combination *ar* and *al* respectively, and, by a repetition of the same process, to the (vriddhi) sounds â*i, âu, âr,* and *âl* respectively. Thus from root *vid,* “ to know,” we have *véda,* “ knowledge, ’ and therefrom *vâidika;* from *yug, yóga, yâúgika.* While the inter- change of the former kind, due mainly to accentual causes, was un­doubtedly a common feature of Indo-Germanic speech, the latter, or vriddhi-change, which chiefly occurs in secondary stems, is pro­bably a later development. Moreover, there can be no doubt that the vriddhi-vowels are really due to what the term implies, viz., to a process of “ increment,” or vowel-raising. The same was univer­sally assumed by comparative philologists till a few years ago, as regards the relation between the guna-sounds *di (8)* and *ău (6)* and the respective simple *i-* and «-sounds. According to a recent theory, however, which has already received a considerable amount of acceptance, we are henceforth to look upon the heavier vowels as the original, and upon the lighter vowels as the later sounds, produced through the absence of stress and pitch. The grounds on which this theory is recommended are those of logical consist­ency. In the analogous cases of interchange between *r* and *ar,* as well as *l* and *al,* most scholars have indeed been wont to regard the syllabic *r* and *l* as weakened from original *ar* and *al,* while the native grammarians represent the latter as produced from the former by increment. Similarly the verb *as (ĕs),* “to be,” loses its vowel wherever the radical syllable is unaccented: *c.g., dsti,* Lat. *est—smás, s(u)mus*; opt. *syâm,* Lat. *siēm (sīm).* For other analo­gous cases of vowel-change, see Philology, vol. xviii. p. 783 *sq.* On the strength of these analogous cases of vowel-modification we are, therefore, to accept some such equation as this :—

*ásmi: smás = δϵρκομαι : ϵδρ(α)κον = λϵίπω : λιπϵιν*

*=emi (ϵιμϵν): imás (ιμϵν for ίμϵν) =ϕϵύγω : ϕυγϵιν*

*= dóhmi* (I milk) : *duhmás.*

Acquiescence in this equation would seem to involve at least one important admission, viz., that original root-syllables contained no simple *i-* and *u* -vowels, except as the second element of the diphthongs *ai, ei, oi; au, eu, ou.* We ought no longer to speak of the roots *vid,* “to know,” *dik,* “to show, to bid,” *dhugh,* “to milk,” *yug,* “to join,” but of *vcid, dcik, dhaugh* or *dhcugh, yeug,* &c. Nay, as the same law would apply with equal force to suffixal vowels, the suffix *nu* would have to be called *nau* or *neu* ; and, in explaining, for instance, the irregularly formed *δϵίκνυμι, δϵίκνυμϵν,* we might say that, by the. affixion of vev to the root δϵικ, the present-stem δικνϵύ was obtained (δικνϵυμι), which, as the stress was shifted forward, became 1 plur. δικνυμϵσ(ι),—the subsequent modifications in the radical and formative syllables being due to the effects of “analogy” *(cf.* G. Meyer, *Griech. Gramm,.,* § 487). Now, if there be any truth in the “agglutination” theory, accord- ing to which the radical and formative elements of Indo-Germanic speech were at one time independent words, we would have to be prepared for a pretty liberal allowance, to the parent language, of diphthongal monosyllables such as *dcik ned,* while simple com­binations such as *dik nu* could only spring up after separate syllable-words had become united by the force of a common accent. But, whether the agglutinationists be right or wrong, a thcory in­volving the priority of the diphthongal over the simple sounds can hardly be said to be one of great *prima facie* probability ; and one may well ask whether the requirements of logical consistency might not be satisfied in some other, less improbable, way.

Now, the analogous cases which have called forth this theory turn upon the loss of a radical or suffixal *a* (ĕ), occasioned by the shifting of the word-accent to some other syllable : *e.g.,* acc. *mâtáram,* instr. *mâtra ; πϵτομαι,* ϵπτόμην; *δϵρκομαι*, *ϵδρ(α)κον*; *ásmi, smás.* Might we not then assume that at an early stage of noun and verb inflexion, through the giving way, under certain conditions, of the stem *a (ĕ),* the habit of stem-gradation, as an element of inflexion, came to establish itself and ultimately to extend its sphere over stems with *i-* and *u* -vowels, but that, on meeting here with more resistance @@1 than in the *a* (ĕ)-vowel, the stem-gradation then took the shape of a raising of the simple vowel, in the “strong” cases and verb-forms, by that same *a-* element which constituted the distinctive element of those cases in the other variable stems ? In this way the above equation would still hold good, and the corresponding vowel-grades, though of somewhat different genesis, would yet be strictly analogous.

The accent of Sanskrit words is marked only in the more import­ant Vedic texts, different systems of notation being used in different works. Our knowledge of the later accentuation of words is entirely derived from the statements of grammarians. As in Greek, there are three accents, the *udâtta* (“ raised,” *i.e.,* acute), the *anudâtta* (“not raised,” *i.e.,* grave), and the *svarita* (“sounded, modulated,” *i.e.,* circumflex). The last is a combination of the two others,

its proper use being confined almost entirely to a vowel preceded by a semivowel *y* or *v,* representing an original acuted vowel. Hindu scholars, however, also include in this term the accent of a grave syllable preceded by an acuted syllable, and itself followed by a grave.

The Sanskrit and Greek accentuations present numerous coin­cidences. Although the Greek rule, confining the accent within the last three syllables, has frequently obliterated the original likeness, the old features may often be traced through the later forms. Thus, though augmented verb-forms in Greek cannot always have the accent on the augment as in Sanskrit, they have it invariably as little removed from it as the accentual restrictions will allow: *e.g., ábharam, ϵϕϵρον; ábharâma, ϵϕϵρομϵν; ábharâ- mahi, ϵϕϵρόμϵθα.*

The most striking coincidence in noun declension is the accentual distinction made by both languages between the “ strong ” and “weak” cases of monosyllabic nouns,—the only difference in this respect being that in Sanskrit the accusative plural, as a rule, has the accent on the case-ending, and consequently shows the weak form of the stem: *e.g.,* stem *pad, ποδ*; *padam,* *πόδα*; *padás, ποδός*; *padi, ποδí; pâdas, πόδϵς; padás,* πόδας; *padam, ποδών; patsú, ποσí.* In Sanskrit a few other classes of stems (especially present participles in *ant, at),* accented on the last syllable, are apt to yield their accent to heavy vowel (not consonantal) termina­tions; compare the analogous accentuation of Sanskrit and Greek stems in *tár : pitáram, πατϵρα; pitré, πατρός ; pitáras, πατϵρϵς; pitrshu, πατρ(ά)σι. ·*

The vocative, when heading a sentence (or verse-division), has invariably the accent on the first syllable ; otherwise it is not accented.

Finite verb-forms also, as a rule, lose their accent, except when standing at the beginning of a sentence or verse-division (a vocative not being taken into account), or in dependent (mostly relative) clauses, or in conjunction with certain particles. Of two or more co-ordinate verb-forms, however, only the first is unaccented.

In writing Sanskrit the natives, in different parts of India, generally employ the particular character used for writing their own vernacular. The character, however, most widely understood and employed by Hindu scholars, and used invariably in European editions of Sanskrit works (unless printed in Roman letters) is the so-called *Devandgarl,* or *ndgari* (“town’’-script) of the gods.

The origin of the Indian alphabets is still enveloped in doubt. The oldest hitherto known specimens of Indian writing are five rock-inscriptions, containing religious edicts in Pali (the Prakrit used in the Buddhist scriptures), issued by the emperor Aśoka (Piyadasi) of the Maurya dynasty, in 253-251 B.C., and scattered over the area of northern India from the vicinity of Peshawar, on the north-west frontier, and Girnar in Guzerat, to Jaugada and Dhauli in Katak, on the eastern coast. The most western of these inscriptions—called, from villages near it, the Kapurdagarhi or Shâhbâz-garhi inscription—is executed in a different alphabet from the others. It reads from right to left, and is usually called the Arian Pali alphabet, it being also used on the coins of the Greek and Indo-Scythian princes of Ariana; while the other, which reads from left to right, is called the Indian Pali alphabet. The former, which is manifestly derived from a Semitic (probably Aramaean) source, has left no traces on the subsequent development of Indian writing. The Indo-Pali alphabet, on the other hand, from which the modern Indian alphabets are derived, is of uncertain origin. The similarity, however, which several of its letters present to those of the old Phoenician alphabet (itself probably derived from the Egyptian hieroglyphics) suggests for this alphabet also—or at least for the germ of it—the probability of a Semitic origin, though, already at Aśoka’s time, the Indians had worked it up to a high degree of perfection and wonderfully adapted it to their peculiar scientific.ends. As to the probable time and channel of its introduction, no satisfactory theory has yet been proposed. Considering, however, the high state of perfection it exhibits in the Maurya and Andhra inscriptions, as well as the wide area over which these are scattered, it can hardly be doubted that the art of writing must have been known to and practised by the Indians for various purposes long before the time of Aśoka. The fact that no reference to it is found in the contemporary literature has probably to be accounted for by a strong reluctance on the part of the Brahmans to commit their sacred works to writing. A useful resume of the various theories proposed on this subject will be found in a paper contributed by Mr R. Cust to the *Journal of the Royal Asiatic Society,* new series, vol. xvi.

The invention of the numeral figures, which used to be generally ascribed to the Indians, has also been rendered doubtful by more recent research.

An excellent Sanskrit grammar, dealing with the language historically, lias been published by Prof. W. D. Whitney. Of other English grammars, dealing almost exclusively with the classical Sanskrit, those of Profs. Max Müller, Monier williams, and F. Kielhorn are now most widely used.

The best dictionary Is the great Sanskrit-German *Worterbuch,* published at St Petersburg, in 7 vols., by Profs. Böhtlingk and Roth. Largely based on this great thesaurus are the Sanskrit-English dictionaries by Prof. M. williams and the late Prof. Th. Benfey.

@@@1 We might compare the different treatment in Sanskrit of *an* and *in* bases *(mûrdháni-mûrdhna; vâdini-vâdinâ);* for, though the latter are doubtless of later origin, their inflexion might have been influenced by that of the former. Also a comparison of such forms as *(devá) devanám, (agní) agninam,* and *(dhenú) dhenúnam,* tells in favour of the *i*- and *u*-vowels, as regards power of resistance, inasmuch as it does not require the accent in order to remain intact.