâd Hormuzd-yâr Sanjânâ in the year 969 Yazdazardi (1600 A. D.).³ Therein are described the events that brought the Parsee emigrants to the town of Sanjân, and then led them to settle in the different parts of Gujarât.

I.

The *Gazetteer* says of this town:—

"By the Arab geographers of the tenth, eleventh, and twelfth centuries, Sanjân, under the name Sindân, is repeatedly mentioned as one of the chief ports of Western India. In the 10th century (915) it is described as famous for the export of an emerald equal to the best in brightness and colour, but harder and heavier, known as the Mecca emerald, because it passed through Arabia. It is also described as a great, strong city with a Jâma mosque. In the twelfth century it is mentioned as populous, the people noted for industry and intelligence, rich and warlike, the town large, and with a great export and import trade."

¹ (a) *Asiatic Researches* I, p. 357. Paper by General Carnac. (b) *Indian Antiquary* V, p. 276. Paper by Dr. Bühler. (c) *Indian Antiquary* IX, p. 33. Paper by Mr. Justice Telang.

² Vol. XIV (Thana), p. 301.

³ It is translated into English verse by Lieut. Eastwick. *Journal, B. B. E. Asiatic Society*, Vol. I, p. 167.

Let us examine how far this statement of the *Gassteeer* is correct. The writer of the above passage bases his description on the authority of the well known Arab writers, Ebn Haukal (950 A. D.), Idrisi (1130 A. D.), Maçoudi (943 A. D.), Istakhri (950 A. D.) and others. As the writer has not given direct references to the works of these authors, except in the case of Maçoudi, it appears that he has taken for his authority the extracts of their works in Eliot's *History of India*.⁴

Firstly, let us examine the references to Ebn Haukal. According to Eliot's manuscript, Ebn Haukal gives the names of the following towns in Hind⁵:—Fâmhal, Kambâya, Sûrbârah, Sindân, Saimûr, Multân, Hadrawur, and Basmât. According to Gildemeister's manuscript,⁶ the names of the towns are Kâmuhul, Kambâya, Subâra, Asâvil, Hanâvil, Sindân, Saimûr, Bani Battan, Jandarûz, Sandaruz. According to Ousley's manuscript,⁷ the names of the towns in Hind are Seidan سیدان Meimoun, Multan and Heidour.

Thus we see that one manuscript of Ebn Haukal gives, as principal towns in Hind, the names of 8 towns, another manuscript those of 10 towns, and a third, of 4 towns. Again, we find a difference in the names of one and the same town, in different manuscripts. This is due to the carelessness, at first of the writer, and then of the copyists, in not putting carefully the diacritical points over the letters. We find, even the celebrated geographer Aboulfêda (A. D. 1273 to 1331) complaining about it. He says, "The book of Ebn Haukal is a work of considerable length, in which the different countries are described with sufficient exactness. But neither are the names of places marked by the proper points, nor are their longitudes or latitudes expressed; this frequently occasions an uncertainty respecting the places, proper names, &c."⁸

Leaving aside the names of the other cities of Hind, we find that the town spoken of as Sindân in the manuscripts of Eliot and Gildemeister, is Seidan in Ousley's manuscript. But later on (p. 154), where the "distances of places" in Sind and part of Hind are spoken

⁴ *History of India*, Vol. I., pp. 26-130.

⁵ *History of India*, Vol. I., p. 34.

⁶ *Ibid*, note 1.

⁷ *The Oriental Geography of Ebn Haukal*, by Sir William Ousley, p. 147.

⁸ Ousley's *Oriental Geography*, p. XVIII. "Il y manque la manière dont doivent se prononcer les noms de lieux." *Géographie d'Aboulfêda* par M. Reinaud Tome I, p. 1.

of, we find the name as Sindân *سندان* even in Ousley's manuscript. Thus, though there is a little uncertainty about the correct name of the place, we would proceed with our examination of the name taking it to be Sindân.

According to Ebn Haukal "Kambâya is one parasang distant from the sea, and about four from Sûbâra, which is about half a parasang from the sea. From Sûbâra to Sindân, which is the same distance from the sea, is about five⁹ days' journey; from Sindân to Saimûr about five; from Saimûr to Sarandip about fifteen."¹⁰ This is according to the manuscript of Eliot. Ousley gives these distances according to his manuscript as follows:—"Sourbah is near the sea: from Sindân to Sourbah is five merileh."¹¹

We find from these two passages of the two different manuscripts of Ebn Haukal, that what is spoken of as Sûbâra in one, is Sourbah *سورباہ* in the other. Sûbâra is probably a more correct reading. It is identified with the Sarpâraka of the copper-plate inscriptions, with the Sûrpâraka of the Mahâbhârata and with the modern Sopârâ near Bassein.¹² Thus, according to Ebn Haukal, Sindân is 5 days' journey from modern Sopârâ. So if the town of Sanjân in Koukan is the Sindân of Ebn Haukal, it is five days' journey from Sopârâ. A day's journey, or merileh (*مرحلم*) as it is called, is, according to Edrisi's Geography, 30 miles.¹³ So the distance by miles, between Sanjân and Sopârâ, would be about 150 miles. But we know, as a matter of fact, that it is not more than 52 miles, or more than two days' journey.

Again, according to the above passage, Kambâya, which the *Gazetteer* identifies with Cambay, is one parasang, i.e., about $3\frac{1}{4}$ miles from the sea and four parasangs, i.e., about 15 miles from Subâra, which the *Gazetteer* identifies with the modern Sopârâ near Bassein. We know,

⁹ As corrected by Eliot (p. 39 note). According to Gildemeister's manuscript it is 10 (*ibid*). Ousley's text gives 5. Ousley's text differs a good deal from Eliot's.

¹⁰ Eliot's History of India, p. 39.

¹¹ Ousley's Oriental Geography of Ebn Haukal, p. 154.

¹² *Indian Antiquary*, Vol. IX., p. 44.

¹³ Ousley's Oriental Geography, Preface p. XXII note. "évaluant la journée à 30 milles" (*Géographie d'Édrisi, par Jaubert: Tome II., p. 231 cinquième climat première section*). 60 milles ou 2 journées (*Ibid*, p. 232).

as a matter of fact, that the distance between Cambay and Sopara is not so short as 15 miles. It is nearly 270 miles.

These calculations of distances tend to show that the Sindân, referred to above by Ebn Haukal, is not the Saujân of the Konkan but some other town near Cambay. It is another Sindân spoken of as Kachh Sindân in Eliot's History¹⁴ and as the Cutch Sindân (Sandhan) by the *Gazetteer* itself.¹⁵

We will now examine the reference to the Arab Geographer Edrisi. He says, "From Subâra to Sindân is considered five days. Sindân is a mile and a half from the sea. . . . East of Sindân there is an island bearing the same name and dependent on India. It is large and well cultivated, and the cocoa-nut palm, kanâ and rattan grow there."¹⁶

We have seen in the case of the reference in Ebn Haukal, that if the Soubârâ referred to, is the modern Sopârâ the Sindân, referred to, as being 5 days' journey from it, is not the Konkan Sanjân. In the same way the reference in this passage clearly shows that the Sindân of Edrisi cannot be the Konkan Sanjân. Here it is said that there is an island of the same name on the east of Sindân, but we know, as a matter of fact, that there is no sea at all on the east of modern Sanjân. The sea is on the west of it. Suppose, for argument's sake that the writer meant to say "west" instead of "east." Such slips of words may occur.¹⁷ But then, even on the west of the Konkan Sanjân we have no island. So it seems to be clear that the Sindân of Edrisi is not the Sanjân of Konkan.

We now come to the direct references of the *Gazetteer* to the Arab writer Maçoudi. This writer, as it appears from his writings, had come personally to India, and so his references to Sindân and Soufâreh, are not made with any second-hand knowledge. While

¹⁴ I, p. 450, n. 2.

¹⁵ Vol. XIV, p. 302, note 4.

¹⁶ Eliot's History of India, Vol. I., p. 85. Joubert also gives a similar version. 'Le Soubara à Sendan, on compte également 5 journées. Sendan **سندان** à un mille et demi de la mer 'est bien peuplé, et ses habitants se font remarquer par leur industrie et leur intelligence ; ils sont riches et d'humeur belliqueuse. La ville est grande ; elle fait un grand commerce d'exportation et d'importation.' 'À l'est de Sendan est une île du même nom, grande, bien cultivée, on croissent le cocotier, le palmier, le cana et le rotting, et qui dépend de l'Inde.' Géographie d'Edrisi, par Joubert, Tome I, p. 172.

¹⁷ Vide *Indian Antiquary*, Vol. IX., p. 44, for one such instance.

speaking on the subject of the flux and reflux of waters, *i.e.*, on ebb and tide, he says:—

Voici ce que j'ai vu dans l'Inde, sur le territoire de la ville de Cambaye (کنبایتم) célèbre par ses sandales, nommées sandales de Cambaye, qui y sont d'usage, ainsi que dans les villes voisines, telles que Sendan et Soufâreh (سندان و صوفاره). J'étais à Cambaye dans l'année 303."¹⁸

In this passage Maçoudi speaks of Sindân and Soufâreh as towns in the neighbourhood of Cambay. In his quotation from Maçoudi, the writer of the *Gazetteer*¹⁹ makes Maçoudi say that the town of Sindân was "near Sufâreh and south of Cambay." But we find from the above quotation that Maçoudi, at least the manuscript of Barbier de Meynard, says nothing about Sindân being south of Cambay. However, that is not an important point. This reference, then, shows that we must look for the town of Sindân somewhere near Cambay and not at Sanjân in the Konkan. There is another reference to Sindân²⁰ in Maçoudi in Chap. XVI, where he speaks about an Indian Gulf. That reference also shows that we must look for this Sindân near a gulf somewhere near Cambay and not in the Konkan. A third reference,²¹ wherein Maçoudi says that the best emeralds came from Sindân, also points to the neighbourhood of Cambay for the situation of Sindân.

Now we come to the references in Istakhri. Among the cities of Hind he enumerates "Ambal, Kambâya, Sûbâra, Sindân, Saimûr, Multân, Jandrud and Basmand."²² Then speaking about the distances between the different places, he says: "From Kambâya to Sûrabâya²³ about four days, and Sûrabâya is about half a parasang from the sea.

¹⁸ Maçoudi par B. de Meynard, Vol. I., pp. 253-54.

¹⁹ Vol. XIV., p. 302, note 4. ²⁰ Maçoudi par B. de Meynard, Vol. I., p. 330, Chap. XVI. "Puis vient la mer Larewi, qui baigne les territoires de Seimour, Soubareh, Tabeh, Sindan, Kambaye et autres, faisant partie de l'Inde et du Sind."

²¹ *Ibid.*, Vol. III., p. 47. "Une province de l'Inde, le Sindân et les environs de Kambaye dans les états du Balhara roi de Mankir fournissent une espèce d'émeraude. . ."

²² Eliot I., p. 27.

²³ According to Abu-l-Fedâ, Sûfâra, Sûfâla, Sûbâra are variant forms. Eliot I., p. 402.

Between Sûrabâya and Sindân about five days."²⁴ These distances given by Istakhri, which are the same as those given by the Arab Geographer Ebn Haukal and Edrisi, also tend to show that the Sûrabâya and Sindân, referred to by him, are not the Sopârâ and Sanjân of Konkan, because the actual distance between them is not 5 days' journey as stated by him. Istakhri²⁵ further says that there are Jamâ Masjids in all the above towns of Hind enumerated by him. This reference to the Jamâ Masjid also shows that it is not the Konkan Sindân or Sanjân that Istakhri refers to, but it is the Cutch Sindân. We will touch upon this point later on.

I think, therefore, that the town of Sindân, referred to by the above Arab geographers, is not the Konkan Sanjân but the town of Sindân in Cutch. It is the same as the Sindân referred to by Ibn Khurdadba in his *Kitabu-l-Masâlik wa-l-Mamâlik*²⁶ as being situated in the countries of Sind. It is the same as the Sindân referred to by Al Bilâduri in his *Futuhu-l-Buldân* as the town where a large Jâmi Masjid was built by Fazl, son of Mâhân.²⁷

This reference to the Jâmi Masjid tends to show that the Sindân referred to by the Arab geographers was not the Sindân of Konkan as supposed by the *Gazetteer*, but the Sindân of Cutch. About this Sindân, where Fazl had built a large Jâmi Masjid, as referred to by Ibn Khurdadba, Eliot says, that "the town here spoken of is more probably the Sindân or Sandân in Abrâsa, the southern district of Kachh."²⁸ Giving a reference to the statement of the above Arab author Al Bilâduri and to the above statement of Eliot, the *Gazetteer*, on their authority, says: "Besides the Konkan Sindân the Arab geographers of that time mention the Cutch Sandhân."²⁹

Thus we see that it is to the Cutch Sindân that the Arab geographers refer to, when they speak of the Jâmi Masjid as being in the town of Sindân and not the Konkan Sindân. So, also, the Arab geographers, Ebn Haukal³⁰ and Istakhri,³¹ when they speak of mosques in the town of Sindân, refer to the Cutch Sindân and not the Konkan Sindân.

Thus all the Arab authors referred to by the *Gazetteer*, viz., Ebn Haukal, Maçoudi, Edrisi, Istakhri, do not refer at all to the Konkan

²⁴ Eliot I., p. 30.

²⁵ Eliot I., p. 27.

²⁶ Eliot's History of India I., p. 14.

²⁷ *Ibid.*, p. 129, p. 450.

²⁸ Eliot I., p. 450.

²⁹ *Gazetteer*, Vol. XIV., p. 302, n. 4.

³⁰ Ousley's Oriental Geography, p. 147.

³¹ Eliot I., p. 27.

Sindân or modern Sanjân. I also think that the Sufâra, Sufâla, Subâra, &c., referred to by them is not the modern Sopârâ of Konkan near Bassein.

II.

Now, before coming to the second part of our paper, we will pause a little and inquire who it was that, according to the Parsee tradition, as noted in the Kisseh-i-Sanjân, first called the place (Konkan Sindân) Sanjân.

In the Kisseh-i-Sanjân,³² referred to above, it is said that Sanjân was so named by the leaders of the Parsee emigrants who settled there. The poem says that after their final defeat at the hands of the Arabs in the battle of Nehâvand (in 841 A. D.) the Parsees wandered for 100 years in the mountains of Khorâssân, and then settled for 15 years in the island of Hormuz. They then betook themselves to the shores of India, where they landed in Div, in Kathiâwâr, and stopped there for 19 years. Thence they sailed to Gujarat, and landed at a place which they latterly named Sanjân. Thus it was in the year 775 that the place was named Sanjân.

The poem says that the leader, a Dastur, of the emigrants went to the ruler of that place, who was named Jâdi Rânâ, and explained to him the circumstances under which they had left their country and had come to India, and solicited the favour of the allotment of a place where they could make their abode. The Râjû, after making certain inquiries from the new-comers, and after making certain conditions, welcomed them to his shores and allotted them a piece of ground where they could settle themselves. It was at first a desert-like place, but they soon turned it into a habitable place.

۳۳ بدشتی در قبول افتاد یکجای
 زمین خوش بود آنجا کرد ماوای
 قبول افتاد مردم را در آنجا
 ز جنگل باز شهری شد هویدا

³² The Revâyet that is being published by Mr. Manockji Rustomji Unwâlâ, pp. 344-354. Journal of the B. B. R. A. S., Vol. I., pp. 167-191.

³³ Mr. Manockji Rustomji Unwâlâ's printed Revâyet, p. 348. Journal of the B. B. Royal Asiatic Society, Vol. I., p. 179.

هم چنگل بیابان بود ویران
 فرو آمد هم برنا و پیران
 چون دستور آن زمین نیکرا دید
 در آنجا بهر ماندن جای بنگریه
 مر اورا نام سنجان کرد دستور
 بسان ملک ایران گشت معمور

Translation.—A place in the desert was accepted. The ground was excellent, and they made it their place of abode. The place was acceptable to all persons. A city was created where there was formerly a desert. It was an uncultivated and an unpopulated desert. All the young and the old landed there. When the Dastur saw this good place, he found it to be a proper place for abode. The Dastur gave it the name of Sanjân, and it was made prosperous like the country of Irân.

According to this passage, then, it was the Parsees who had first named it Sanjân. Now the question is, why it was named Sanjân by the Parsees. One may say that it was so named after a town of that name in Persia. As modern colonists name the new towns in their adopted country after the names of the towns of their mother-country, *e. g.*, New England, New York, so the ancient Parsees perhaps named their new place of abode Sanjân, after a town of the same name in their mother-country of Persia. We find that there were several towns in Persia of the name of Sanjân. In Barbier de Meynard's Dictionary of the Geography of Persia, under the head سنجان Sanjân (Sendjân), we find four towns of the name of Sanjân: (1) A town near the gates of Merw; (2) a locality in the country of Bab-el-Abwab (Derbend); (3) a locality situated near Niçabour (Nishapour); and (4) a town in the district of Khawaf (Koraçan).³⁴

Now, as according to the Kisseh-i-Sanjân, after the fall of their empire at the hands of the Arabs, the Parsees had wandered for about 100 years in the mountainous country of Khorassan, before leaving the shores of Persia, one may say that it is very likely that they named their new place of abode after the town of Sanjân in Khorassan, whose memory was fresh in their mind. The last line of the above passage from Kisseh-i-Sanjân is بسان ملک ایران گشت معمور *i. e.*, it became prosperous like the country of Irân. This leads

³⁴ Dictionnaire Géographique, Historique et Littéraire de la Perse, par C. Barbier de Meynard, p. 323.

us to say that it is probable that the new town derived its name at the hand of the Parsees.³⁵

III.

Now we come to the second part of our paper. The *Bombay Gazetteer* says: "In three Silhâra grants of the tenth and eleventh centuries Sanjân is probably referred to under the name of Hanjaman."³⁶ The writer of the *Gazetteer* does not say on what grounds he bases his statement. He does not suggest the grounds of probability. I beg to state here some facts which supply the grounds for that probability.

The three Silhâra grants, referred to by the *Gazetteer*, are the following:—

The first grant found in Thana is that of the King Aricésari Dêvarâja of the Silhâra dynasty in Saka 939 (*i. e.*, A. D. 1018).³⁷

The words of the grant, referring to the city of Hanyamana as translated by Pandit Râmalochan and communicated by General Carnac, are as follow:—

"The fortunate Aricésari Dêvarâja, Sovereign of the great circle, thus addresses even all who inhabit the city Sri Sthânaca, his own kinsmen and others there assembled, princes, councillors, priests, ministers, superiors, inferiors, subject to his commands, also the lords of districts, the governors of towns, chiefs of villages, the masters of families, employed or unemployed servants of the king, and his countrymen. Thus he greets all the holy men and others inhabiting the city of Hanyamana."³⁸

The second grant referred to by the *Gazetteer* is that of Chhittarâjâdeva, Mahâmaṇḍalésvara of Konkân in Saka 948 (*i. e.*, 1026 A. D.)³⁹ The plate of the grant belonged to Mr. Hormusji Cursetji Ashburner,

³⁵ We have a similar instance in the case of the name of the town of Nowsaree. According to the Parsee tradition, the Parsee emigrants there named the town Nao-sari, *i. e.*, New Sari, because the climate there resembled that of the town of Sari in Persia. The *Gazetteer* says that the story that "Navasari got its name from the Pârsis is incorrect, as Navsari is shown in Ptolemy's map." But it is probable that the Parsees, finding the name of the place similar to that of a town in Persia, persianized it a little.

* Nusaripa. Ptolemæi Geographiæ Libri octo Græco-Latini à Petro Martano recogniti. (Fol Amsterdam, 1605, p. 169.)

³⁶ XIV., p. 302. ³⁷ Asiatic Researches, Vol. I., p. 357.

³⁸ *Ibid.*, p. 361.

³⁹ Indian Antiquary, Vol. V., p. 276, Sept. 1876—Article by Dr. Bühler.

and was found on his family property near Bhandup in about 1836. The donor of the grant is Chhittarâjâdeva of the Silahara or Silârs dynasty, and the donee is one Âmadevaiya. The field granted "was situated in the village of Noura, now Nowohor, belonging to the vishaya or tâlukâ of Shatsbashthî, the modern Salsette, and included in Shristhânaka or Thânâ." The words of the grant, where the town of Hanjaman is referred to, are as follow :—

"The great provincial chief, the illustrious Chhittarâjâdeva addresses with salutations, worship and respect all the assembled men of royal caste, ministers, Purohitas, councillors, chief and minor officials, whether connected with himself or strangers, as well as the lords of râshtras (zillâs), the lords of vishayas (tâlukâs), the lords of towns, the lords of villages, officials, and non-official persons, servants of the king, and *rayats*, likewise the citizens of the town of Hamyamana,⁴⁰ belonging to the three (twice-born) castes and others as follows"

The third grant⁴¹ is that of the illustrious Mahâmaṇḍalésvara, King Anantadêva, the emperor of Konkan in Saka 1016 (i. e., 1094 A. D.). The donees are "two persons, the great Minister Sri Bhabhaṇa Sreshthî and his brother."⁴² The subject of the grant is the release of the toll duties. The words of the grant are as follow :—

"Illustrious Mahâmaṇḍlésvara, King Anantadêva, announces with salutations, honour, respect, and directions, to all princes, councillors, priests, ministers, principal and subordinate officers, both those connected with himself and others, as also all heads of râshtras, heads of vishayas, heads of towns, heads of villages, royal officials specially appointed or not, country people, as well as townspeople of the town Hanjamana of the three classes and so forth"⁴³

The translators of these three grants have thrown no light upon the word Hanyamana or Hanjamana. The translators of the first two grants, Pandit Râmalochan and Dr. Bühler, have said nothing

⁴⁰ The words in the Sanskrit text are हंयमननगरपौरनिवर्गप्रभृतीश्च (p. 278, plate II.A., l. 11).

⁴¹ Indian Antiquary, Vol. IX., p. 33, February 1880—Article by the late Mr. Justice Telang.

⁴² *Ibid.*, p. 38.

⁴³ The words in the text about the town of Hanjamana are हंजमननगर पौरत् (चि) वर्गप्रभृतीश्च. *Ibid.*, p. 35, Plate III, l. 10.

about it. The translator of the third grant, Mr. Justice Telang, says about this word: "I do not understand this."** Further on he says: "I can say nothing about Hanjamana."**

It is probable that Hanjamana was another name by which the Parsee town of Sanjân was known by the Hindu rulers and by the people. Two facts are disclosed by the Silhâra grants. Firstly, the donors address the tenor of their grants in general terms to all the people of the country, to members of the royal family, to their high and low officials, to officials and non-officials, to all their *rayat*, and then make a special reference to the people of the town of Hanjamana. Why were these people not included in the general terms of the address in the general term '*rayat*'? What was the reason of separately addressing the people of the town of Hanjamana? Did not the people of that town form a part and parcel of the *rayat* of the donor-princes? The reason seems to be that the Parsee emigrants, though they were the subjects of the ruling princes, formed a separate community of themselves. They founded and formed, as it were, a separate colony of their people. They were alien foreigners, not only in the matter of their origin and descent, but in their religion. Hence the necessity of addressing them separately as a foreign community.

Secondly, the inhabitants of this town of Hanjamana, which is named separately in the grants, are spoken of in the first grant as "the holy men and others inhabiting the town of Hanjamana." In the second grant they are spoken of as "the citizens of the town of Hanjamana belonging to the three (twice-born) castes." In the third grant also they are spoken of as "the townspeople of the town Hanjamana of the three classes."

These special terms of reference, and especially the words "the holy men" in the first grant, tend to show that the people of the town belonged to the priestly class. In the second and third grants, the town is spoken of as belonging to "the त्रिवर्ग, i. e., "the three classes." Dr. Bühler, while translating the second grant, translates the word त्रिवर्ग by three castes, and adds the word "twice-born" in brackets after the word "three." We are not in a position to know why he adds this word, but, possibly, he thinks that the reference is to the three castes of Brâhmins, Khshatryas, and the Vaishyas who are generally called Dvijas, i. e., the twice-born. But we must bear in mind that the word

** Indian Antiquary, Vol. IX., p. 38. n, 45.

** *Ibid.*, p. 44.

used in the grants is वर्ग, not वर्ण, *i.e.*, class, not caste. Mr. Justice Telang has correctly translated it by the word classes. Again, if the donors meant to refer to the three Hindu castes, there was no special necessity, as we said above, of separating the three Hindu castes of the town of Hanjamana, from the similar three castes in the other parts of the country or from the whole *ṛayat*.

I think that the reference here is to the three classes of the priestly class of the Parsees.

In the Avesta we find the *Āthravans* (the priestly class corresponding to the Brâhmins) called *Thrâyavan*.⁴⁶ This word is variously translated by different translators. Dastur Edalji Sanjânâ, Spiegel, Harlez, Darmsteter, and Tehmuras have translated it in various ways. Anquetil has translated it, "Chef pur des trois Ordres," *i. e.*, the "holy chief of three orders." Kânga has translated it त्रय पंचायति *i. e.*, of three religious orders. These three classes referred to are the three grades of the priestly class, (1) the *Dastura*, (2) the *Mobeda*, and (3) the *Herbeds*. These are the three grades of the priestly class referred to by the *Saddar*.⁴⁷

This word "thrâyavan" of the Avesta then corresponds to the त्रिवर्गं (*trivargg*) of the Silhâra copper-plate grants.

Thus, then, the town of Hanjaman seems to have been called the town of three classes, because, perhaps, the Parsee emigrants mostly consisted of the priestly class. We find from the *Kisseh-i-Sanjân* that the leader of the emigrants, who went before the ruling prince (Jâdi Rânâ) was a *Dastur*. We also learn from it that the prince, before allotting any land to them, liked to know something about their religion, manners and customs. The *Dastur* explained these to the prince. A description of these is preserved among the Parsees in form of Sanskrit slokas. From these and from the description given by the *Dastur*, as noted in the *Kisseh-i-Sanjan*, it appears that the *Dastur's* narrative of some of their beliefs and observances may have led the king to find that they belonged to the sacerdotal class.

It is for this reason, perhaps, that the king and his successors took all the Parsee colonists to be of the priestly class. Hence their town is referred to as the town of the three grades (classes), in which the



⁴⁶ 𐬰𐬀𐬎𐬎𐬰𐬀𐬎𐬎𐬰𐬀𐬎𐬎𐬰𐬀𐬎𐬎𐬰 *Yasht Khordâd 9, Yasht Bcherâm 46, Abân Yasht 86.*


⁴⁷ *F. B. E. XXIV., West, Ch. XCIX.*

priestly class of the Parsees is divided. Again, the final reply of the Hindoo prince shows that he was pleased with the new-comers as belonging to a holy class of foreigners. He thus blesses them according to the slokas:—

“O Parsees! May God grant you a progeny of children. May He grant you success and victory. May the immortal Fire grant you victory. May you be free from sins. May you always be holy. May the Sun be auspicious to you for ever. Always revere the Sun. May your desires be fulfilled. Take whatever land you desire in my country. May your respect and honour increase. O Parsees! if any ignorant people will look at you (with an idea to injure you) I will smite them. May you be successful over them. May riches be your lot.”⁴³

According to the Kisseh-i-Sanjân, the prince took great interest in their spiritual welfare and even helped them to erect a fire-temple, wherein he also gave some offering.

Now the question arises if, by the word Hanjamana, the Silhâra grants referred to the new Parsee town of Sanjân, as pointed out by the *Gazetteer*, why was the town so called? What does it signify? Hanjamana  is an Avestaic word meaning “an assembly.” It comes from Avesta  “han,” Sanskrit सन or सङ्ग,

Lat. con, Gr. syn, meaning together, and  jam, Sanskrit गम to go. The literal meaning would be “a place where people go together, *i. e.*, meet.” If the word could be rendered into Sanskrit, its equivalent would be सन गम or संगम, *i. e.*, a place of junction or meeting. It is now used in the sense of “assembly.” How are we then to account for the two names, Hanjamana and Sanjân? We can account for it in two ways.

Firstly, the early Parsees may have named their new town Sanjân, and possibly knew it also by the name of Hanjamana, *i. e.*, an assembly, because all the emigrants met there together. The Hindu rulers, instead of calling the new town by its name Sanjân, which was, as it were, an alien name to them, being originally the

⁴³ Translated from a Gujarati version of the Slokas belonging to Mr. Manockjee Rustomjee Unwála. For all the slokas, *vide* Dastur Aspan-dyârjee Kamdin's *श्रीमद्भारतम् पारसीभाषायां* (1826), pp. 119-116.

name of a town in Persia, chose to know it by its second name, which pointed out its purpose, and the meaning of which they could easily understand, the word being similar to a corresponding Sanskrit word.

Secondly, the similarity of the two names Hanjamana and Sanjân suggests the idea that possibly Hanjamana and Sanjân may be one and the same name. Hanjamana was the original name given to the new town by the Parsees, and Sanjân was its later corrupted or Sanskritised form. The Avesta 'h' becomes 's' in Sanskrit, as in the case of the Avesta Hapta Hindu which has become Sapta Sindhu in Sanskrit. So Sanjân may be the later Sanskritized form of Hanjamana, which would be at first Sangama in Sanskrit. But then one would point to the Kisseh-i-Sanjân, saying that according to that book it was the early Parsees who themselves gave the name of Sanjân to that town. But we can explain that fact by saying that the book, though written on the authority of oral traditions, was written as late as 1600 A.D., *i. e.*, about 900 years after the event. So the writer, instead of giving the original name of the town, as given by the early Parsees, gave the name by which the town was known in his time.

APPENDIX.

There is one Arab geographer who also refers to one Sindân. It is Albiruni.⁴⁹ The passage referring to this town, as translated by Eliot, runs thus:

"After traversing the gulf you come to the small and big mouths of the Indus; then to the Bawârij, who are pirates, and are so called because they commit their depredations in boats called Baira. Their cities are Kach and Somnât. From Debal to Tulishar is fifty parasangs; to Loharânî twelve; to Baka twelve; to Kach, the country producing gum and bâdrûd (river Bhâder), six; to Somnat fourteen; to Kambâya thirty; to Asâwâl two days' journey; to Bahruj thirty; to Sindân fifty; to Sufârâ six; to Tâna five."

Prof. Dowson, the editor of Eliot's History, identifies the Bahruj of Albiruni with Broach, and says⁵⁰ "Albiruni makes the distance from Broach to Sindân fifty parasangs⁵¹ and from Sindân to Sûfâra six

⁴⁹ Eliot, I., pp. 65, 66. Albiruni's Text by Sachau, p. 102, l. 12.

⁵⁰ Eliot, I., p. 402-3.

⁵¹ A parasang (or farsang) varies from 2½ miles to 4 miles in different countries. Ousley and Kinner take it to be 3½ miles. Eliot, I., p. 400.

parasangs. Abû-l Fida says that Sindân was the last city of Guzerât, and the first of Manibâr (Malabâr), three days' journey from Tana. It is hardly possible to reconcile all these statements, but there seems to be sufficient evidence for making Sindân the most southerly. It was on a bay or estuary a mile and a-half from the sea, and the modern Damân is probably its present representative. Sûbâra was similarly situated at the same distance from the sea and finds a likely successor in Surat."

We see here that Prof. Dowson tries to identify Sindân with Damân and Subârâ with Surat. The great dissimilarity in names suggests that this identification is not correct. The distance of Sindân from Broach as given here is [50 (Sindân)-30 (Bahraj) = 20 days' journey, *i. e.*] about 600 miles. Again Prof. Dowson is wrong in inferring that Albiruni makes the distance from Broach to Sindau fifty parasangs. Albiruni speaks of the distance of Sindân from Debal (and not from Broach) as fifty days' journey.

ART. III.—*Āpastamba and Baudhāyana.*

By K. B. PATPAK, B.A.

[Read 27th September 1900.]

In his Introduction¹ to the translation of Āpastamba's Dharma Sūtra, which he has contributed to the Sacred Books of the East, Dr. Bühler has endeavoured to prove that Baudhāyana flourished before Āpastamba. In support of his contention Dr. Bühler appeals to Mahādeva, who in his commentary on the Hiraṇyakēśi-sūtra mentions the names of Baudhāyana and Āpastamba. The order in which these names are given is assumed to be chronological by Professors Weber² and Bühler. The latter scholar, who is aware that the Charṇavyūha mentions³ these names in a different order, seems perfectly conscious of the weakness of the view, and tries to substantiate his position by bringing forward many arguments. As regards these it will suffice to say that they are hardly convincing.

But the student of Sanskrit literature will be interested to learn that Bhaṭṭa Kumārila, who flourished about A.D. 750, offers a most satisfactory reply to the question whether Baudhāyana lived prior to Āpastamba. In a well-known passage in the Tantravārtika we are introduced to an interesting discussion on the validity of local customs. Kumārila says:—

यच्चयत्तनानामहिच्छन्नकमायुरब्राह्मणीनां सुरापानादि वाक्षिणात्यानां मानुलुहिन-
द्विवाहादि स्मृतिविरुद्धमुपन्यस्तम् । तत्र केचित्तावदाहः । स्मृत्याचारयोरितरमर
निरपेक्षवेदमूलत्वेन तुल्यबलत्वाद्धिहितप्रतिषिद्धविकल्पानुष्ठानाभ्युपगच्छेत् इति
सन्नु वक्ष्यमाणबलाबलविभागाद्युक्तम् । अन्येस्त्वेवमाहः ॥

सर्वेषामेवमादीनां प्रतिदेशं व्यवस्थया ।

आपस्तम्बेन संहत्य बुष्टाबुष्टत्वमाश्रितम् ॥

येषां परंपरा प्राप्ताः पूर्वजैरप्यनुष्ठिताः ।

त एव तैर्न बुष्येयुराचारैर्नेतरे पुनः ॥

तथा मनुनाप्युक्तम् ॥

येनास्य पितरो याता येन याताः पितामहाः ।

तेन यात्यात्सतां मार्गं तेन गच्छन्नु बुष्यन्ति ॥

येषां तु यः पित्रादिभिरेवार्यो नाचरितः स्मृत्यन्तरप्रतिषिद्धश्च तेन तं पश्चिह्रस्त्वेव-
अपरिहरन्तो वा स्वजनादिभिः परिह्रयन्ते । ननु गौतमेनाप्रायश्चित्तज्ञानामाचाराणा-
सप्रामाण्यमुक्तम् । आह ॥

यद्विदेवविरोधः स्याद्विष्वेतेषामपमानता ।

स्मृतिराज्ञात्रघर्षेण न तु वेदवदुच्यते ।

न खेतवपि युक्तं स्मृतिग्रन्थेऽप्याज्ञावशाब्दप्रयोगात् । स्मार्तधर्माधिकारे हि शङ्क
लिखिताभ्यामुक्तमात्मनायः स्मृतिधारक इति । ग्रन्थकारगतायाः स्मृतेस्तत्कृतप्र-
न्याज्ञायः स्मृतिग्रन्थाध्यायिनां स्मृतिधारणार्थेनोक्तस्ततश्च मन्वादिवाक्यप्रतिधि-
ज्ञाचाराणां प्रामाण्यमद्यक्यमभ्युपगन्तुम् । भापस्तम्बवचनं तु बौधायनेन स्मृति-
विरुद्धदुष्टाचारोदाहरणान्येव प्रयच्छता निराकृतम् । स्पष्टकामादिहेत्वन्तरदर्श-
नान्नविरुद्धाचाराणामापस्तम्बवचनस्य वा श्रुतिमूलत्वोपपत्तिः ।

Translation.

The custom of drinking prevalent among the present Brahmin women of Ahichchhatra and Mathurâ, and that of marrying maternal uncles' daughters obtaining among the people of Southern India, are spoken of as opposed to Smṛiti or religious law. On this point some people remark thus :—Such customs may be held equally authoritative with Smṛiti as they are quite independent and may be supposed to be based on Vedic texts; since when a thing is enjoined by custom and prohibited by Smṛiti, its observance can only be regarded as optional, and thus the difficulty may be removed. But this opinion is incorrect owing to the distinction between validity and non-validity which will be presently discussed. Others contend that such customs are approved or disapproved by Āpastamba according to their observance or non-observance in any particular country. Those who inherit such customs from their ancestors are justified in observing them, while others who follow them in the absence of such a prescriptive right are held guilty. Manu^s also lays down a similar rule—"One should go by the same path which was trod by one's ancestors. A person, therefore, who follows the path of the good is not condemned." Men of course avoid a practice which was not observed by their ancestors and which is opposed to Smṛiti. If they fail to do so, they will be shunned by their relations. It may be objected that Gautama holds such practices invalid as are opposed to Āmnâya. I by this expression is meant a Vedic text, such practices are utterly invalid. On the other hand, if Smṛiti is intended by the word Āmnâya, it is not exalted to the rank of a Vedic text. But this opinion is also erroneous, the word Āmnâya being frequently employed in works on Smṛiti; for Śankha and Likhita in the chapter on the duties of householders explain the word Amnâya to mean something that refreshes the memory. From

this it is impossible to defend practices condemned in the writings of Manu and others. The opinion of Âpastamba referred to above is refuted by Baudhâyana who cites specific instances of prohibited practices opposed to Smṛiti. When we see a distinct motive for such practices such as desire, it is absurd to vindicate them or Âpastamba's opinion in favour of them by supposing the existence of Vedic texts as their basis.

From this interesting passage it is obvious that Âpastamba claims for local customs as high an authority as Smṛiti itself, provided they have prescriptive right in their favour. This view is dissented from by Gautama, while Baudhâyana not only accepts Gautama's opinion, but cites specific instances of practices condemned by Smṛiti and refutes Âpastamba's opinion in favour of them. This is the gist of the passage quoted from the Tantravârtika, a work the importance of which, from an historical point of view, it is impossible to exaggerate. Let us now turn to the work of Baudhâyana and see whether he holds the views attributed to him by Kumârila. Here is the passage. Baudhâyana says⁶:—

पञ्चधा विप्रतिपत्तिर्दक्षिणतस्तथोत्तरतः ॥ 17 ॥
 यानि दक्षिणतस्तानि व्याख्यास्यामः ॥ 18 ॥
 यथैतदनुपेत्य सह भोजनं स्त्रिया सह भोजनं पशु-
 षितभोजनं मातुलपितृष्वसृगुहितृगमनमिति ॥ 19 ॥
 अथोत्तरतः ऊर्णाविक्रयः सीधुपानमुभयतोवद्विर्भ्यवहारः
 आयुधीयकं समुद्रयानमिति ॥ 20 ॥
 इतरदितरस्मिन्कुर्वन्बुध्यति ॥ 21 ॥
 तत्र तत्र देशप्रामाण्यमेव स्यात् ॥ 22 ॥
 मिथ्यैतदिति गौतमः ॥ 23 ॥
 उभयं चैव नाद्विद्येत सिष्टस्मृतिविरोधदर्शानात् ॥ 24 ॥

This passage is thus translated by Dr. Bühler⁷:—

17. There is a dispute regarding five (practices) both in the South and in the North.

18. We shall explain those peculiar to the South.

19. They are,—to eat in the company of an uninitiated person, to eat in the company of one's wife, to eat stale food, to marry the daughter of a maternal uncle or of a paternal aunt.

20. Now (the customs peculiar) to the North are,—to deal in wool, to drink rum, to sell animals that have teeth in the upper and in the lower jaws, to follow the trade of arms and go to sea.

21. He who follows (these practices) in (any) other country than the one where they prevail commits sin.

22. For each of these practices, the (rule of) the country should be (considered) the authority.

23. Gautama declares that this is false.

24. And one should not take heed of either (set of practices), because they are opposed to the tradition of those learned (in the sacred law).

If we analyze this passage, we find that it consists of three parts. First, it cites specific instances of practices obtaining in the North and the South. Next, it proceeds to quote some unnamed author, who says that such practices are good wherever they prevail, though invalid elsewhere, on the ground that local custom is a safe guide. In the last place Baudhāyana tells us that this strange view of the unnamed author is not acceptable to Gautama, and winds up by saying that he himself is opposed to all such practices. Let us now turn to the passage from the *Tantravārtika*. Here we read that Gautama is opposed to such practices, and in expressing his opinion, he uses the word *Āmnāya*. This is very interesting, and we can easily identify the *śūtra* in Gautama, where he says⁹ :—

देशजातिकुलधर्माश्चास्मरैर्यद्विरुद्धाः प्रमाणम्

But the most important literary information which the passage from the *Tantravārtika* conveys to us is that the unnamed author who upholds local customs as against *Smṛiti* or the sacred law, and who is attacked by Gautama and Baudhāyana, is no other than *Āpastamba*. This conclusion is further corroborated by the fact that Kumārila frequently goes out of his way to attack *Āpastamba* for his strange views. We are told⁹ :—

यावि चापस्तम्बवचनासुल्यबलत्वाद्वा भवेत् सावि तस्माद्वास्तवः सुरा न पिबतीत्येतेन प्रत्यक्षश्रुतिविधिना निराकृतेति नैवंविधाचारप्रामाण्यमाशङ्कित्यम्

These passages can point to one conclusion, namely, that *Āpastamba* is attacked by Baudhāyana. Nor can we forget the fact that the conclusion does not rest on the authority of Bhaṭṭa Kumārila only ; but it is amply confirmed by the statement of Baudhāyana himself as explained by Kumārila. These considerations lead us to infer that *Āpastamba* lived prior to Gautama and Baudhāyana, while Baudhāyana himself is the latest of the three *Sūtrakāras*.

An interesting question suggests itself here, whether in the text of *Āpastamba*, which is now extant, we can trace the opinions attributed

to him by Baudhāyana and Kumārila. We find one sūtra¹⁰ which alludes to local custom ; but the commentator Haradatta is careful to tell us that we should not understand Āpastamba to defend in this sūtra such practices as that of marrying a maternal uncle's daughter. That this explanation is altogether wide of the mark is abundantly proved by the passages which I have quoted above. At the same time we must admit that since we do not meet with any sūtras defending in express terms local custom as against smṛiti or sacred law, the conclusion is inevitable that the present text of Āpastamba differs, in some respects, from that which was accessible to Kumārila and his contemporaries in the middle of the eighth century.

¹ *Sacred Books of the East*, Vol. II., Part I., Intro. to Āpastamba, pp. 16-22.

² Weber's *History of Sanskrit Literature*, p. 110, 2nd ed.

³ *Sacred Books of the East*, Vol. II., Part I., Intro. to Āpastamba, p. 16.

⁴ *Tantravārtika*, Benares edition, p. 138.

⁵ *Manu*, IV. 178. Mandalik's edition, Vol. I., p. 542, reads रिच्यते instead

of दुच्यति.

⁶ Baudhāyana, *Dharmasūtra*, I. 1, 17-24.

⁷ *Sacred Books of the East*, Vol. II., Part I., Intro. to Gautama, p. 49.

⁸ Gautama, *Dharmasūtra*, XI. 20.

⁹ *Tantravārtika*, Benares edition, p. 142.

¹⁰ Āpastamba, *Dharmasūtra*, II., 15. 1.

ART. IV. *Astronomy in its bearing on the Antiquity of the Aryans.* By V. B. KETKAR, ESQ.

[Read 18th December 1900.]

Mr. President and Gentlemen,

I beg to thank you for your kind permission to read before this learned assembly a paper on the subject, "Astronomy in its bearing on the Antiquity of the Aryans." But it is so interesting, important, and vast, that to be able to do any justice to it, one must possess special talents, leisure, books, money; and above all health and energy to undertake journeys through the land of research. I confess I possess none of these qualifications and resources; and consequently I do not expect to fulfil even your moderate hopes to hear of some new discovery. At the instance of Rao Bahadur Krishanrao Balal Deval I consented to stand before you to-day, and I leave it to your indulgent consideration to decide how far I was right in accepting the call.

With these introductory remarks I beg to read my paper, hoping that you would give a calm and attentive hearing to it.

CHAPTER I.—THE CALENDAR.

The civilization of mankind, or rather the first awakening of human intellect, appears to be the latest event in the history of the earth. Even this awakening was not general. It was confined to a small tract of Central Asia between the Indus and the Caspian Sea. The people who dwelt in this tract called themselves Aryans.

Man's history on this earth may be divided into three periods. In the first, he lived solely by hunting or on wild fruits and roots. In the second, he tamed wild animals which he used for food or other services and led a nomadic life. In the third, the growth in the number of his race taught him the necessity and the propriety of resorting to Agriculture as a means of livelihood.

As the knowledge of time fit for ploughing and sowing operations is essential to success in agriculture, the earliest efforts of the Aryan agriculturists must have been directed towards the accomplishment of this important object. But this was no easy work for them. Moreover, the seasons in their country are very irregular, and baffle the

efforts even of the most intelligent meteorologists. This is often the case in higher latitudes. Napoleon attributed the failure of his Russian expedition chiefly to the fact that the winter of A. D. 1811 set in earlier by 20 days than the average of the past 50 years. The Aryans must have therefore appointed the shrewdest among themselves to discover as accurately as they could the length of the Cycle of seasons, or, in other words, the length of the Tropical year. This shows that Astronomy was the child of Agriculture.

People who first resigned their nomadic life and took to agriculture called themselves Aryas, which means ploughers of soil or husbandmen. They were not ashamed, but, on the contrary, proud of this name. The elevation of the word Arya, which latterly came to mean one born of high family, may be traced to this fact.

Clever men charged with the new duty must have seen that the Sun did not rise daily on the same point of their horizon, that he oscillated on it regularly like the pendulum of a clock, and that the seasons varied with the course of his yearly oscillation. On continuing their observations for several years, they might have found that the length of the tropical year, *i.e.*, the cycle of season, varied between 365 and 366 days. This was the first step in Astronomy achieved by man.

The settlements of the early Aryans were few and far between. They somewhat resembled the first European settlements in North America. It was, therefore, necessary for each settlement or village to entrust to a family of learned and respectable men the task of watching the daily progress of the sun's annual oscillation, that they might predict with tolerable accuracy the time of commencing the operations connected with agriculture.

In our time the abundance of time-pieces, watches and almanacs has much lessened the difficulty and importance of the above-mentioned task. Besides this there are observatories to keep the almanacs correct; and regular markets, fairs and festivals help much to keep the knowledge of time up-to-date. In the days of the early Aryans there were no such facilities. Neglect of duty, on the part of the timekeepers, meant death or disaster to the little and isolated colony. This sufficiently explains why they paid almost divine respect to their timekeepers.

These holy timekeepers were called **मामपुरोहितः**, **अभिहोत्रिन्ः**, **कालज्ञः**. As they gave timely notice of the approach of the season and sowing

time, and thus secured the welfare of the village to which they were attached, they were most deservedly called ग्रामपुरोहित. At first the reckoning of the days elapsed might have been kept up daily in the morning by notches or beads. But some shrewd and intelligent ग्रामपुरोहितs might have noticed that a particular bright star rose at dawn at the approach of a particular season. This discovery was of great use to them, as it saved the trouble of daily marking the days elapsed since the equinoctial or the solstitial day. It was sufficient if at intervals they only observed what star rose at dawn. It was kept a secret, and for fear that the honour they received from the villagers should wane, the custom of प्रातर्होम, originally introduced as a means of keeping up the daily reckoning of days, was continued as before. Those ग्रामपुरोहितs who knew the secret performed the daily प्रातर्होम even after sun-rise, but those that did not stuck to their old custom of प्रातर्होम before sun-rise. Hence arose the two sects of ग्रामपुरोहितs, called उदितहोमिन् and अनुदितहोमिन्.

Some still more shrewd पुरोहितs might have conceived the idea that the moon, which appears full twelve or thirteen times a year, might be used as an unerring and automatic instrument of measuring time, if only they should discover from observations a cycle of years that contained an exact number of full-moons. They soon found that the least number of years that fulfilled the condition was five, during which the moon appeared 62 times full and completed 67 revolutions through the stars. This discovery spared them the perpetual worry of keeping an account of time, if only they remembered the number of full-moons elapsed since the beginning of the five-year cycle. For this purpose each of the years had a name assigned to it. The names were संवत्सर, परिवत्सर, इहावत्सर, अनुवत्सर and इहवत्सर. But the custom of प्रातर्होम was not given up, because it did not involve mental anxiety of keeping an account as before. It now became a pure religious duty and a means of keeping sound health.

From this time the ग्रामपुरोहितs assumed the name अग्निहोत्रिन्s, and discharged their old duty of time-keeping under the name of इष्टिs, or fortnightly sacrifices; the one on the new-moon day was called द्वादष्टि and the other on the full-moon day was called पूर्णमासेष्टि. At every fourth full-moon day an इष्टि of a higher order called चतुर्मासेष्टि was performed, at which they called themselves ऋत्विज् or season-sacrificers. The harvest of the new season was not to be used for consumption before a portion of it was offered to the gods at these public

sacrifices. The villagers joined in the festival and brought offerings and presents for the high priest, who in his turn entertained them at a public feast. After an exchange of blessings and thanks the villagers returned to their homes quite pleased with the ऋषिऋषि for the good harvest of the season. The three season sacrifices were called आमयणेष्टि, इयामाकेष्टि, and यवेष्टि. The names of the last two are from the names of the corn reaped at the end of the season.

The आमिहोत्रिन् of the present day, though free from his old duty, which is discharged by the ग्रामउद्योतिषि or village astronomer, is much respected for the religious merit he confers by his regular performance of वसुंधरासोष्टिः. He believes that he is discharging a purely religious duty for the good of the people among whom he dwells, never dreaming that his forefathers were once holy timekeepers. He would even resent such an appellation. Superstitious men would call it a blasphemy. But the truth is that the अमिहोत्रिन्s were the first astronomers and their houses the first observatories in the world.

At one time the word कालज्ञ was deemed a title of high honour. When we read the history of the Chaldean Astronomers, we are struck by the strong resemblance of their manners, customs, learning and highly respected position in society with the same of our ancient ऋषिऋषि or अमिहोत्रिन्s. We cannot therefore resist the inference that the word Chaldean might be a corruption of the word कालज्ञ, and that the Chaldeans were a tribe of Aryans that migrated to Babylonia or Assyria. Their influence reached such a pitch that the country they migrated to was called Chaldea after them. This question, in my opinion, has not received that amount of attention and thought on the part of the Antiquarians which it deserves. A visit to places of interest such as Basora or a travel in a spirit of research through Mesopotamia would be productive of more interesting and authentic information on this question than reading a heap of books.

I will now speak a few words about the Aryan Calendar and its accuracy. A small tract called वेदांगउद्योतिष gives all the details about it. But it is so much vitiated by wrong readings that most of the verses are meaningless. The tract calls itself कालज्ञान and tells that it is based on the book written by लगध. The positions of the solstitial points among the stars in its time show that it was composed at about the year B. C. 1300, and that लगध lived in latitude 35° north. The Calendar was quinquennial, and contained 1,830 mean

solar days, 62 lunar and 67 sidereal months. But five tropical years, according to modern observations, are equal to 1,826·2 days, and not 1,830 days. The five-year cycle was therefore the first approximation to the system of Luni-solar chronology.

The difference of 3·8 days is not small, and unless there was some arrangement for removing the difference, the calendar might have become in a few cycles quite useless. Although the वेदांगज्योतिष does not explicitly speak on this point, yet the following verse in it serves to throw some light on the mystery.

स्वराक्रमेते सोमार्का यदा साकं सवासवौ
स्यात्तदादि युगं माघस्तपः शुक्लोऽथनं शुक्ल ॥ १ ॥

This verse states the time when the first cycle or आदियुग commenced. This leads to the inference that there was a major cycle consisting of a certain number of five-year cycles, at the end of which full coincidence of the Lunar and Solar years was secured by the omission of the last intercalary month, so as to fulfil the conditions characteristic of the आदियुग or the first of the five-year cycles. The three major cycles probably consisted of 6, 6, and 7 minor cycles in succession, and they together contained 1,175 lunar and 1,270 sidereal months and 95 tropical years. These are, according to modern observations, equal to 34,698·44, 34,698·5, and 34,698·01 days respectively.

CHAPTER II.—THE VERNAL EQUINOX.

The tropical year is the time taken by the sun from leaving the vernal equinox to its coming there again. There is another year called sidereal, which is the time taken by the sun from his departure to his arrival at the same star. Had the equinoctial points been fixed like the stars, there would have been no difference in the two years. But as the former points recede $50^{\circ}2$ in a year, the sun arrives 20 minutes earlier at the equinox than he does at the star. The primitive Aryans, having no means of detecting this small difference of 20 minutes in a year, believed that the equinoxes were stationary, and had prepared their calendar upon this false hypothesis. Great was their astonishment when, after the lapse of a thousand years, the vernal equinoctial point which formerly coincided with the star अग्नि or β Tauri was seen to have receded towards the star रोहिणी or α Tauri. प्रजापति or the god of the creation was supposed to dwell at the

vernal equinox. From this station he controlled the year, and was on this account called *संवत्सर*. As they could not account for this anomaly they ascribed it to the illicit love of *प्रजापति* for his daughter *रोहिणी*. Thus after the lapse of every thousand years the vernal equinox receded through the space of one asterism and became a matter for great surprise. The ancient Aryans have left records of their successive surprises, which have become invaluable means of fixing the different epochs in their history and of demonstrating their high antiquity. No other nation has perpetuated the memory of the ancient astronomical phenomena like the Aryans, which is a proof of their mental development being the earliest in the world.

Mr. B. G. Tilak, as an independent savant in the field of researches, holds a similar view in his book *Orion*, which I should like to recommend for your perusal. I will content myself with mentioning here some of the dates ascertained from references to astronomical phenomena.

B. C.

- 4000 Era of *सृग*, when the vernal equinox was in the Orion, or more correctly near the star β Tauri, as implied in the story of *ब्रषाकवि* in the Rig-Veda. The present longitude of the star in A. D. 1900 from the equinox is $81^{\circ} 12'$.
- 3068 The Era of *कृत्तिका*s or Pleiades, when they rose due east as mentioned in the *शतपथब्राह्मण*.
- 1300 Era of *वेदांगज्योतिष* when the southern solstitial point was at the beginning of *धनिष्ठा*
- 500 Era of *भरणी* implied in the story of *विश्वामित्र* in the *Mahá-bhárata*.

CHAPTER III.—INDISPUTABLE EVIDENCE IN PROOF OF
ARYAN ANTIQUITY.

(1) *Rising of the Pleiades due East.*

The late Mr. Shankar Bálkrishna Dixit has discovered in the *शतपथब्राह्मण* certain passages which record means of determining the position of the vernal equinox correct to within a degree of arc. The passages run as follow:—

(कृत्तिकाः) एता ह व प्राच्य दिशो न द्यवन्ते ।
सर्वाणि ह वा अन्यानि नक्षत्राणि प्राच्यै दिशा द्यवन्ते ।

They mean that the cluster of Pleiades rise due east while no other asterism does so.

The latitude of the principal star in the cluster, or more roughly speaking of the whole cluster, is 4° north. With this latitude the cluster could rise due east only when the equinox was 10° east of the star. At present (A. D. 1900) the equinox occupies a point 59° west of it. The equinox has therefore retrograded full 69° from the time when the passage was first composed, for it speaks in the present tense. The equinox moves backwards at the slow rate of 1 in 72 years. The passage is consequently 4,968 years old. Its date, according to Christian chronology, is B.C. 3068. Of course, the date of the Rig-Veda, which must be at least a thousand years older, comes to B.C. 4000.

(2) *The occultation of the star δ Cancer by the planet Jupiter.*

I have my own humble quota to add to the above indisputable proof of the high antiquity of the Aryans. I take for my basis the following passage from तैत्तिरीय ब्राह्मण—

ब्रह्स्पतिः प्रथमं आयमानः ।
तिष्यं नक्षत्रमभिसंबभूव ।

It means that the planet Jupiter, the first born, or for the first time occulted the star तिष्य. This star can be no other than the star δ Cancer, and the tense of the verb indicates that the occultation took place at a very ancient date.

Prior to this occultation Jupiter had been passing by the star every twelve years, but was unable to occult it. For the latitude of the star was north and that of Jupiter was south, his ascending node being situated to the east of the star. The inclination of Jupiter's orbit to the ecliptic is $79'$ and the star's latitude is $4'$ north. Supposing these to be invariable, or variable within very narrow limits, which is really the case, the node of Jupiter must be 3° west of the star to render the occultation possible for the first time.

At present Jupiter's node is exactly 28° to the west of the star. It has therefore receded 25° from its old place. The retrograde motion is so slow that it amounts to 4° in a thousand years. The occultation must have therefore taken place 6250 years ago, or about the year B.C. 4350.

A passage about ब्रह्स्पति also occurs in the Rig-Veda in a modified form. It is there ब्रह्स्पतिः प्रथमं आयमानो महो उद्योतिषः परमेष्ठोमन्. The meaning is not clear, but one thing is certain, viz., that the occultation occurred for the first time at a remote period anterior to

मेकरीवसंहिता as the tense of the verb अभिसंबभूव shows, and therefore in the days of Rig-Veda or, roughly speaking, B. C. 4000.

From a consideration of the situation of the vernal equinox as implied in the story of वृषाकपि the date of the Rig-Veda goes as far back as B. C. 4000. The date of the वृषाकपि B.C. 3068 also lends its support to the date of Rig-Veda. It is therefore B. C. 4000 or thereabouts.

CHAPTER IV.—ORIGIN OF ASTRONOMY.

A brief sketch of the rise and progress of Astronomy may not be out of place here. As mankind progresses in civilization the number of duties for which they are responsible also increases. To discharge all the duties without confusion or mistakes a knowledge of time is indispensable. Hence every nation that rose from a barbarous condition devoted its earliest attention to the acquirement of this knowledge. If we study the history of any science we find that attempts are made at first to discover certain broad rules and then to account for discrepancies in them by a number of special ones. It is the same with Astronomy. All the early civilized nations strove hard and prepared calendars based on broad and striking phenomena that recurred again and again after a certain time. Their calendars were therefore made up of certain cycles. The Aryans regulated the roll of their duties with the aid of the five-year cycle, and the Hebrews with the aid of their nineteen-year cycle. The Metonic cycle, discovered by Meton, an Athenian, B.C. 432, was of great use in predicting eclipses without the help of calculations.

When human knowledge reaches the stage of cycles there generally comes on a lull lasting for hundreds of years, required for the accumulation of minute and reliable errors. A blank period lasted from B.C. 1500 to B. C. 200, during which the only people busy at work were the Assyrian or Chaldean astronomers, who were laying a store of Astronomical knowledge. The Aryans and their descendants the Hindus seem to have done nothing beyond ascertaining the synodic periods of the planets by which they could, though very roughly, foretell the times of their heliacal risings and settings. On the fall of the Persian Empire, B. C. 322, Alexander the Great is said to have found at Babylon records of ancient observations, made by the Chaldean astronomers, for 2000 years. These he sent to his tutor Aristotle, in Greece, from whom they appear to have passed into the hands of the Greek

astronomers of Alexandria during the rule of the Ptolemys. Several astronomers might have attempted to reduce to calculations the seemingly irregular motions of the wandering stars. But nothing but their names have been handed down to us. The earliest work now extant is that of Hipparchus, B.C. 140. He is justly called the father of Astronomy. The next great astronomer was Ptolemy, who built up a complete system of Astronomy in A. D. 150. His book is called Syntaxis.

During the interval that passed between Hipparchus and Ptolemy India was invaded by a race of Sythians or Shakas, who had come from Persia or Egypt. The Coptes, the descendants of the early Egyptians, better known under the name of Shakas, adopted the Julian calendar in B.C. 22 (see the French Annuaire for 1894, page 57). The Shakas brought with them not only their new calendar but also several small tracts on astronomy. Our Shaka era named after Shaliwahan is undoubtedly of the Egyptian origin, for the simple reason that it began in our country exactly at the beginning of the second century of the new Egyptian era. For $22 + 78$ make 100. As the five सिद्धांतः mentioned in the पंचसिद्धांतिका of बराहमिहिर follow the Shaka chronology there can be no doubt that they were all derived from tracts brought by the Shaka invaders. This settles for ever the question as to the claims of the Hindus for originality in astronomy. If farther proofs be required they can be found in the internal structure of the सिद्धांतः. They are too many to be mentioned here, the chief of which are the longitude of उज्जयिनी the capital of विक्रम from Alexandria, the exact coincidence of the number of stars with those given in Ptolemy's catalogue and the complete agreement with Ptolemy's solar system. Even the name पितामह may be the sanskritized form of one of the Ptolemy kings under whose auspices the tract was originally prepared, just as the Alphonsine tables are named after King Alphonso of Spain सिद्धान्त is perhaps another form of Syntaxis. It is not a little surprizing that the Hindu सिद्धांतः contain nearly the same number of chapters or subjects, viz. 13, as those of the Syntaxis of Ptolemy. All this evidence proves one truth, viz., the Hindus borrowed astronomy from the Greek astronomers of Alexandria.

From this it should not be understood that I mean to disparage my countrymen, who have been ruling the whole civilized world by

their invention of the decimal notation. My object is only to rescue the truth.

It would not be out of place to mention here that I have lately written in Sanskrit a book on Practical Astronomy. It is called *व्यातिर्गणितम्* and is intended to supply a want felt throughout India at the present day. It is a real improvement on the existing old but nearly useless astronomical works. The erroneous results which they give are chiefly due to three main causes:—

1. The wrong supposition as to the forms of the orbits of planets.
2. The rough nature of the early observations and the consequent errors in the chief elements of the orbits.
3. The ignorance of the laws and theory of Gravitation and of the perturbations due to it.

The first two causes sometimes produce an error of several degrees in the Heliocentric places of the planets. The third cause often produces an error of several *वटिका*s. in the times of *तिया*s. The present error in the longitude of the moon's apogee is large enough to produce an error of an hour or so in the times of the eclipses.

All these errors have been rectified in my book. It is based on the works of Western Astronomers Leverrier Hansen and Newcomb. I have added new subjects and methods which cannot be described here even in a cursory way. Among others my contrivance for getting rid of the trigonometrical formulæ in the calculations of the geocentric places of planets deserves special mention. A perusal of its English preface will, I hope, satisfy the curiosity regarding it. I have also added a chapter to the book by which any date of the Shaka era can be converted into its corresponding Christian one and *vice versa*. The date of the beginning of the *कालिबुग* for instance can thus be fixed as Friday, the 18th of February, B. C. 3102. Gentlemen now I have done, but before I sit down I once more express my thanks for the trouble you have taken to meet here.
