ART. V.—*The Invention of the Indian Alphabet.* By JOHN DOWSON, Esq., M.R.A.S., late Professor of Sanskrit, etc., in the Staff College.

THE origin of the Indian alphabet is a matter of very considerable interest and importance. Was the art of writing introduced from foreign lands, or was it an indigenous invention; and in what age did it first make its appearance? Opinions differ on these points, for there is no certain evidence; and the conclusions arrived at are based entirely on inference and probability. The balance of opinion has perhaps, hitherto, inclined to the theory of a Semitic origin, and a late writer on the subject, our learned colleague Dr. Burnell, has given a very decided opinion on that side of the question.¹ To his judgment I pay due deference, but the arguments with which he supports it seem to me inconclusive and unsatisfactory. I propose, therefore, to review briefly the whole subject.

The most definite argument known to me, on the Semitic side of the question, is that of Prof. Weber, in vol. x. of the *Deutschen Morgenländischen Gesellschaft*. I am unable to concur in the derivations and conclusions proposed in that essay, but I am relieved from the duty of examining and criticising them by the fact, that so earnest a supporter of this Semitic theory as Dr. Burnell, has refrained from adopting Professor Weber's proposed identifications. He considers that the true Semitic source has yet to be discovered.

The Semitic races were acquainted with the art of writing at a very early period. Whether the original idea came to them from Egypt, or not, is beside the present inquiry. The Cuneiform inscriptions show the transition from an ideographic to an alphabetic form of writing, and the frequent mention of writing and books in the Old Testament proves that the art was commonly known among the Jews. Christian people have hence looked upon the Hebrews as the

¹ South Indian Palæography.

original possessors of the graphic art, and there has been a natural disposition to refer all alphabets to a Semitic source. There is proof of the art of writing having been known to the Hebrews long before any proof can be found of its use among the Greeks or Indians. But the absence of the evidence of existence is no proof of non-existence; still less does it justify the inference that the later alphabets must have been derived from the earlier.

There is a repugnance in the human mind to admitting the probability, or even possibility, of two independent inventions of the same thing. This instinct is sound and useful, and perhaps it has been intensified among Englishmen by Sheridan's satire that two such men as Shakspeare and Puff may hit on the same thought. But this feeling has been and may be pressed too far, as the double inventions of gunpowder and the mariner's compass prove. The Chinese system of writing might have been cited a short time ago as another independent invention, but reasons have lately been advanced for connecting it with the Accadian Cuneiform, and if this theory is confirmed, the evidence tells the other way.

The Hindus possess, as we know, a very old and extensive literature. The hymns of the Rig Veda are more than a thousand in number, and form a very considerable whole, as the printed texts abundantly prove. The age in which these hymns were composed is a matter of conjecture, for chronology seems to have been unknown to or held in abhorrence by the Hindus. Certainly, the hymns carry us back to a remote age; some of them having possibly an antiquity of fifteen, twenty, or even more centuries before the Christian era. The question arises, Could these numerous hymns have been handed down through century after century by oral tradition? Prof. Max Müller has discussed the question carefully and candidly, and the conclusion he has arrived at is that they were so transmitted, and that they bear strong internal evidence of such a descent. There is every reason for believing that the Homeric poems were similarly preserved, and that writing was

unknown to the Greeks when these poems were composed and sung. But, allowing that these Vedic hymns were traditional, can the Brāhmanas, written in terse and difficult prose, have also been transmitted by oral teaching through many ages? This is more difficult to believe, but still there is no evidence of their having been written—the more so, that they, like the hymns, betray signs of oral transmission. The art of memory was, and is still, diligently cultivated among the Hindus, and the perfection to which it has been carried almost exceeds the bounds of belief; but when it is known that the grammar of Pānini and other similar works were composed to be learnt by rote, and were actually so learnt, any other great effort of memory fails to surprise. It may be added, that the Brāhmins seldom studied or attempted to master more than one subject or division of a subject: “the ambition to master more than one subject,” says Max Müller, “is hardly known in India.” There is nothing therefore entirely incredible in the statements that both the Hymns and the Brāhmanas were transmitted for centuries by tradition.

One argument against the knowledge of writing in these early times is founded upon the fact that there is no mention of books, pens, ink, writing, or like matters, in any of the Hymns or Brāhmanas. This argument has some weight, but is not conclusive. The Hindus had, in those old days, a predilection for oral instruction, and this predilection survives among their descendants ages and ages after the use of writing has become universal. There is still a great prejudice against book learning, and a Pandit who has gained his knowledge from the oral instruction of his Gamaliel stands higher in estimation than another who has derived his learning from books. Max Müller has pointed out that Kumārila,¹ an author of about the eighth century A.D., who composed several treatises and probably wrote them, “when he speaks of the material evidence of the Veda, can only conceive of it as existing in the minds of men.”

¹ Anc. Sans. Lit. 510.

This author does mention writing, but only to condemn its use. If this was the feeling of Kumārila, in days when writing was generally known and practised, the same feeling no doubt existed in greater force in the olden days, when oral instruction was more general, and when writing, if known at all, was less common and was the object of greater repugnance to sacred teachers. The absence of all reference to writing in the old Hindu hymns and treatises may be attributed to ignorance, but it may, also, have arisen from this strong repugnance preventing any allusion to it in the sacred writings.

At the close of the Vedic period followed that of the Sūtra literature. This period is again an uncertain one, but the earliest Sūtra works come immediately after the close of Vedic times, and six centuries B.C. has been named as about the period when they probably appeared. The peculiarities of the Sūtra compositions are such as to make their production and transmission almost impossible without the use of letters. Prof. Max Müller has expressed a decided conviction, that writing was employed in the Sūtra period, and he adds that the word *patala*, which is used as the name for the chapters of the Sūtras, means a covering or binding, and is strongly suggestive of *biblos* or book.¹

In addition to the teaching of the Text, the great Vedic masters instructed their pupils in the rules of Sandhi, in the euphonical changes rendered necessary by the contact of incompatible sounds. This teaching could hardly have been made distinct and comprehensible by the use of the mere sounds; names seem necessary to express them; and from the mental perception of names designating different vocal sounds, the step to the representation of those names by pictorial signs or arbitrary alphabetical characters is but a short one, and it seems hardly possible that the step should not have been taken. Much may be conceded to teachers of such remarkable tenacity of memory and powers of expression as the Vedic sages; the possibility of their having

¹ Anc. Sans. Lit. 524.

done without alphabetical names or letters cannot be denied, but there is a wide interval between the possible and the probable, and it is difficult, nay almost impossible, to conceive that this branch of teaching could have been conducted without names for the vocal sounds; and if names, then symbols to represent them. Such is the fair presumption; of actual proof it must be allowed there is none.

Some of these grammatical treatises were anterior to Pāṇini, and bring us to the work of that celebrated grammarian. Unfortunately his era is not certain. According to Goldstücker, Pāṇini's age may be six centuries B.C.; a more moderate computation reduces it to four, and Weber makes it even later. Let us take the mean and allow four centuries. Pāṇini makes unmistakable reference to writing, he uses the word *lipikāra*, scribe, and refers to the *Yavanāni lipi*, Greek or foreign writing, about which something will be said hereafter. Max Müller maintains that there is nothing in Pāṇini to show that he was acquainted with technical names for letters; but Kātyāyana, who came closely after him, as also the Prātiśākhya treatises, certainly used the word *repha* as the name of the letter *r*, and it is hard to suppose that *r* was the only letter that had a name. Goldstücker expresses a very decided opinion "that Pāṇini's grammar could not even have been composed as it is now without the application to it of written letters and signs."¹ Dr. Burnell strongly supports this view, and says, "Pāṇini's sūtras show that writing was known in his time, and many expressions render it impossible to doubt that he used writing and that to express minute details."²

The old lawgiver Manu uses the words *lipikāra*, scribe, and *lekhitā*, caused to be written (viii. 168). He further denounces punishment upon the forgers of grants of land (ix. v. 232). This is proof positive that writing was not only known, but had been employed for the practical purposes of life, for some considerable time before the promulgation of his Institutes. The age of Manu is unknown,

¹ Mānava-kalpa-sūtra, Pref. p. 17.

² South Indian Palæography, p. 6.

but the preponderance of opinion favours 500 years B.C. as the time when the laws were collected, and there is no doubt that many of them existed in a scattered state long before. Yājñawalkya (ii. 240) and Vishnu (iii. 81), two great writers on law of later date, have similar provisions, and the latter mentions that title-deeds were written on a piece of cotton cloth or a copper plate. These two writers are not cited as of themselves authorities on the antiquity of writing, but as affording some assurance that Manu's provision for the punishment of forgers is not an interpolation of modern date.

Writing is distinctly mentioned in the great heroic poem the Mahā-bhārata, which denounces hell as the punishment of those who write the Veda.¹ Three to six centuries B.C. is the period assigned for the compilation of this great poem. Many of its component parts existed in a scattered state previously, but others are interpolations of a later date. The authenticity of any particular verse cannot therefore be relied on, but the verse cited has not that sectarian character which marks the modern introductions.

Again, we have a full description of writing and the alphabet in the Buddhist chronicle called Lalita-Vistara. The date of this work is unknown, but it was translated into Chinese in the year 76 A.D., and it is obvious that in those days the work must have been written a very considerable period before it could have acquired such a celebrity as would lead to a translation. This work describes the birth and childhood of Buddha, and it gives the alphabet which he learnt to write at school, the common Sanskrit alphabet as we now have it, with the omission of the vowels *ri* and *lri*, which were unknown in the Pāli, the language which Buddha spoke. It is curious that the letter *l* is also omitted from this alphabet, though it was in common use. The date of the death of Buddha is not conclusively fixed, but the best opinions vary only about a century, from 544 to 478 B.C. Buddha then, according to the latest of these dates, must

¹ "Those who sell the Vedas, and even those that write them, those also who defile them, they shall go to hell."—Anc. Sans. Lit. 502.

have been born at the beginning of the fifth century B.C., and if the authority of the *Lalita-Vistara* can be accepted, the art of writing was then well known, and formed part of a liberal education.

In the dramas *Śakuntalā* and *Vikramorvasī*, writing, and the use of lotus leaves and birch bark as writing materials, appear among the incidents of the action. These dramas are of early date, but the time of their composition is so vague and uncertain, that their evidence is of little or no value.

Thus there are a number of independent pieces of evidence, all pointing to a particular age in which the art of writing must have been known to the Hindus. These are—

The *Sūtras* of about the sixth century B.C.

The *Prātisākhya*s, Pāṇini, and the grammarians of the third to the sixth century B.C.

Manu of the fifth or sixth century B.C.

The *Mahā-bhārata* of the third to the sixth century B.C.

The *Lalita-Vistara*, which describes the education of Buddha, at the beginning of the sixth century B.C.*

No one of those dates is certain, and the aggregation of a number of uncertain dates, however concurrent, cannot result in certainty. But it must be borne in mind that, if only one of these dates can be substantiated, the proof of the existence of alphabetical writing is complete. Even if this proof should continue wanting, such a concurrence of testimony as here shown forms a strong chain of circumstantial evidence, fully justifying a belief, and leading up to an overpowering conviction, that the art of writing must have been practised among the Hindus five or six centuries B.C.

There remains the testimony of the Greek writers. Near-chus (B.C. 325) states that the Brāhman laws were not written, which is quite in agreement with the Hindu practice of preserving their knowledge mentally. But Strabo quotes his statement that the Hindus wrote letters on cotton cloth, and this is in accord with the statement of Vishnu, that title-deeds were written on cotton fabric. Megasthenes says that the Hindus did not "know letters or use seals"; he also says

that they erected milestones to denote distances and bye-roads. This is somewhat contradictory, but the explanation is probably that suggested by Max Müller, that letters were known but were not used as a vehicle of literature.¹ At any rate, the statement of Nearchus, as quoted by Strabo, shows that the art of writing was known in India in the fourth century B.C.

We pass now from the region of uncertainty and conjecture to one in which there is a clear, definite stand-point. This is found in the Rock Inscriptions of King Piyadasi or Asoka, which were set up about the year B.C. 250.² From within a few years of this point we can work with perfect certainty. These Inscriptions show that two alphabets were then known: the Arian-Pāli used in the regions about the Indus, and the Indian-Pāli from the Himālayas to Gujarāt on the west, with Ganjam on the east and in the island of Ceylon.

Of the two alphabets used by Asoka, the Arian-Pāli first claims attention. This character is written from right to left, and, in its general appearance, more than in identity of forms, resembles the Phœnician. There can be little hesitation in assigning this to a Phœnician or Aramaic origin, although it has developed peculiarities unknown to its prototype. It is rich in compound consonants, and it has a very perfect system of initial and adjoined medial vowels, but it is deficient in making no distinction between long and short vowels. This development of the alphabet proves that, although the idea of an alphabet and the shapes of some of the letters were derived from a foreign source, the general idea was worked out in a more complete manner with an intelligent comprehension of the requirements of the language to which it was to be adapted. Is it not probable that there was some other Hindu alphabet previously in use to which this was assimilated? The abundance of compound

¹ *Anc. Sans. Lit.* 515.

² Dr. Burnell notices in these inscriptions some varieties in the forms of words, and also some irregularities, which he deems to be evidence that writing was a recent practice. It must be borne in mind that the language was then in a transition state, and that dialectal varieties were probably numerous. This would account for occasional diversities, and faults of orthography are surely no proofs of the new invention of writing.

consonants in the Arian-Pāli shows that it must have been used for the expression of the Sanskrit itself, or for a descendant of that language which had undergone little disintegration, and was not very far removed from the classic tongue. The inevitable conclusion is that the language used in the lands about the Indus where this character was employed had suffered comparatively little change from the Sanskrit.

There can be no hesitation in believing that the Arian-Pāli alphabet came into India from the west. It was used on the bilingual coins of the Greek kings of Bactria, and never spread far to the east. Many Bactrian coins bear a Greek superscription on one side, and a Pāli translation thereof on the other. Coins of two kings have been found on which the Pāli legend is in the Indian-Pāli characters, but the great majority have their legends in Arian-Pāli. This seems to show that both varieties of Pāli writing were known in Bactria in the third and second centuries B.C., but that the Arian was the more common and prevailed. Certain it is that this character was so well known and firmly established, that the Greek kings commonly used it on their coins. This character does not seem to have spread far in India. Inscriptions prove that it was used in the Panjāb and in Bhāwalpur, and the coins of some of the early Sāh kings of Gujarāt, just before the beginning of the Christian era, show that it obtained a limited use under those rulers. Their names and titles are expressed in Indian-Pāli, their names only are repeated in Arian. The most westerly point at which the character has been found is the Kāngra hills. Sir E. C. Bayley discovered there a stone bearing a bi-literal inscription of two or three words in both the Arian- and Indian-Pāli. The result appears to be that the Arian-Pāli was confined to the north-west of India;¹ that it there had to struggle with the Indian-Pāli, which was known even on the other side of the Indus, and that the latter eventually supplanted it. Various interpretations have been given to the words *Yavanāni lipi*, used by Pānini.

¹ Five of the Arian-Pāli letters have been found separately on sculptures at Bharhut, 120 miles south of Allahābād; but these are mere mason's marks, and Gen. Cunningham is no doubt right in taking them to be proofs that the masons came from the north-west.—*Sthupa of Bharhut*.

Yavana in its primary sense means 'Greek,' but the term was commonly used to denote anything foreign. Pāṇini's words seem to be used for some specific kind of writing, and would appropriately designate the Arian-Pāli, to which character we may believe he applied them.

The Indian-Pāli is in every way the more important character. It spread over a much larger expanse of territory, and from it all the subsequent forms of Pāli and Nāgari have descended. The inscriptions of Asoka show that the character was used at Khālsī on the upper course of the Jamna, at Gīrnār in Gujarāt on the extreme west of the peninsula, and at Dhāuli and Ganjam on the extreme east. A fragment of an inscription brought from Mehentele in Ceylon (J.R.A.S. Vol. XIII. p. 176), which seems to have been strangely overlooked by writers on this subject, proves it to have been used by Piyadasi or Asoka in that island. It may be objected that there is no proof that this character was known and understood over this vast extent of country, and it must be conceded that there is no complete proof. There remains the fact that these important edicts were set up and published by a great and wise king for the edification and instruction of his subjects: can it be supposed that all this trouble was taken if they were in general illegible and not understood by the people?

The origin of this Indian-Pāli alphabet is the great point of interest. It may be admitted, at once, that there was no obstacle to its importation. The knowledge of it may have come in across the Indus, or it may have found an entrance through the ports of the peninsula, between which and the western world commerce was carried on from very early times. But the supposition of its having come in across the Indus may be dismissed. The Arian-Pāli imported by that road maintained its standing for some centuries, but eventually fell into disfavour, and disappeared before its rival. It is not at all probable that both came from the same source, and that one passed over the other. The western ports remain, and the character may have come in through them, or the talk of the mariners and traders may have given

the Indians an idea of a written character, and have set them at work to invent one. The Indian-Pāli probably had its origin near the central course of the Ganges, from whence it worked upwards and overwhelmed its rival.

The first duty of those who attribute a foreign origin to the Indian alphabet is to show whence it came, and to prove its relationship, either by the near resemblance of particular letters, or by the general style and peculiarities of the whole. Dr. Burnell offers no such proofs, but he gives what he calls "numerous indications pointing to a Semitic original." Let us examine these indications. The first is, that "a number of letters point to an Aramaic source," but no attempt is made to show the similarities, and it is left a mere expression of opinion. The next is, "that the most important proof of the Semitic origin is the imperfect system of marking the vowels. They have, like the Semitic alphabets, initial characters for them, but, in the middle of words, these letters are marked by mere additions to the preceding consonants." Different minds take different views. To my mind, no two things of a similar nature can well be more distinct than the Semitic and the Indian vowel systems; on a comparison of the two, the latter seems perfection itself. The *alif* and the *ain* of the Semitic tongues, which are used when words begin with vowels, are no vowels at all, they are mere signs of breathings to which tone is given by the accompanying vowel-points, so that they carry, in turn, the sound of every vowel in the alphabet. The Indian initial vowels are, on the contrary, clear, distinct letters, with, invariably, the same sounds. The Semitic vowel-points are detached, and are frequently omitted altogether; the Indian medial vowels are attached to their consonants upon a systematic principle, and are invariably expressed when required. So much for the supposed similarities of the Semitic and Indian vowel systems. Dr. Burnell considers that "a cursory inspection of the alphabet used in the Asoka inscriptions will satisfy any one accustomed to such inquiries that the character from which it is derived did not comprise a sufficient number of letters, and that new signs were made by altering some of the old ones. This is in

itself a sufficient proof that the Indian alphabet was an adapted, and not an indigenous invention." This proof is not obvious; and, as will be presently shown, a more natural and simple explanation can be found. These are all "the numerous indications that" (according to Dr. Burnell) "point to a Semitic source of the Indian alphabets, and which are generally received as sufficient." But continues Dr. Burnell, "The immediate original is as yet uncertain. Three probable sources may be suggested. The first is, that the original alphabet came from Phœnicia, and was introduced by the early Phœnician traders. The second is, that the original of these alphabets is to be sought in the modified Phœnician alphabet used by the early Himyarites of Arabia, and this has been lately put forward as an ascertained and certain fact. As a third possibility, I would suggest that the Indian alphabets may be derived from an Aramaic character used in Persia, or rather in Babylonia:" but no such alphabet has, at present, been discovered.¹

Now what do these suggestions amount to but a begging of the main point of contention? Without anything to be called evidence, but upon the strength of two or three "indications" of the most inconclusive nature, the Semitic origin of the alphabet is assumed, and the anxious inquirer is referred, not to the alphabet which it resembles or from which it was evidently borrowed, but to "three probable sources," which, if diligently searched, may possibly afford that evidence which ought to have been discovered and displayed before any judgment was expressed. There is then an absence, not only of proof of the Semitic origin of the Indian alphabet, but also of all such evidence as would justify a strong presumption in its favour, save only the saying, "Post hoc propter hoc."

If, then, the attempt to trace the Indian alphabet to a Semitic source has failed, whence did the character arise, and how was it formed? This is a question difficult to answer;

¹ Note by Dr. B.:—"By F. Lenormant (*Essai sur la propagation de l'alphabet Phénicien*, vol. i. pt. 1, table 6). The author makes the 'alphabet primitif du Yemen' the source of both the Himyaritic and Māgadhi (!!) alphabets." Dr. B. does not seem to place much faith on this work.

the discovery of a sound theory is always more difficult than the refutation of a faulty one. I believe the Indian alphabet was a Hindu invention, and now proceed to offer reasons for this opinion.

Why should it be thought a thing incredible that the Hindus should have invented for themselves an alphabet? They were the greatest masters of the details of language that the world has ever known, and, as before urged, the perfection to which they carried their niceties of grammar and distinctions of vocal sounds made an alphabet a necessity to them. Further, they showed their powers in the invention of characters, by the formation of a system of numerical notation which, so far as is known, has no parallel.

There is no certainty that we possess the original Indian alphabet; rather, there are reasons for believing the contrary. The Arian-Pāli alphabet may have been sufficient for the expression of the Sanskrit consonants, but as it apparently made no distinction between long and short vowels, and as it had no signs for the vowels *ri* and *lri*, it was clearly insufficient for the purposes of Sanskrit grammarians. As before observed, it seems to be an alphabet appropriate to a language slightly removed from the Sanskrit. The Indian-Pāli is one suited to a language farther advanced in the process of disintegration. Its vowels are more perfect than those of the Arian-Pāli, but it also is deficient in the vowels *ri* and *lri*. The edicts of Girnār, Dhauli, and Ganjam, have only one of the three sibilants, the dental *s*; but the Khālsi version has one other. The inference to be drawn from this peculiarity is not obvious. Thus it seems clear that neither of these alphabets was sufficient for the old Sanskrit grammarians, and that if they used a written character at all, it must have been one fuller and more perfectly adapted to the niceties of Sanskrit grammar. A seal of black stone found by Major Clark at Harapā, in the Panjāb, bears a legend of six unknown letters, which may possibly belong to an older form of the Indian alphabet.¹ The letters are not very

¹ Cunningham, *Corpus Inscriptionum*, p. 61.

suggestive of such an origin; one of them resembles the *l* of the Indian-Pāli, the others present no distinct points of similarity.

Two writers of authority, Gen. Cunningham and Mr. Thomas, have expressed decided opinions as to the independent invention of alphabetical writing in India. Agreeing in their conclusions, I am unable to accept the arguments by which they arrive at them. Gen. Cunningham maintains that the original letters were simply pictorial representations of different members of the human body, and that the shape of each member was adopted for the literal representation of the sound with which its name began. He shows great ingenuity in working out this theory, and at least makes it plausible, but my imagination is not sufficiently lively to follow him and accept his conclusions as demonstrations and matters of fact.

The basis of Mr. Thomas's theory is the presence of the so-called cerebral letters in the Indian alphabets. These peculiar letters will presently be brought under notice. On the strength of these letters Mr. Thomas assumes a Dravidian origin for the Indian-Pāli alphabet, and proceeds to support the theory by "an avowedly speculative suggestion."¹ He invents a "Normal Dravidian Alphabet," "not from any given Tamil alphabet,"² but upon mere theory, and supplies this Normal alphabet with the sonant letters *g, j, d, b*, which do not exist in any known Dravidian alphabet. The Dravidians, no doubt, had the sounds of these letters, but they have represented them by the clumsy contrivance of doubling the surd letter, thus, double *k* is *g*, and double *p* is *b*. This looks very like an afterthought, but it is quite in accordance with the general character of the Dravidian alphabet, which is miserably defective. The earliest known Dravidian alphabet is not anterior to the ninth century A.D., and, according to the high authority of Bp. Caldwell and Dr. Burnell,³ there is no Dravidian literature of an earlier date. There is no evidence

¹ J.R.A.S. Vol. V. p. 422.

² The Gupta Dynasty, p. 31.

³ Dravidian Com. Gram. (first ed.), p. 83; South Indian Palæog. p. 47.

whatever to show that the Dravidians understood the art of writing more than three centuries B.C., nor can it be supposed that they were then masters of an alphabet more perfect than their descendants have ever known. This "speculative suggestion" supplies excellent material for theorizing, but it cannot be accepted as evidence, or even as suggestive of probability. The Dravidian theory involves the assumption that the Dravidian civilization preceded the Aryan, and that the Aryans had no written character until they copied that of the Dravidians. We have seen at what an early period the old Sanskrit grammarians must have used an alphabet, and it is quite incredible that they should have been so far brought under and dominated by Dravidian influences as to have borrowed their written characters from that source. Such a derivation would be a complete reversal of the natural order of things, and would make the more highly gifted and cultivated race the debtors of one far behind them.

Though the invention of the Indian alphabet is not ascribable to the Hindī or Dravidian people, it seems clear that the cerebral letters are the special production of India. Burnouf, Norris, Caldwell, and others, long ago expressed decided opinions that the Sanskrit owes its cerebral letters to the influence of the races which occupied India before the ingress of the Aryan immigrants. No other Aryan alphabet possesses the two classes of *ts* and *ds*, but they are common to all the languages of India. That the cerebrals and not the dentals are the peculiar letters is proved by the fact that the *ts* and *ds* of words which are identical in Sanskrit and Zend are represented by the dental letters in the former. But though the cerebral letters are unknown in other Aryan languages, the sounds are certainly present in some of them. Natives of India, when they transcribe English words and names containing the letters *t* or *d*, invariably represent these letters by their own cerebrals.¹ The Aryans must have brought with them the rudiments of the cerebral sounds in some of the combinations of the letters *t* and *d* with the

¹ I have seen it stated that in the opinion of natives of India the dental letters are the shibboleths of Englishmen, the cerebrals of Persians.

letter *r*, and after their arrival in India these sounds became more distinct, partly perhaps through the influence of climate, but more no doubt through association with a people of harsher speech than their own. Their speech and pronunciation were modified by time and surrounding associations, like as in the course of three centuries the Norman-French in England fell to the condition of the French of Stratford-atte-Bowe.

The art of representing thought by lineal signs can be traced from the hieroglyphics through the partly ideographic partly syllabic cuneiform to the alphabetical. Strictly speaking there are no "ideographs" in Cuneiform. Every character has a phonetic value, which value is however in most cases the name of the object, represented by the original sign. There are also a few determinatives and perhaps non-phonetic adjuncts, but these can hardly be called ideographs. The process was slow and laborious, from exuberance to simplicity. Of the actual invention of letters we know little or nothing; and, if we could penetrate the mystery of their development, we should probably find something very different from what on *primâ facie* considerations we might deem likely. In the present state of our knowledge, the natural course for the inventor of an alphabet would seem to be, first to settle the forms of the primitive letters, and then to slightly modify those forms for the representation of kindred sounds, such as aspirates, —having settled the form of *k*, to make some little change in that letter to represent *kh*. The resemblance of the letters *b*, *p*, *d*, *m* and *n*, *u*, *v*, and *w*, in the European alphabets, affords strong evidence of this mode of formation. So thought Prinsep; but Thomas and Burnell are of opinion that the development of an aspirated letter from the unaspirated marks a later introduction, and the latter goes so far as to hold it a sign of foreign origin. From this opinion I entirely dissent; but while inclining to Prinsep's view, I place no reliance upon it, and believe that no valid argument can be founded on these speculations. Philology has shown that the course of language has been from the complex to the simple. The earlier

forms of languages were encumbered with an apparatus of grammatical inflexions which were thrown off in progress of time; such also was probably the course of alphabetical writing,—a superfluity of signs to begin with, but reduced and simplified by actual use.

The art of writing was known long before there is any sign of an alphabet in India, but the fame thereof must have spread abroad wherever traders and travellers penetrated, and India could hardly have remained long in total ignorance of so useful an art. The idea probably reached her from without; the practical application of the idea was her own. The alphabet cannot have been invented before the Aryans had dwelt for some considerable period in the land of their adoption, and had been influenced by the language of the people whom they subjugated. Then the Aryan, with his acute ear for minute varieties and changes of vocal sounds, realized the distinction between the cerebral and dental sounds, and represented them by distinct letters. The cerebral letters are peculiar to India, therefore they must be an Indian production; and if an Indian production, then their origin is attributable to the enlightened Aryans, not to the Dravidian or Hindī races, who have nothing to show of letters or literature till long after the era of Asoka's edicts.

The next particular in which the Indian alphabet shows itself distinct from foreign alphabets is in its perfect series of aspirate consonants. Greek had its *theta*, *khi*, and *phi*, we have our *th*, and other alphabets have sounds which are represented by the combination of consonants and the letter *h*, but these are not aspirated consonants, they are modified sounds.

No other people have observed and noted the modulations which the *nāsals* undergo when connected with the various consonants. The Indian has invented a special nasal for each class of consonants, and besides these, the *anuswāra* and *anunāsika* for use with vowels and semivowels.

The Indian alphabet has its three sibilants, the third *s* representing a sound intermediate between our *s* and *śh*.

Besides these, there is the lingual sibilant called *Jihvamūliya*. Other languages, as the Hebrew and Arabic, have their two sibilants, but the difference is not the same. But no great stress need be laid on this distinction.

The Aryan alphabet has its peculiar vowels, *ri* and *lri*, vowels which are so distinct from every other series of vowels, that with all the explanations afforded by the grammars, they are difficult to thoroughly understand and appreciate.

Lastly, the Indian alphabets are written from left to right, not from right to left.¹ The Arian-Pāli, which ran from right to left, fell into total disuse. No great reliance can be placed on the direction of the writing. The old Greek was written both ways, and scribes occasionally followed the Boustrophedon fashion, and, having completed a line from left to right, turned back plough-wise, and wrote the next from right to left. But for all this, there remains the remarkable fact, that, while the Semitic peoples have kept on writing from right to left, the Aryan nations pursue the opposite course. Of Semitic writing, the Himyaritic has shown similar vagaries to the Greek; and Modern Persian and Urdu are exceptions on the Aryan side, but for the peculiarities of these latter there are obvious and sufficient reasons.

Such are the leading peculiarities of the Indian alphabet which demonstrate its independence of all foreign origin. If it is still objected, as it may be, that these peculiarities have been engrafted on a foreign stock, there is no possibility of proving the negative; but, it may be confidently urged, that all probabilities and inferences are in favour of an independent invention. Moreover, if the Hindus had borrowed a

¹ Dr. Burnell, remarking that the compound *vy* of the Asoka alphabet is written *gv*, considers this to be a remnant of the Semitic fashion, and an indication that the writing formerly ran the other way. But this is a mere fashion of writing which the form of the letter *y* rendered convenient. No ambiguity is possible, because *gv* is an impossible combination. He says further: "Again, the vowel *e* precedes the consonant, which in reading it must follow." This is hardly a precise statement, for the vowel *e* is simply projected from the left side of the top of the consonant in the same manner as the vowel *ā* projects from the right side. But if there is any force in this criticism, what inference must be drawn about the modern Devanāgarī and the Bengali, in which the short vowel *i* is written separately before its consonant?

ready-made alphabet, they might have been cramped, as we Englishmen have been cramped, by one insufficient for the requirements of the language; and the Indian alphabet, the most perfect system of alphabetical notation in existence, might never have been matured.

NOTE.

Since this paper was read to the Meeting of the Royal Asiatic Society, on December 20, Mr. Thomas has put himself into communication with Professor Dowson, with reference to certain misapprehensions on the part of the latter, as to the primary aim and arguments adduced by Mr. Thomas in his original theory of the derivation of Indian Alphabets.

Mr. Dowson, who is very unwell, is unable either to reply to Mr. Thomas's objections, at the present moment, or to follow the course the general investigation has taken, since first broached before the Asiatic Society of Bengal, on February 6, 1867, when Mr. Thomas's letter, on this subject, was read.—[ED. JOURN. ROY. ASIAT. SOC.]