ART. VIII.—*On the Treatment of the Nexus in the Neo-Âryan Languages of India.* By JOHN BEAMES, B.C.S.

Read February 21, 1870.

In the following remarks the term “nexus” is employed to denote a conjunction of two or more consonants in one word without the intervention of a vowel, as *kt*, *dhy*, *rn*, etc.

I divide the neo-Âryan languages of India into two classes. The Prâkrits and Pâli are called the “languages of the first period;” Hindî, Bengâlî, Ūriyâ, Panjâbî, Marâthî, Sindhî, Gujarâtî, are the “languages of the second period.”

In assuming that the languages of the first period are later than Sanskrit, I do not lose sight of the fact that historically they were contemporaneous with it. But I call them “neo-Âryan,” because the majority of their forms exhibit a decadence from some more perfect condition. It is true that not only in classical, but even in Vedic, Sanskrit forms are found which exhibit a perfect Prâkrit type; but this does not prevent the general run of Prâkrit from showing unmistakable signs of having degenerated from a purer and stronger ancient language, which we cannot call Sanskrit, because it is older still than even the language of the Vedas, and which therefore may, when necessary, be called “Old Âryan.”¹

It is a highly probable theory that the Old Âryan, like all other languages, began to be modified in the mouths of the people as early as the Vedic period, and that the Brahmans, at a subsequent date, in order to prevent the further

¹ Es kann aber die Sprache wiederum, je höher ins Alterthum aufgestiegen wird, als Dialect oder gar Mundart einer früheren, weiter zurückliegenden erscheinen. Grimm, *Gesch. d. Deutschen Sprache*, p. 574 [827].

degeneration of their language, polished, elaborated, and stiffened it into the classical Sanskrit. We cannot, however, suppose that they brought any new material into the language, but simply that they reduced to rule what was till then vague and irregular, that they extended to the whole of the language euphonic laws which had been till then only of partial application, and so forth; all the while, however, only working upon already existing materials. It will, therefore, not militate against the established contemporaneous existence of learned Sanskrit and popular Prākṛit, to consider the former as in general the representative of the original Old Âryan, and, consequently, as so far older than the Prākṛit; because, *ex hypothesi*, in Sanskrit most of what existed in Old Âryan has not only been preserved, but worked up and expanded, while in Prākṛit, on the contrary, not only has much been absolutely lost, but that which remains has been corrupted and debased. Besides, as nothing whatever of the Old Âryan has been preserved, or is likely to be discovered (although much may be, and has been, guessed at from analogy), we are driven, whether we like it or no, to look to Sanskrit for the oldest extant forms; and we do, undoubtedly, find them there, as contrasted with Prākṛit and Pāli. In the following remarks, therefore, which make no pretence to rise to the level of the higher philology, I take Sanskrit as my starting-point, and place the Prākṛits and Pāli on the first downward step, or, in other words, in the first period of Neo-Âryanism.

With regard to the languages of the second period, it must be explained that I do not intend to touch on the obscure question of how far non-Âryan elements enter into their composition. Much there is which is still doubtful, but this is admitted on all hands, that a very large proportion of their constituent parts is of Âryan origin, and to that the present notes will be confined.

It has been customary with some writers to derive all the Âryan words of the languages of this period from the Sanskrit *through* Prākṛit; but on a closer survey, I think it will be seen that this idea is erroneous.

The languages of the first period have been studied, and the laws of their formation analyzed, and written down. Knowing this much, therefore, we can see that in the second period there are two grand classes of words, one of which has evidently been derived through the medium of Prâkrit, the other not. It often happens that a Sanskrit word, for instance, re-appears in Hindi under two forms, one of which shows signs of having been in existence in the Prâkrit period; while the other, by retaining consonants which have been lost in Prâkrit, shows that it cannot have reached its present position *through* that language. As a general example, the word गृह "a house," may be given. This word in the first period becomes गिह and गेह, with total loss of the cerebral semi-vowel. In the second period, however, the word appears as गृह and ग्रह.¹ The र could not here re-appear unless recourse had been had to the ancient Sanskrit fountains; and this opens the way to a theory which will account for the occurrence in the second period of words far better preserved than they are in the first. I conjecture that in the revival of Brahmanism which followed the expulsion from India of the Buddhists, efforts were made by the Brahmins to re-establish in the mouth of the people, in their pure Sanskrit form, words which they had long been familiar with in their corrupted Prâkrit shape. It would be thought advisable to discountenance the use of words deeply impregnated with Buddhistic associations, the more so as Buddha had made the vernacular of his native province into a sacred language in opposition to Sanskrit. This practise of resuscitating words having once begun, has lasted down to our own times.

We find, therefore, three classes of words in the languages of the second period,—

First,—Words which existed in Prâkrit, and passed from and through it into the modern languages.

¹ Chand. Prithir. 23.20. One MS. reads गृह; another ग्रह; the whole passage is आयी चैत सुहामनी । गृह गृह भयी अनन्द ॥ "Pleasant thoughts came—in every house was joy."

Second,—Words which have not passed through Prākṛit processes at all, but came direct from Sanskrit, at the commencement of the second period.

Third,—Words imported at later dates from Sanskrit, chiefly by pedants, and which have therefore an artificial character and appearance.

In an investigation like this, which is still in its infancy, it would be, however, premature to lay down absolutely a date for the origin of the second period. We hold two ends of a chain, the centre of which is hid from us. We have at one end Sanskrit, the Prākṛits, and Pāli, all languages of an inflectional character; by degrees we lose sight of them and several centuries of absolute darkness follow, and when light dawns again we find a mass of local tongues all more or less analytical in their type. When or how the change took place we cannot find out from any literary monuments. A long and patient inquiry may, however, hope at length to bridge over the chasm. The first step in such an inquiry is the analysis of the forms of stem words; that of grammatical forms is the second. The treatment of the nexus affords the most solid and important results to begin with; and it is to this point that I wish to contribute a few observations.

Three kinds of nexus may be distinguished in Sanskrit.

- I. The strong nexus, *i.e.* the combination of two or more strong letters, *e.g.* कुञ्ज, शक्ति, सप्तन्, शब्द.
- II. The mixed nexus, *i.e.* the combination of a strong with a weak letter, *e.g.* माचा, वाष्प, विदुत्, व्याघ्र.
- III. The weak nexus, *i.e.* the combination of two or more weak letters, *e.g.* जन्मन्, गुह्य, ब्राह्मण, अन्य.

The strong letters, it should be understood, are the letters of each of the five vargas, with the exception of the nasals; the weak letters are all the rest, *viz.*, nasals, sibilants, semi-vowels, and the aspirate ह.

These three kinds of nexus differ from each other in their method of treatment, in both periods, in the manner which I now proceed to show.

§ I.—THE STRONG NEXUS.

A. IN THE FIRST PERIOD.

The treatment of the strong nexus is uniform and invariable throughout the first period. The rule, though variously stated by different writers, from Vararuchi downwards, is substantially the same; to wit, that *the first member of the nexus is assimilated to the second*: e.g. क्त *kt* becomes त्त *tt*.¹ The strong nexus is of rarer occurrence than the others, because it is limited by the euphonic laws of Sanskrit, which prohibit the combination of a media with a tenuis, or the placing of an aspirated letter as the first member in the composition.

Vararuchi in his third chapter gives a string of rules, arranged without much reference to the character of the nexus, but from which the following general view may be deduced:—

क, ग, ङ, त, द, प, are elided before another consonant and the second letter is doubled. This is rather a round-about way of putting it, and he omits all mention of च, ज, ट, and व. In Prākṛit व is identical with व, and the rules given for व therefore apply; व in iii. 3 is elided (or, as we should say, assimilated), whether it be the former or latter member of a nexus, and व consequently does the same; thus, Skr. लुब्धक् *lubbhaka* = Pr. लोद्धञ्चो *loddhāo*, and Skr. पक्व *pakva* = Pr. पिक्क *pikkam*; Skr. लुब्ध *lubbha* = Pr. लुद्धो *luddho*.—Var. iii. 51.

As to ट it so seldom occurs as the first member of a nexus (except in combinations where षष् “six,” constr. षट् forms the first element), that Vararuchi probably thought it useless to mention it. Similarly I am not aware of any cases where the palatals form the first member of a nexus. By Sandhi they would migrate into gutturals in composi-

¹ In virtue of this rule, we find in Prākṛit that when the second member of a nexus is an aspirate, the first member is changed into the homogeneous lenis; thus, क्थ *kth* = त्थ *tth*, not थ्थ, which would be an impossible nexus.

tion; e.g. त्वच् *twach* + दोषिन् *doshin* = त्वग्दोषिन् *twagdoshin*, वाच *vách* + य *ya* = वाक्य *vákya*. So that probably no instances exist of palatals as initials in a nexus. Vararuchi's examples are: भक्त = भक्तं, सिक्थक = सित्यञ्चो, मुग्ध = मुञ्चो, स्निग्ध = सिणिञ्चो, खड्ग = खग्गो, षड्ग = सञ्चो, उप्तल = उप्पलं, etc.

Lassen, p. 239, repeats Vararuchi for the most part, but shows some consciousness of the difference between a strong and a weak nexus. He gives (p. 235) five classes of nexus, among which is No. II., "Complexus consonantium quaternarum ordinatarum," which corresponds to my "strong nexus." His list of examples is different from Vararuchi's, but does not add anything to the general rule already obtained from the Indian author.

Hoefer, de dialecto Prakritā, p. 90, § 73 b, gives a list of words in which the Sanskrit form of the nexus is retained in Prākṛit, but this list has no value, as it rests upon incorrect readings. The principal instance is समित्कुस in Vikramorvaṣi, 110, 2 (edition Calcutta), which Lassen concludes to have arisen "ob negligentiam editorum," or, perhaps, rather from the proclivity of the scribe towards Sanskrit forms, a fertile source of bad readings in the plays. We should undoubtedly read समिक्क^०. Hoefer's work does not appear to be one of much value.

If now we turn to Pāli and the Prākṛit of the Jain writings, we find the same principle carried out. Instances from the Dhammapadam and Bhagavatī (ed. Weber) are, पृथग्जने = पुथुज्जणे, क्षप्तं = यत्तं, पुद्गलं = पुग्गलं (or in Bhāg. पोग्गलं¹), सप्तन् = सत्तं, सप्तषष्टि = सत्तट्ठि, खुय्य = कुञ्ज (कुञ्ज is probably for कुम्भ, hence the aspirate).

Pāli seems to have the best claim to be considered as pure Māgadhī, and in the Mahawanso, one of the chief works in that language, we find the same rule, e.g. वत्तव्यं = वत्तव्वं, प्राप्त = पत्तं, युक्त = युत्तं. Numerous instances may be

¹ Vide Weber. Ueber ein fragment der Bhagavatī, aus d. Abh. d. k. A. d. W. Berlin, 1. Theil, p. 405.

collected from every page of the Mahawanso, or any other Pāli work. The rule is apparently absolute and without exception, so much so, that any deviations from it may at once be set down as errors of copyists.

There seems to be no good ground for supposing that the last member of a strong nexus is ever assimilated to the first. The examples given by Hoefer rest chiefly on incorrect readings, as shown by Lassen.

B. IN THE SECOND PERIOD.

We have here to deal with a mass of forms in seven different languages, and the attempt to find a law for the changes observed is attended with much difficulty.

It will therefore tend to remove all doubt as to the truth or rather accuracy of my assertions to give as large a number as possible of examples of strong nexus which occur in Sanskrit, with their modifications in the languages of the second period; commencing with the numeral "seven," which is from its nature of universal employment.

सप्तन् *saptan* (oxytone),¹ "seven." Pr. सत्तो.² H. सात्. M. and G. सात्. B. and U. सात् (pronounced "shâtö"). S. सत्. P. सत्त. B. U. and M. also, *pedanticè* सप्त.

सप्तम *saptama* (oxytone), "seventh." Pr. सत्तमो. H. 1st सत्तं (Chand. Prith. 1, 5), 2nd सातमौ (Braj), 3rd सातवां *m. वीं f.* (modern). M. same as H. 3rd. G. सातमो—

¹ But see Bopp, Vgl. Acc. System, p. 45, § 29, the modern languages appear to have treated it as oxytone.

² Skr. stands for Sanskrit, Pr. Prākṛit, H. Hindī, M. Marāṭhī, G. Gujarātī, P. Panjābī, B. Bengālī, S. Sindhī, U. Ūriyā. I have written all the words in the Devanāgarī character, because of the difficulty of getting appropriate type for some of the languages, as Ūriyā and Panjābī, and because the use of one type facilitates comparison.

मी—मुं. S. सतीं—तीं. P. सत्तवां—वीं. B. and V. सप्तम (shōptōmō).

सप्तदशन् *saptadaśan* (accent on first syll.), “seventeen.” Pr. सत्तरस. H. सत्रह (*satraha*), modern सतरह (*satarah*). M. सत्रा or सतरा. G. शतर. S. सत्रहँ. P. सतारा, in which it stands quite alone. B. सतेर *shoter*. U. सतर *shotoro*.

सप्तदशः *saptadaśah* (id.), “seventeenth.” H. सत्रहवां or सतरहवां—वीं. M. सत्रावां—वीं—वें. G. शतरमो—मी—मुं. S. सत्रहँ. P. सतार्हवां and ०मां. B. and U. सप्तदश or B. सतेर (same as the number for 17).

सप्तति *saptati* (oxyt.), “seventy.” Pr. सत्तति, सत्तरि, हत्तरि. H. सत्तरि (Braj) सत्तर (mod.). M. सत्तर. G. सीतेर. S. सतरि. P. सत्तर. B. सत्तर. U. सत्तोरि, in which it stands alone (M. B. and U. also indulge in their favourite pedantry by using सप्तति occasionally).

सप्ततितमः *saptatitamah* (oxyt.), “seventieth.” H. सत्तवीं—वीं. M. and P. id. G. सीतेमी—मी—मुं. S. सतर्यो (*sataryo*). B. and U. the Skr. form.

It is next necessary to observe the curious modifications which the word for “seventy” undergoes when it occurs as the last member of a compound word.

Sans.	एकसप्ततिः <i>ekasaptatih</i> .	“Seventy-one.”
Hindī, 71,	इकहत्तर <i>ik+hattar</i> .	72. बहत्तर <i>bahattar</i> , and so on.
Mar. 71,	एकाहत्तर <i>ekā+hattar</i> .	72. बाहत्तर <i>bāhattar</i> , etc.
Guj. 71,	इकोतेर <i>ik+oter</i> .	72. बोहोतेर <i>bohoter</i> , etc.
Sind. 71,	एकहतरि <i>eka+hatari</i> .	72. बोहतरि <i>bbohatarī</i> , etc.
Panj. 71,	इकहत्तर <i>ik+hattar</i> .	72. बहत्तर <i>bahattar</i> , etc.
Beng. 71,	एकात्तर <i>ek+āttar</i> .	72. बाहात्तर <i>bāhāttar</i> , etc.
Ūriyā, 71,	एकसोरि <i>eka-stōri</i> .	72. बासोरि <i>bāstori</i> , etc.

Also the still greater transformations of “seven,” when it is the first member of a compound, e.g.,

“Twenty-seven.”

Sans.	सप्तविंशतिः <i>saptaviṃśati</i> .
Hindī,	सताईस <i>satā+īs</i> .
Mar.	सत्तावीस <i>sattā-vīs</i> .
Guj.	शतावोस <i>śatā-vīs</i> .
Sind.	सतावोह <i>satā-vīh</i> .
Panj.	सताई <i>satā-ī</i> .
Beng.	साताईश् ¹ <i>sātā-īś</i> .
Ūriyā,	सताईश <i>satā-īśo (shotaiśho)</i> .

“Thirty-seven.”

सप्तत्रिंशत् <i>saptatrinśat</i> .
सैंतीस <i>sain+tis</i> .
सततीस <i>sata-tīs</i> .
साडतीस <i>sād-tīs</i> .
सतदीह <i>satadīh</i> .
सैंचो <i>sain-trī</i> .
साईचीश् <i>sāin-trīs</i> .
संइतिरिश् <i>sanitirīśo</i> .

“Forty-seven.”

S.	सप्तचत्वारिंशत् <i>saptachatvārinśat</i>
H.	सैंतालीस <i>sain+tālīs</i> .
M.	सत्तेचालीस <i>satte-chālīs</i> .
G.	मुडतालीस <i>mūd-tālīs</i> .
Si.	सतैतालीह <i>sate-tālīh</i> .
P.	संताली <i>sant-ālī</i> .
B.	सात्चालीश् <i>sātchālīs</i> .
U.	सत्चालिश् <i>satchālīśo</i> .

“Fifty-seven.”

सप्तपंचाशत् <i>sapta pañchāśat</i> .
सतावन <i>satā-wan</i> .
सत्तावन्न <i>sattā-vanna</i> .
सतावन <i>satā-wan</i> .
सत्वंजाह <i>satwa-njāh</i> .
सतवंजा <i>sata-vanjā</i> .
सातान्न <i>sātānno</i> .
सतावन <i>satāvano</i> .

“Sixty-seven.”

S.	सप्तषष्टिः <i>saptashashṭīh</i> .
H.	{ सरसठ <i>sarsaṭh</i> .
	{ सतसठ <i>satsaṭh</i> .
M.	सत्सष्ट <i>satsashṭ</i> .
G.	सड्सेठ <i>saḍ seth</i> .
Si.	सतहठि <i>sat haṭhi</i> .
P.	सताहट <i>satā haṭ</i> .
B.	सातषाट्टि <i>sātshāṭṭi</i> .
U.	सत्षटि <i>satshaṭi</i> .

“Seventy-seven.”

सप्तसप्ततिः <i>saptasaptatiḥ</i> .
सतहत्तर <i>sat-hattar</i> .
सत्याहत्तर <i>satyā-hattar</i> .
सीतोतेर <i>sītoter</i> .
सतहततिरि <i>sathatari</i> .
सतत्तर <i>satattar</i> .
सातात्तर <i>sātāttar</i> .
सतस्त्रोरि <i>satastori</i> .

¹ Bengālis and Ūriyās pronounce the स as *sh*, so that *shātāīś* would be perhaps a better transliteration, and so throughout the series.

“Eighty-seven.”

- S. सप्तशीतिः *saptāśītiḥ*.
 H. सतासी *sat-āsī*.
 M. सत्यांशी *satyānśī*.
 G. सतासी *satāsī*.
 Si. सतासी *satāsī*.
 P. सतासी *satāsī*.
 B. साताशी *sātāsī*.
 U. सताशी *satāśī*.

Ninety-seven.”

- सप्तनवतिः *saptanavatīḥ*.
 सतानवे *satā-nave*.
 सत्यांशवे *satyān-ṇave*.
 सतांशु *satān-ṇū*.
 सतानवे *satānave*.
 सतावनै *satānavanai*.
 सातानव्वई *sātānavvāi*.
 सतानोइ *satānoi*.

I have given all these numerals in full detail, because they exhibit such a surprising amount of variation from the original stem सप्तन्.

Some other common words in which a strong nexus occurs are as follows:

खड्ग *khaḍga*, “a sword.” Pr. खग्गो, Var. iii. 1. H. 1st, षग्ग¹ Chand. Prith. 15, 24. लग्गयौ षग्ग उडि हृद्य ते “He attacked, raising sword in hand;” 2nd, खाग (but only used for the horn of the rhinoceros, for which also खड्ग is used); 3rd, खड्ग (*kharag*); 4th, खांड (*khāṇḍ*). M. 1st, खड्ग (rare); 2nd, खंडा; 3rd, खांडा. P. and U. *deest*. S. खनो.² G. खाडु. B. खडग (*khōḍḍog*).

मुद्ग *mudga*, a sort of pulse³ (*Phaseolus mungo*). Pr. मुग्गो, Var. ib. H. मूग. M. मूग (*pedanticè* also मुद्ग but rare). S. मुङ्ग (*muṅgu*). U. मूग (*mūgo*). G. *deest*. P. मुंग or मुग्ग. B. मुग (*mugō*).

दुग्ध *dugdha*, “milk.” Pr. दुद्ध. H. दूध. M. and G. दूध (*ped.* दुग्ध). U. दुध. P. दुह. S. डोधि. B. दुध, दुद्, दुदु, and दुग्ध (*ped.*).

¹ ष is always written for ख in the two MSS. of the Prithirājarāsa, which I have seen so also in Bengālī.

² Cf. अण्ड, S. आनो “egg.”

³ Erroneously in all the dictionaries as a kidney-bean, which it in no way resembles; it is a sort of millet.

मुन्नर *mudgara*, "hammer." Pr. मुन्नरो. This word is used in two senses in the second period. (a) = an athlete's club for exercising the muscles. H. मुग्दर (मुग्दर). M. मुद्गल्. S. *deest*. G. मग्दल्. U. and B. मुग्दर and मुन्नर. P. मुग्दर (b) = a washerman's mallet for beating clothes. H. मूगरा and मोगरा. M. मोगर ०रा and ०री. S. मुडिरो. G. मोगर and ०री. U. *deest*. B. *deest*.

शब्द *ṣabda*, "a word." Pr. सहो. H. सबद and शब्द. M. S. G. and B. शब्द (not very frequent, except in B.). P. *deest*. U. शब्द (*ṣōbōdō*).

कुब्ज *kubja*, "crookbacked." Pr. खुज्जो and खुब्जो. H. 1st, कुब्जा; 2nd, कुब्जा; 3rd, कुबड़ा (*kubrā*, commonest form). M. कुबड़ा (in the Wāri dialect, खुबड़). G. कुबडो (both in M. and G. खुबड़ा is "the snail," i.e. humpback). S. कुबो. P. कुब्जा and कूबा. U. कूबा. B. कुज, कुंज, and कुब्ज.

मुग्ध *mugdha*, "foolish." Pr. मुद्धो. मुग्ध occurs in M. and B., but in the others the form in use is मूढ, from the Skr. मूढ, which is the other form of the p. part. of मुह्.

भक्त *bhaktam*, "boiled rice." Pr. भक्तो. H. भात्. M. and G. *id.* S. भत्. B. and U. भात (*bhātō*). P. *deest*.

The class of words containing the nexus क्त *kt* is rather numerous, but does not present many interesting features; a few examples follow:

भक्त *bhakta*, "a devotee." Pr. भक्तो. H. M. and B. भगत् and भक्त. G. भगत. S. भगत्. P. भगत्.

मुक्ता *muktā*, "a pearl." Pr. मुक्ता. H. मोती. M. मोती. G. मोती. B. and U. मोति. B. also मुक्ता, मौक्तिका, and मति. S. मोती. P. *id.*

रक्त *rakta*, "red." Pr. रक्तो. H. राता. M. *id.*, when it

means "red," but रक्त when meaning "blood." S. रतो.
G. रातु. P. *deest*. U. and B. रक्त in both senses.

The Sanskrit words शक्ति, व्यक्ति, पक्ति, भक्ति, मुक्ति, पङ्क्ति occur in their original forms in nearly all the languages, but with slight modifications in some. They do not, however, offer much that is noteworthy.

From the examples collected above certain laws may be deduced, keeping in mind the distinction already drawn between words which show traces of Prākṛit influence (class 1), and those which do not (class 2).

Hindî, in class 1, rejects the first of the two consonants of Prākṛit, and as a compensation lengthens the preceding vowel, e.g. सात, खाग, मूग, दूध, मोगर, भात, from सत्तो, खगो, मुगो, etc. At the same time the final short *ă* is cut off in nearly every instance in substantives, but not, as a rule, in adjectives.¹

In class 2 the compound consonant of Sanskrit is split up by the insertion of a short *ă*, e.g. खड्ग *kharag*, सबद *sabad*, भगत *bhagat*, for खड्ग *khadga*, शब्द *ṣabda*, भक्त *bhakta*. In the case of खाँड *khāṇḍ*, the last member of the nexus has been rejected, and the vowel lengthened, as in class 1, but this is merely an exception. In कुबडा also the last member has disappeared, but in place of the customary compensative lengthening of the vowel we have the well-known Hindî familiar or diminutive particle डा added, so that we may assume the existence of an intermediate form कूबा, which, however, is only found in Panjābî.

The series of "seven" and its derivatives belongs to

¹ In the case of adjectives the neuter in *am* appears to have been accepted as the basis of the modern system, just as in the Romance languages the Latin neuter in *um* has been selected, and results in a termination *o*. (That this *o* came from *um*, and not from the masculine *us*, is proved by the existence in the earlier stages of the Romance languages of a separate masculine nominative in *s*, e.g. *mals* for *malus*.) The neuter *am* of Sanskrit modulates in the first instance into *o*, and in this stage Marāṭhî, Sindhî, and Gujarātî still have it, but in Hindî it has further migrated into *ā*.

class 1, in so far as it has everywhere lost its first member **प**. This is only natural; a numeral being, next to a pronoun, the most commonly used description of word, and hence not to be changed by authoritative interference, such as I have assumed in the case of class 2.

The variations may be thus analyzed :

सत्त° *satta-*, in the words 70, 70th.

सात° *sât-*, in the words, 7, 7th.

सता° *satâ-*, in the words 27, 57, 87, 97.

से° *saīm-*, in the words 37, 47.

सत्° *sat-*, in the words 17, 67, 77.

Of these, **सत्त°** is simply the assimilated form of the first period, which in the compounds modulates into **हत्तर**, a form which is found even in the first period. This word is noticeable as the solitary instance in Hindî of a change of the initial **स** into **ह**, though in Panjâbî the change is so common as to be regular.

सात is the regular form of the 1st class, like **भात्** and others. In **सता** we have rather a curious phenomenon which requires fuller analysis; the words are **सताईस**, **सतावन**, **सतासि**, **सतानवे**. In the first period we do not uniformly find the long *â*, e.g. *sattavîsatimo*, 27th, but *sattânave*, 97. But there is a remarkable uniformity in all the seven languages of the second period. We find the long *â* in all of them for 27; in all but Panj. and S. for 57; in all for 87 and 97.

Judging at first from **सताईस** only, and the Hindî chiefly, I thought this abnormal long *â* arose from the **व** of **विंशति** amalgamating with the inherent *ă* of **सप्त**, first from *av* (*saptavîṣṭati*) into *au* (*sattavîṣ*), and thus, according to the usual Hindî analogy, into *â*. But this suggestion broke down in two ways—1st. Because the Marâṭhî has both the long *â* and the *v* in **सत्तावीस**; so also have the Sindhî and Gujarâtî; and 2nd. Because we have the long *â* in words where there existed originally no *v* to coalesce with it into *au*.

The opinion I am at present most inclined to is that the presence of the long *â* is due to the accent of the Sanskrit.

Saptan is undoubtedly oxytone, and though I have not been able to find in the dictionaries or other published works any instance in which the accent of *saptaviṇṣati* is given, yet I have no reason to doubt that, as in Greek, the accent remains in the compound word just as it stood on each member when separate. In Greek the rule which forbids us to place an accent further back than the antepenultima obscures the analogy, but in Sanskrit we have no such restriction, and “*saptáviṇṣáti*,” with the major accent on the penultima, and the minor on the præ-antepenultima is quite possible. Assuming this, and seeing that the two last syllables “*ati*” have disappeared, the word would fall into the form of a paroxytone, and the accent on the syllable *ta* being the only one left, would assume such prominence as to insure its remaining long throughout the ages. I own I was unwilling to admit this possibility of the influence of the accent, and sought for some time for another solution; I was unwilling to admit into the discussion of a question, already sufficiently complicated, the disturbing influence of another unknown quantity in the shape of the Sanskrit accent; but I fear there is no help for it. That a subtle and apparently irregular system of accents haunts and flavours the pronunciation of modern Hindustānī is as evident as in the case of modern Greek. Why do we say *káhān*, laying the accent on the first syllable though short? why *káho*, not *kahó*? why a dozen other anomalies? This unwelcome conviction thrusts back my lucubrations on the nexus till the Sanskrit scholars of Europe are kind enough to dig out and impart to us more facts and laws about the accents of that language.

We next come to the curious form *सै*, only found in 37 and 47. In these two sets of numbers we find that all the odd numbers except the first take this form in *ain*, thus,

33. तैतीस <i>taintís</i> .	43. तैतालीस <i>taintálís</i> .
35. पैतीस <i>paintís</i> .	45. पैतालीस <i>paintálís</i> .
37. सैतीस <i>saintís</i> .	47. सैतालीस <i>saintálís</i> .

The other languages offer only faint indications of simi-

larity. P. has **सैची**, B. **साईचीश**, U. **संदतिरिश**, but none of the others. I think it has arisen from a sort of rhyming propensity, sometimes observable in Hindi. From **ते** or **तै** the transition to **तै** was easy, the insertion of the nasal in season and out of season being a weakness of that language. In the word for 35 they had at first *panchatrīṅsat*, which soon got altered into *panchtīs*; but here they had a strong nexus, **च+त**. The **च** therefore dropped out, and the resulting double **त** was reduced to a single, and the preceding vowel compensatorily lengthened, so that the form **पांतीस** arose; to make which rhyme with the word for thirty-three would be irresistible. So also the 37, which was probably **सात्तीस**, was dragged into the scheme, and became **सैतीस**.

The only remaining form **सत** is found in 17, 67, 77. In 67 the word was originally *saptāṣṣaṣṭīh*, with two accents close to one another, the latter of which, so to speak, kills the former, so that when by the usual Prākṛit process the first member is modified into *satta*, the second *a*, being atonic, falls out; and though the first *t* also falls, yet, as it is in the first syllable of two, the latter of which is accented, no compensatory lengthening can take place.

In 77 we ought to have **सता**, and probably such a form did once exist, but was crushed into *sat* by the weight of the double *tt* of *hattar* so close after it. Only Marāṭhī retains a form *satyāhattar*. Similarly, the form for 17 was originally *sattārah*, and is so still in Panjābī; perhaps some obscure idea of its similarity in sound to *sattar*, “seventy,” may have operated in the minds of the people to shorten it. For your Hindustānī is a dreadful jingler: he twists his words into absurd semi-rhymes, as *bartan-artan*, for *bartan*, “a plate;” *gāri-wūri*, for *gāri*, “a cart;” *ultā-pultā*, for *ultā*, “reversed,” and so on.

[Here, for the present, I must stop, reserving the analysis of the mixed and weak nexus for a future occasion, as I am obliged to return to India immediately. I hope to be able in a few months to send home the remainder of the argument, together with the rules deducible therefrom.]