

The Vedic Root Variants of the Type *CaC* // *C(C)ā*: Formal Patterns and Transitivity Types

(*Indo-Aryan Evidence for the Indo-European Schwebeablaut and Laryngeal Root Extension*)

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This paper has a long (pre)history. It has come out of my Moscow Candidate degree dissertation (1989), and the very first draft of the paper where I summarized my ideas on the syntactic features of the verbal pairs of the type *CaR* (*CaC*) // *CRā* (*CCā*) was written in the same year. Two years later, I presented a short summary of my results at the conference "Slavic, Indo-European and Nostratic studies", held on the occasion of V.A. Dybo's 60th birthday (see Kulikov 1991; a somewhat extended English version of the brief summary Kulikov 1991 was published as Kulikov 2011). Yet several aspects of the phenomena in question remained unclear to me, which was one of the reasons to repeatedly revisit this issue. In November 1992 I gave a draft version of my paper to Prof. Raimo Anttila when meeting him during Ann Arbor Workshop on Reconstruction at University of Michigan, and in December 1992 I had the pleasure to discuss some ideas formulated in my paper with Raimo during my short stay in Los Angeles. Both reading Raimo's monograph (Anttila 1969), which remained the most comprehensive treatment of the Indo-European Schwebeablaut till the appearance of Kaspars Ozoliņš' PhD dissertation (2015), and our 1992's discussion have strongly encouraged me to continue my research. Needless to say, Raimo's memorial volume seems to me the best occasion to update my paper (the complete version of which was never published) and to present here the results of my study.

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ABSTRACT

The present paper offers a systematic analysis of Vedic root pairs of the type *ay* (i) 'go' // *yā* 'drive' or *tari* (*tī*) 'pass' // *trā* 'protect, rescue' (called 'C-roots' and 'ā-roots' for short), concentrating on their syntactic features and correlations with transitivity oppositions, voice and such voice-related categories as causative. It will be argued that the ā-verbs generally attest much less syntactic flexibility, being employed either mostly/exclusively in intransitive usages, or mostly/exclusively in transitive usages. The corresponding C-verbs typically are syntactically more flexible as far as transitivity features are concerned, cf. *yā* (intransitive) vs. *ay* (i) (intransitive and transitive); *trā* (transitive) vs. *tari* (*tī*) (intransitive and transitive), sometimes even demonstrating labile syntax. I will further argue that the heterogeneous origin of this morphophonological type accounts for the diverse character of the syntax of the corresponding verbs.

Key words: Proto-Indo-European, Vedic, transitivity, Schwebeablaut, laryngeal, root extension, labile verb, causative, passive, alternation, submorph

1. THE C//Ā-ALTERNATION: A SHORT SURVEY

1.1. ā-roots: synchronic patterns and diachronic sources

The Vedic verbal lexicon contains some twenty root pairs of the type *ay* (*i*) 'go' // *yā* 'drive', *gam* 'go' // *gā* 'tread', *tari* (*tī*) 'pass' // *trā* 'protect, rescue', *dhami* // *dhmā* 'blow', *pari* (*pī*) // *prā* 'fill', *bhas* 'devour' // *psā* 'chew', *man* 'think' // *mnā* 'mention', etc. In all such pairs, the second member ends in ā and can be derived, in formal terms, by adding ā to a certain modification (most often, the zero grade) of the first member (*i-ā*, *psā* [= *bhs-ā*], *mn-ā*, etc.). Schematically, the formal relationship between the members of such pairs can be represented as *CaC* // *C(C)ā*, where the final consonant is, most often, a sonant (*i* = *ay*, *tī* = *tari*, etc.), thus: *CaRi* (*/Cī*) // *CRā*. Accordingly, I will hereafter refer to the second members of such pairs as ā-roots (ā-verbs), while the first members, the 'base roots', will be called, for lack of a better term, C-roots (C-verbs). The alternation of this type will be referred to as 'C/ā-alternation'.

The formal relations between the members of such pairs are quite diverse, and so are their origins. Some of them can be treated in terms of the pattern *CaC* // *CCā*, which suggests that the second member of the pair is derived by means of a laryngeal root extension (*-eH- > -a-), cf. *i* - *yā*, *man* - *mnā*. Some others follow the pattern *CR* (*CaRi*) // *CRā* (where *R* stands for a sonant), and thus, at the level of the Indo-European reconstruction, instantiate Schwebeablaut *CeRH-* // *CReH-*, a phenomenon discussed in detail by Raimo Anttila (1969). The members of the schwebeablauting pairs, *CaRi* and *CRā*, are often called, according to the Indo-Europeanist tradition, 'full grade I' (Vollstufe I) and 'full grade II' (Vollstufe II), respectively (see, for instance, Gotō 1987: 45f.). Finally, a few pairs exemplify the type *CaC* (*CaR*) // *Cā*, as in the case of *gam* 'go' // *gā* 'tread' and *dru* (*drav*) // *drā* 'run'; some of these pairs may be formed by etymologically unrelated roots as a result of their semantic and phonological convergence.

No less variety is found in the treatment of the relationship between the members of such pairs in the traditional Sanskrit (Vedic) scholarship. Some of them are taken as root variants distributed between the formations of one single paradigm (individual verbal system, in terms of Jamison 1983), as in the case of *dhami* // *dhmā* 'blow' (see below, Section 3, sub voce). The emergence of two different full grades is mostly explained by several secondary developments and paradigmatic reanalyses. In some other cases, the members of such pairs are more commonly treated as distinct lexical units (resp. roots), which, nevertheless, historically belong together as etymologically related roots (see below on *pari* (*pī*) // *prā* 'fill'). Finally, the members of some pairs are never treated as representing one synchronic unit, while their historical (etymological) connections vary from clear and undoubted (cf. *bhas* 'devour' // *psā* 'chew') to questionable or implausible (cf. below on *gam* 'go' // *gā* 'tread' and *kan* // *kā* 'be pleased, enjoy').

Altogether, the synchronic status of the C//ā-alternation within the Vedic verbal system is unclear. On the one hand, it is beyond any doubt that there must be some sort of relationship between such roots as *i* and *yā* or *bhas* and *psā*. No Sanskritist or Indo-Europeanist will deny that the members of such pairs are related rather than result from accidental formal coincidence (convergence). There are good reasons to believe that, synchronically, the members of such pairs as *pari* (*pī*) // *prā*, *dham* // *dhmā* or *pay(i)* (*pi* [*pī?*]) // *pyā* were considered as belonging together, too, even in spite of the somewhat unclear and non-productive character of relation between them, thus resembling the English type *foot* : *feet*, *tooth* : *teeth*, rather than *near* : *next* (cf. Old English *nēah* : *nēarra* : *nēahsta*) or *old* : *elder*.

On the other hand, no Sanskrit (Vedic) grammar deals with the pairs of the type *tari* (*tī*) // *trā* in the chapter on verbal derivation, treating the second members (of the type *trā* etc.) as separate lexical units.

There are several reasons for this state of affairs. On the one hand, there are cases such as *dhami* // *dhmā* 'blow', where the genetic and synchronic relationship between the members of a pair is beyond any doubt, and the two members appear to be (nearly) exact synonyms, so that it is unclear if any functional value whatsoever might be ascribed to the C//ā-alternation. On the other hand, in some other pairs, such

as *tari* (*t̪r̪*) 'pass, overcome, carry across' // *trā* 'protect, rescue' or *mari* (*m̪r̪*) 'crush' // *mlā* 'wither, relax', the formal and/or semantic relation between the members is blurred, which prevents us from considering them as forming a synchronic unity; such pairs rather belong to the type *near* : *next*. Thus, ironically enough, the members of the pairs like *dhami* // *dhmā* or *pari* (*p̪r̪*) // *prā* are (semantically) too similar to be treated as representing a morphological derivation, whereas the members of the pairs like *tari* (*t̪r̪*) // *trā* or *mari* (*m̪r̪*) // *mlā* are too different to be regarded as synchronically (derivationally) related.

Last but not least, there is yet another reason which has contributed to the 'bad reputation' of the C//ā-alternation. It seems that pairs of the type *pari* (*p̪r̪*) // *prā* and *tari* (*t̪r̪*) // *trā*, however transparent their synchronic relations might appear, bear a heavy burden of diachronic "sins". Specifically, most of these pairs are associated with two quite ill-famed phenomena of the proto-language. One is the Schwebeablaut, the alternation of the type *CeRC-* // *CRēC-*, observed in such examples as **perk-* (cf. OHG. *fergōn* 'to ask') ~ **prek-* (Got. *fraihnan* id.); see Anttila 1969: 150–151 and Ozolinš 2015: 29. Here must belong, in particular, such pairs as *t̪r̪* // *tari* (cf. class I pres. *tárati* < **terH-e-ti*) // *trā* (cf. class IV pres. *trāyate* < **treH-*). Anttila's 1969 monograph removes the Schwebeablaut from the proto-language, explaining such pairs as due to several secondary developments. Yet, much remains unclear about this morphological phenomenon, and, in any case, we are hardly able to ascribe any functional value to this alternation.

Another – and even more vexed – problem directly related to our C//ā-pairs is the highly controversial issue of the Proto-Indo-European laryngeal root extension and/or suffix *-ē-. As is well known, the final consonants in such Indo-European roots as **trep-* (OCS *trepetъ* 'trembling'), **tres-* (Skt. *trasati* 'trembles') and **trem-* (Gr. *τρέψω* 'tremble'), or **dreu-* (Skt. *drávati* 'runs'), **dreH-* (cf. Skt. impv. *drātu*) and **drem-* (Gr. *δραμεῖν* 'run'), might be treated, at least from the formal point of view, as suffixes. However, given that the meaning or function of these final elements is unclear, Indo-European scholarship sticks to more neutral terms, such as 'root enlargements', 'root extensions', 'Wurzeldeterminativa' or 'Wurzelerweiterungen'. Attempts to determine the function of these elements have largely failed. Since the monograph Persson (1912), which remains the most fundamental treatment of the issue till now, no special study has been devoted to this phenomenon.

Thus, pairs of the type *ay* (*i*) // *yā* or *dah* // *kṣā* can only be taken as related if the second members are treated as comprising the morphological element (suffix? submorph? root extension?) -ā- (< PIE *-ē- or *-eH-). Such a suffix, presumably with an intransitivizing function and/or stative meaning, is posited in many Indo-European handbooks, but Vedic roots such as *yā* or *kṣā* are (usually) treated separately from the -ē-verbs in Indo-European scholarship of the last century. Accordingly, we are forced to posit a laryngeal extension (*-(e)H-) at the end of these roots. This analysis is adopted, in particular, by Anttila (1969: 59–63) and Mayrhofer (EWAia, sub voce) for *kṣā* (EWAia I, 430), *psā* (EWAia II, 198) and *yā* (EWAia II, 407).

Obviously, the analysis of such roots as *kṣā*, *psā* and *yā* as containing the reflexes of the laryngeal root extensions (= suffix *-eH-?) leaves open the question on their function of this element and, more generally, on the semantic difference between them and the corresponding non-extended roots, i.e. *dah*, *bhas* and *ay* (*i*).

Likewise, the functional value of the Old Indo-Aryan C//ā-alternation altogether remains an enigma, and the very phenomenon is largely disregarded by Sanskritists. Yet, there is a feature that makes a research of the C//ā-alternation in Vedic a particularly interesting and important task. This alternation appears to be better represented in Indo-Iranian (and especially in Indo-Aryan) than in most other Indo-European branches. This may point to the fact that the origin and expansion of this phenomenon must represent an Indo-Iranian (or even an Indo-Aryan) innovation.

Accordingly, in what follows, I will make no attempt to investigate or reconstruct at full scale the Proto-Indo-European origins of the C//ā-alternation. Rather I will concentrate on the systematic treatment of the features of the members of the Vedic C//ā-pairs, above all in a synchronic perspective.

1.2. Remarks on the morphophonological features of ā-roots

Before I proceed to the analysis of the C- and ā-verbs, a few remarks on their morphophonological features are in order.

Obviously, for our purposes we need to identify any relevant formation as belonging to the system of the C- or ā-root. Generally, this task poses no problem, cf. infinitives *étave* and *tar(i)tam* (built on the C-roots *ay* and *tari*), as opposed to *yātave* and *trātum* (ā-roots *yā* and *trā*). Problems are only posed by the zero grade forms of the schwebeablauting roots, such as *tari* (*t̪ṛ*) // *trā* or *pari* (*p̪ṛ*) // *prā*. From the formal point of view, such formations as verbal adjectives *tīrṇā-* and *pūrṇā-* might belong to either of the two variants, i.e. either to the C-root *CaRi* / *CR̪* (< **CRH-* / **CeRH-*), or to the ā-root *CaRi* (*CR̪*) / *CRā* (< **CaRH-* (**CRH-*) / **CReH-*), that is, in our case, either to *pari/p̪ṛ*, *tari/t̪ṛ* or to *prā*, *trā*. This problem does not actually arise in the case of pairs such as *tari/t̪ṛ* 'pass, carry across' // *trā* 'protect, rescue', where the C- and ā-roots clearly differ in meaning, cf. *tīrṇā-* 'passed, crossed' (≠ 'protected, rescued'). The zero grade formations made from members of C//ā-pairs with (nearly) no semantic difference may pose difficulties, however: for the correct identification/attribution of such forms we need additional criteria. There are some indications that all zero grade forms should be grouped with the C-roots. Specifically, many ā-roots such as *trā* and *prā* tend to generalize full grade (i.e. ā), using it also in those formations where we expect zero grade. Thus, we find ā-grade in verbal adjectives (past perfect participles) in *-ta-na*, cf. *trāta-*, *dhamāta-*, *prāta-*, as opposed to the adjectives *sthitā-* and *dhitā-*, made from the 'independent' (= non-schwebeablauting) roots *sthā* 'stand' and *dhā* 'suck'. In other words, the ā-roots such as *trā*, *dhamā* and *prā* belong to the 'non-alternating' morphophonological type in terms of Zaliznjak (1975: 68ff.). This morphophonological peculiarity of the ā-roots has not of course remained unnoticed. Sanskrit grammars and dictionaries usually do not connect formations such as *pūrṇā-*, *tīrṇā-*, pres. *prṇāti*, *tīrāti* etc. with ā-roots. I will basically follow this tradition, including zero grade formations into the verbal systems of the corresponding C-roots, unless there are clear semantic indications for the opposite analysis (as in the case of *yā* 'drive' - pres. *īyate*).

2. SYNTACTIC FEATURES OF THE C//Ā-ROOTS: A PRELIMINARY HYPOTHESIS

To begin with, let us have a closer look at the features of two C//ā-pairs.

(i) *pari* (*p̪ṛ*) // *prā* 'fill'

The roots *pari* (*p̪ṛ*) and *prā* 'fill' are synonymous and occur in similar constructions, as, for instance, in (1a, b):

(1) a. (RV 8.64.4c)

óbhé prṇāsi ródasī

'You fill both worlds.'

b. (RV 9.97.38)

óbhé aprā ródasī

'You have filled both worlds.'

There is, however, a remarkable difference between their properties that seems to have escaped scholarly attention. The verbal system of *pari* (*p̪ṛ*) contains both intransitive and transitive formations; both groups are well-attested from early Vedic (= the language of the R̪gveda and Atharvaveda) onwards, cf. intransitive constructions as in (2-3) and transitive-causative usages as in (1a):

(2) (RV 1.51.10cd)

ā tvā vātasya nr̪maṇo manoyúja' ā pūryamāṇam avahan abhí śrávah

'[The horses] of Vāta, yoked with thought, (wind) conveyed you, O one who has manly thought, (sc. Indra) who were growing full [with soma and strength], to glory.'

(3) (RV 3.50.1c)

óruvyácdāḥ prṇatām ebhír ánnaiḥ

'Let the one who is able to contain much fill himself with this food.'

By contrast, *prā* is mostly employed in transitive constructions, as in (1b) and (4):

(4) (RV 1.52.13)

viśvam ā prā antárikṣam mahitvā

'You filled the whole space [between heaven and earth] with your greatness.'

The intransitive class IV present *pūryate* is likely to belong to the C-root *pari* (*prī*), and there is no present passive ***prāyáte*. The only attestation of an intransitive (passive?) form built on this root, the medio-passive i-aorist *-aprāyi* (with the preverb *ā*), appears at the end of the early Vedic period, in a late stanza (5), for which see Kümmel 1996: 72f.; Griffiths 2009: 213f.; Kulikov 2012 [2014]: 124-125:

(5) (RVKh. 4.2.1 = AVŚ 19.47.1ab = AVP 6.20.1ab = VS 34.32ab)

ā rātri pārthivam rájaḥ ' pitúr aprāyi dhāmabhiḥ

'O night, the earthly space has been filled / has become full with the establishments of the father.'

(ii) *ay (i)* 'go; send, set in motion' // *yā* 'drive, speed'

As in the case of *pari* (*prī*) // *prā*, the ā-root *yā* neatly differs from its C-counterpart *ay (i)* in syntactic features. For the root *ay (i)*, both intransitive and transitive formations are well-attested from the early Vedic period onwards. Intransitive derivatives, meaning 'go', are represented, in particular, by the class II present (= athematic root present) *éti*, as in (6). The transitive-causative counterpart of *éti* is the class V present *inóti* and its thematicization *invati*, meaning 'send, impel, set in motion', as in (7):

(6) (RV 1.191.8c)

út purástāt sūrya eti

'The sun rises (lit. goes up) in the East.'

(7) (RV 4.53.5c)

tisró dívaḥ prthivīs tisrá invati

'He sets in motion three heavens (and) three earths.'

By contrast, the ā-root *yā* is basically intransitive (cf. pres. *yāti*, *iyate* 'drives, speeds', etc.). The -aya-causative *yāpayati* first appears in the Brāhmaṇas.

In spite of the difference between the syntactic types of the ā-roots in the two above-discussed cases, there is a remarkable syntactic feature shared by the pairs *pari* (*prī*) // *prā* and *ay (i)* // *yā*. While the C-verbs are well-attested in both intransitive and transitive (transitive-causative) usages, usually from early Vedic onwards, their ā-counterparts show a noteworthy limitation of their 'syntactic flexibility', restricting their usages either to intransitive or to transitive only. The former, more flexible, type of syntactic behaviour, exemplified by such C-verbs as *pari* (*prī*) and *ay (i)*, will hereafter be called 'diffuse', for the lack of a better term. The most typical representatives of the diffuse type are those verbs some forms of which can be employed both intransitively and transitively, thus showing the labile syntax. Thus, for instance, 3pl.pf.act. *vāvṛdhūḥ* of the verb *vardh* (*vṛdh*) 'grow, increase' occurs 6 times in intransitive usages (as in (8a)) and 14 times in transitive-causative usages (as in (8b)) in the Ṛgveda (see Kümmel 2000: 469-473 for details):

(8) a. (RV 2.34.13b)

rudrā rtásya sádaneṣu vāvṛdhūḥ

'The Rudras have grown in the residences of the truth.'

b. (RV 8.6.35a)

índram ukthāni vāvṛdhūḥ

'The hymns have made Indra bigger.'

Apparently, both ā-verbs under discussion, *yā* and *prā*, belong to the non-diffuse syntactic type: their forms can only be employed intransitively or transitively, while the opposite type of usage (transitive or intransitive, respectively) is either exceptional and/or only attested in late texts, or does not occur entirely.

Thus, the clue to the functional value of the C//ā-alternation is likely to be found in the domain of syntactic features and transitivity of the verbs in question.

In what follows, I will scrutinize the C//ā-pairs for their syntax, checking my assumption against the evidence available from Vedic.

3. THE VEDIC C//Ā-VERBS AND THEIR SYNTAX

In what follows, I will briefly discuss almost twenty root pairs exemplifying the C//ā-alternation.

av (u) // vā 'weave'

The ā-root *vā* is of clearly secondary nature, being created alongside the anīt-root *av (u)* (see Hoffmann 1974: 23 [= Hoffmann, Aufs. 335], fn. 17; Mayrhofer EWAia I, 275f.; II, 538). The derivatives of both root variants are attested in the same type of transitive constructions. There are only two forms that can be ascribed to *vā*: 1) the infinitive *vātave* at AVŚ 10.7.44 (corresponding to the earlier form *ótave* in the parallel passage RV 10.130.2) and 2) the future participle (RV 7.33.12), cf.

(9) (AVŚ 10.7.44)

imé mayūkhā úpa tastabhus dívam̄ 'sāmāni cakrus tásarāṇi vātave
'These pegs have supported the sky; they have made the chants shuttles, for weaving.'

The infinitive made from the main root variant *av (u)* attested in the parallel Rgvedic verse (10.130.2cd) clearly points to the secondary character of the Atharvic ā-infinitive:

(10) (RV 10.130.2cd)

imé mayūkhā úpa sedur ū sádah̄ 'sāmāni cakrus tásarāṇiy ótave
'Here are their pegs; they [= the gods?] sat down upon their seat and made the sāman-chants the shuttles for weaving.'

kani // kā 'be pleased, enjoy'

The verb *kani*, attested in the perfect (1sg.act. *cākana*, 2-3sg.inj.act. *cākán*, etc.) as well as in a few sigmatic aorists, is construed either with the accusative (as in (11)), or, more often, with oblique cases (locative or genitive) (as in (12)), thus being 'intransitive/transitive' in terms of Jamison (1983: 31-39); see Kümmel 2000: 130-133 for details.

(11) (RV 2.11.13c)

śuṣmíntamam̄ yám̄ cākánāma deva
'[Give us] the strongest [treasure], which we will enjoy, O god.'

(12) (RV 8.31.1c)

brahméd índrasya cākanat
'That priest will be pleased with Indra.'

The only attested perfect middle form, 3pl.subj. *cākánanta*, appears in intransitive constructions, meaning 'be pleasant', as in (13):

(13) (RV 1.169.4c)

stútaś ca yás te cākánanta vāyóḥ
'... and the praises [addressed to] Vāyu, which should also be pleasant for you (sc. Indra) ...'

By contrast, the forms of the verb *kā* (middle perfect *cake* and the Rgvedic hapax pres.part. *kāyamāna*-) are employed in transitive constructions, meaning 'yearn, enjoy', as in (14-15):

(14) (RV 1.25.19c)

tvām avasyúr ā cake

'Looking for help, I yearn after you.'

(15) (RV 3.9.2ab)

kāyamāno vanā tvām ' yán mātṛr ájagann apáḥ

'When you (sc. Agni), longing for wood, have gone to your mothers, the waters...'

In formal terms, the class IV pres. stem *kāya*- is ambiguous. It may be based on the root *kā* < *keh₂, thus, belonging with the middle perfect *cake* (thus Joachim 1978: 67f.; Mayrhofer, EWAia I, 334; Kümmel 2000: 142f.; LIV 343). Alternatively, *kāya*- might be connected with the set root *kani* 'rejoice', as its class IV present (cf. *jani* - *jáyate*). However, as Narten (1964: 94f.) points out, the individual verbal systems of these two roots, as well as their syntactic and semantics can be neatly distinguished. In contrast to *kani*, which only builds active forms (perfect *cākán*- and sigmatic aorist *akāniṣ*-) and is employed intransitively, *kā* forms the middle perfect (*ā*) *cake*, *cakāná*, which is mostly construed with an accusative. This favours the analysis of the hapax *kāyamāna*- as a middle participle of the -ya-present built on the root *kā*, connected with the accusative *vanā*. Accordingly, the construction in the pāda should be interpreted transitively ('longing for wood').

These two roots are usually considered as genetically unrelated in the literature (see Mayrhofer, EWAia I, 296f., 334 and LIV 343, 352 on the roots *kani* 'Gefallen an etwas finden, sich freuen' and *kā* 'begehrn, gern haben'). However, in view of the semantic affinity of these two meanings, possible (secondary) connections between them should not be ruled out.

***kāś* 'become visible, appear (?)'; *see* // *kśā (khyā)* 'see, consider, reckon'**

The root *kāś* probably goes back to PIE *kuek- (cf. Gr. τέκμωρ, τέκμαρ 'sign, feature'); the vowel length is likely to be secondary (see Gotō 1987: 115, with fn. 102; Mayrhofer, EWAia I, 344f.; LIV 383ff.). In early Vedic, this verb is only attested in the active intensive -cākaśī etc. (RV+) 'consider, see, look at' (see Schaefer 1994: 102-104; Roesler 1997: 199-204) and causative *sām kāśayāmi* (AV 14.2.12), which probably means 'make visible' (see Jamison 1983: 125; for a detailed discussion of the relevant passage, see also Schaefer 1994: 103f., fn. 264). The intransitive class I present -kāśa-te 'become visible, appear' occurs from the Brāhmaṇas onwards (ŚB, Jaiminīya-Upaniṣad-Brāhmaṇa). In spite of the rather late attestation of the intransitive usages, there are some indirect reasons for determining the original meaning of the root as 'become visible, appear; consider, see, look at'; as Jamison (1983: 125) suggests, *kāś* may belong to the same syntactic type as *dars* (*dṛś*), cf. med. *dadrśé* 'appears' ~ act. *darśayati* 'reveals'. Correspondingly, intransitive usages can be tentatively reconstructed for early Vedic (cf. also the historically related root *caks* 'look at, appear', on which see Roesler 1997: 205-209; LIV 383-385).

The ā-verb *kśā (khyā)* 'consider, count' is fundamentally transitive. The present -yā-passives appear from the Brāhmaṇas onwards, but in early Vedic (RV) we find the middle thematic aorist (3sg. -akhyata) attested in a passive construction (for a detailed analysis of the passage, see Kulikov 2008: 251-252):

(16) (RV 9.61.7c)

sám ādityébhir akhyata

'[Soma] has appeared together (and, by virtue of that, has become associated) with the Ādityas.'

The Iranian evidence (Cheung 2007: 245-246) supports the secondary character of the ā-root as well as the antiquity of the intransitive usage.

***gam* 'go' // *gā* 'go, tread'**

In spite of the semantic and phonological similarity of these roots, their historical relationship is far from clear. In the early scholarship, *gam* and *gā* are often connected (cf., e.g., Benfey 1837: Sp. 927 [= Kl. Schr. I/2, 29]; Reichelt 1904: 40; Persson 1912: 572ff.), and this view is adopted by Mayrhofer (EWAia I, 466: "Mit GAM vermutlich wurzelverwandt ... ist GĀ1"; see also EWAia I, 482). **gue-* could not be a possible root structure in Proto-Indo-European, and thus PIE **guem-* (> Ved. *gam*) and **gueh₂-* (> Ved. *gā*) cannot be directly related in terms of root extensions. Nevertheless, the semantic affinity between the members of this pair could be supported by the model of the semantically similar pair *dram* // *drā* 'run' (see below, s.v.), which may be associated with *gam* // *gā* as 'rime-words' ('Reimbildungen').

Whatever the historical relations of these two roots in Proto-Indo-European, their syntactic behaviour is amazingly similar to that of most other C//ā-pairs. The C-verb *gam* is fundamentally intransitive, but its present causative *gāmāyati* is well-attested from early Vedic onwards (3x in the RV); the causative aorist *ajīgamat* first appears in the Atharvaveda (see Jamison 1983: 172). By contrast, causative of the intransitive *gā* (**gāpáyati*) is lacking.

***jani* 'be born; beget, generate' // *jñā* 'know'**

The attempts to connect these two roots semantically and historically proved unsuccessful (see Anttila 1969: 130). Yet, this pair is worthy of mention in our discussion, foremost because of the fact that the syntactic behaviour of its members perfectly fits the pattern of the type *pari* (*prī*) // *prā*. The verb *jani*, well attested both in intransitive (pres. *jāya-te*, pf. *jajñé*, medio-pass. aorist *ájani*, sigmatic aorist *ájaniṣṭa*) and transitive-causative (pres. *jána-ti*, *janáya-ti*, pf. *jajña*, etc.) usages can serve as a parade example of the diffuse syntactic type. By contrast, *jñā* is fundamentally transitive; passive usages are only attested for the present passive *jñāyá-te* 'be known' (RV 4.51.6 +; see Kulikov 2012: 92-95).

***tan* // *tā* 'stretch, extend'**

The syntactic type of *tan* 'stretch' can be determined as diffuse. There is a remarkable correlation between tenses and syntactic patterns attested for this verb (for details, see Kulikov 1999: 26ff.). On the one hand, forms of the present system most often occur in transitive-causative usages, as in (17-18):

(17) (RV 10.125.6a)
ahám rudrāya dhánur ā tanomi
'I string his bow for Rudra.'

(18) (RV 4.52.7)
ā dyām tanośi raśmíbhir ... úṣaḥ ...
'You string the sky with your rays, ... O Uṣas ...'

On the other hand, perfect forms are more common in intransitive constructions, as in (19), although transitive-causative usages are possible, too, cf. (20):

(19) (RV 6.12.1d)
dūrāt sūryo ná śocíṣā tatāna
'From afar [Agni] has extended, like the sun, with [his] flame.'

(20) (RV 10.80.4c)
agnír diví havyám ā tatāna
'Agni has stretched the oblation up to heaven.'

The root variant *tā* is never treated as a separate root. The origin of this secondary root is unclear. It only appears in the Ḍgvedic hapax 3sg.pf.med. *tate* (RV 1.83.5) 'has extended' (transitive, cf. (21)) and present passive *tāyáte* (RV+) 'is stretched, extended'.

(21) (RV 1.83.5a)

yajñáir átharvā prathamáḥ pathás tate

'The Atharvan has first stretched the paths by means of sacrifices.'

In late Vedic, we also find the medio-passive *-i*-aorist *prātāyi* (hapax, attested in the AĀ). It must be conditioned by the adjacent *-ya*-present (probably passive) *prātāyata*. Both forms are employed for an "etymological explanation" of *prātar* 'early in the morning':

(22) (AĀ 2.1.5)

taṁ devāḥ prāṇayanta. sa praṇītaḥ prātāyata. prātāyītiṁ3. tat prātar abhavat

'The gods led him (sc. the *prāṇa* = the out-breathing breath) forward / to the east. Having been led forward / to the east, he was extended [forth / further to the east]. [The gods said:] He has extended [forth / further to the east]. Then it became early in the morning.'

(i.e. *prātar* is called thus because it has been extended [*prātāyi*])

Thus, with the exception of one isolated perfect form (transitive), the secondary root *tā* only appears in two intransitive (passive) formations.

***tari (tṛ)* 'pass, carry across' // *trā* 'protect, rescue'**

The C-verb *tari (tṛ)* is well-attested both in intransitive constructions (e.g. class I pres. *tára-ti* 'pass', cf. (23)), and in transitive-causative constructions (e.g. class VI pres. *tirá-ti* 'make pass', with the preverb *prá* typically meaning 'make someone's life(time) safely pass over [obstacles and dangers] and reach its natural end', cf. (24)), thus, being a typical example of a diffuse verb:

(23) (RV 6.64.4b)

avātē apás tarasi svabhāno

'In the windless [atmosphere] you (sc. Uṣas) cross the waters, O self-luminous one.'

(24) (RV 1.89.2d)

devā na ḍyuḥ prá tirantu jīvásē

'Let the gods make our lifetime [safely] reach [its natural end], for life.'

By contrast, the ā-root *trā* 'protect, rescue', probably based on the transitive-causative usage of the C-root *tari (tṛ)* ('protect, rescue' ≈ 'carry across' = 'make pass'), is only attested in transitive constructions, for instance, in the class IV present formation *trāyate* 'protects, rescues', cf.:

(25) (RV 7.16.8c)

tāṁs trāyasva sahasya druhó nidáḥ

'Protect them from deceit, from blame, O powerful one (= Agni).'

***dah* // *kṣā* 'burn'**

The verb *dah* 'burn' is fundamentally transitive. However, the intransitive present *dahya-te*, attested both with root (non-passive) and suffix (passive) accentuation, becomes quite common at the end of the early Vedic period, from the Atharvaveda onwards. Importantly, for many of its occurrences both passive ('X is burned') and non-passive intransitive, or anticausative ('X burns, is on fire') interpretations are possible, as in (26-27) (for details, see Kulikov 2012: 390-396):

(26) (AVŚ 12.4.3)

vāṇḍáyā dahyante grhāḥ

'By [giving] a crippled [cow] the houses [of the giver] are burned / burn down.' (unpleasant consequences of giving defective cows to the Brahmans)

(27) (SB 14.2.2.54)

sá yád vānaspatyáḥ syāt, prá dahyeta; yád dhiraṇmáyah syāt, prá līyeta

'If it (sc. the vessel) were made of wood, it would burn; if [it] were made of gold, it would melt.'

Thus, by the end of the early Vedic period, *dah* behaves as a diffuse, rather than as a predominantly transitive, verb. See also rich evidence for the intransitive (diffuse or even labile) syntax of the Iranian cognates (Proto-Ir. *daj- 'burn': Av. *daž-* id. etc.) in Cheung 2007: 53-54.

By contrast, the ā-root *kṣā* (< *dhgūh-eh₁-; see Mayrhofer EWAia I, 430; LIV 133f.), attested, for instance, in the class IV present *kṣāya-ti* (AVP+; see Kulikov 2012: 532-533), is fundamentally intransitive. Causative formations of *kṣā* appear from the late Ṛgveda onwards (injunctive of the causative aorist *cikṣipas* RV 10.16.1; pres.caus. *kṣāpáya-ti* AV+; see Jamison 1983: 140).

drav (dru) // drā 'run'

The synonymous roots *drav* (*dru*) and *drā* are clearly related and, as some scholars suggested, could even form one suppletive paradigm, with the class I present of *dru* (*dráva-ti*), on the one hand, and the root and sigmatic aorist of *drā* (3sg.subj.act. *drāsat* etc.), on the other hand; see Gotō 1987: 178; Kümmel 2000: 254; LIV 129, but see serious criticism against this assumption in Casaretto 2002: 45-49. The syntactic relationships between the formations derived from the roots of this pair essentially reproduce the pattern of *gam* // *gā*. The C-root *dru* is mostly employed intransitively, but its causative *drāváyati* is twice attested in the RV (on its antiquity, see Jamison 1983: 114). The causative of *drā*, *drāpayati*, first appears in middle Vedic, in the Śatapatha-Brāhmaṇa (9.1.1.24).

dhami // dhmā 'blow, inflate'

The members of this pair are usually taken as root variants, not as separate roots. The majority of formations built on the C-variant (foremost, the class I present *dháma-ti*, for which see Gotō 1987: 180f.) are employed transitively, except for the present passive *dhamyate*, a Vedic hapax, attested in the late RV:

(28) (RV 10.135.7c)

iyám asya dhamyate nālīḥ

'This flute of his (sc. Yama) is (being) blown (by Yama).'

The ā-variant is scarcely attested in early Vedic. Its syntactic type can tentatively be determined as (predominantly) transitive. The only attested finite form is the sigmatic aorist *-adhmāsam* found in the Paippalāda recension of the Atharvaveda (see LIV 153):

(29) (AVP 1.59.6ab)

prāham glāvam adhmāsam ' nir aham glāvam adhmāsam

'I blew away the swelling, I blew out the swelling.'

Apart from this form, we only find non-finite derivatives: 1) verbal adjective *dhmātā-* 'blown' (RV 7.89.2); 2) agent noun *dhmātar-* 'the one who blows; wind player'; and 3) action noun *dhmātár-* 'fan; blower' (both in stanza RV 5.9.5). While the passive built on the C-variant, *dhamyate*, is a Ṛgvedic hapax, present passive *dhmāyá-te* first appears in late Vedic (JB, Up.; see Kulikov 2012: 125-130).

dhayi (dhī) // dhyā 'consider, think (about), reflect'

The verb *dhayi* (*dhī*) mainly appears in the perfect *dīdhaya* (also pluperfect *ádīdhēt* and reduplicated present created on the basis of the perfect subjunctive), well-attested in early Vedic and employed in transitive usages; for a detailed discussion of the attested formations and their semantics, see Kümmel 2000: 257-261. The ā-root *dhyā* appears, in particular, in the class IV present *dhyāya-ti* 'think of, meditate, contemplate' (construed with the accusative), which first occurs in late early Vedic (AVP 9.21.1-12), but becomes common only in middle Vedic (YVp+); for its attestations and genesis, see Kulikov 2012: 565-568.

***pay(i) (pi)* // *pyā* 'swell'**

The C-verb *pay(i) (pi)* [*pay (pi)?*] is well-attested both in intransitive and transitive-causative usages; see, in particular, Thieme 1929: 40–41, 43, 49. The syntax of the thematic nasal present *pínya-ti/te* depends on the diathesis: middle forms typically occur in intransitive constructions ('swell'), as in (30), while active forms are transitive-causative ('make swell'), as in (31):

(30) (RV 9.64.8c)

samudráḥ soma pínvase

'You swell [like] the ocean, O Soma.'

(31) (RV 1.64.5d)

bhūmim pínvanti páyasā párijrayah

'[The Maruts] running around make the earth swell with milk.'

Cf. also the labile (albeit predominantly intransitive) syntax of the active perfect (see Kümmel 2000: 298–304):

(32) (RV 1.181.8c)

vṛṣā vām meghó vṛṣanā pīpāya

'O (two) bulls, your raining cloud has swollen.'

(33) (RV 1.116.22)

staryām pipyathur gām

'You (two) have filled [= made swell] a dry cow.'

By contrast, the ā-verb *pyā* 'swell' (-ya-present *-pyāya-te* etc.) only occurs in intransitive constructions in the RV, as in (34); the -áya-causative *pyāyāyati* first appears in the Atharvaveda (see Jamison 1983: 149):

(34) (RV 10.85.5)

yát tvā deva prapíbanti ' tátā ā pyāyase púnaḥ

'When one drinks you off, O god, then you (sc. Soma) swell again.'

***bhan* 'speak' // *bhā* 'shine'**

The roots *bhan* 'speak' and *bhā* 'shine' (cf. also *bhāṣ* 'speak' and *bhāṣ* 'shine') are usually taken as etymologically related in the Indo-European scholarship, in spite of a considerable semantic distance between their meanings. The syntactic features of the ā-verb *bhā* resemble much those of *gā*, the ā-member of the formally similar pair *gam* // *gā* (see above). The only early Vedic (RV+) formation of *bhā*, root present *bhāti*, is employed intransitively, as in (35); causatives of this root are lacking in Sanskrit.

(35) (RV 6.48.3ab)

vṛṣā hy ḥgne ajáro ' mahān vibhāsy arcíṣā

'Since you, O Agni, being a great unaging bull, shine with your flame ...'

By contrast, the verb *bhan*, in spite of its rather scant attestation in Vedic (which amounts to four occurrences of the class I present *bhána-ti/te* in the Ṛgveda), exhibits a much greater variety of syntactic patterns. The active forms (3sg.act. *bhánati* at RV 6.11.13 and 3pl.act. *bhananti* at RV 4.18.6) are employed transitively, as in (36); the middle form *bhananta* appears in the reflexive (RV 7.18.7; cf. (37)) and reciprocal (RV 4.18.7) usages; see Gotō 1987: 222f., with fn. 472–473.

(36) (RV 4.18.6c)

etā ví pṛchā kím idám bhananti

'Ask them, what do they tell here.' (or: 'why do they tell this')

(37) (RV 7.18.7ab)

ā pakthāso bhalānāso bhanantālināso viṣāṇīnaḥ śivāsaḥ

'The Pakthas, Bhalānas, Alinas, Viṣāṇins called themselves [Indra's] good [friends].'

***bhas* 'devour' // *psā* 'chew'**

Both the C-verb *bhas* 'devour' (RV+) and the etymologically related ā-verb *psā* (< *bhs-ā-; see Mayrhofer EWAia II, 198, 257 and LIV 82, 98) 'chew' (AV+) are fundamentally transitive; passives are unattested.

***man* 'think, believe; respect' // *mnā* 'mention'**

The verb *man* is attested in transitive usages of two types:

(i) The class IV present *mánya-te* and the sigmatic aorist (*ámāṇsta*, *māṇsi* etc.) mostly occur connected with the direct speech construction, meaning 'X [nom.] thinks (that) P' or with two accusatives ('X [NOM] considers/believes Y [ACC] to be Z [ACC]'), as in (38):

(38) (RV 5.9.1c)

mánye tvā jātāvedasam

'I believe you to be *Jātavedas*.'

(ii) The present *manuté* (class VIII in the traditional classification, originally, a -nu-present: **mṇ-nu-tai*) is typically construed with the accusative or genitive of the deity or his/her aspects, meaning 'respect, remember with respect'. The root aorist (*ámata*, *ámanmahi* etc.) is most commonly employed in this latter usage ('respect' etc.), although type (i) usages are possible as well.

The -ya-present *mánya-te* is also common in intransitive (reflexive) usages, meaning 'X [NOM] considers/believes him-/herself to be Z [NOM]', as in (39):

(39) (RV 8.48.6)

áthā hí te máda ā soma mánye revāṁ iva

'... and because of now being intoxicated by you, O Soma, I consider myself as rich.'

The secondary ā-verb *mnā*, traditionally regarded as an extension of *man* (see, e.g., Mayrhofer, EWAia II, 385; LIV 447), is attested from the middle/late Vedic period onwards (*ā-mnāta*- Br., *ā-mnāyá-* Ār.+, etc.; see Gotō 1987: 239; 1997: 1025). This verb is fundamentally transitive; its present passive first appears in the (post-Vedic) Bhāradvāja-Śrautasūtra (3pl. *ā-mnāyante*).

***mari* (*mṛ*) 'crush' // *mlā* 'wither, wilt'**

The verb *mari* (*mṛ*) 'crush' is fundamentally transitive (the rare passive present *-mūryá-te* occurs only in ŚB 1.7.3.21 ≈ 1.7.4.12). The historically related ā-root *mlā* 'wither, wilt', attested, in particular, in the class IV present *mlāya-ti* (AVP, ŚB; see Kulikov 2012: 599-600), is fundamentally intransitive; its causative *mlāpáya-ti* first appears in the Atharvaveda (see Jamison 1983: 143).

***śar* (*śṛ*) // *śrā* 'become ready; cook'**

The only early Vedic occurrence of a present form (part. *śrāyant-*) of the ā-root *śrā* appears in a rather difficult construction (40), which can be tentatively interpreted as intransitive, adopting Karl Hoffmann's translation of the passage:

(40) (RV 8.99.3ab)

śrāyanta iva sūryam ' viśvēd índrasya bhakṣata

'Wie gar werdende (= sich erhitzen) Leute (Anteil) an der Sonne (haben), so haben sie Anteil an allen (Gütern) des Indra.' (Hoffmann apud Joachim 1978: 162 and Narten 1987: 272f. [= Kl. Schr. 1, 342f.], fn. 3)

The -áya-causative *śrapáyati* 'cooks, prepares' first appears in the Atharvaveda (attested, in particular, at AVŚ 11.1.4; see Jamison 1983: 145). The reduplicated causative aorist first occurs in the Brāhmaṇas (ŚB-Mādhyandina 3.8.2.28 = ŚB-Kāṇva 4.8.2.21 *áśiśrapāma* 'we have cooked').

Evidence for the syntactic type of the C-root *śar/śr* (anīt type) is scant. It is only attested in the verbal adjective *śrtá-* 'cooked; ready' (RV+), which might be based either on a transitive ('cook') or on an intransitive ('become ready') verb.

havi (hū) // hvā 'call'

The verb *havi* (*hū*) is fundamentally transitive (presents *hávate* and *hváyati* 'calls', pf. *juhāva* 'has called', etc.; see Gotō 1987: 347ff.; Kümmel 2000: 606ff.), but its passive (pres. *hūyá-te* RV+; passive aorist participle *huvāná-* RV; cf. (41–42)) is well-attested from early Vedic onwards (see Kulikov 2012: 306–310):

(41) (RV 8.65.1ab = 8.4.1ab)

yád índra prág ápāg údaṇ 'niyāg vā hūyáse nýbhiḥ

'When you, O Indra, are invoked by men in the East, West, North, or South ...'

(42) (RV 10.112.3c)

asmābhir indra sákhibhir huvānáḥ

'Called by us, friends, O Indra ...'

The root variant *hvā* (= full grade II), has probably arisen on the model of some ā-roots which form -áya-presents, such as *dhā* - *dháyati* 'sucks' and *dā* - *-dáyate* 'distributes' (i.e. *dhā* : *dháyati* = X : *hváyati*). All formations built on the root variant *hvā*, viz. agent noun *hvātar-* JB, fut. -*hvāsyā-ti/te*, caus. -*hvāpayati* ŚrSū., etc., first appear in late Vedic texts, thus being of little comparative value (though cf. Late Avestan *zbātar-*); see Gotō 1987: 350, fn. 863; Kümmel 2000: 608; LIV 180–181 for a discussion. All these formations attest the transitive syntax.

4. SYNTACTIC FEATURES OF THE Ā-VERBS: A RECAPITULATION

The results of the present study are summarized in Table 1 below. The members of the above-discussed verbal pairs are distributed across five syntactic classes in accordance with their transitivity features. Two non-diffuse classes include (1) intransitive verbs causatives of which are unattested or exceptional in early Vedic texts (i.e. in the RV and AV); and (5) transitive verbs passives of which are unattested or exceptional in early Vedic. Three diffuse classes consist of (2) basically intransitive verbs -áya-causatives of which are attested from early Vedic onwards (weak-diffuse intransitives); (3) verbs which are well-attested in both intransitive and transitive (causative) usages; and (4) fundamentally transitive verbs intransitive (passive) derivatives of which are well-attested from early Vedic onwards (weak-diffuse transitives). Verbs of these five syntactic classes can be arranged in accordance with their degree of diffuseness/non-diffuseness in terms of the following Diffuseness Hierarchy (43):

(43) Diffuseness Hierarchy

(3) → (2), (4) → (1), (5)

diffuse → weak-diffuse → non-diffuse

Table 1. Syntactic types of verbs belonging to C//ā-pairs

(1) Non-diffuse (intransitive)	(2) (weak-diffuse)	(3) Diffuse	(4) (weak-diffuse)	(5) Non-diffuse (transitive)
only intransitive usages; causatives are unattested/exceptional or late	basically intransitive verbs; -dyā-causatives are attested	both intransitive and transitive (causative) usages are attested	basically transitive verbs; intransitive (passive) usages are attested	transitive verbs; passives are unattested/exceptional or late
pattern <i>CaC</i> // <i>C(C)ā</i>				
yā 'drive' gā 'tread' drā (// <i>dram?</i>) 'run' bhā 'shine'	<i>gam</i> 'go' <i>dru</i> 'run' kṣā 'burn' pyā 'swell' śrā 'become ready'	<i>ay</i> (<i>i</i>) 'go' <i>kāś</i> 'appear (?)'; <i>see</i> ' <i>tan</i> 'stretch' (<i>tā</i>) ← <i>dah</i> 'burn' <i>pay</i> (<i>payi?</i>) 'swell' <i>bhan</i> 'speak' <i>man</i> 'think, respect' (<i>śar/śr</i> (?))	<i>kani</i> 'be pleased' kṣā (khyā) 'look at'	kā 'yearn' bhas 'devour' // psā 'chew' <i>av</i> (<i>u</i>) // vā 'weave' (mnā 'mention')
pattern <i>Cṛ</i> (<i>CaRi</i>) // <i>Crā</i>				
mlā 'wither'	[<i>jani</i> 'be born' jñā 'know']	<i>tari</i> (<i>tṛ</i>) 'pass, carry across' <i>dhami</i> 'blow' <i>pari</i> (<i>pṛ</i>) 'fill' <i>havi</i> (<i>hū</i>) 'call'		trā 'protect, rescue' (dhmā) <i>dhayi</i> (<i>dhī</i>) // dhyā 'think, reflect' prā 'fill' <i>mari</i> (<i>mṛ</i>) 'crush' (hvā 'call')

Note: ā-verbs are shown in **boldface**.

However variegated the syntax of the C- and ā-verbs might appear, there is at least one remarkable feature (tentatively formulated in Section 2) which is shared by nearly all ā-verbs and makes this distribution non-random. The ā-verbs (shown in boldface in the table) generally attest much less syntactic flexibility, being employed either mostly/exclusively in intransitive usages, or mostly/exclusively in transitive usages, and thus belong to the non-diffuse syntactic type. The corresponding base verbs (C-verbs) show a great variety in syntax, but typically are more diffuse (= more flexible in transitivity), cf. especially *yā* (intransitive) // *ay* (*i*) (intransitive and transitive), *trā* (transitive) // *tari* (*tṛ*) (intransitive and transitive), *drā* (intransitive) // *drav* (*dru*) (intransitive and transitive-causative). Within the pair *pyā* // *pay/pi* (*payi/pī?*), *pay*(*i*) (*pī*) is well-attested in both intransitive and transitive usages already in the RV, while *pyā* is predominantly intransitive; -áya-causatives first occur in the AV (4x); thus, the ā-verb is clearly less diffuse (weak-diffuse) than the base verb, at least in the language of the RV. There are also a few pairs where both members belong to the same syntactic class, cf. *dhyā* // *dhayi* (*dhī*) (both transitive) and *psā* // *bhas* (both transitive). The only pair where the ā-verb can be considered (somewhat) more diffuse than the corresponding C-verb is *mlā* // *mari* (*mṛ*). *mlā* is fundamentally intransitive, whilst *mari* (*mṛ*) is transitive, but the causative of the former, *mlāpáya-ti*, is a bit older (AV+) than the passive of the latter, *-mūryá-te* (SB). In fact, this seems to be an exception that proves the rule: due to the difference in

final sonants (l/r) (probably a dialectal feature), the historical relations between *mlā* and *mari* (*mṝ*) are more blurred than those between the members of any other root pair, and synchronically they clearly do not belong together.

As far as more specific correlations between the syntactic characteristics of the verbs and the type of formal relationship between C- and ā-roots are concerned, the following regularities can be observed.

(i) Within the pairs which follow the schwebeablauting pattern *CaRi* (*CR̄*) // *CRā* (i.e., in diachronic terms, **CaRH-* // **CRaH-*), the ā-member is often transitive, as opposed to the (more) diffuse C-verb; cf. especially *tari* (*t̄f̄*) 'pass, carry across' // *trā* 'protect, rescue' and *pari* (*p̄f̄*) // *prā* 'fill'. It is interesting to note that present passives with the suffix -ya- and passive aorists (i-aorists) are unattested in Vedic for most of these ā-roots. Thus, *aprāyi* is a hapax, which only appears in the RVKh. and Atharvaveda; *dhamāyate* first appears in late Vedic; pass. *trāyate* 'is (being) protected, is (being) rescued' does not occur before Classical Sanskrit; for other ā-roots -ya-passives and i-aorists are unattested.

(ii) By contrast, many ā-verbs which follow the pattern *CaC* // *C(C)ā*, i.e., in diachronic terms, contain the root enlargement (suffix) -ā- (< PIE *-eH-), are (predominantly) intransitive, as opposed to the (more) diffuse C-verbs. Note, in particular, that present causatives with the suffix -(p)āya- (well-attested in early Vedic for some roots in -ā such as *sthā* 'stand' and *dhā* 'suck') are (relatively) late or entirely lacking for the ā-verbs (ā-roots) of the *CaC* // *C(C)ā*-pairs. Thus, causatives of *yā* and *drā* first appear in the Brāhmaṇas; causative of *gā* is unattested. The intransitivizing effect of -ā- is also fairly obvious in the pair *dah* // *ksā* 'burn': unlike *dah*, which is basically transitive but later is drifting into the diffuse type, *ksā* is a predominantly intransitive verb, which forms an -āya-causative.

5. CONCLUDING REMARKS: HISTORICAL SOURCES OF THE C//Ā-ALTERNATION AND ITS SYNCHRONIC STATUS

Much remains unclear about the origins of the above-formulated correlations between the formal patterns of the C//ā-alternation and the syntactic features of the verbs in question. In general, evidence from Indo-European languages outside Indo-Iranian furnishes few parallels to the syntactic patterns described in Section 4. Moreover, many of the ā-verbs have no reliable cognates outside Indo-Iranian, and, thus, we have to look for the origins of this syntactic patterning on Indo-Iranian (or even Indo-Aryan) ground.

There may have been several sources of the correlations between the attested formal patterns and syntactic features.

(i) In the case of the *CaC*//*CCā*-type, the (predominantly) intransitive character of some ā-verbs may be a vestige of the intransitive/stative function of the hypothetical Proto-Indo-European suffix *-ē- (*-eH-). In fact, as mentioned above, evidence for reconstructing this 'stative' suffix in ā-verbs is scant: while in the 'stative' suffix *-ē- we have to reconstruct *h₁* (*-eh₁-; see Beekes 1995: 230), in most of the above-discussed ā-roots we are probably dealing with the reflex of another laryngeal, *h₂*. The full evidence can be summarized as follows (the reconstruction mostly follows Mayrhofer's EWAia and LIV):

h₁: *kṣā* < **dhgūh-eh₁-* 'burn' (intransitive with -āya-causatives); *prā* < **pleh₁-* 'fill' (transitive); *mlā* < **mleh₁-* 'wither, wilt' (intransitive with -āya-causatives)

h₂: *kā* < **kṇh₂-* (?) 'yearn, enjoy' (transitive); *gā* < **gueh₂-* 'go, tread' (intransitive); *trā* < **treh₂-* 'protect, rescue' (transitive); *drā* < **dreh₂-* 'run' (intransitive); *bhā* < **bheh₂-* 'shine' (intransitive); *mnā* < **mn-eh₂-* 'mention' (transitive); *yā* < **(H)ieh₂-* 'drive' (intransitive)

h₃: no reliable examples

H (unknown): *kṣā* < **kuk-eh-* 'see, consider, reckon' (transitive with passives); *dhamā* < **dhmeH-* 'blow, inflate' (transitive); *dhyā* < **dhiēH-* 'consider, reflect' (transitive); *pyā* < **piēH-* 'swell' (intransitive); *psā* < **bhs-eH-* 'chew' (transitive); *vā* < **HueH-* 'weave' (transitive); *śrā* < **kl-eH-* 'become ready' (intransitive (?) with -āya-causatives); *hvā* < **ghueH-* 'call' (transitive)

Apparently, there are as few as one or two root pairs where the intransitivity of the ā-verb can be explained as a direct reflex of the intransitive function of the PIE suffix **-eh₁-*. Note, however, that the development of the syntactic features ('non-diffuseness') of the ā-verbs should probably be dated to Proto-Indo-Iranian, where the three PIE laryngeals have fallen together. Accordingly, it cannot be ruled out that just a few (derived) roots with the reflex of the PIE 'stative-intransitive' suffix **-eh₁-* > PIr. **-aH-* (**dhguyh-eh₁-?*, **kl-eh₁-?*) could trigger and/or support the development of similar syntactic properties of the verbal forms derived from all **CC-aH-* roots, irrespective of the quality of the PIE laryngeal.

(ii) In some cases, the syntactic features of the formations built on different grades of one verb/root (cf. the transitive aorist *aprāt* as opposed to the intransitive present *pūryate* and transitive-causative present *prnāti*) could be associated with the corresponding (C- vs. ā-) root variants. Subsequently, one paradigm could split in two sub-paradigms, and, accordingly, one lexical unit (verb) gave rise to two different (albeit etymologically and derivationally related) verbs. Thus, the transitive syntax of the root aorist *áprās* could be generalized for all formations built on the full grade (II) of the root *pṛ* // *prā* 'fill', as opposed to formations derived from the zero grade (pres. *pūrya-te*, *pūryá-te*, *prnāti*, *prná-te*), which, eventually, has led to the split of one single lexical unit in two, *tari* (*pṛ*, *pūr*) 'become full; fill' and *prā* 'fill' (see Albino 1999; Kümmel 2000: 325-328), differing in syntactic features: diffuse vs. (predominantly) transitive. This difference in syntax could be expanded to another root pair following the same pattern (*CaRi* // *CRā*), *tari* (*tṛ*) 'pass, carry across' // *trā* 'protect, rescue'. In some cases, this syntactic difference could be supplemented with idiomatic shifts (cf. *tari* (*tṛ*) 'pass, carry across' // *trā* 'protect, rescue'; *man* 'think, believe; respect' // *mnā* 'mention'), but their character is of a less regular nature than the above-discussed syntactic oppositions.

(iii) Finally, it cannot be ruled out that the difference in syntactic properties between some historically (and semantically) unrelated but formally similar roots has contributed to the development of the functional (syntactic) value of the C//ā-alternation. Particularly instructive is the case of *jani* 'be born; generate' // *jñā* 'know'. In spite of the lack of semantic and historical connections between these two roots (see above), their formal similarity and the remarkable difference in syntactic behaviour (*jani* is diffuse; *jñā* is fundamentally transitive) could have supported the syntactic model of the etymological *CaRi* // *CRā* pairs such as *pari* (*pṛ*) // *prā*.

To conclude, a few remarks on the status of the C//ā-alternation within the system of verbal categories and transitivity oppositions will be in order. Although its connection with such syntactic features of the verb as transitivity or lability does not raise any doubt, at least for a considerable number of root pairs, it would be incorrect to consider this morpho(phono)logical phenomenon as a valency-changing category. The idiomatic character of changes observed for several verbal roots does not allow to characterize this morphological operation as one of (in)transitivizing derivations known from typology. Rather, we are confronted here with quite a complex phenomenon relevant both for the semantics of the verbal roots and for its paradigmatic properties, and the function of this operation should be qualified in terms of quite vague tendencies, rather than in terms of strict rules. Such synchronic 'vagueness' of the C//ā-alternation must be due to the heterogeneity of its origin (see above) as well as to its diachronic instability. Before it had rooted in the Old Indian verbal system, it started to lose its functional features as early as by the end of the early Vedic period and, especially, in middle Vedic - most probably, due to drastic changes in the system of valency-changing categories and, foremost, because of the increasing productivity of morphological causatives (with the suffix *-áya-*) and passives (with the suffix *-yá-*; see, in particular, Kulikov 2006a: 75ff.). Nevertheless, the importance of this phenomenon for establishing the Old Indo-Aryan system of transitivity oppositions, especially in the early Vedic period, is quite obvious. Although the C//ā-alternation was operating for a relatively small part of the verbal dictionary, and its status should be qualified as submorphemic, rather than as morphological, it played an important role for establishing the syntactic potential of the vast fragments of verbal paradigms, influencing some basic trends within the Vedic verbal system. The status of such submorphemic phenomena and their diachronic typology, both in Indo-European and beyond, is poorly studied and represents one of the most interesting domains of research in historical linguistics in general, and in Indo-Iranian and Indo-European linguistics, in particular.

SYMBOLS AND ABBREVIATIONS (TEXT SIGLA)

□+ (attested) from [text] □ onwards
ĀĀ Aitareya-Āraṇyakas
Ār. Āraṇyaka(s)
AV(Ś) Atharvaveda (Śaunakīya recension)
AVP AV, Paippalāda recension
Br. Brāhmaṇas
JB Jaiminīya-Brāhmaṇa
KathU Kaṭha-Upaniṣad
MaitrU Maitri- (Maitrī-), Maitrāyaṇa-, Maitrāyaṇīya-Upaniṣad
□_p prose part of [text] □
RV Ṛgveda
RVKh. Ṛgveda-Khilāni
ŚB Śatapatha-Brāhmaṇa
ŚrSū. Śrauta-Sūtras
Up. Upaniṣads
VS Vājasaneyi-Samhitā
YV Yajurveda(-Samhitā)

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BIBLIOGRAPHICAL ABBREVIATIONS

EWaia Etymologisches Wörterbuch des Altindoarischen

HS Historische Sprachforschung

IIJ Indo-Iranian Journal

JAOS Journal of the American Oriental Society

JIES Journal of Indo-European studies

KEWA Kurzgefaßtes etymologisches Wörterbuch des Altindischen

Kl. Schr. Klein(er)e Schriften

KZ Zeitschrift für vergleichende Sprachforschung (Kuhns Zeitschrift)

LIV Lexikon der indogermanischen Verben

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