

Language, the Cyclicity Theory and the Sanskrit Dhātus.

N. Kazanas (revised in 2014)

Argument. Sanskrit alone has dhātus or roots in an absolute sense. This fact and the accompanying complex morphology of Sanskrit show that language (human speech in general) started as a highly synthetic phenomenon. With the passage of millennia it gradually devolved into a simpler morphology and many descendants. Within this larger movement of decay several tongues moved from a rather fixed syntactic isolating status back to a fusional condition with new complex morphology (e.g. Coptic from Old Egyptian, Modern from Old Hungarian, etc.). These are smaller segments of cycles within the larger descending spiral. An examination of several nominal and verbal endings in Sanskrit and Proto-Indo-European shows that these endings do not come from original pronouns, pre- or post-positions and similar morphemes.

How did language begin? How and why does it change?

1. It is generally thought that languages tend roughly to follow a circular course moving from isolating to agglutinative to fusional typology then back to an isolating status and so on (Dixon 1997: 42; Hodge 1970 *passim*). Let us define these terms for types of language. Classical Chinese is an **isolating** language, where every meaningful lexeme is a distinct word; English has over the centuries moved toward this position. **Agglutinative** tongues have words which are compounds containing several meaningful elements that can be separated, such as Turkish and Hungarian. However, Hungarian is for some time now moving towards a **fusional** state, where a word contains a stem and other elements marking noun cases, number and gender and in verbs person, number, mood, tense, activity, passivity and so on: typical fusional tongues are the classical ones like Latin and Sanskrit and Modern Lithuanian and Russian.

This view of the cyclical movement certainly appears to be true in many cases but it does not take into account some important factors which will be examined in the ensuing discussion. The most important evidence against this theory is found in the Sanskrit dhātus and the language's complex morphology.

In this paper various reconstructed Proto-languages will not be examined at all. Studies of Romance languages attempting through the comparative method to arrive back at the original Proto-Romance i.e. Latin, achieved only very partial success – and we must note that the linguist who made this effort knew Latin (Hall 1950, 1970, 1985). A similar attempt comparing modern Indian languages to arrive at their original Proto-language, i.e. Sanskrit, again yields only a partial success – and again the scholar knew Sanskrit (Southworth 1958).

E. Pulgram pointed out caustically (1958: 147) that, without documentation, our picture of classical Latin would have been quite different, since Romance languages today have for 'horse' derivatives from the late vulgar Latin *caballus* (French *cheval*, Italian *cavallo* etc) whereas Cicero, Virgil and Tacitus used *equus* (the common IE stem found in S *aśva* etc). Take another example. Modern Greek has verbal stems *adrachn-* 'grasp', *deichn-* 'show',

diōchn- ‘chase away’, *richn-* ‘throw’, *sprōchn-* ‘push’, *phtiachn-* ‘make’. Now, at first sight one would think that these stems had the same more or less final conjunct in Ancient Greek, also. However, documentation shows that the original stems differ almost incredibly: number one is *adratt-*, two is *deikn-*, three is *diōk-*, four is *rhipt-*, five is *eis-pro-ōth-* and six is *eutheiaz-*! We know only because we have rich documentation – from Homeric through Hellenistic and Byzantine Greek up to our own times. A different aspect is seen in cognates English *devil*, French *diable* etc; here again, only documentation reveals that all these are loans from Gk *diabolos* ‘twister, ill-speaker’. Finally, Hungarian *haz(a)* ‘house’ indeed looks very much like the various Germanic cognations for ‘house’ but documentation shows that they are not related because the older Hungarian word is *kaz-*.

The examples given illustrate clearly the dangers involved in reconstructing Proto-languages and since there is no means whatever of verifying the reconstructions, these remain unreliable. Consequently all efforts dealing with Proto-this and Proto-that (with asterisks ***) seem to us wasteful and worthless. We shall consider hereafter evidence from only actual historical, well-attested languages and refer to Proto-Indo-Europeans only for some specific cases borne out by Sanskrit.

It is as well to remember that language is not an organic entity like a plant or an animal that grows and degenerates due to biological processes; nor a material artefact like a spoon, a pianoforte or an aeroplane that will change and decay after a period even if it is not used. A language changes only because of human action which is always purposeful, but sometimes irrational, often mechanical, erratic or accidental and unpredictable. The only certain principle governing human action is the desire for greatest gain, or the best result, with the least effort.

Linguistic changes are known only after the event and, of course, only if there is ample and detailed documentation. The so-called “laws” of linguistic changes are abstracted from such well-documented periods, areas and phenomena and apply only to those specific periods, areas and phenomena. As M. Alinei puts it: “The rules are determined *a posteriori*, they take into consideration only changes that have taken place, and do not represent a ‘law’ existing prior to change itself, independent of it and therefore foreseeable” (2005: 22). Talk of “universal” or “constant” laws of change is sheer nonsense. The only universal or constant aspect of linguistic change is that for that period, area and phenomenon the result was the easiest, simplest and most convenient in the circumstances.

Thus the tendency of innovations or changes is towards simplicity or ease rather than complexity and difficulty. Let me give some examples. First Latin > Italian *factus* > *fatto*, *septem* > *sette*, *somnus* > *sonno*; etc. etc. Or a similar process in Sanskrit > Pali: *mukta* > *mutto*, *abja* > *ajjo*, *śabda* > *saddo*; etc. etc. Then take American spelling: *thru* < *through*, *valor* < *valour*; etc. etc. Finally an example from Greek: the perfect was generally formed with reduplication of the initial of the stem and the ending *-ka*: thus *lúō* ‘loosen’ gave *lé-lu-ka* ‘I have loosened’. This is very simple. But we also have *thúō* ‘sacrifice’ giving *té-thu-ka* and *phú-ō* > *pé-phu-ka* and even *aitō* > *ēi-tē-ka*, or *elaúnō* ‘move forth’ > *el-ēla-ka* or *ómnumi* ‘swear’ *om-ōmo-ka*. On the whole, this is hardly a simple and convenient situation: it taxes the memory. So when the periphrastic perfect was developed in classical times with the auxiliary *échō* and the form *lúsēi* (or *thúsēi*, *elasēi* etc), the reduplicated forms fell into

desuetude and for centuries now Mod Gk has only the periphrastic perfect – in the passive as well (*échéō luthē* ‘I have loosened myself’). The same is observable in Mod English, Italian, etc.

Different declensions and conjugations with different stems (and often endings) tax the memory. It is more convenient to have streamlined declensions and only a few auxiliaries for conjugations (‘to be’ and ‘to have’): the result is a much easier situation all round.

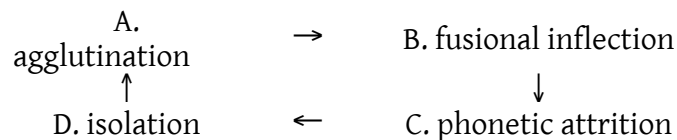
Unfortunately, linguists produce their theories and reconstructions without taking into account this simple principle.

2. R. Dixon refers (1997: 42 n 11) to S. Delancey (1985) who offers a useful discussion and evidence for this cyclical phenomenon. But before going on with this, we should define more clearly the phenomenon.

The movement is said to be from a fully syntactic condition with the barest morphology to agglutination and some morphological developments through synthesis of stems and various kinds of postpositions for nouns and for verbs; then to more complex morphology such as found in Latin, Old English etc; then to attrition of endings (mostly) and dissolution of the complex inflected forms back into an increasingly syntactic position using auxiliaries like Italian and Mdn English. Using S/s for syntax, C for Complex and M/m for morphology the movement can be represented as

$$S/m \rightarrow M/s \rightarrow CM/s \rightarrow S/m$$

We could remove the CM/s stage or introduce additional grades but the stages given explain adequately the cyclic process (a modification of Hodge 1970). J. O. Askedal refers to other authorities and describes this “cyclical evolution” as follows (2001: 1635):



Various other models and more refined versions (pp 1635-6) do not differ substantially from the basic pattern. He himself examines various concepts of typological change and concludes that “theories of typological cyclicity ... are in general conjectural due to the fact that, as far as we can tell, no known languages or language families have been attested in all the stages required for completing a full cycle” (ibid).

Theoretically one could start at any main stage of the pattern but the general notion is that languages started at the isolating or syntactic analytic stage (Campbell 1993; Hirt 1927-34; etc).

3. S. Delancey indeed examines the circular motion within languages of the Tibeto-Burman family. He takes examples from three stages of directive verbs (for motion): he says that this “directive category is regularly reinvented in the TB languages and almost as regularly lost again” (p 367). We have no reason to doubt Delancey’s claim with regard to the TB family of languages. But we do find a problem in that *the cyclic pattern is not given by*

him in any one language. He gives one stage in Newari and another in Lahu and yet others in other languages. He actually points out that any one stage may “be stable over time” as indeed happens with “syntacticized motion verb constructions” in the Tai languages (p 385). He writes that in Sema “the process of grammaticalization is complete” in that motion verbs *gwo* ‘go’ and *re* ‘come’ which appear as separate verbs in other tongues, here agglutinate into *gwo/wu* ‘go’ and *gwo-re* ‘come’ (p 372). More evidence of these stages is given in the subsequent pages but, again the examples of syntactical to morphological to syntactical stages are taken from different languages and reconstructions of proto-languages – Akha, Loloish, Nujaang etc (pp 374 ff). But, as we said, this cycle can be accepted starting, say, with motion verbs used syntactically as specifiers of deictic orientation for other verbs; then “these syntacticized morphemes begin to agglutinate into the verb complex” in the process of morphologization (p 380).

4. The Finno-Ugric family offers a much clearer and more convincing case of this cyclic pattern, or at least the segment where syntactical morphemes like noun-stems and various types of postpositions agglutinate and produce morphological flexion (or grammaticalization). We take Hungarian as the example.

Hungarian undoubtedly exhibits for some centuries now the on-going process of moving from a purely agglutinative typology to a fusional one: $S_m \rightarrow M_s$ (where S_m = predominantly syntactic; M_s = predominantly morphological). This is pre-eminently obvious in the nominal forms where various morphemes as postpositions have become fixed terminations. E.g.:

*a haz*ø ‘the house’ with zero marker for the Nom Sing.

a haz-ban ‘within the house’, Loc Sing.

a haz-ak-ban ‘in the houses’, Loc Pl.

The *a* is the definite article. In the third form the suffix *-(a)k* is that for the plural and the *a* is auxiliary (cf *gyerek(-e)* ‘child’ Nom Sing, *gyerek-ek* ‘children’ Nom Pl). The suffix *-ban* is a reduced form of an old (but still existing and productive) noun *bele* ‘interior’ + the suffix *-n* ‘in, within’ (Marcantonio 2000: 8.3.2, where several more such morphemes are given). Thus strictly speaking, we have ‘in [the] interior of the house’. One should note here that the plural marker *-ak* precedes the locative suffix *-ban*. Anyway, one finds similarly *haz-zal* ‘with/ by means of [the] house’, the Instrumental case; or *haz-nak* ‘to/ of [the] house’ which is both Dative and Genitive; and so on. Depending on how one wishes to count, one finds that the language has now 18 to 22 cases.

However, despite this increasingly complex morphology, the agglutinative character does not seem to be lost. Unlike the Classical IE languages, in Hungarian the marker for the case comes at the very end. Not only the plural marker but also the possessive one precedes the case ending. When there is a personal, possessive marker, then the plural marker is *-i* (or *-a-i*). E.g.:

a haz-a-i-m ‘my houses’

a haz-a-i-m-ban ‘in my houses’

While now the suffix *-ban* has become a definite locative marker, it is not like the terminations of Sanskrit or Latin or Lithuanian which give greater elasticity and subtlety. E.g. Sanskrit:

vāstu → *vāstuṣu* ‘house’ → ‘in houses’ (Loc Pl)
mama vāstuṣu or *vāstuṣu mama* ‘in my houses’
 (*madvāstuṣu* or *vāstuṣu me* ‘in my houses’;
madīyasu vāstuṣu or *vāstuṣu madīyasu* ‘in my houses’).

Thus while Sanskrit shows greater freedom in word-order, Hungarian morphology seems to have the same fixity as that of the English invariable sequence ‘in my houses’. Thus this fusional character is very limited.

Nouns have no gender, not even the small degree that English displays. Absence of gender is observable in all Finno-Ugric languages from their very earliest attestation (Marcantonio, *ibid*).

The verb conjugation shows, according to some authorities a movement in the opposite direction, if anything, towards simplification, although others dispute this. It is said¹ that Hungarian, by the late stage of its Old Period (before 1500 CE) had developed six tenses: Past Narrative (preterite), Past Finite and Past Complex (perfective); Present; Future Simple and Future Complex. Today there is only Past Finite and Present. So, in effect, there are only two tenses, past and non-past.

Futurity is expressed by the Present and some adverb. In literary forms, it is expressed by the conjugated auxiliary *fog* and the infinitive: thus –

fogom varni/adni ‘I shall wait/give’ etc.

Sometimes the prefix *meg-* is used to the same effect: e.g. *megírom* ‘I shall write’, where *ír-* is the verb stem and *om* the 1st person termination for the Definite construction (*-ok* marking an indefinite statement like ‘I (shall) write a book (sometime)’).

The Past Finite continues today with the marker(s) *-t/-tt* as in *vartam* ‘I waited’ and *tanítottam* ‘I taught’. The older language had also the Past Complex (a kind of Perfect or Pluperfect with the invariable auxiliary *vala*) as in –

elementem vala ... es meghalgttem

‘I had gone ... and [then] listened.’

The Past Narrative had a full conjugation in the indicative both for transitives and intransitives (again Encyclopaedia Hungarica Humana): e.g. –

trans: *várám, várád, várá, várok, várátók, várák.*

intrans: *várék, várál, várá, váránk, várátók, váránák.*

However, all this is said to be rare literary formations (including the inflected Fut) and not original Old Hungarian. Be that as it may, the verb does not show any indications of moving, like the noun, towards greater fusional complexity.

Another interesting point in Hungarian (and Finno-Ugric) is the Vowel Harmony. This is

¹ Encyclopaedia Hungarica Humana: on the Internet – <http://mek.oszk.hu/01900/01993/html/index2.html>

an aesthetic phenomenon where suffix vowel(s) must agree with stem vowel(s) – whether front or back vowels (*nyelv-em* ‘my language’ but *ház-am* ‘my house’): there is no grammatical or semantic function, as with the Germanic ablaut system, exhibited in English *sing, sang, sung* and *ring, rang, rung*. We note also that even in Modern as well as in Old Hungarian this rule is not followed in several cases. Scholars give examples from both periods: e.g. (Marcantonio 2000: 8.5):

Old: *bu-a-beleul* ‘from her sorrow’

Mdn: *bú-já-ból* ‘from her sorrow’.

I wonder whether this Vowel Harmony having no grammatical function at all and, really, serving no semantic purpose, is not a devolution from a remote state of the language which had an ablaut system similar to the one in Germanic or in Sanskrit with full semantic force.

5. C.T. Hodge makes references to Finno-Ugric including Hungarian (1970: 2) and to other languages (p 3) but focuses on his specialty, Ancient Egyptian and its later transformation into Coptic (p 3ff) and, more specifically, on the verb. He states that Late Egyptian lost much of the flecational morphology of the Old language but Coptic, evolving as it did out of Late Egyptian (with the help of Greek and Christianity), developed an equally complex system. This had eight basic tenses for the verb, four affirmative and four negative and many more satellite constructions – which are not explained. (The negative tenses are just that, and hardly count; but one future, one present and two past tenses certainly give a complex morphology.) Citing earlier authorities he says: “the Old Egyptian syntactic verb of the suffix conjugation changed into the analytic Late Egyptian verb, and finally into the Coptic synthetic verb of the prefix conjugation”. He stresses this change (p 4): “The interesting aspect is the almost total loss of the inflected forms – with suffixes – and the later appearance of inflected forms with ‘prefixes’ (or noun subjects in that position).”

This change can be seen clearly in a simple example (from Loprieno 2004: 180):

a)	OEg:	<i>sdm.hr-f</i>	Coptic:	<i>ša-f-sôtm</i>
		hear+Aor+he		Aor+he+hear

Both denote habitual action with present meaning: ‘he usually hears’.

Here we sense a difficulty in that ‘inflection’ has always been associated with suffixes and terminations in declension and conjugation, not with prefixes of pronouns and nouns in that position. In fact, the Coptic verb has not gained any inflections but shows now an agglutinative aspect with prefixes. This is as rigid as any agglutinative system (e.g. Hungarian) and an analytic syntactical sequence (e.g. English). Hodge gives the sentence (p 5) –

b)	<i>sbte pekšagye</i>	<i>tarousotmef</i>
	‘prepare your speech	and-the-result-will-be-that (<i>tar-</i>) they (<i>ou</i>) hear it (<i>ef</i>)’

The noun has masculine and feminine gender which is distinguished, not by a suffix as in OEg, but by the definite article: *p-rôme* ‘the man’ (m), *t-sône* ‘the sister’ (f). There is no dual, as there was in OEg, and the plural is given by the prefix-marker *ne/ni* which is the plural definite article – through a few nouns do have a plural suffix. Since neither OEg nor Coptic have noun declensions we need not pursue this matter further.

The Old language was flecational but at its Late stage moved towards a syntactic condition; but, as Hodge observes (p 5), at no time do we find a purely syntactic state. Although polysynthetic, the Coptic morphology is, in fact, fairly fixed so that the verb has a prefix marker conveying “aspectual, temporal or modal features, followed by the nominal or pronominal subject and by the infinitive” (Loprieno 2004: 181): e.g. *a-i-hmoos* Past-Pronoun-Verb = ‘I sat down’; *a-p-rôme sôtm* Past-Article- Noun- Verb ‘the man heard’. There are some minor variations and, of course, more extended sentences.

However, neither Coptic nor Old Egyptian have the complex morphology of Latin or Sanskrit. Old Egyptian itself had already lost certain features that are common in other descendants of Proto-Afro-Asiatic like the dual number and cases Nom. Acc. Gen. and perhaps Directive (Huehnergard 2004: 146); there may have been even a neuter gender in the distant past, now expressed by curious feminine constructions, as pointed out by A. Gardiner (1957: 86, § 111; 271, §354). J. Huehnergard states that in the descendants of Proto-Afro-Asiatic some nouns “are construed as both masculine and feminine” (2004: 147): this suggests indeed a former neuter gender but this is very speculative. A. Loprieno cites Hodge (1970) and states explicitly that in Coptic the former analytic patterns of Late Egyptian “are reanalysed as polysynthetic structures (sentence and clause conjugations) marked by heavy prefixing” (2001: 1760). Nonetheless this change S/m → M/s is a minor one (mostly verbal) and, in any event, Coptic not only did not develop a more complex morphology but, in fact, froze into its own syntactic patterns like English. (Loprieno does not make a similar statement in 2004.)

6. Most academics like to conjecture about this subject in order to fill gaps. Hodge does the same in respect of Proto-Afro-Asiatic. He thinks that this was probably predominantly syntactic whereas others now say it was fusional (Huehnergard 2004: 140). He also uses assumptions from other scholars to arrive at the conclusion that “morphology is the result of syntactic constructions”. In this he agrees with earlier linguists, like F. Bopp, K. Brugmann, H. Hirt and others (Hodge, 2-3) and cites from them several relevant passages. We take one of these citations from Brugmann which illustrates this view: “In the parent language, phrases made up of a word denoting some condition or action and a personal pronoun, used as a sentence in which the latter was subject and the former predicate, coalesced and became a single word: this is the origin of all finite verb-forms” (Hodge, 3).

To be fair, Hodge cites also Otto Jespersen who holds the opposite view. This is all very well as a theoretical generalisation but no scholar (to my knowledge) shows with concrete examples what post positional pronouns, or other significant morphemes, as is obvious in Hungarian (§4), coalesce with words of “condition or action” to become terminations in nouns and verbs.

Like many an indoeuropeanist, egyptologist Hodge does not quite realize the fact that we know nothing about PIE beyond the conjectural reconstructions which can't be verified! But he ought to know that Hirt and others are merely making assumptions about PIE. Moreover, by the late 1960's even the conjectured reconstructions showed that PIE had a most complex morphology – as will be demonstrated herein below, on the basis of the extant branches. Hodge ought to see also that using Yakut, a Turkic language, to claim a syntactic origin for IE inflections as Hirt had done (Hodge, 3) is methodologically unacceptable.

Hodge also seems to think that Hittite is closest to PIE, again as most indoeuropeanists continue to think. This is still controversial. Undoubtedly Hittite retains several archaic elements but nothing (apart from the controversial laryngeals) that is not found to differing extents in one or another branch. But we have yet to see a reasoned explanation why this supposedly archaic language lacks so many features common to the IE branches: i.e. the stem for horse (L *equus*, Mycenaen *iqo-*, S *aśva* etc); the stems for the eight commonest relationships – brother, daughter, father, husband, mother, sister, son, wife; the third gender; the dual; the roots as seen in Sanskrit (to be explained below). Moreover, it has (apart from the smothering elements from non-IE languages of the Near East) auxiliaries like *man*, which, with the present indicative, forms conditional modality and which hittitologists regard as rather modern (as Hodge himself admits, p 5). All in all, Hittite shows a state of devolution from a complex morphology like that of later Iranian branches from Old Avestan (Sims-Williams 2006: 140). Even so, with its six noun-cases, its two distinct verb conjugations (e.g. *epmi* 'I take' and *arhi* 'I reach'), its Active and Mediopassive Voices and its tenses etc (Luraghi 2006: 182-5), Hittite is still a highly inflective language and Hodge is not justified in ascribing to it "a comparatively light morphology" (p 5) – a description appropriate rather for Old Egyptian and Coptic. Finally it is worth pointing out that several authorities have found traces of feminine termination (e.g. Melchert 1992; Weitenberg 1987).

7. The contention for the cyclical S/m → M/s → CM/s → S/m is not attested in any known language or family of languages going as far back as 1500 or 3000 BCE (see §2). It has been erected on assumptions that have little basis on facts and reason. We say this advisedly because there is Sanskrit, little known to most linguists, which has a unique morphology that defies this hypothetical cyclicity and the assumptions supporting it. As was said, there is a spiral movement with smaller cycles that do, indeed, show shifts from syntactical to morphological, back to syntactical stages and so on, but the general direction is from CM/s to S/m. At least this is what Sanskrit indicates – and by Sanskrit we mean the entire Old Indic language including the earliest Vedic stage. This language has features which cannot be explained away by the linguistic assumptions and processes given by those who support circularity.

8. Alone of all known languages Sanskrit has *dhātus*, i.e. actual roots which generate both nominal declension and verbal conjugation: thus $\sqrt{īś} > īś$ (m) 'lord' and $\sqrt{īś-te}$ 'reigns'; $\sqrt{ruc} > ruc$ (f) 'lustre' and $\sqrt{aru-ruc-at}$ (redupl aor) 'one shone'; $\sqrt{sad} > sad$ (adj) 'sitting' and $\sqrt{á-sad-at}$ (aor) 'one sat'; etc.

As the word ‘root’ is often (mis-)used for ‘stem’, we shall use hereafter the term dhātu. Some 2000 dhātus, ‘seedforms’ really, are recorded in Sanskrit but only about 700 appear also in the early Vedic literature² and of these only 200 are actually nominal and verbal – and not theoretical postulates. The others were pushed out of use as radical nominal forms probably by other primary derivatives: e.g. \sqrt{am} ‘moving, injuring’ and *áma* (m) ‘pressure, illness’; \sqrt{kr} ‘doing’ and *kará* (m/f/n) ‘doer, making’ and *kṛt* (adj at end of compounds) ‘making’; $\sqrt{jīv}$ and *jīvá* (adj) ‘living’, (m) ‘living soul’; etc. Even so the 200 are an inheritance that cannot be overlooked. The nominal endings and the verbal affixes (suffixes and infixes) also cannot be overlooked in the present discussion. As T.Elizarenkova put it, “the verb-root [i.e. *dhātu*] is basic to both inflexion and derivation ... it is irrelevant that for some roots such nouns are not attested” (1995:50). In other words originally all nouns and verbs had or arose out of dhātus but, for various reasons most dhātu- or root-nouns were lost. The notion that the dhātu is an abstraction made by grammarians should therefore be dismissed: the ancients knew the dhātus as generators of both nouns and verbs through certain grammatical, phonetic regulations.

At the outset it should be said that Sanskrit has suffered losses and has made innovations but probably to a lesser degree than other IE branches (Fortson 2004). Some devout Hindus declare that this *devavāṇī* ‘language of the gods’ is eternal and, in fact, the Proto-Indo-European language, but obviously they do not take into account simple facts of change within the well-documented language. To take one example, the form, say, for Nom dual m. *aśvinā* ‘two horsemen’ eventually gave way totally to the form *aśvinau*. Another change is the abandonment of the richly inflected forms, especially verbs, in favour of very long compounds. However, neither the attritions nor the innovations will engage our attention except in so far as the former show, in association with other IE branches, that PIE must have had an incredibly complex morphology.

Some scholars hold that the dhātu is the original language-unit and that people thought and spoke in dhātus. Thus an Indian scholar dismisses various theories about the original structure of language in general and concludes that “what we can accept without any contention is the statement that every root is the undeveloped sentence of primitive man” (Chakravarti 2003: 220). This may have been so, but we have no proofs. So let us look at the facts exhibited by Sanskrit.

One fact we must bear in mind is that of vowel strengthening (ablaut). Sanskrit has five basic vowels arising at distinct places of articulation and then undergoing two degrees of strengthening – *guṇa* (‘twine, multiplier, secondary’ etc) and *vṛddhi* (‘full growth’).

	Guttural	Palatal	Retroflex	Dental	Labial
Simple	a (schwa æ ?)	i	ṛ	ḷ	u
Guṇa	a	e	ar	al	o
Vṛddhi	ā	ai	ār	āl	au
	<i>kaṇṭhya</i>	<i>tālavya</i>	<i>mūrdhanya</i>	<i>dantya</i>	<i>oṣṭhya</i>

2 It would not be entirely reasonable to expect that **all** existing dhātus would have been used in the early texts.

Clearly there is asymmetry with the the **a/ā**. We can only speculate and one useful idea is that the simple vowel was schwa **æ** (?). Also metrical considerations often but not always show that a very short **a** should be understood to exist between a consonant in conjunction with - *r* - or a nasal; this is called in the Prātiśākyas (=manuals of pronunciation) *svarabhakli* ‘vowel-section’: e.g. *índara* for *índra*, *yajañá* for *yajñá* etc.

The retroflex *r* is often said to arise close to the dental *l* but this does not affect our discussion and the *l* is found only in one dhātu \sqrt{klp} ‘be suited’. The *a* obviously does not follow the regular pattern. While *e* and *o* are long (in the Guṇa grade), *a*, *ar* and *al* are short. But these too don’t affect our discussion.

Only Sanskrit of all IE branches has this almost invariable graduation and has 10 distinct classes of dhātus from which are generated families of words (verbs, nouns, adjectives).

9. In the native *Dhātupāṭha* ‘Lists of seedforms’ are given 10 categories or classes of dhātus that develop as verbs with very particular morphological features. The tenth is mostly denominative and need not occupy us.

a) Class 1, *bhvādi*, the $\sqrt{bhū}$ ‘becoming’ and the rest strengthen their vowel (*bhū* > *bho-*; *cit* > *cet*; *sṛp* > *sarp-*; etc) then take suffix *-a-* unaccented, which is the class marker, and then the verbal terminations for the person, number, mood, tense and voice, which are the same endings for all classes. Thus, \sqrt{cit} > *cet-* > *cét-a-ti* ‘one knows, perceives’; similarly $\sqrt{kṛs}$ > *kars-* > *kárs-a-ti* ‘one drags (something)’. The accent falls on the stem vowel. But the ending for the middle voice is different *kárṣa-te* ‘one drags (something) for oneself’ and is the same ending for the passive, which is formed with the dhātu itself and its own accented marker (= *-yá-*) *kṛṣ-yá-te* ‘one is dragged’. The passive is formed similarly, with the dhātu and the (accented) marker *-yá-* and the middle-voice endings in all classes.

Class 1 has the bulk of the dhātus, i.e. over 1000.

b) Class 2 *adādi*, the \sqrt{ad} ‘eating’ and the rest strengthen their vowel only for certain persons in certain moods and tenses then take the regular endings directly and have the accent on the stem in the strong persons and on the ending in the unstrengthened ones. Thus $\sqrt{dviṣ}$ > *dvéṣti* ‘one hates’ but *dviṣ-ánti* ‘they hate’. Here there is no marker at all.

Note (i). This would seem to be the most natural way of conjugating a verb – affixing the endings directly to the modified, or not, root-stem. Old English does it, Latin, Greek and so forth – but with variations in the ablaut. On the other hand these branches have no dhātu as such, only stems. Even Hebrew has only a notional root of two and more commonly three consonants without actual independent existence as with S $\sqrt{kṣudh}$ > *kṣudh* (*f*) ‘hunger’ and *kṣúdh-yati* ‘one hungers (after)’.

Note (ii). Other tenses (i.e. perf, aor etc) do have strengthening as in 3rd perf *di-dvéṣ-a* ‘hated’ or \sqrt{muh} ‘be deluded’ > fut *moh-isyáti* ‘will be deluded’, etc.

c) Class 3, *juhotyādi*, the \sqrt{hu} ‘sacrifice’ and the rest have reduplication of the initial syllable (and variants) and strengthen the root stem in certain persons etc as in class 2, then

take the endings: e.g. $\sqrt{dā} > dā-dā-ti$ ‘one gives’ (already strengthened, or rather fully-grown); $\sqrt{viṣ} > ví-veṣ-ṭi$ ‘one is active’. Note that dhātus with initial *h* reduplicate with *j*: so $\sqrt{hu} > jú-hoti$, $\sqrt{hrī} > jí-hreti$ ‘one is ashamed’. It may be that at a much earlier stage in PIE S| *h* was a different consonant capable of devolving into both *|h|* and *|j|*; the equivalent Gk *ch* χ (in *cheō*, *chous* etc) would suggest some such origin. Here too we are speculating. There are other phonological peculiarities ($\sqrt{mā} > mí-mī-te$ ‘measures’ but perf *mamā-*; $\sqrt{hvar} > jú-hūr-$ ‘be crooked’; etc), but they do not affect the main issue – that these dhātus have reduplication.

d) Class 4, *divādi*, the \sqrt{div} (or $\sqrt{dīv}$) ‘play, light, joy etc’ and the rest have their root-stem unmodified and accented and take the marker *-ya-* unaccented and then the usual terminations for present (all moods) and imperfect: *dīv-ya-ti*, *kṣúdhyati* ‘one hungers’, etc.

But here some root stems show reduction as with $\sqrt{spás} > pás-ya-$ ‘see’, $\sqrt{vyadh} > vídh-ya$ ‘pierce’ etc while others show lengthening as with $\sqrt{tam} > tām-ya-$ ‘faint, darken’, $\sqrt{śram} > śrām-ya-$ ‘be weary’ etc.

So changes there were on many fronts, disturbing an original order which must have been marvellous but no longer reconstructible.

e) Class 5 *svādi*, the \sqrt{su} ‘press out, extract’ and the rest take affix *no* on strengthened persons (as in classes 2 and 3) and *nu* or *-n-* on the unmodified root-stem, then the endings: *su-nó-ti* ‘presses out’, *su-nu-tá* ‘you (pl) press out’ (impv); $\sqrt{śru} > śṛṇóti$ ‘one hears’, *śṛṇvánti* ‘they hear’; etc. The affixes *no/nu* are very simply markers for this 5th class: **they have no semantic function that we know of!**

One could speculate and argue that this **nū** affix derives from a morpheme like the sanskrit particle **nu/nū** ‘now, still, now then’ or the Latin **nunc**, but there is no such significance in any of the Vedic dhātus. Nor is it a present-action marker since we find it in past action as *áśṛṇu-an* ‘they were listening to’, *avrṇo-t* ‘one covered’. In Hittite, verbs in *-nu* had the function of causatives! We would be speculating and arguing only to support a theory based on recent not ancient facts.

f) Class 6 *tudādi*, the \sqrt{tud} ‘thrust’ and the rest take the marker *-á-* as in Class 1, but here in class 6 accented, on the unmodified root-stem, and then the endings: *tud-á-ti* ‘one strikes, thrusts’, $\sqrt{kṣip} > kṣipáti$ ‘throws’, $\sqrt{diś} > diśáti$ ‘shows’ etc. These dhātus have strengthening in certain persons of the perfect, the future and the causative (as with most dhātus of all classes).

In taking the affix *-á-* as its marker this class, the second most numerous, resembles the first class but the marker is accented here and the stem remains unmodified in the present and imperfect – unlike class 1 which has modified root-stem.

g) Class 7 is the most peculiar of all in that it takes an infix in the stem, then the endings after its final radical phoneme. This *rudhādi* class has the \sqrt{rudh} ‘obstruct’ and just over 20 more dhātus which take the infix *na* for strong persons and the *-n-* for the others: $\sqrt{rudh} > ru-ṇá-ddhi$ ‘one obstructs’ (< *ru+na-dh+ti*) due to rules of *sandhi* ‘euphonic combination’;

again, $\sqrt{yuj} > ju-ná=k(<j)-ti$ ‘joins, yokes’ and $\sqrt{piṣ} > pi-ná-ṣ-ti$ ‘one crushes’. The marker *ná* is accented. In the unstrengthened forms we find simply *-n-* as in *yu-ñ-k-té* ‘one joins for oneself’ (middle voice) where the accent shifts to the termination.

Here we find corroboration from Latin *iu-n-g-o* ‘yoke’ and Gk *zeug-nu-mí* ‘yoke’ This Gk **nu** is not the infix **na/n-** but a suffix found in other Gk verbs, like *deik-nu-mi* ‘indicate’ and we should note well that only Greek has this formation since other branches do not show it at all: S *diśāti*, Ossetic (=Persian) *āw-dis-yn*, L *dic-o*, Gm *-teih-an/zeig-en* Hit *tekkus-āi-*.

h) Class 8 *tanādi*, the \sqrt{tan} ‘stretch’ and the rest take the affixes *o/u* (in parallel to *no/nu* exactly) but since all seven or eight dhātus end in *-n* they behave like those of class 5. Thus: *tan-ó-ti* ‘one stretches’, *tan-u-anti* $>$ *tan-vánti* ‘they stretch’; $\sqrt{van} > van-ó-ti$ ‘one wins’, *van-u-thás* ‘you two win (pres. dual).

At first sight these dhātus might as well belong to the 5th class. And most sanskritists do assign them there (e.g. MacDonell 1916). However, this is an error. First, the ancient Indian grammarians did not do so and they were not less observant or less intelligent than modern Western linguists. Moreover, they had much more material at their disposal than we do. Class 5 dhātus like \sqrt{su} , *śru*, *kr*, *dhū* etc have no noun-forms with *n* in the stem (except very rarely some late and questionable forms: Whitney 1885). But dhātus of the 8th class like \sqrt{tan} , and \sqrt{van} have *tán-a* ‘offspring’, *tán-aya* ‘posterity, belonging to a family’, *tán-tra* ‘loom, principal part’ etc, then *ván-as* ‘longing’, *van-i-tā* ‘loved woman’, *van-ús* ‘eager’ etc. Thus the dhātus and affixes **are** different. In the eighth class the *-n* belongs to the original dhātu.

However, as these dhātus are very few we can sidestep them. One example more or less will not make any difference to the main argument.

i) Class 9, *kry-ādi*, $\sqrt{krī}$ ‘buying’ and the rest (over 60) take as their class marker accented *nā* in the usual strengthened persons, and unaccented *nī* (but *n* before endings with initial vowel) in the other persons and then the endings: e.g. *krī-nā -ti* ‘one buys’, *krī-ñ-ánti* ‘they buy’.

Here we can branch off and follow F. de Saussure (19th cent.) and other linguists who agree with him and evince admiration at the conclusion that these suffixes *nā/nī/n-* have been produced from the 7th signs, strong and weak infixes *na/n-*. So also in $\sqrt{mī} > mīnāti$ ‘one damages, lessens’, *minītás* ‘the two damage’; or $\sqrt{bandh} > badh-nā-ti$ ‘one binds’, *badh-n-ánti* ‘they bind’ etc. A simplified description of the evolution of this pair of affixes from the 7th class ones is found in B. Fortson (2004: 75-6). But since no explanation is given by anybody for the lengthening of *na* to *nā* and *n* to *nī* and since the analytical reasoning seems highly specious, we hold such ‘discoveries’ totally unacceptable. Why would a rather simple people (and nomadic, as the mainstream theory goes) produce yet another class of verbs when the new signs *nā/nī/n-* have no apparent semantic difference? There does not seem to be any reason! We must also bear in mind another unexplained phenomenon, that is the fact that several of these verb-stems appear as full cognates in other IE branches. A good example found in several branches, not just Greek or Latin, is $\sqrt{krī}$, *krīnāti* itself: we find Gk *per-nu-mi* ‘sell, export’ (the *k/p* correspondence in S and Gk is not uncommon), O Ir *cre-n-aid* ‘one

buys' and O Rus *kre-n-ati*. Consequently we must accept that the *nā/nī/n* as marker of a class was present in PIE itself (and probably had a semantic function which we can no longer figure out). However, this point also does not affect substantially the argument.

j) There is a tenth class, $\sqrt{cur} > cor-aya-ti$ 'steals' etc, but since it seems to be a secondary, derivative class (causatives, nominals etc) we can bypass it. Again it makes no difference to the argument.

10. The argument is that, contrary to what Hodge and others claim about suffixes being originally pronouns or other morphemes (or 'formatives') that came to be affixed onto the stems of verbs and so produced conjugation (§5), these affixes (suffixes, infixes and endings) were such formatives from the PIE period as far as one can see. For, surely, who can in all seriousness claim that these Sanskrit (and corresponding but unknown) PIE affixes were floating about in PIE and somehow got agglutinated to the stem which in some cases felt so swollen that it pushed out its initial phoneme in reduplication? Then, by what extraordinary process did the 7th class sign *na/n* wind its way into the root-stem? True, other languages display the similar phenomenon of having an infix inside the stem. S. Anderson gives two examples: in Chichasaw (Muskogean) a verb is made negative by the insertion of a glottal stop before the final (plus two other changes); in Palavan (Micronesian) the past tense sign is an infix as *menga* 'eat' and *m-il-eng-a* 'ate' (1985: 165-6). But, in the IE verbs we are examining, this *na/n* infix has no such semantic function that we know of!

However, first let us establish clearly the fact that most if not all the Sanskrit affixes we considered above, markers and endings, are PIE.

First, the suffixes *n/na/nā/nī/nu/no*. The distinctions are not at all apparent in other IE branches but the presence of *-n-* is indisputable. Take some examples: S \sqrt{yuj} (7th class) $> yu-na-k-ti$ 'joins' appears in Gk as *zeug-nu-mi* 'I join', L *iu-n-go* 'I yoke, join' and Lith *ju-n-kti* 'to join'; S \sqrt{str} (5th and 9th) $> str-ṇo-ti$ (*str-ṇā-ti*) 'strews, spreads' appears in Gk as *strō-nnu-mi* (and *stor-nu-mai*) 'spread, strew'; Alb *štri-n-j-*, L *ster-n-ere*, O Ir *ser-n-im* – all 'spread, strew'; S $\sqrt{mī}$ (9th) $> mi-nā-ti$ 'lessens' appears in Gk as *mi-nu-(th)-ō*, L *mi-nu-ere* (some see this as a simple root *min-* but then there is the affix *-u-*), Cornish *mi-n-ow* 'reduce' and Gm *mins* 'less', Sl *mī-ni-ji-* 'younger'. Thus at least one affixal form (*n/na/nu* or whatever) was operative in PIE.

Is there a pronoun or other morpheme resembling this suffix?

Well, yes there is the S enclitic *nau* 'we two' (=Gk *nōi*) for Acc, Dat, Gen; then *nas* 'of, to us' and L *nos* 'we, us'. But obviously these forms can have no relation, however distant, with the suffixes *na, nu* etc. There is also, as said above in (e) and (g), the S particle *nu*, Gk *nu(n)*, L *nunc*, all meaning 'now, indeed'; but this particle too does not appear in any way related to our suffixes. If we take the sense of 'now' we can claim that, yes, the suffix enters for the present stem. Against this, are the facts that the suffix enters for the imperfect also (I was, used to, did ...) and that only certain verbs took it; when these verbs are examined, they are seen to have little in common that would bring them together in a distinct (or several) category(s): *kṛṇoti* 'do, make', *yunakti* 'join', *mināti* 'lessen', *strṇāti* 'spread' etc.

Another consideration is that we find the suffixes *á* accented and *a* unaccented and the *ya* unaccented (4th class). The affix *a* resembles the deprivative prefix *a-* (e.g. *á-ja* ‘not-born’, *á-yukta* ‘not joined, yoked’) and the prefix or preposition *ā* ‘from, until’, but, again, neither seems at all relevant. The relative *ya* ‘who(ever)’ certainly resembles the affix *-ya-* but does not seem to have the slightest semantic relevance. Here again, the 4th class verbs (e.g. *dív-ya-ti* ‘plays’, *mán-ya-ti* ‘thinks’, *śám-ya-ti* ‘feels weary’ and some 90 more) do not, as far as we know, have anything special in common to form this class. Then again, *-yá-* accented is also the sign for the passive and evidently has no relation to the pronoun *ya*.

This affix *ya* thus appears in 4th class stems without any (to us) obvious signification, to the passive voice and in the *aya* affix of the causatives and denominatives. Here again one could speculate and argue but only from recent, historical forms and conjectural forms with asterisks which may or may not have existed, not from ancient, primary evidences (See, however, Diessel 1999 for an interesting view on morphology of demonstratives).

11. Then there is the reduplicating class – S *dá-dā-ti*, Gk *di-dō-si* ‘he gives’. Reduplication is used also in the perfect: \sqrt{tud} (6th) > *tu-tod-a* ‘one (has) hit, pushed’; L *cad-ō* ‘fall’ > *ce-cid-i*, *curr-ō* ‘run’ > *cucurri*; etc. We find in Gothic *stai-stant-* ‘struck’, *hai-hai-t* ‘sowed’; etc. It is also found outside the IE family: e.g. in Egyptian (Afro-Asiatic family) *pt-pt* ‘crush’, *sn-sn* ‘fraternize’ and so on.

Surely nobody will seriously claim that this initial reduplication started with floating prepositions or other morphemes and because of their similarity with the stem got agglutinated to it.

In Egyptian we observe the repetition (otherwise ‘gemination’) of the entire stem: *sn* means ‘brother’, so ‘brother-brother’ → ‘fraternize’. But in the IE languages and especially Sanskrit the reduplication is not quite so mechanical and gross. Apart from verbs of the reduplicating type (Gk *pi-pt-* ‘fall’, L *si-st-* ‘stand’, S *ji-jñā-* ‘know’ etc) we find that S has reduplication in the Desiderative conjugation which is the same (except some minor variations) for all classes: e.g. *ji-jīv-i-ṣet* ‘let, may one wish to live’ (opt). Also for some aorists like *á-cī-kṛṣ-am* ‘I pulled, ploughed’ and the Intensive conjugation like *cár-kṛṣ-ati* ‘they pull, plough repeatedly’. While the last case (the Intensive) seems reasonable and somewhat resembles the Egyptian *sn-sn*, all the other cases present no clues whatever indicative of why they have reduplication.

Reduplication very obviously is a morphological and not a syntactical feature. What we don’t know, as with so many other things pertaining to PIE and language in general, is the exact significance of the phenomenon.

12. Let us now examine affixes that are verbal terminations denoting person, mood, tense and aspect.

Take 3rd, indicative, present of ‘to be’: S *as-ti*, Gk *es-ti*, L *es-t*, Gm *is-t*, Sl *jes-tu* – all meaning ‘one is’. The PIE ending must have had *-ti* or at least *-t*. But apart from the S neuter

tad ‘that one’ (and its cognates in the other branches), no other surviving independent pronoun comes anywhere near the ending.

The Gk neuter article is *to*, also phonetically close to *-t(i)*. But the masculine and feminine forms (e.g. S *sa/sā* and Gk *ho/hē*) are unrelated to the ending. In the Afro-Asian languages certain persons are distinguished by masculine and feminine endings alone since there are only these two genders: e.g. Hebrew: he remembered *zākhar*, she remembered *zākhārā(h)* where *-āh* is also a common ending for feminines (as also *-t* as in *ěmēt* ‘truth’)³. Now, IE neuters in S, Gk, L etc are mostly inanimate things or states that would be used with stative (or intransitive) verbs – be, become, flow, lie (somewhere), grow up, perish, shine and so on. Active entities like the wind, fire, sea, storm, fury and the like are like men and women, gods and goddesses, either masculine or feminine. So active verbs would have, we should think, masculine or feminine pronouns as endings (as with Hebrew?). But while the Sanskrit/Greek etc 3rd person sing present is the same for masc/fem/neut, the endings for masculine and feminine nouns (Nom) are numerous and varied.

Let us take another example. The 1st plural is quite different: S *s-mas*, Gk *es-men*, L *sumus*, Gm *sijum*, all ‘we are’. Let us say the original was something like **mas/mes*. Here no 1st person plural pronoun comes near except perhaps Gk *hēmeis* (Attic) and *ammes* (Aeolic): the others are S *vayam* (and *nas*), Av *vaem*, Ht *wēs*, L *nos*, Gth *weis*. Yes, it could be that here Greek retained the original form which agglutinated to the stem after attrition (*ammes* > **mes*). But the terminations for the past tense are S *-ma*, Gk *-men*, Gm *-ma*, etc. Is it likely the Gk pronoun *ammes* suffered further attrition to generate these endings too? Possible but hardly probable. Because we have the medio-passive endings now: S *-mahe*, Tocharian *ämtär*, Gk *-metha* or the aorist S *-mahi*, Toch *-mte*, Gk *-metha*. It is rather too much to expect that a single pronoun – and this in Greek only and severely lamed – gave all these endings.

Let us take the 2nd singular: the independent pronoun for all genders is S *tvam* (enclitic *te*), Av *tu* (encl. *toi*), Ht *zik/tuk* (encl. *ta*), Arm *dow*, Gk *su/tu* (encl. *toi*), L *tu*, Sl *ty* (encl. *t*) etc. The PIE corresponding verb ending is active present **-si*, past **-s*, mediopassive **-se/ai/ther* (anyone or other variant). They are all phonetically unrelated to the pronouns. Here, we have some possibilities, of course. We can only speculate that the Gk *su* generated the second singular endings over the centuries. But since Greek has *tu* as well, the possibility of *su* is very remote and rather improbable; the *tu* agreeing with the other forms in so many other branches (*tu*, *tvam*, *ty*, *dow* etc) was most probably the original PIE – or a morpheme like it, with *|t|*. Then we do find endings phonetically related to *tu* (*thou* etc) but these (S. *tha-na*, Ht *-teni*, Gk *-tes*, L *-tis* etc) are of the second person plural. Again one may speculate and argue but only to move further away from simple facts.

We could examine other endings too (e.g. 3rd pl: S *-a(n)ti*, Gk *-ousi* etc) but we would find that there are no pronouns that could even remotely have a phonetic similarity and thus provide a basis for such endings.

13. There are, however, additional difficulties. Even if we allow the presence of all necessary dependent/enclitic pronouns, we must ask **how** they were suffixed to verbal stems

³ There are still variant transliteration systems.

after the non-semantic affix(es) *na*, *nu* or whatever. The IE people must have been quite numerous even when concentrated in one region and must have spread over a wide area judging by their later diffusion and the near certainty that at the time of the diffusion there already existed dialects (Burrow 1973).

They had no writing then, nor, presumably, a central “educational” authority that would dictate the “correct” type of speech, nor, of course, mass media to inform the people in remote places of changes in language usages. Even if phonological change is, according to most comparativists, uniform (something wholly hypothetical and by no means proven since the phonological environment was not the same: see §1), nonetheless it is very difficult to envisage how such morphological changes would be established in a non-literate society. The two changes S/m → M/s mentioned earlier (§3, 4) in Hungarian and Coptic occurred in a highly literate society under the influence of a strong culture: Latin and Christian Europe for Hungarian and Greek and early Christianity for Coptic.

But before we state anything definite we must examine the noun also.

14. With the nouns too we find strong and weak cases: in the strong cases the accent falls on the stem. But let us bypass this aspect and deal with the case endings. We saw that in Hungarian various morphemes as post-positions coalesce with the stem then, in a reduced form, become case-endings (§3). Can we say the same for Sanskrit or, more accurately, for PIE?

The Sanskrit and the PIE endings for athematic nouns (f and m) coincide according to most (e.g. Fortson 2004: 103-5) at least in the Acc and Loc sing and Loc plural: these are **-m**, **-i** and **-su** respectively. These should provide adequate data. We note that, contrary to Hungarian, endings which often have two syllables and can be related to their original morphemes (some still independent nouns), these three (and all others in sing, dual and plu) are monosyllabic or even single-phoneme terminations which cannot be traced back to any obvious postpositional morphemes. There is no preposition or other morpheme in Sanskrit, Greek, Latin etc, that remotely resembles *-m*, *-i* and *-su* that might give these endings. Here certainly we could speculate and argue that a pronominal form of the first person, like S *mama/me* or Gk *me*, L *mei* etc (all ‘mine, of me’) could have supplied the ending **-m**. But the Acc sing is just as frequently constructed with the other two persons in all three numbers. Again it is possible that the Gen sing of the first person somehow, sometime, stuck, but how probable is this?... I consider it most improbable because we have no other parallel with the other endings of that ancient period. Moreover, there is no relic in Sanskrit of the Acc sing alone without the possessive pronoun: ‘I see my horse’ *asvaṃ me paśyami*.

There is one morpheme that could be connected with an ending. S *abhi* ‘to, towards’ is phonetically similar to the Dat pl ending *-bhyas* (which in PIE is given as **-bhios*); the Instr pl is *-bhis* and the Instr, Dat, Abl dual are **-bhyām*. So here we can visualize *abhi* as postposition joining the stem of nouns in the sense of ‘to, towards’ and losing the initial *-a* and gaining a final **-s*, **-as* and **-ām* – as in *nāribhyas gāve* ‘to women and to cattle’. But we have already met the difficulty of explaining the changes in phonology. **The other difficulty is that there is no trace of this **(a)bhi(-s/-as-ām)* in the corresponding case-**

endings of the singular. A third difficulty is that in Sanskrit from the earliest Vedic usage *abhi* is not post-positional but prefixed to (verbs and) nouns: *abhikrānti* ‘the act of overpowering’, *abhicāra* ‘malevolent incantation’, *abhidhāna* ‘name’, *abhibhū* ‘one superior’ etc etc. Moreover, there are semantic difficulties as well. The sense of the Ablative is also ‘away from’: thus *nāribhyas* in a different context could mean ‘(away) from’ or ‘more than, far above women’. Then, the Instrumental (*-bhis* in pl, *-bhyām* in dual) has no sense at all of ‘to, towards’. This case has instrumental and associative meaning: thus *aśvibhyām uṣāṣā* means ‘together with the two Aśvins and Uṣas, the Dawn’. Here there is no semantic link at all with *abhi*. After all, Sanskrit (and presumably PIE) had other morphemes expressive of this sense – *saha*, *sākam* ‘with, jointly, together (with)’. Yet another difficulty is the variation in the meaning of the cognates of *abhi* in the other IE branches: Gk *amphi* ‘on both sides’, L *amb-* and Gm *umbi* (Mdn *um*) ‘around, round’ etc. So again this agglutination seems remotely possible but extremely improbable.

15. The Accusative in the classical languages expresses the direct object which invariably, without the mediation of another party, receives directly the energy, impact or influence of the action of the subject, agent. Even if we supposed that at some distant past a movement towards the direct object was expressed by some adverb, preposition or postpositional morpheme, Sanskrit has *anu*, *abhi*, *-anta* and *-antika* (at end of compounds) and *prati*, but nothing that would yield *-m* (Acc sing) without wholly unacceptable violence. So this ending has no known or conjectural origin in floating morphemes. Greek *pros*, *epi*, *eis* and the like (and similarly Latin) are in no way related.

16. The endings *-i* (Loc. sing) and *-su* (Loc. plural) are just as unwilling to reveal their origination. There is, of course, Gk *en*, L *in*, Welsh *yn*, Armenian *i* etc, all meaning ‘in’ and it is possible that the original form joined stems and lost the *-n*, as in Armenian. The trouble is that although there are hundreds of compounds with *en/in* as initial both in Greek and Latin, there is no enclitic/postpositional attestation of it in Latin and the Oxford Greek Dictionary (1996) gives only one enclitic use in the epic poetry (*Odyssey* 1.50). Even if we accepted this solution, we still have to account for *-su* (Loc plural). Sanskrit has *antas* ‘within’ (Gk *entos*, L *inter*, Gm *untar* etc all ‘among, in between’) but, obviously, this cannot be connected at all with *su*; and the same difficulty has to be met with the dual locative *-os* (or whatever may have been the PIE ending).

The three endings *-m* (Acc. sing), *-i* (Loc. sing), *-su* (Loc. plural) do not derive from any known postpositional morphemes with independent existence. I have dealt with them because they are accepted by indoeuropeanists as the same endings in PIE. Personally, we do not care at all for PIE reconstructions and never use them. But, in this case, I do refer to all the PIE nominal endings saying that all of them consist of one syllable or simple phoneme, as given in various publications on Indoeuropean languages (e.g. Fortson 2004: 113; Clackson 2007: 97). I do not know if these are correct and, frankly, I have serious doubts about them, but neither for these nor for Sanskrit, Greek and Latin endings, do I find any morphemes that appear within reason to have been the originals.

17. It is very significant that scholars who make or repeat such claims, or build upon them, do not provide any such evidence from the rich field of IE languages. Consequently statements that PIE inflections derive from postpositional morphemes (nouns, pronouns or adverbial forms) sound highly arbitrary and injudicious. As I wrote several times earlier one can speculate and argue (and we love doing this when in fact we do not know) projecting backwards to the PIE situation elements we glean from subsequent and modern linguistic processes and no doubt we are entitled to this. But clearly we are simply imposing our own (often theoretical) concepts. We simply do not know how language started and how it developed in these prehistoric times. Let me use an analogy: When standing on the North Pole, we can only move southward. Once we have taken a few steps, we can move in any direction we like, even northward. But these are subsequent possibilities. I would not accept modern claims for such remote events as the PIE. Unless solid evidence is provided, these claims shall remain nebulous assumptions.

What then is the origin of the Sanskrit complex morphology (and of course PIE which must have been even more composite, subtle, elastic and expressive)? I don't know. Frankly, I don't think anybody knows for certain. Obviously, suffixes and infixes like *nu/no*, *ya* etc had a function other than merely marking the morphological class (afterall, why have these classes?) but this is no longer known. There are many conjectures, many hypotheses, many theories. These are obviously connected to rather superficial views about man's origin based on (neo-)Darwinian theories of evolution, which lack any solid proof (and, indeed, are seriously doubted by biologists and geneticists like Behe 1996, 2004, Brooks 2001, Denton 1985, Lipton 2005, Paquette et al 2003, etc).

18. There are many theories regarding Language, dialects, linguistic development, changes in sound or morphology and so on. Grammarians of the 19th century like A. Schleicher or his opponent H. Schuchardt, influenced no doubt by Darwin's Theory of Evolution, thought that languages are natural organisms that are born, grow up and develop according to constant laws then grow old and die. Although this is untrue, many writers even nowadays seem to think that languages change because of the operation of unseen natural or metaphysical laws: e.g. "The only constancy of language is that it is always changing ... We may expect that the amount of change will be partly dependent on the extent of time that has elapsed in the linguistic continuum ... linguistic differentiation is a product of time" (Mallory 1989 ;22, 23, 152). Some write (or speak) plainly of an evolutionary process connecting with (Neo-) Darwinism (like Ritt's 2004 *Selfish Sounds ... A Darwinian Approach to Language*; also Croft 2000). Fortunately others approach the issue with more pragmatism, like W. Labou: "it appears that the process of sound change is not an autonomous movement within the confines of a linguistic system, but rather a complex response to many aspects of human behaviour" (1984:163).

It should be clear that a language is organic in that it has interconnected organs but it is not a biological organism like a plant or an animal and has nothing to do with natural evolution. It is not born, it does not grow old and does not die. All the so called 'dead' languages are languages that are simply no longer used: that is all. Language is primarily a

mental and emotional phenomenon expressed in gross sounds (and writing) as is done here now. All linguistic change, morphological, phonetic, semantic or whatever (wrongly termed “evolution”) results from human action (as said in §1) which consists in deliberate interventions or in mere side-effects. Sometimes it is the action of a great grammarian like Pāṇini or other wise sages in ancient India or ancient Egypt, Palestine, etc; sometimes it is that of a great poet like Chaucer in England or Dante in Italy; sometimes in modern periods that of a government. The plain fact is that nobody has ever seen or heard of the origin of any language: we have all been born within a current linguistic context and however back we go in documented human history language is always there in one form or another. Its origin is really unknown: we have only ancient writings of Revelation (in the East and in the West) that ascribe its origin to God.

The Vedic sages who left us much wisdom commented on the language also. One hymn assigned to Ucathya Dīrghatamas in the *R̥gveda*, probably the oldest document of humanity, says: *catvāri vāk pārimitā padāni, tāni vidur bhāhmaṇā ye maṇiṣiṇaḥ; gūhā trīṇi nīhitā neṅgayanti, turīyaṃ vācō manuṣyā vadantī* (1.164.45) – ‘Speech is measured out in four quarters; perspicacious Brahmins (=holy men) know these: three placed within, secret, do not cause movement; the fourth one men speak’. Much else was said, analysed and categorised, in the course of time. A philosopher-linguist, Bhartṛhari of c 300 CE, explicated in his *Vākyapadīya* the four quarters as *parā* ‘Supreme Source, indescribable’, *paśyantī* ‘looking on (emotional wordless knowledge)’, *madhyamā* ‘subtle (thinking in mind)’ and *vaikharī* ‘gross ordinary speech’. It would seem that only if one reached the level of *parā* one would know all about language; even with *paśyantī* one would understand far more. But such study would require yogic, philosophical, metaphysical or esoteric practices that very few scholars wish to undertake.

My own view, if I must express one, is that language did not start with grunts, hisses and warbles as most think (e.g. Hawkins & Gell-Man 1992) but, as Dixon writes, with “an explosion”. He finds no evidence of a “primitive language” with just a few hundreds words and only a little grammar (1997: 65); a similar view has been enunciated by D. Bickerton (1990) and N. Chomsky (1986). The presence of dhātus in Sanskrit and the simple mechanisms of their varied development into nominal declensions and verbal conjugations indicate that there was design at the very start with dhātus and terminations. I would go a little further than Dixon and say that language arose in primitive man’s mind in its fullest and most complex morphology just as Athena sprang out of Zeus’ temple in full panoply. And this would be the levels of *parā* and *paśyantī*, mentioned above. This need not seem far-fetched. Most animals show a capacity to fashion a nest/lair, to care for their young teaching them to hunt on land, in water and in air and to communicate to some degree. Such behaviour betokens some intelligence. Many plants also exhibit signs of intelligence. Considering the vastly greater intelligence of humans, we should not be too surprised at the sudden outburst of a rich, fully inflected language. This of course cannot be proven except one reaches back to that original state and sees how it all started.

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