

Vedic and Greek Aorists

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The 7 types of Aorist in Sanskrit furnish additional clear evidence for its antiquity and special status among Indo-European tongues. Comparison with Greek aorists show that the Sanskrit types are inherent, not innovations as most scholars believe. But we are left with the difficult question “Why have so many different types when there is no apparent difference in semantic function?”

1. Both Ancient Greek and, moreso, Sanskrit are highly complex, inflective languages, both deriving from an even more complex, inflective mother tongue, termed by comparativists *Proto-Indo-European*. Here I shall deal primarily with Sanskrit of the Vedic period adverting to Greek as occasion recommends and leaving aside the PIE mother tongue with only the comment that all attempts to reconstruct it are based on utterly wrong premises and consequently the conclusions must also be utterly wrong, although some aspects have merit. This PIE cannot be reconstructed and any such product will remain a mere conjecture of no practical linguistic value.

For my subject I take the past tense and particularly the Aorist, as it is called in the West. In the Sanskrit Paninian grammar it is termed simply *IUN*. In his Grammar-book **Aṣṭādhyāyī**, Pāṇini in his unique shorthand manner defines it as **bhūte** (3.2.74) ‘in the past, in having been’. The term itself *IUN* is given several sūtras later, in 3.2.110. What Westerners call the Perfect tense is given further down as **parokṣe liT** (3.2.115), which is usually translated as ‘in non-witnessed [remote time] the suffix *liT*’. This is clearly misleading since the statement *ahám- evá śyenám-antárikṣe dadárśa* ‘I indeed have seen the eagle/falcon in the midair’ is not non-witnessed time. So a more correct rendering would be “not immediately/presently witnessed”.

Sanskrit has all the kinds of past tense that we find in most (and in modern) languages but, unlike most, it has 7 forms for the Aorist whereas Greek and Germanic (thematic and strengthened medial vowel) have only two and most other languages only one. Now, it is understandable that a language should have the pluperfect for remote past (‘he had gone abroad before he married’), the perfect for the effect of a past action continuing to now (*pitā grhá āviveśa* ‘father has entered the house - and is [probably] still in it’), the aorist for an action that ended in the past ‘he came yesterday – but perhaps has gone again’ (and the continuous action ‘he was coming’) and the repeated (and continuous) past action as in ‘he used to come’ (usually rendered by the imperfect). But what is the need for more than one form in the aorist?

I take first the example of the defective *dṛś* ‘seeing’: it has the **root-aorist** stem *á-darś-/á-dṛś-* with the accented augment *á-*; the **s-aorist** stem *á-drāks-/á-dṛks-* (the change *ś>k* is usual, normal sandhi or euphony); the **sa-aorist** stem (*á-)dṛkṣa-*; and **reduplicated-aorist** stem *á-dīdṛś-*. Now in all these 4 cases we translate ‘he/she/it saw’ or loosely ‘has seen’! Whereas in all the other forms of past tense (perfect etc) there is an important difference in the semantic nuance

(e.g. *dadárśa* 'he/I have seen', as distinct from *ádarśam* 'I saw'), there is no such detectable difference in all these aorists . And there are **a-aorist**, **iṣ-aorist** and **siṣ-aorist**, as well, found not with this but other verbs (*átan-a-*, *áṭṛp-a-*; *ákram-iṣ-*, *ánay-iṣ-*; (*á*)*raṃ-siṣ-*, *áyā-siṣ-*; etc) .

So why have all these types? The distinctions made by Western scholars into seven aorists are based in their distinction of the Greek Aorist into 1st (or A) Aorist and 2nd (or B) Aorist. Macdonell writes (1927: 117): “*There are two kinds of aorists in Sanskrit, as in Greek. The First is formed by inserting a sibilant [-s-] between root and [secondary] terminations, the Second by adding the terminations to the root with or without the connecting vowel a. Both aorists take the augment (which is accented).*” There are 4 forms, he adds, of the First and 3 forms of the Second.

This statement is true, of course, but it leaves out some highly significant aspects which no sanskritist, as far as I know, has even mentioned, let alone dealt with. There are not just “two kinds of aorist in Sanskrit as in Greek”. I shall return to the matter further down. Here I mention how often I am amazed by the fact that we take for granted so many things without really understanding them or, when awakened by the shock of sudden realisation, without wanting to delve deeper.

2. As was said, the defective root $\sqrt{dṛś}$ has 4 of the seven aorist forms. The root \sqrt{budh} shows five. In all cases the translation is identical, except for nuances necessitated by the immediate context. Why all the different aorist forms?

It may be supposed that, in a community, as the language was taking the complex form that we know from, say, a much cruder form, much closer to animal or monosyllabic expressions (as the usual theory on language-origins has it) , some people emitted one kind of aorist, others another and still others differing forms. And so all these were kept in a good, non-offensive, democratic fashion. Or, it could be conjectured that this supposition may be extended to proximate but different communities of the same crude language adopting the different aorist forms and all keeping them all!

But at once some scholars will raise the objection that human nature likes to do things with as much economy of effort, brevity, speed and usefulness as is most suited to the action that is to be accomplished. This multitude of aorists serves no practical purpose in communication and may even cause delay, doubt and confusion in the speakers and hearers. It is taxing to remember 7 different forms when one would do!

Somebody else would object with the question “why did this happen only with the aorist and with not easily constructed forms (= reduplication or the *-siṣ-* form) but did not happen with the present tense or the subjunctive? Because, if variants were formed in the aorist, why not in the present also or the future?

A third scholar would point out that some verbs have the root-aorist and the *sa-*aorist, others the root- and the *-iṣ-* and the *a-*, others 2 or 3 others and so on without uniformity or apparent reason for these variations.

Yet another, who knows that several elements were lost in the very long history of the development of Vedic-Sanskrit, might assert that the different aorists had different semantic nuances and the Vedic people forgot them but retained the forms. The nuances are lost to us too and it does not seem very probable that we can regain them.

And another one might add by way of explanation and clarification that the amount of literature from the rigvedic period is confined to just over 1000 hymns. This amount does not suffice to give us a full picture of the language used at that time. It is possible that originally all verbs had all of 7 aorists and some lost 5, others 4, others 3 and others 2 of the forms. But to what purpose?

3. Here we must clarify that the number 7 for the forms is misleading. It may be that originally they were not that many. It is just possible that the affix *-sa-* was the original one and the affixes *-a-* and *-s-* were derivatives due to corruption and loss. Also the *-iṣ-* and *-siṣ-* are mere extensions of the *-s-* plus the *-i-* which appears as if inherent in some roots called **set**, that is verbs *sa-it* (= with the affix *-i-*), where the affix *-i-* necessarily enters after the stem of these verbs in certain tenses like aorist and future. E.g.:-

Most roots ending in a vowel except *r* take the future affix-marker *-syá-* which is accented; if a vowel other than *a/ā* immediately precedes, the affix becomes *-ṣya-* (e.g. *dhā* > *dhā-syá-ti* ‘will place’ but *ni* > *ne-ṣyá-ti* ‘will lead’) by a canon of *sandhi* ‘euphony’. Some roots ending in vowels (e.g. $\sqrt{bhū}$ ‘being/becoming’), many roots ending in consonants and in *-r-* and also causative stems (e.g. *gam-aya-* ‘cause to go, guide, send’) take the affix *-i-*, which turns the initial *-s-* of the marker *-sya-* into *-ṣ-*. Thus *aś* > *aś-i-ṣyá-ti* ‘will eat’, *bhū* > *bhav-i-ṣyá-ti* ‘will be/become’, *gam-ay-iṣyá-ti* ‘will cause-to-go, will lead’.

In fact, Pāṇini in his **Aṣṭādhyāyī**, in adyāya 4, pādas 1 and 2, deals with the aorist and seems to make an effort to reduce the seven to four.

So, let us accept not four but three for the sake of convenience.

a) The root aorist as: \sqrt{bh} *-ū* > *á-bhū-t* ‘one was, became’; $\sqrt{sthā}$ > *á-sthā-m* ‘I stood’.

b) The *-sa-* aorist as: $\sqrt{kruś}$ > *á-kru(ś>)k-ṣa-t* ‘cried out’, \sqrt{ruh} > *á-ru(h>)k-ṣa-t* ‘ascended’; with *-s-* only – \sqrt{kram} > *á-kraṃ-s-ta* (ātmanepada ‘middle voice’) ‘strode’; with *-a-* only $\sqrt{kṛ(n)t}$ > *á-kṛt-a-t* ‘(has) cut’ (imperfect *LAN*, *á-kṛnt-at*), \sqrt{kr} > *á-kar-a-t* ‘did, made’ (imperfect *á-karo-t/á-kṛno-t*).

Then there are the many verbs that take the affix *-iṣ-*: e.g. *á-kram-iṣ-am* (= ‘I strode’) which is like the sigmatic *-s-* aorist with the connecting vowel *-i-*. Other verbs are \sqrt{av} ‘help’, *kan* ‘enjoy’, *kr* ‘do, make’, *tṛ* ‘cross’, *budh* ‘wake, understand’, *san* ‘gain’ etc (some 145 of them: MacDonell 1916: 165).

A few take the *-siṣ-* affix for the aorist which differs in having affixed an additional *-s-*: e.g. *á-gā-siṣ-at* ‘one sang’ and 6 more verbs $\sqrt{jñā}$ ‘know’, *pyā* ‘fill’, *yā* ‘go’, *ram* ‘rejoice’, *van* ‘win’ and *hā* ‘leave’. Now, this is quite extraordinary. Burrow thinks (1973:340) this is an Indoaryan innovation, since no other IE language, not even

Avestan, has it. But why would such a comparative complex form be deemed necessary, when its function as aorist was just as easily performed by the other sigmatic types? Root *jñā* has also the *-s-* aorist type *á-jñā-s-am* ‘I knew’; *yā* has also the simple sigmatic type *á-yā-s-am* ‘I left’ and so does *ram* *á-ram-s-ta* ‘one rejoiced’ (ātmanepada); root *van* has as well both sigmatic *-s-* and *-iṣ-* in the subjunctive – *vám-s-at* and *ván-iṣ-at* ‘one will, should win’. This is the most puzzling type of all, so far. I find it more likely to be a remnant of a very old form, entirely lost in other IE tongues, rather than an innovation. For the simple reason that it does not perform a function which is not performed by other sigmatic aorists! Why innovate?

c) The reduplicated aorist as seen in §1 with roots $\sqrt{dṛś}$ ‘see’ > *á-dī-dṛś-* and \sqrt{jan} ‘generate’ *a-jī-jan-* seems to me just as extraordinary. I call it ‘extraordinary’ because it is so unusual and has special rules. There is the reduplicating class 3 of dhātus, of course (see §5), like $\sqrt{dā}$ > *dá-dā-ti* ‘gives’, \sqrt{yu} > *yu-yó-ti* ‘separates’ etc. It would be perfectly understandable to have a reduplicating aorist in this class, but why in other classes? They have the **root-**, the **sa-**, the **s-**, the **a-**, the **siṣ-** aorists. Why the reduplicating one, as well? It is not as if it is the easiest of forms. The vowels *a/ā*, *r/ṛ* and *l* are represented in the reduplicative syllable by long *-ī-*, as seen in the roots *jan* and *dṛś* above and many others.

Why then this odd, reduplicated form? It may be said that it started with the 3rd class reduplicating verbs and then spread to the other classes. It is possible. But of some 20 verbs that belong to this class the most common ones $\sqrt{dā}$, *dhā*, *bhr*, *mā*, *viṣ*, *sr*, *hu* and *hū* have root-, *a-*, *s-*, *iṣ-*, and *siṣ-* aorists but not reduplicated. MacDonell’s **Vedic Grammar** (1916) shows only the roots *pr* ‘pass’, *pṛ* ‘fill’, *bhṛ* ‘fear’ and *yu* ‘separate’ to have reduplicated forms. It is, of course, possible that they did not survive in the limited Vedic accented literature.

Burrow thinks (1973: 337) this aorist is related to the Causative aspect of verbs and cites *janáyati* for redupl. aorist *ájījanat* and *vardháyati* for *ávīvr̥dhat*. Now, why does he introduce this notion? True, many others have said so and it is used in the causative conjugation. But while formally it may be relevant to the first case, it does not formally relate to the second, except in so far as it is said to be so. The stem *-vr̥dh-* in the reduplicated form is the form of the dhātu itself, as is *-jan-* and so many others; the Causative stem is *vardh-áya-*. Taking the stem *-dṛś-* in the redupl. aorist form *ádi-dṛś-at* we see that it is again the dhātu; in this case this is also a masculine noun meaning ‘seeing, viewing’ and the stem as first member of compounds (*drk-patha-* ‘sight-range’); the stem of the Causative aspect is *darś-áya-ti*. We can take the stem *-budh-* in *ábū-budh-at* which is again the dhātu form and the stem of the second member in compounds as in *a-budh* (> *abhut*) ‘not-wise’ or *usar-budh* ‘waking-at-dawn’. Then Burrow in the next paragraph (brings in the Avestan reduplicating forms and) writes that this was “originally a... stem forming both present and preterite” (= aorist). But then he complicates matters by postulating two pairs “**jījanati: ájījanat* and *janáyati: ájanayat*. But certainly *ájījanat* does not mean ‘one caused someone else to beget’; it means ‘one beget’.

4. Why have them all? The question remains. Why have such divergent and unrelated forms? We can accept that the root-aorist acquired an additional suffix *-sa-* which was after much use reduced to *-s-* or *-a-*. But how or why would anyone go for the suffix *-siṣ-* or the reduplicative form which has an affix as well

as the augment (e.g. *á-dī-drś-* ‘saw’, *á-nī-naś-* ‘perish-ed’, *á-vī-var-* ‘cover-ed’ etc)? These forms cannot be explained by corruption through much use, like the affix *-sa-* becoming *-s-* or *-a-*, if indeed this happened. Nor by the complicated thinking exhibited by Burrow.

It seems, then, that these were not chancy, accidental morphological developments. Of course, many forms show signs of distortion and attrition, but that is expected in the long history of a language. I am referring to the idea of different types of formation. Like the three we examined in §3. One is forced (or, I am forced) to assume that these forms were original, integral parts of the primary structure of Sanskrit but the different semantic nuances were not preserved.

Take another simpler example. Sanskrit has three sibilants *śa*, *ṣa* and *sa*. The first two are for a very long time now pronounced identically as English *sha*. But this we feel sure could not have been the case originally. There is no reason at all that people should have two different letters to denote one and the same sound. The two letters denote the existence of two sounds that behaved quite differently in different phonetic contexts. What is more, one can practise the two sibilants, the palatal *ś* and cerebral *ṣ* (or retroflex) according to the canons in the *Prātisākhya*s (how the palatals and the cerebrals should be pronounced), whereupon one will discover that the two are quite distinct sounds. But in the history of India the users of the sounds found it easier to allow the strict pronunciation to slide and lapse into one sound *-sh-*!

And again we can ask “why three sibilants when many languages or dialects manage with only two or even one”? English has only the dental and the palatal sibilant, not the cerebral. French too. Modern Greek in most of the country and in the alphabet has only the dental *-s-*. But on the island of Crete and in Cyprus (which also has Greek) people turn, in some phonetic contexts, the dental into the palatal sibilant *-sh-*. Otherwise, even on these islands, the formal pronunciation has only one sibilant, the dental one.

In this simplest of examples also we see that there is an initial subtlety and complexity which usage reduced to coalescence for ease. The beginning is subtlety, differentiation and complexity; the crude simplicity comes later!

5. For a third subject I take the reduplication of the perfect tense, of the desiderative and the intensive conjugations. The reduplication of the initial consonant (or the initial syllable in several cases, especially with first vowel *-i-* or *-u-*) takes place with the perfect tense (e.g. *da-dárś-a* ‘I have seen’, *du-duh-úr* ‘they have milked’); also the intensive, as in *cár-car-ī-ti* ‘one goes/moves intensely, repeatedly’ and *dár-dar-ī-ti* ‘pierces repeatedly’, where we see (for the Present tense) initial reduplication and between stem and termination the insertion of the suffix *-ī-*. This suffix *-ī-* or *-ī-* is inserted in other grammatical forms as well of certain (not by any means all) roots and we see it in the *iṣ-* and *siṣ-* aorists, in the Future stem (e.g. *car-i-ṣya-*) and so on. It need not detain us. But here again one wonders “Why?”. Why insert the *-i-*? There is *varṣa* ‘rain’ and *marsin* ‘enduring’ etc, so it is not to make pronunciation easier. Why, then?

Then for the Desiderative we have *mú-muk-ṣa-ti* 'desires to be free'; *dú-duk-ṣa-ti* 'desires to draw out/milk'; *mí-mik-ṣa-ti* 'desires to mix'; etc. Here also we see initial reduplication and between stem and terminations the insertion of the suffix *-(sa>)ṣa-*.

Such formations are unknown in modern IE (= Indo- European) languages, though some traces have been preserved in nominal forms that obviously come from reduplication (as in Mod Gk *pe-patēmeno* 'what has been trodden upon repeatedly/by many'). But they are quite common in Sanskrit. Here again we don't find in the limited texts all roots to appear in the desiderative or the intensive conjugation. But most, if not all the common ones, have the reduplicated perfect; this we find commonly in Greek and in rare remnants in other Indo- European languages.

The perfect has only reduplication of the first syllable as in *ja-jān-a* 'one has engendered', *du-duh-úr* 'they have drawn/milked', *vi-viś-úr* 'they have entered/stayed'; etc. Often the root-vowel changes according to the general rules governing strong and weak forms or some other cases, but this is another matter. One must wonder at this mode of generating this particular tense. This is absent in modern IE languages, as was said, even in Greek which had it in the classical language (*lé-lu-ka* 'I/he have/has loosened'). In the languages of today the perfect is formed with the use of an auxiliary verb: e.g. 'we have read this section' etc (same construction in English, French, Greek etc but not Russian or other Slavic tongues, which have different verbal systems).

It may be supposed that the reduplication is simpler and easier and that is why the ancient language creators used it. But if this claim for easiness is really true, then why did subsequent users of the language - Indians of Sanskrit, Greeks of Greek, Italians of Italic - abandon it for the composite use of the main and auxiliary verbs? E.g. Greek no longer has the perfect *léluka* < *lúō* 'loosen', *péplecha* < *plékō* 'knit' etc. Instead is used '*échō lúsei, échō pléxei*' 'I have loosened, knitted'.

And if we take into account the desiderative conjugation we find that the ease and simplicity become more dubious. For, here now, apart from the reduplication in the beginning of the word, we find that an affix *-sa/ṣa-* is inserted between the stem and the termination. Thus we have *ní-nī-ṣa-ti* 'desires-to-lead', *yú-yu(dh>)t-sa-ti* 'desires to fight', *śú-śrū-ṣa-te* 'desires to hear/listen'. (The change of *-s-* to *-ṣ-* is due to the same phonetic canon of sandhi 'combination/euphony' that we saw in §3 and does not affect our discussion.) Here we have a more complex situation with a prefix produced from the stem, an unrelated affix (marking also an aorist: see " §1, above) and the suffix of the termination.

This is a very sophisticated, highly evolved morphology. What might have been the crude form from which it developed? Presumably several separate lexemes that united, as is often conjectured for similar if not identical cases, and were perhaps transformed into a more effective form. But does this form really give an instrument easier to handle and more precise in its denotation? More important,

how does it happen that with every root we find that it is the initial syllable that reduplicates – or geminates – and no other? So let us forget this agglutination.

It seems pre-eminently logical and extremely natural that the stem should geminate its initial syllable as in cases we have examined and others (*car-car*, *ji-jiv-*, *bu-budh-*, *vi-viṣ-* etc). We know Greeks had it, Iranians had it, Italians (*ce-cid-i* ‘fallen’, *cu-curr-i* ‘have run’), Germans too (*hai-hait* ‘have sown’, *stai-stant* ‘have struck’). Egyptians had it also as in **sn-sn**, where *sn* = ‘brother’ and consequently *sn-sn* = ‘fraternise’, **pt-pt** ‘crush’. Egyptologists use the term “gemination” often for “reduplication”. If some such process of gemination/reduplication was easy and logical and natural, why have languages lost this, wherever they had it?... Now they use a stereotyped form of the main verb and an inflected auxiliary “have” for the Perfect and for the desiderative the main verb in the infinitive and a conjugated auxiliary “desire, wish, would like”. But Sanskrit could have formed this construction *i(c)chāti/ácchan nētum* ‘desires/desired to lead’. The desiderative imperfect would be *á-ni-nīṣat* (just one word) ‘wanted to lead’. It is possible they lost it because of the invention of writing which may have weakened memory and the loss of a strict oral tradition like the one the Indians preserved. As memory weakened, people found it easier to remember stereotyped general formulas like “have done, want to do, do repeatedly” in place of the variety of reduplicating stems.

6. There are many theories on the emergence and development of language - one sillier than the other. Nobody really knows how language began with humans. Nobody really knows how humans themselves began on this Earth. We have no witnesses or real evidences from those remote times. Nor can we accept with full confidence the theory that humans “evolved” from some anthropopithecus and ape, although it is not impossible. We can conjecture and theorise only. Thereafter the plausibility or implausibility of a theory and its probability as a fact depends on the premises, on the evidence and the reasoning used. The beginnings of human language are very mysterious.

Sanskrit has **dhātu-s ‘root, seedform’**. No other IE tongue has dhātus. These are mostly monosyllabic primary lexemes which develop by fairly strict rules into nominal forms (= nouns, adjectives, adverbs, compounds) and verbal systems (active, middle and passive conjugations with their desideratives etc). I used earlier (§1) the verbal forms of seeing $\sqrt{drś}$ in the various aorists of the Active Voice. In §3 I used the perfects of the Active for \sqrt{duh} ‘drawing, milking’, \sqrt{jan} ‘engendering’ and $\sqrt{viś}$ ‘entering, staying’. For the intensive conjugation I used \sqrt{car} ‘going, travelling’ and $\sqrt{dr/dṛ}$ ‘piercing, splitting’ and for the desiderative I used \sqrt{muc} ‘releasing’, $\sqrt{miś}$ ‘mixing’, $\sqrt{nī}$ ‘leading’, \sqrt{yudh} ‘fighting’ and $\sqrt{śru}$ ‘hearing’. Elsewhere I used many others.

Any decent (Western) Grammar-book will tell you that the dhātus fall into 9 categories and a 10th one which has also many derivative stems, either from nouns or from verbs. There are simple seedforms like \sqrt{cur} ‘stealing’ > *cor-áya-ti* ‘one steals’ but also causatives and nominatives like *krodh-áya-ti* ‘enrages’ etc. These categories (*gaṇa* ‘group, class’) are in effect classes of verbs each

conjugating in the present tense according to its own particular rules, with some few exceptions here and there.

Unfortunately, what no Grammar, Indian or Western, does, is to begin (after giving the alphabet and pronunciation, of course, and the rules of sandhi) with the *dhātu* and the modes whereby the different classes of verbs are generated and then the modes whereby the different masculine, feminine and neuter nouns of first, second and third degree-formation are produced. (E.g. \sqrt{cit} 'knowing fully, thinking, being conscious of' > m/f/n. *cit* 'consciousness, thinking' in compounds, *cit-ra* adj. 'conspicuous, bright, variegated'; then, *cet-ana* neut. 'consciousness, mind, soul'; then *caitanya* neut. 'consciousness, intelligence'. And we find the same gradations in the verb: *cit-é* pres. 3rd sing. (*ātmanepada*, 2nd class) 'one perceives, is aware of, for oneself', *cétati* (parasm. 1st class, pres, 3rd sing.) 'one perceives'; then root-aorist *á-cet* 'one perceived' or s-aorist *á-cait* 'perceived'; then *ci-két-a* perf. 'has perceived'; *cé-kit-e* intensive 'one perceives intently, repeatedly'.) Or take \sqrt{yuj} 'joining, yoking' m., fem., n., mostly in the end of compounds; verb *yu-na-(j>)k-ti* 'joins, yokes' taking for the present and the imperfect *á-yu-na-k(-t)* within the stem the marker of the 7th class *-na-* (for strong stem and *-n-* for weak stem, as *yu-n-(j>)k-te*; perfect *yu-yój-a*; root aor. *á-yuj-l*; future *yo-(j>)k-syá-ti*; then, nominals *yuga*, *yoga*, *yunjaka*, *yaugika*, etc. Grammar-books start with the declension of nouns, following the model used in Western classical antiquity. Consequently **the beginner thinks that Sanskrit is just like any other IE language, chaotic and haphazard. And this first impression stays on even with philologists and is in part responsible for many wrong notions about Sanskrit and about language in general.**

It is, of course, true that not all nouns and other elements in the language can be derived from *dhātus*, which are just about 2000 and only about 700 are in frequent use in Vedic texts. Of these, again, only 200 appear as both nouns (of one or other gender or adjectival) and verbs. But it would be totally unreasonable to expect that the early texts, which are limited and highly repetitive, would record all the vast variety of nominal and verbal formations possible in this language. Fortunately some scholars (e.g. Elizarenkova, 1995) do accept that at a very remote past all *dhātus* developed as nouns (of different genders) and verbs (and perhaps more than the 2000 preserved, I add). Moreover, we must set aside the notion, dear to many Indians that Sanskrit is a perfect language. It probably was **deva-vāṇī** 'Gods' language' at a prehistoric period of which we have no facts. It is certainly more subtle and complex than any known IE tongue. But it is obvious that it has had attritions and losses and innovations and confused forms in its very long history. That is why it has so many exceptions to what seem general rules, many duplicated forms (e.g. dual *áśvinā/áśvinau* 'two horse-gods, Ashvins'; desideratives *dí-dhi-ṣa-ti* and *dhí-t-sa-ti* 'one wants to place' of $\sqrt{dhā}$) and so many irregularities. None the less, it has an inner organic coherence that can be found in no other IE language, ancient or modern, despite its gaps, anomalies and confusions.

It is not possible that chancy, haphazard lexemes (derived from original animal sounds but now infused with human meaning) would by a gradual process eventually incline towards and concur on a *dhātu* that encapsulates the basic

meaning and its various nuances. This might happen in a few (say 5 or 10 or 20) cases but certainly not in 700 or even 200 cases. Especially when one considers the variety and the different peculiar features of each class of verbal formation, like the 7th where the class-marker is inserted inside the stem, as in root *yuj* (*yu-na-j-mi* 'I yoke').

I have dealt with this issue in detail in ch 6 of my *Vedic & IE Studies* (Kazanas 2015). Here I add one more short comment. Sanskrit belies all theories claiming that language started in a simple crude form and developed into a more complex morphology. Rather the opposite holds for Sanskrit and its derivative tongues - Bengali, Hindi, Maharashtri, Punjabi etc. None of these preserved the complexity and subtlety of Sanskrit and, most certainly, none developed into a more complex morphology! In all cases we see a simplification.

Language most probably started, as Sanskrit indicates and as RM Dixon held (1997), with "an explosion". I add, it started with its fullest and most complex morphology, like goddess Athena who sprang out of Zeus' temple in full panoply.

Old-Indic/Sanskrit/Vedic is the closest language to the Proto-Indo-European mother tongue. **In fact, in my view, Proto-Vedic, at a very early age and in a form beyond reconstruction, was the Proto-Indo-European tongue.**

7. The aorists in Sanskrit (I have used mainly Vedic, since by the time of finished epics and especially *Mahābhārata*, say in the 2nd cent. bce, the language had changed considerably) show much about the PIE and Language in general. Especially if we make a comparison with the aorists in Greek.

Now, in Greek most verbs take the aorist with **-s-** and the augment - sometimes not the augment. (In Greece it is no longer taught as First Aorist, but simply "aorist".) These verbs do not have a 2nd Aorist also!

Thus *lu-ō* > *é-lu-s-a* 'loosen-ed', *pemp-ō* > *é-pemp-s-a* 'send > sent', *plek-ō* > *é-ple(k+s>)x-a* 'knit-t-ed' etc. As one might expect there are many anomalies like asigmatic *kteino* > *e-ktein-a* 'kill-ed', *men-o* > *e-mein-a* 'remain-ed, stay-ed'; or sandhi changes, as in Sanskrit: *graph-ō* > *e-grap-s-a* 'write > wrote'; or ellipsis as in *peith-ō* > *épei-s-a* 'persuade-d', *blapt-ō* > *é-blap-s-a* 'harmed-'; and so on. Despite their anomalies, all these take the endings of the First Aorist.

But there are a number of verbs that form their aorist with no **-s-** and the imperfect endings, thus giving the 2nd Aorist. However, these verbs do not have a 1st, sigmatic aorist! The most common ones are about 60.

E.g. *ag-ō* 'I lead' > *é-ga-g-on*, where we notice a certain reduplication with **-g-**; then, *gígnom-ai* 'I become' > *e-gen-ómēn* (atmanepada, middle voice) - where there is obvious affinity with Sanskrit *jan-* in its desiderative aspect *ji-jan-iṣ-*. There is accent-shift while the reduplication in the present stem is lost in the aorist. Then *ball-ō* 'strike' > *é-bal-on*; *lanthan-ō* 'err' > *é-lath-on*, *leip-ō* 'be absent' > *é-lip-on*, *peith-ō* 'persuade' > *é-pith-on*; and so on.

This last example *peith-ō* has both aorists – *é-pei-s-a* and *é-pith-on*. A handful more have both, like the common *lég-ō* ‘say’ > *é-le(g>k+s)>x-a* and *eíp-on/eíp-a*, or *trép-ō* ‘turn’ *é-trep-s-a* and *é-trap-on*. **These few examples indicate that perhaps all verbs originally had both aorists.**

In all these verbs we note that they have a stem for present tense and for the 2nd aorist, wherever this occurs, but no dhātu and there is no discernible full system of gradation as in Sanskrit. Some indoeuropeanists do admit that some formations like *títhēmi* (= S *dádhāmi*) ‘I place’ > aor. *é-thē-ka* and *dídōmi* (=S *dádāmi*) ‘I give’ > aor. *é-dō-ka* are “puzzling” (e.g. Ramat & Ramat 2006: 250). There are several more and they are termed “root” aorists; so also, we have forms like *é-bē-n* ‘I went’ < *bain-ō* (=S $\sqrt{gam-}$) ‘I go’; also *é-gnō-n* ‘I knew’ < *gi-gnō-sk-ō* (= S $\sqrt{jñā}$ ‘knowing’ > desiderative *ji-jñā-sa-te* ‘wants to know’); *é-phu-n* < *phu-o-mai* ‘I grow’ (= S $\sqrt{bhū}$).

Philologists generally suggest gradation for *leip-* > *e-lip-* and *le-loip-* (see also *peith-* > *e-pith-* and *pe-poith-*). Perhaps there was. BUT we have aor. *eíp-on* and Homeric *é-eíp-on* which shows a vowel reduplication for aorist (and the variant *eíp-a*) all meaning ‘said’ ! We also have the aor. *eídon* (from **eidō* but) used for the deficient *horá-ō* ‘I see’, which has for its perfect *he-ōra-ka* and also *oida* but more in the sense ‘I know, having known’ exactly as the S *veda*. This *oida* is used also in connection with the verb *gignōsk-ō* ‘I know’, which has its own strange perfect *é-gnō-ka*, a form without reduplication and akin to aorists *é-dō-ka* and *é-thē-ka*.

Consider also the grades (full, o-grade and zero-grade) postulated for the verb *pásch-ō* ‘I grieve, suffer’ and derivatives: *pénthos* ‘grief’ (neut. nom. sing.), *pé-ponth-a* in the perfect and *é-path-on* as aorist. What they don’t say is that there are so many other forms: *páthos* also neut. nom. sing. (= *pénthos*) and the strange future *pei-s-omai* ! And if we take *thnēisk-ō* (Aeloic *thnaísk-ō*, Doric *thnáisk-ō*) ‘I die’, we discover more wonders: *than-at-os* masc ‘death’, perfect *té-thnē-ka* but in epics *té-thnat-on* i.e. syncope (*lopa* in Sanskrit) and zero grade, aor. *é-than-on* and fut. *than-éō* – the weak thematic short **-a-** being maintained throughout! The changes are haphazard!

8. When it comes to the formation of nouns, there the chaos is even more obvious - and no amount of laryngeals **h** can save the day. What are laryngeals? They are sounds unattested in all IE tongues except Hittite, a language much decayed, smothered by surrounding neighbours rich in laryngeals. At one period there were as many as ten (10) of them but now they have been reduced to 2 or 3; I am not sure as I have stopped keeping track. But they are useful in that comparativists insert them wherever they feel an anomaly can be explained. I shall give an example with the laryngeal **H*₂ (or **h*₂ or **ə*₂).

The word for daughter in PIE is supposed to be **dhugH₂ter* (Fortson 2004: 204). This appears as *-a-* in Greek *thug-a-tēr* but as *-i-* in Sanskrit *duh-i-tar*. However, Avestan has neither *-a-* nor *-i-* (noir *H*₂) in its *duγδ-ar* (Hale 2004:748) and/or *duxt-ar* (Fortson 2004: 204). Hittite has no corresponding cognate. (Germanic has *dauht-ar* and Lithuanian *dukt-e*). But where do these words come from? Our indoeuropeanists do not put this question and therefore give no answer. But **in Greek and Germanic and so on they are isolated nouns with no other cognates except forms produced from them as secondary derivatives.** Only Sanskrit has a dhātu and several cognates: \sqrt{duh} (2nd class) with *duh* m/f/n ‘granting’, *doha*, *dohana*, *dohas* – all having to do

with milking and extracting or gaining; in post-vedic texts we find derivatives like *dauhitra* etc. *duhitṛ* itself is formed regularly with the connecting *-i-* and the common suffix *-tṛ* (like *jan-i-tṛ*, *pav-i-tṛ* etc). In those ancient times the daughter was the ‘milkmaid’ – as in Old English the ‘lady’ was the *hlaf-dige* ‘the maker of the loaf [of bread]’. Since the nouns are totally isolated in the other tongues they are of little value in reconstructing the protoform because the languages obviously suffered enormous losses and are not to be trusted!

The PIE word for father is allegedly **pH₂tēr*. And, sure enough, according to the theory Greek has *pa-tēr* and Sanskrit *pi-tar*. Sure enough Hittite does not have it (except a near stem meaning judge). Avestan has *pta* and later *patar* and *pitār*. Latin too has both *pater* and *pitār* while Germanic has *fadar*. But according to the theory Sanskrit should have *phi-tṛ* because the original laryngeal in other instances becomes *-i-* preceded by *-h-* aspirating the preceding consonant. Thus PIE **stH₂to* ‘one who has stood’ becomes in S *sthita* and PIE **pletH₂* > S *prathi-man* ‘width’. However this does not explain why *pi-tṛ* has no aspiration, why the S present is *ti-stha-ti* ‘one stands’ having *-a-* preceded by aspirate *-th-*, while Greek, on the other hand, has present *hi-stē-mi* and the stem *-stē-* in future(s), aorist(s) and perfect(s).

There is another “law” in IE linguistics saying that the changes are uniform in the selfsame phonetic context. Well, as we see, and as philologists write, the law often does not operate. So it is not really a (scientific) law. But enough of this.

9. Let us now examine the formation of nouns from verbs or the other way round in Greek where we shall see many wonders again. I take only the clusters formed with three common verbs - *ché-ō* [*khé(w)-ō* in Fortson, 2004:53] ‘I pour, sacrifice’ and *dé-ō* ‘I bind’ and *pné-ō* ‘I blow, breathe’. The first is cognate with S \sqrt{hu} > *ju-hó-ti* ‘one pours, sacrifices’ (3rd reduplicating class). I take first the Sanskrit family formed from the seedform. This has no root noun; the closer is *hu-t* m.f.n. 2nd member in compounds (e.g. *agní-hut* ‘sacrificing to agni’). Then *hu-tá-* m.f.n. ‘offered, sacrificed to’ (past participle passive used as adjective and neuter noun meaning ‘oblation, sacrifice’, a very common formation and usage); also *hu-ti-* fem as in compound *havír-huti*. Then, from the guṇa (= strong) stem *ho* > *hav* + *a-/ana/aniya/is* = *hava*, *havana*, *havaniya*, *havis* etc all connected with offering and sacrifice; also \sqrt{h} (full-grown) stem *hau* > *hāv* + *aka-/in* > *hāvaka*, *hāvin* etc. Also *ho-tr̥* m. ‘sacrificial priest’, *hotrá* n. ‘office of priest’, *hóma* m. ‘act of sacrifice’ etc; and full *hautrika*, *haumya* etc. (The unaccented words are post-rigvedic.) We see a rich formation with regular use of strong and full grades. Let us now look at Greek.

From verb *ché-ō* are derived, or with that verb are connected, the nouns *cheu-ma* ‘a flow, stream’, *cho-ē* ‘a libation’, *cho-anē* ‘melting pot’, *chu-ma* ‘the fluid’, *chu-sis* ‘shedding’, *chu-tra* ‘earthen pot’. What gradation is there in the vowels *-e-*, *-eu-*, *-o-* and *-u-*? Even if we take *khew-* as the original base we cannot see a vowel gradation. The PIE stem is given as **gheu-* ‘pour’ – to account for Greek and for the Sanskrit reduplication *ju-hu/ho* and other forms in IE.

So let us get help from verb *dé-ō*. With this are connected nouns *de-ma* ‘band’, *de-sis* ‘the binding together’, *de-smos* ‘bond’, (dia-) *dē-ma* ‘ribbon round hair’; but no words with stems *deo-*, *do-*, *du-*.

Is there any help from verb *pne-ō*? With this are connected nouns *pneu-ma* ‘blast/current of air’ and later ‘breath of life, spirit’, *pneu-sis/pno-ē/pnoi-a* ‘blast, breeze, breath’: here we have a new stem *pnoi-* but not *pnu-*. And if we examined verbs *bde-ō*, *ze-ō*, *ke-ō*, *ne-ō*, and *xe-ō*, we would find other surprises. E. g. *plēō* ‘I float’ has stems *pleu-*, *plōē-*, *plōi-*, *plou-*. There is no regular gradation and we find remarkable interchanges of the palatals *-e/ē-* with the labials *-u-* and *-o-*! But indoeuropeanists manage to find PIE forms that, they believe, account for all these Greek developments, not wanting to relinquish their doctrine that (Hittite and) Greek are more reliable languages for the reconstruction of PIE!

10. Conclusion. Now, what does all this indicate?

It indicates that **Greek has retained only remnants of an original rich system much more of which is found in Sanskrit.** Having lost the semantic nuances of all these types of aorist, if there were any, Greek let go of the different forms too. Why keep them? Even the two types that it retained have no real semantic difference. This is quite clear with the few surviving verbs that have both aorists. It might be argued that Greek too innovated, but Greek is too unsystematic, too chaotic, in many other aspects also, as I have indicated in §9, above, and in other publications (e.g. Kazanas 2015:chs 2, 3, 5 and 6). It has traces of the reduplicated aorist. It has the *root* and the *s-* aorists as well. Consequently, these aorists were most probably inherited types from PIE and not innovations, as is thought by mainstream scholars.

Undoubtedly, scholars will continue to argue, as they have been arguing, that the Sanskrit aorists, even the two Greek aorists, are innovations. Perhaps they are. But they were discarded completely in Middle Indian developments and, on the Greek side, in the Koine, in Byzantine and in Modern Greek developments. Why innovate and then discard? It would rather appear that they were original but were shorn off in the passage of time and in other IE tongues, where, again, we discern some traces of root and reduplication!

We have evidences, therefore, that there were originally in PIE at least three or four aorists and, we must conclude, as mentioned earlier, that these types must have had different nuances of meaning – nuances about which we can only speculate but can have no substantial certainty. And PIE must have been a language so much richer that we cannot conceive of. I leave the matter here.

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