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**Special Issue: Typology of Labile Verbs:  
Focus on Diachrony**

Guest Editors  
Leonid Kulikov  
and  
Nikolaos Lavidas

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Leonid Kulikov

# The decline of labile syntax in Old Indo-Aryan: A diachronic typological perspective

**Abstract:** The ancient Indo-European languages, such as early Vedic or (Homeric) Greek, are usually considered to be characterized by a high degree of lability. According to the *communis opinio*, they had a considerable number of labile verbs or verbal forms that could be labile, cf. *rudrā ṛtāsyā sādaneṣu vāvṛdhuḥ* ‘Rudras have grown [intransitive] in the residences of the truth’ ~ *īndram ukthāni vāvṛdhuḥ* ‘The hymns have increased [transitive] Indra’. This paper offers a general overview of the Vedic verbal forms for which labile patterning is attested. I will argue that, for most of these forms, the secondary character of lability can be demonstrated. Thus, for many labile forms with middle inflection (in particular, forms belonging to the present system), labile patterning results from the polyfunctionality of the middle diathesis (self-beneficent / anticausative). The secondary transitive usages of some fundamentally intransitive verbs such as *puṣyati* ‘prosper; makes prosper’ originates from the syntactic re-analysis of content accusative constructions of the type ‘X prospers (in) Y’ → ‘X makes Y prosper’. I will further demonstrate that, within the Old Indo-Aryan period, we observe the decline of the labile type. Already in the second most ancient Vedic text, the Atharvaveda, we find very few labile forms. Thus, most of the active perfects which show labile syntax in the Rgveda are either attested in intransitive usages only, or in transitive usages only, or do not occur at all. I will also discuss the main mechanisms of the loss of labile pattern in Old Indo-Aryan.

**Keywords:** Vedic, Indo-European, labile, transitivity, causative, perfect, middle, stative, aorist, nominalization

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## 1 Introductory remarks

The present paper offers a general perspective of the historical development of labile syntax and labile verbs in one of the oldest attested Indo-European

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languages, Old Indo-Aryan, which can be roughly identified with Vedic Sanskrit and dated between the end of the second millennium and the first half of the first millennium B.C.<sup>1</sup>

## 1.1 Basic definitions and theoretical preliminaries

The term *labile* refers to verbs (or, to be more exact, verbal forms) which can show valency alternation (for instance, can be employed both intransitively and transitively) with no change of form in the verb.<sup>2</sup> Typical examples of labile patterning are given under (1–4):

- (1) a. John **ate** the cake. *S = A type*  
       b. John **ate**.
- (2) a. John **broke** the chair. *S = O type, P-lability*  
       b. The chair **broke**.
- (3) a. John **reads** this book with pleasure. *S = O type, P-lability*  
       b. This book **reads** with pleasure.
- (4) Vedic
- a. *īndram*            *ukthāni*            **vāvyrdh-uḥ**  
    Indra:ACC.SG    hymn:NOM.PL    grow:PF-3PL.ACT  
    ‘The hymns **have increased** Indra.’  
    (RV 8.6.35a)
- b. *rudrā*            *ṛtāsya*            *sādaneṣu*            **vāvyrdh-uḥ**  
    Rudra:NOM.PL    law:GEN.SG    residence:LOC.PL    grow:PF-3PL.ACT  
    ‘Rudras **have grown** in the residences of the truth.’  
    (RV 2.34.13b)

In what follows, I will focus on pairs of the type illustrated in (2)–(4). Unlike (1), sentences (a) and (b) in (2)–(4) do not have the same noun phrase as the subject, but the object of the transitive clause in the (a) sentences, typically a Patient in terms of semantic roles, corresponds to the subject of its intransitive equivalent in the (b) sentences (whence the terms *S = O type* or *P-lability*), and the meaning of the verb in (2a), (4a) can be roughly defined as ‘CAUSE’ + the meaning of the verb

<sup>1</sup> On the chronology of Vedic texts, see, for instance, Witzel 1995.

<sup>2</sup> Other terms referring to this class of verbs include *ambitransitive* (e.g. Dixon 1994: 18, 54 et passim), which is somewhat less commonly used, however.

in (b) (e.g. ‘cause to open; make open’ etc.). The type is usually labelled *causative/inchoative* (cf. e.g. Haspelmath 1993), *causative* (cf. Levin 1993) or *ergative* alternation (see Kulikov [1999a: 225–227] for a terminological discussion); the type exemplified by (3) can be labeled *transitive/(potential) passive*.

P-lability is common in many languages with ergative alignment, but it is also well-attested in a number of languages of the nominative-accusative type, in particular, in modern Greek or in English (as well as in many other Germanic and in Romance languages).

## 1.2 Proto-Indo-European and the ancient Indo-European syntactic type: labile or not?

While the systems of labile verbs in several modern Indo-European languages (particularly in the Western part of the Indo-European area) are relatively well-studied, our knowledge of the situation that existed in ancient Indo-European languages is more limited. The ancient Indo-European languages, such as early Vedic or (Homeric) Greek, are usually considered as characterized by a high degree of causative lability. According to the *communis opinio*, they had a considerable number of labile verbs and verbal forms. Being one of the most intriguing aspects of (ancient) Indo-European syntax, this phenomenon has even caused quite desperate claims expressed by some Indo-Europeanists, in particular, by Victor Henry in his review of Brugmann’s *Indo-European Compendium*:

... je demande: Que signifiait donc [la forme proto-indo-européenne] \**e-liq-ê-s*? Était-ce ‘tu laissas’ ou ‘tu restas’? Si l’un des deux, comment est-il devenu l’autre? Si tous les deux, il faut convenir que nos ancêtres manquaient de clarté. (Henry 1893: 121)

Nearly half a century later, Hermann Hirt in his seminal *Indogermanische Grammatik* (VII/2: *Syntax*) has formulated his views less emotionally, but hardly more optimistically:

Bei den Sätzen mit Verben muß man [...] unterscheiden, ob das Verb allein steht oder noch eine Ergänzung, ein Objekt, fordert, ob es nach der gewöhnlichen Ausdrucksweise intransitiv oder transitiv ist. [...] Nun ist aber die Unterscheidung nicht so wesentlich, da intransitive Verben transitiv und transitive intransitiv werden können. Wäre sie von großer Bedeutung, so würden wir wohl eine Verschiedenheit der Form zwischen den beiden Kategorien antreffen. (Hirt 1937: 28)

On closer examination, it becomes clear, however, that various branches of Indo-European drastically differ from each other as far as the feature of P-lability is

concerned. On the one hand, for instance, in Greek we observe the expansion of the labile patterning from the Classical period onwards (see, in particular, Lavidas 2004 and Karantzola and Lavidas, this issue). On the other hand, the productivity of the labile type in the Indo-Iranian branch is constantly decreasing, and this process is well-documented, in particular, from early Vedic onwards.

Thus far we have no full treatment of the phenomenon of lability in the ancient Indo-European languages in general or in Vedic in particular (for a preliminary survey, see Kulikov 2003). I will of course make no attempt to present the full inventory of the labile forms attested during the documented history of Vedic. Rather, I will confine myself to an overview of the parts of the verbal paradigm where labile patterning was most common in early Vedic, above all in the most ancient Vedic text, the Ṛgveda (RV), that can be dated to approximately the second half of the second millennium B.C. (Section 2). I will argue for the secondary character of lability in most such cases. In Section 3, I will briefly outline some basic scenarios of the decline and disappearance of the labile type in the middle and late Vedic periods. The concluding Section 4 will offer a sketch of some general tendencies in the evolution of the verbal system which could be responsible for the decline of the labile type by the end of the Old Indo-Aryan period.

## 2 Labile patterns in Vedic: The main types and their origins

### 2.1 Labile syntax of the middle present forms

#### 2.1.1 Labile middle present (class I) forms (type *códate* ‘impels / hastens’)

In a number of middle forms of the system of present, labile patterning results from the polyfunctionality of the middle diathesis. The middle inflection can express either the auto-benefactive (self-beneficent) meaning with no valency change (cf. the textbook example act. *yájati* ‘sacrifices’ ~ mid. *yájate* ‘sacrifices for oneself’), or an intransitivizing derivation, most often, anticausative (decausative). The auto-benefactive meaning includes several subtypes, the most important of which are the auto-benefactive proper, as in (5), and possessive-reflexive usage, when the subject is referentially identical with the possessor of the referent of another argument, usually the object, as in (6); for details, see Kulikov 2012b: 172–179.



- (5) *ukṣāṇam pṛśnim apacanta vīrās*  
 bull:ACC.SG motley:ACC.SG.M cook:IMPF:3PL.**MID** hero:NOM.PL  
 ‘The heroes cooked the motley bull for themselves.’  
 (RV 1.164.43c)

- (6) *átha pāñí áva nenik-te*  
 then hand:ACC.DU down wash:INTENS-3SG.**MID**  
 ‘Then he washes his hands.’  
 (ŚB 1.2.5.23)

Correspondingly, in the cases where the middle diathesis can have both functions, its middle forms can be employed either transitively with the self-beneficent meaning, or intransitively, so that we are confronted with labile patterning.

These labile class I present formations (i.e., full grade thematic root presents) include:

- *svádate* ‘makes sweet (for oneself) / is sweet’
- *códate* ‘impels (e.g. *he impels his horse*) / rushes, hastens’
- *námate* ‘bends [transitive] (e.g. *he bends arrows for himself*)<sup>3</sup> / bends [intr.]’
- *bhárate* ‘brings (for oneself) / brings oneself’
- *váhate* ‘carries (for oneself) / drives, goes’
- *śráyate* ‘lays, fixes on, fastens (for oneself) / leans on’

Cf. (7–8):

- (7) a. *sváda-sva*<sup>4</sup> *índrāya pavamāna*  
 be/make.sweet:PRES-2SG.IMPV.MID Indra:DAT.SG Pavamāna:VOC.SG  
*pītāye*  
 drink:INF  
 ‘Be sweet for Indra, O Pavamāna (= Soma sap), for drinking.’  
 (RV 9.74.9d)
- b. *sváda-sva* *havyā*  
 be/make.sweet:PRES-2SG.IMPV.MID oblation:ACC.PL  
 ‘Make the oblations sweet [for yourself].’  
 (RV 3.54.22)

<sup>3</sup> See, for instance, Gotō 1996 [1987]: 193–196 for a detailed discussion of the middle forms of this verb.

<sup>4</sup> The symbol ∪ shows that the sandhi has been undone.

- (8) a. *vṛṣā*                      *coda-sva*                      *mahaté*    *dhānāya*  
 bull:NOM.SG    rush:PRES-2SG.IMPV.MID    big:DAT.SG    prize:DAT.SG  
 ‘Rush [like] a bull for a big prize!’  
 (RV 1.104.7b)
- b. *vṛṣṇe*                      *coda-sva*                      *su-ṣṭutīm*  
 bull:DAT.SG    impel:PRES-2SG.IMPV.MID    good-praise:ACC.SG  
 ‘Send forth your beautiful praise for the bull.’  
 (RV 8.75.6c)

The lability of the type *codate* ‘impels / hastens’ (that is, the labile verbs such as *svādasva* or *codasva*) is only attested in early Vedic; see Section 3.1 for details.

### 2.1.2 Labile thematic presents with nasal affixes

Labile patterning is also attested for some presents with nasal affixes, i.e. with the suffixes *-nó-/-nu-*, *-nā-/-nī-* and with the infix *-nā-/-n-* (= classes V, IX and VII in the traditional notation), especially for their thematized variants, such as the labile thematic middle present *pr̥ṇāte* ‘fills; fills oneself’:

- (9) a. *ā*    *vakṣāṇāḥ*                      *pr̥ṇā-dhvam*  
 PREV udder:ACC.PL    fill:PRES-2PL.IMPV.MID  
 ‘Fill your udders, (o rivers).’  
 (RV 3.33.12)
- b. *sāvaneṣu*                      *sómair* [. . .]    *pr̥ṇa-dhvam*  
 pressing:LOC.PL    Soma:INS.PL    fill:PRES-2PL.IMPV.MID  
 ‘At the [Soma-]pressings fill yourself with the Soma[-sap].’  
 (RV 7.37.1)

The origin of the secondary intransitive usages of forms such as *pr̥ṇādhvam* requires an explanation. Perhaps, it is due to the secondary association between the thematization and middle diathesis,<sup>5</sup> which may have lead to the transfer of some features of the middle diathesis (in particular, its intransitivizing function) to the thematic type of stem.<sup>6</sup>

<sup>5</sup> Cf. pairs such as act. *riṇāti* ‘makes flow’ ~ mid. *rīyate* ‘flows’, act. *junāti* ‘impels’ ~ mid. *jávate* ‘hurries’, where thematic middle presents are opposed to athematic transitive-causative active presents with nasal suffixes (see, e.g., Joachim 1978: 27–28).

<sup>6</sup> This may account for the fact that, in rare cases, labile syntax is also attested for active thematized presents, such as *ṛṇvati* ‘sets in motion’ [transitive] / ‘moves, rises’ [intrans.] (e.g. at RV 6.2.6); see Kulikov 2000 for details.

## 2.2 Labile patterning of the type *púṣyati* ‘prosper’ / ‘make prosper’ and constructions with content accusatives

Another type of Vedic and Indo-European lability is represented by the verbs of the type *púṣyati*, employed both in the intransitive usage ‘prosper, thrive’ and the transitive-causative usage, meaning ‘make prosper, make thrive’,<sup>7</sup> as in (10a)–(10b):

- (10) a. *tarāṇir ij jayati kṣéti*  
 fast:NOM.SG only win:PRES:3SG.ACT dwell:PRES:3SG.ACT  
*púṣya-ti*  
 prosper:PRES-3SG.ACT  
 ‘Only the one who is fast is victorious, dwells (in peace), **prosper**s.’  
 (RV 7.32.9c)
- b. *sá mudā kāv,yā purú*  
 that:NOM.SG.M joy:INS.SG poetic.inspiration:ACC.PL many  
*viśvam bhūma iva puṣya-ti*  
 all:ACC.SG.N earth:NOM.SG like prosper:PRES-3SG.ACT  
 ‘By [his] joy, he (sc. Agni) [makes thrive] many poetic inspirations, as the earth **makes** everything **thrive**.’  
 (RV 8.39.7cd)

Elsewhere (Kulikov 1999a) I have argued that only intransitive constructions, as in (10a), represent the original, authentic usage of this verb. The overwhelming majority of the occurrences with the accusative are, in fact, (i) constructions with the *etymological* accusative (*puṣṭi-* ‘prosperity’, *póṣa-* ‘prosperous thing’), or (ii) constructions with the *content accusative* (Inhaltsakkusativ), referring to some aspect(s), parameter(s) or scope of prosperity; cf. (11–15):

- (11) *tvám ... śrávo váso puṣṭim ná*  
 you:NOM glory:ACC.SG Vasu:VOC.SG prosperity:ACC.SG as  
*puṣya-si*  
 prosper:PRES-2SG.ACT  
 ‘You, o Vasu, **prosper** in **glory** [= you are glorious], as [one prospers] in **prosperity** [= as one is prosperous].’  
 (RV 6.2.1)

<sup>7</sup> See Böhtlingk and Roth’s dictionary (1865: Sp. 808) s.v. *púṣ-*: a) ‘gedeihen’; b) ‘gedeihen machen, gedeihen lassen’.

- (12) *sā́* *vīt* *su-vīrā* *marúdbhir*  
 that:NOM.SG.F tribe:NOM.SG good-man:NOM.SG.F Marut:INS.PL  
*as-tu* [...] *púṣya-nt-ī*  
 be:PRES-3SG.IMPV.ACT prosper:PRES-PART.ACT-NOM.SG.F  
*ṇṛmṇām*  
 manliness:ACC.SG  
 ‘Let this tribe be full of valiant sons with [the help of] Maruts, . . . **prospering in manliness.**’  
 (RV 7.56.5)
- (13) *eté* *ta* *indra* *jantávo* *viśvam*  
 this:NOM.PL.M your Indra:VOC.SG people:NOM.PL all:ACC.SG.N  
*puṣya-nti* *vār,yam*  
 prosper:PRES-3PL.ACT desirable.good:ACC.SG  
 ‘These men of you, O Indra, **prosper in all desirable goods.**’  
 (RV 1.81.9ab)
- (14) . . . *tāsmād rājā* *paśūn* *nā* *puṣya-ti*  
 therefore king:NOM.SG cattle:ACC.PL not prosper:PRES-3SG.ACT  
 ‘. . . Therefore the king does not prosper in cattle.’  
 (ŚB 13.2.9.8 = TB 3.9.7.2)
- (15) *jamadagniḥ sarvān* *poṣān* *apuṣyat*  
 J.:NOM.SG all:ACC.PL.M prosperous.thing:ACC.PL prosper:IMPF:3SG.ACT  
 ‘Jamadagni **prospered in all prosperous things.**’  
 (PB 22.7.2)

Such constructions with the content accusative are erroneously translated by some scholars as transitive-causative (‘make prosper, make flourish’), cf., for instance, the erroneous translations offered for (14): ‘[. . .] whence the king does not **rear** cattle’ (translation by Eggeling [1900: 326] of the passage ŚB 13.2.9.8); ‘[. . .] Therefore [. . .] the king does not **feed** cattle’ (translation by Dumont [1948: 484] of the passage TB 3.9.7.2).

As to the rare transitive-causative usages (illustrated in (10b)), they probably result from the reanalysis of constructions with the content accusative, in accordance with the following semantic scenario: *bhūma viśvam puṣyati* ‘the earth prospers in everything [which exists on it]’ → ‘the earth makes everything [which exists on it] prosper’ (see Kulikov 1999a: 239–240 for details).<sup>8</sup>

<sup>8</sup> Cf. a comparable, albeit not identical, semantic development attested for the middle forms of the verb *cyu*, in particular, for the middle present *cyáva-*<sup>1e</sup> ‘move, come into motion [intr.]’;

Again, this type of lability is exclusively limited to the early Vedic period. In the post-RVic language, when causatives with the suffix *-āya-* become very productive, the causative *poṣāyati* completely replaces the *-ya-*present *púṣyati* in transitive-causative usages ('make prosper').

## 2.3 Labile syntax of athematic middle participles with the suffix *-āna-*

Labile patterning is also very common for middle athematic participles with the suffix *-āna-*. While the corresponding finite forms are only employed transitively, the *-āna-* participles are attested both in transitive and intransitive (passive) constructions. Intransitive usages are typically instantiated by passive constructions, as in (16a) or (18a). This fact was noticed already by Delbrück in his seminal *Altindische Syntax* (1888: 264).

For instance, the participle *hinvānā-* (root *hi* 'impel'), taken by all grammars as the middle participle of the nasal present with the suffix *-nó/-nu-* (class V in the Indian tradition), occurs 18 times in intransitive (all passive) constructions, as in (16a), and 10 times in transitive constructions, as in (16b), in the Ṛgveda:

- (16) a. *sómo*                      *hi-nv-ānó*                      *arṣati*  
 Soma:NOM.SG impel-PRES-PART.MID:NOM.SG.M      flow:PRES:3SG.ACT  
 'Soma, **being impelled**, flows.'  
 (RV 9.12.8)
- b. ... *índrāya*      *pavase*                      [...]  
 Indra:DAT.SG      purify:PRES:2SG.MID  
*hi-nv-ānó*                      *vācam*  
 impel-PRES-PART.MID:NOM.SG.M      speech:ACC.SG  
*matibhiḥ*                      *kavīnām*  
 thought:INS.PL      poet:GEN.PL  
 'You (sc. Soma) become clean / purify yourself for Indra, **impelling**  
 (your) speech with the (religious) thoughts of the poets.'  
 (RV 9.97.32)

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perform (an activity)'. The latter, transitive, construction may be based on lexicalization of the original causative, i.e., 'perform (an activity)' ← 'set (an activity) into motion', rather than on a construction with the content accusative or a construction with a goal accusative, as Gotō (1996 [1987]: 143) explained it ('sich an eine Sache begeben' > 'eine Sache unternehmen').

By contrast, the finite middle forms derived from the same stem (3pl.mid. *hinváte* etc.), with which *hinvāná-* is supposed to belong, can only be employed transitively, meaning ‘to impel’, as in (17):

- (17) *hi-nv-é*                      *vājeṣu*                      *vājīnam*  
 impel-PRES-1SG.MID   prize:LOC.PL   runner:ACC.SG  
 ‘I **spur** on this runner [in the race] for prizes.’  
 (RV 9.65.11c)

Likewise, the participle *yujāná-* (root *yuj* ‘yoke’) occurs 8 times in intransitive (passive) constructions (as in (18a)) and 14 times in transitive constructions (as in (18b)) in the Ṛgveda:

- (18) a. *rátho*                      *ná mahé*                      *śávase*  
 chariot:NOM.SG   like great:DAT.SG.N   power:DAT.SG  
*yuj-ānāḥ*  
 yoke:AOR-PART.MID:NOM.SG.M  
 ‘... like a chariot **yoked** for the great power.’  
 (RV 6.34.2c)
- b. *yuj-ānó*<sup>9</sup>                      *harītā*                      *rátthe*  
 yoke:AOR-PART.MID:NOM.SG.M   fallow:ACC.DU   chariot:LOC.SG  
 ‘... (Tvaṣṭar,) **yoking** two fallow [horses] to the chariot.’  
 (RV 6.47.19a)

Vedic grammars treat *yujāná-* as a middle participle of the root aorist (see, for instance, Whitney 1885: 132; Macdonell 1910: 370). However, again, as in the case of *hinvāná-*, the corresponding finite forms (3sg. *áyukta* etc.) can only be employed in transitive usages, as in (19):

- (19) *áyuk-ta*                      *saptá harītaḥ*  
 yoke:AOR-3SG.MID   seven   fallow:ACC.PL  
 ‘He **has yoked** (now) his seven fallow [horses].’  
 (RV 7.60.3)

Elsewhere I have demonstrated that the grammatical characteristics of such passive *-āna*-participles should be reconsidered (Kulikov 2006b). In my view,

<sup>9</sup> -ó is the same ending as in *yujān-āḥ* in (18a), resulting from the sandhi before a voiced consonant (-āḥ h- → -ó h-).

these participles are homonymous, or morphologically (grammatically) ambiguous. Thus, the participle *hinvāná-* in its transitive usages, meaning ‘impelling’, belongs to the paradigm of the transitive nasal present (*hinváte* etc.). But it is a member of the paradigm of the stative (3sg. *hinvé*, 3pl. *hinviré*), i.e. a stative participle, when employed intransitively (passively), meaning ‘impelled’. Likewise, *yujāná-* is a member of the paradigm of the (transitive) root aorist (*áyukta* etc.) when employed transitively (‘yoking’), but it is a member of the paradigm of the passive aorist (3sg. *áyoji*, 3pl. *ayujran*), i.e. a passive aorist participle when employed in passive constructions (‘yoked’), as shown in Figure 1:

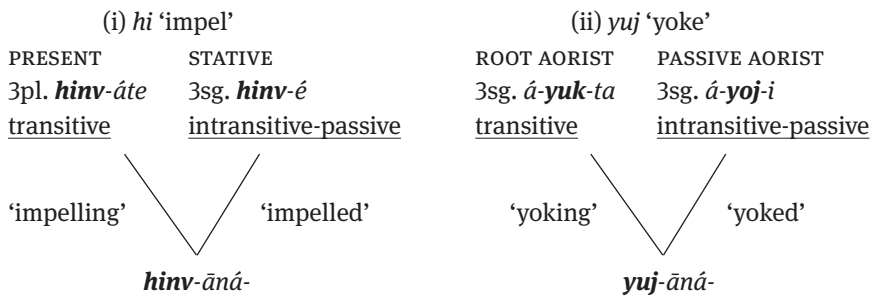


Fig. 1: Middle present and root aorist participles vs. passive aorist and stative participles

Although traditionally, Vedic grammars do not include participles into the paradigms of statives and medio-passive aorists, the assumption that passive *-āna*-participles should be added to these paradigms seems quite attractive, since it easily explains their abnormal syntax. The labile syntax of forms such as *hinvāná-* ‘impelling; impelled’ and *yujāná-* ‘yoking; yoked’ can be accounted for as a direct corollary of their morphological (grammatical) ambiguity. The transitive occurrences of *hinvāná-* belong with the present paradigm, while its intransitive-passive attestations belong to the paradigm of the stative. Likewise, *yujāná-* is a middle root aorist participle in transitive usages and a medio-passive aorist participle in intransitive-passive usages.

## 2.4 Middle perfects and statives

The same type of explanation which has been offered in the preceding section for the allegedly labile middle participles with the suffix *-āna-* holds for forms with the endings of the 3rd sg. and 3rd pl. middle perfects, *-e* and *-re*, as well as for the corresponding middle perfect participles. That is, transitive forms with the

endings *-e* and *-re* should be taken as 3sg. and 3pl. forms of the middle perfect, while the same forms attested in intransitive (passive) constructions ('is put / has been put'; 'are yoked / have been yoked') belong with the stative paradigm (for a detailed discussion, see Kulikov 2006a).

For instance, the form *dadhé* (root *dhā* 'put') should be taken as a 3sg. form of the middle perfect when meaning 'has put', as in (20a), and as a 3sg. form of the stative when meaning 'is put / has been put', as in (20b):

- (20) a. *ā yó víśvāni vār,yā*  
 PREV who:NOM.SG.M all:ACC.PL.N desirable:ACC.PL.N  
*vāsūni hāstayor dadh-é*  
 goods:ACC.PL hand:LOC.DU put:PF-3SG.MID  
 'The one who **holds / has put** all desirable goods in his hands . . .'  
 (RV 9.18.4ab)
- b. *hāsteṣu khādīś ca kṛtīś ca*  
 hand:LOC.PL brooch:NOM.SG and sword:NOM.SG and  
*sām dadh-é*  
 together put:STAT-3SG.MID  
 'Brooch and sword **are put** in [your] hands.'  
 (RV 1.168.3d)

Likewise, the 3pl. form *yuyujré* is middle perfect of *yuj* 'yoke' when employed transitively, as in (21a), and stative when employed passively, as in (21b):

- (21) a. *vātān h<sub>i</sub>y āśvān dhur,y à-yuyuj-ré*  
 wind:ACC.PL since horse:ACC.PL shaft:LOC.SG PREV-yoke:PF-3PL.MID  
 'Since [the Maruts] **have yoked** the winds as their horses into the shaft . . .'  
 (RV 5.58.7c)
- b. *dhiyā yuyuj-ra<sup>10</sup> índavaḥ*  
 thought:INS.SG yoke:STAT-3PL.MID drop:NOM.PL  
 'The [Soma-]drops **have been yoked** with a religious thought.'  
 (RV 1.46.8c)

The same holds true, *mutatis mutandis*, for middle participles made from perfect stems and employed in passive usages. Such forms should be taken as belonging

<sup>10</sup> *-ra* is the same ending as in *-yuyuj-ré* in (21a), with *a* resulting from the sandhi before a vowel (*-e i- → -a i-*).



with statives rather than with middle perfects, as in the compound *yuyujānā-sapti-* ‘with yoked horses’:

- (22) *tā nāvyaśo jāramāṇasya mānma*  
 that:NOM.DU.M youngest:GEN.SG.M praiser:GEN.SG prayer:ACC.SG  
*ūpa bhūṣato yuyuj-ānā-sapti*  
 to further:PRES:3DU.ACT yoke:STAT-PART.MID-horse:NOM.DU  
 ‘Those two [Aśvins], with **yoked** horses, further the prayer of the youngest praiser.’  
 (RV 6.62.4ab)

## 2.5 Labile patterning of active perfects

The labile patterning of active perfects may be of a more authentic character. Typical examples are perfects of the verb *ṽṛdh* ‘grow, increase’. Both active and middle perfect forms of this verb can be employed either intransitively or transitively. For instance, the 3rd person plural active form *vāṽṛdhūḥ* occurs in the Ṛgveda 6 times in intransitive usages, as in (23a) (= (4b)), and 14 times in transitive-causative usages, as in (23b) (= (4a)) (see Kümmel 2000: 469–473 for details):

- (23) a. *rudrā ṛtāsya śādaneṣu vāṽṛdh-uḥ*  
 Rudra:NOM.PL law:GEN.SG residence:LOC.PL grow:PF-3PL.ACT  
 ‘Rudras **have grown** in the residences of the truth.’  
 (RV 2.34.13b)
- b. *īndram ukthāni vāṽṛdh-uḥ*  
 Indra:ACC.SG hymn:NOM.PL grow:PF-3PL.ACT  
 ‘The hymns **have increased** Indra.’  
 (RV 8.6.35a)

Another perfect verb form which is common both in intransitive and transitive usages is *tan* ‘stretch’ (see Kulikov 1999b: 32–34, 36; Kümmel 2000: 208–211), cf.:

- (24) a. *yāḥ śāvasā pāñca kṛṣṭīḥ ...*  
 who:NOM.SG.M power:INS.SG five people:ACC.PL  
*tatān-a ...*  
 stretch:PF-3SG.ACT  
 ‘... who **has stretched** with his force across five peoples.’  
 (RV 10.178.3)

- b. *ā sūr<sub>i</sub>yasya duhitā tatān-a śrávo*  
 PREV sun:GEN.SG daughter:NOM.SG stretch:PF-3SG.ACT glory:ACC.SG  
*devēsu ...*  
 god:LOC.PL  
 ‘The daughter of the sun **has stretched** (her) glory among gods.’  
 (RV 3.53.15)

The labile syntax of the early Vedic perfect (especially common in the RV) may originate in the predominant intransitivity of the Proto-Indo-European perfect, of which some traces can still be found in early Vedic and Homeric Greek.<sup>11</sup> A detailed discussion of the syntactic development which the Proto-Indo-European perfect could have undergone goes beyond the scope of the present paper, but an approximate scenario can be outlined as follows. Originally, the active/middle opposition was not applicable to perfect forms. This assumption is supported by the existence of verbs for which the active perfects are employed in the same usage as the corresponding middle presents (non-passive intransitives); cf. middle present *pādyate* ‘falls’ ~ active perfect *papāda* ‘has fallen’, middle present *mriyāte* ‘dies’ ~ active perfect *mamāra* ‘has died’.<sup>12</sup> In other words, such active perfects serve as the perfect tense pendants of both middle (intransitive) and active (transitive) presents. This fact may account for the ability of the active perfects of the type *vāṇṛdhuḥ* to be employed both intransitively and transitively, as in (23), that is, for their labile syntax. The former, intransitive-anticausative, usage was probably more common however (*split transitivity*; see Kulikov 1999b).

Another possible reason for the labile syntax of the *proto-perfect* might be the nominal origin of it assumed by some scholars (see, e.g., Kuryłowicz 1964: 62; Cowgill 1979; Hart 1988); this issue will be discussed in the next section.

## 2.6 Nominalizations and labile syntax

In many languages with morphological voice and/or valency-changing categories, where the lability is uncommon for both finite and non-finite forms of the paradigm, deverbal nouns (in particular, action nouns, or *nomina actionis*) may

<sup>11</sup> For Greek, see, for instance, Chantraine 1927: 26–44; for Vedic, cf. Renou 1924; 1925: 144–148. For a general discussion of this phenomenon (‘split causativity’) in a typological perspective, see Kulikov 1999b.

<sup>12</sup> See e.g., Hoffmann 1976: 590; Kümmel 2000: 296–297, 370–372 et passim.

crucially differ in their syntactic properties from the forms belonging to the verbal paradigm. In particular, since action nouns (nomina actionis) typically lack any morphological marking to encode changes in valency, the same noun can be used for a variety of syntactic patterns, thus being labile (unlike the forms belonging to the verbal paradigm, which show overt marking of transitivity and voice).<sup>13</sup> For instance, the Russian action nouns such as *ispolnenie* ‘(musical) performance’ allow for both instrumental and genitive encoding of the Agent argument (for details, see Padučeva 1974: 201; Koptjevskaja-Tamm 1993: 8–15; 197–201) and thus show labile syntax, as illustrated in (25):

(25) Russian

- a. *Ego včerašnee ispoln-eni-e Ravelja bylo*  
 His yesterday:ADJ perform-NMZ-NOM.SG Ravel:GEN was  
*velikolepno.*  
 wonderful  
 ‘His performance yesterday of Ravel was wonderful.’
- b. *Ispoln-eni-e im Ravelja včera bylo*  
 perform-NMZ-NOM.SG he:INS.SG Ravel:GEN yesterday was  
*neumestno.*  
 out.of.place  
 ‘His performance yesterday of Ravel was out of place.’

This feature is also quite common for many Vedic deverbal nouns. In particular, a number of root nouns may correspond either to the intransitive or to the transitive-causative usage of the corresponding verb. Consider the root noun *vṛdh-* (derived from the verbal root *vṛdh* ‘grow, increase’; cf. (23)), which, in various compounds, may correspond either to the intransitive usages of the corresponding verb (‘grow’), meaning ‘the one who has grown’ or the like (as in (26a)–(26b)), or to the transitive-causative ‘make grow, increase’, meaning ‘the one who is making / has made [sth.] grow, the one who is making / has made [sth.] increase’ (as in (26c)) (see Scarlata 1999: 513–525):

<sup>13</sup> Notice that in Western Slavic languages, e.g. Polish and Czech, deverbal nouns can take reflexive morphology. This may account for the fact that their syntactic features are quite different from what we observe in Russian and other Slavic languages. In particular, they normally do not demonstrate labile syntax, so that, for instance, the translation equivalent of (25b) in Czech, with the instrumental encoding of the Agent argument (*Provedení \*jím Ravela . . .*), is ungrammatical (I am thankful to the anonymous reviewer who has pointed out this fact to me). For further details, see, in particular, Hron (2005) and Hron (2012: 76–135).

## (26) Early Vedic

- a. *ghṛtēna*      *dyāvā-pṛthivī*      *abhīvr̥te*  
 ghee:INS.SG    Heaven:NOM.DU-Earth:NOM.DU    surrounded:NOM.DU.F  
*ghṛta-śrīyā*      *ghṛta-pṛcā*      *ghṛta-vṛdh-ā*  
 ghee-beauty:NOM.DU.F    ghee-mix:NOM.DU.F    ghee-grow-NOM.DU.F  
 ‘Heaven and Earth are surrounded with ghee, adorned with ghee, mixed  
 with ghee, **grown** by ghee.’  
 (RV 6.70.4ab)
- b. *n̥y*      *āpayataṃ*      *vṛṣaṇā*  
 down    move:CAUS.PRES:2DU.IMPV.ACT    bull:VOC.DU  
*tamo-vṛdh-aḥ*  
 darkness-grow-ACC.PL.M  
 ‘Throw down, o you two bulls (sc. Indra and Soma), those **who have**  
**grown** in darkness!’  
 (RV 7.104.1b)
- c. *suprātike*      *vayo-vṛdh-ā*  
 beautiful.face:ACC.DU.F    energy-grow-ACC.DU.F  
*yahvī*      *ṛtāsyā*      *mātārā*  
 youngest:ACC.DU.F    order:GEN.SG    mother:ACC.DU  
*doṣām*      *uṣāsam*      *īmahe*  
 night:ACC.SG    dawn:ACC.SG    approach:PRES:1PL.MID  
 ‘We approach those two with beautiful faces, **who increase** vital energy,  
 the youngest mothers of order, Night and Dawn.’  
 (RV 5.5.6)

Apparently, in examples (26a) and (26b) the first constituent of the compound corresponds to the oblique objects (Instrument or Location) of the syntactic construction with the verb *vṛdh*, while in (26c) the syntactic source of the first constituent has the role of Direct (accusative) Object. There are some reasons to assume that the Indo-European perfect ultimately goes back to a nominal formation<sup>14</sup> (for instance, the perfect form *vavārdha* might mean ‘growing’ or the like, later developing a complete finite paradigm), this might account for its *syntactic*

<sup>14</sup> In particular, as an anonymous reviewer has pointed out to me, the fact that the stem of the perfect tense had the *o*-grade of ablaut alternation in Proto-Indo-European (cf. Greek *λέλοιπα* ‘has left’), which is also found in a plethora of nominal formations (cf. Greek *λοιπός* ‘remaining over’), may serve as additional support for the hypothesis regarding the origin of the Indo-European perfect in a deverbal noun.

*flexibility*. The labile syntax of the Indo-European perfect might be then a vestige of its nominal origin.

## 2.7 Vedic labile forms and Iranian influence

There are some isolated instances of labile syntax for a number of forms which may be due to the copying of syntactic patterns from another, non-Indo-Aryan, language(s).

Thus, the present *rīṣya-ti* almost exclusively occurs in intransitive constructions in Vedic texts, meaning ‘be hurt, injured’ (for details, see Kulikov 2012a: 609–611), as in:

- (27) *sá ghā vīró ná rīṣ-ya-ti*  
 that:NOM.SG.M PRTCL man:NOM.SG not be.hurt-PRES-3SG.ACT  
 ‘That man is not hurt ...’  
 (RV 1.18.4a)

The transitive-causative pattern ‘Y<sub>NOM</sub> injures X<sub>ACC</sub>’ occurs only once in Vedic,<sup>15</sup> in book VIII of the RV:

- (28) *ṛdūdāreṇa sākhyā*  
 having.pleasant.nature:INS.SG.M companion:INS.SG  
*saceya yó mā*  
 follow:PRES:1SG.OPT.MID which:NOM.SG.M I:ACC  
*ná rīṣ-yed dhar̥y-aśva*  
 not hurt-PRES:3SG.OPT.ACT fallow-horse:VOC.SG.M  
*pītáh*  
 drink:PART.PF.PASS:NOM.SG.M  
 ‘I wish to be in friendship with the companion of pleasant nature, who may not hurt me, when he is drunk up, O one with fallow horses (sc. Indra).’  
 (RV 8.48.10ab)

The labile syntax of *rīṣya-ti*, albeit exceptional for Vedic *-ya*-presents, matches well (i) with the labile patterning of the thematic aorist *arīṣat* (cf. RV 1.94.1 *mā rīṣāmā* ‘may we not be hurt’ ~ transitive participle *rīṣant-*, *rīṣant-* ‘injuring’, e.g.,

<sup>15</sup> This occurrence was noticed already by Delbrück (1897: 29); see also Joachim 1978: 146; Oettinger 1992: 136.

in RV 1.12.5);<sup>16</sup> and (ii) with the syntax of its Avestan cognate present *irišiiēiti*;<sup>17</sup> see Kulikov (1999a: 232–233) for details and discussion. It is probable that the sole transitive-causative occurrence of the present *rīṣya-<sup>ti</sup>* in book VIII of the RV is a syntactic feature of the dialect of the Kāṇvas, a half-mythical lineage of the Vedic poets (ṛṣis), to which book VIII is ascribed. There are some reasons to believe that at least some of the Kāṇvas could have been bilingual, i.e., speakers of both an Old Indo-Aryan (Vedic) dialect and a non-Indo-Aryan (Iranian?) language (Hoffmann 1940: 142 [= Aufs. 1, 9]; Stanley Insler p.c.). This could facilitate copying some syntactic patterns from Old Iranian into the Old Indo-Aryan dialect of this book of the RV.

Parallels to the mechanism of the emergence of labile verbs through the borrowing of syntactic patterns can be found in a number of languages, for instance, in Estonian, which considerably increased the number of labile verbs under the influence of German in the 18th century (Kehayov and Vihman this issue); or in Late Latin, where the influence of Greek could support a general tendency towards an increase in the number of labile verbs, especially in texts written by speakers of Greek or in translations from Greek (Gianollo this issue).

### 3 The decline of labile syntax in middle and late Vedic

After the Ṛgveda, we observe the decline of the labile patterning for most groups of verbal formations which are still labile in the earliest period of Vedic. Although the mechanisms of this decline and the loss of lability may differ for different classes of labile forms, they all share a remarkable tendency to limit the syntax of the corresponding forms either to intransitive or to transitive usages only.

#### 3.1 The decline of the labile syntax of middle presents

The labile syntax of middle presents is virtually unattested after the RV, that is, already in the second most ancient Vedic text, the Atharvaveda (AV). This

<sup>16</sup> Note also the transitive usage of the desiderative *rīriṣa-<sup>ti</sup>* ‘want to injure’ (see Heenen 2006: 212) as well as of the nominal derivatives *reṣin-* (in *puruṣa-reṣin-* AVP-Kashm. 20.50.7 (?; ms. *°rīṣiṇīm*), KauśS ‘people-injuring’), *°riṣá-* ‘injuring’ (in *naghāriṣá-* AV (lit.) ‘surely-not-injuring’, i.e., ‘harmless’; see Zysk [1985: 316–317], with fn. 15).

<sup>17</sup> Transitive usages (‘harm, make hurt’) are attested, e.g., in V 15.12 (*irišiiēiti*), 7.38 (subj. *irišiiāt*); intransitive constructions (‘be hurt’) appear, e.g., in V 13.37 (*irišiiāt*), V 15.48 (*irišiiān* ‘they will not be hurt’); see Bartholomae 1904: 1485–1486; Lühr 1994: 89.

suggests that some drastic changes in the verbal syntax can be dated as early as the very end of the epoch of the RV, which is chronologically contemporaneous with the earliest layers of the AV, i.e. approximately at the turn of the second millennium B.C. Most often, one of the two usages (transitive or, more rarely, intransitive) merely disappears after the RV. Thus, of the six labile middle presents of class I listed in 2.1.1, one (*códa-te* ‘rush, hasten; impel’) does not occur in post-Ṛgvedic texts at all, while three other (*náma-te* ‘bends’, *śráya-te* ‘lean on; lay on, fix on, fasten’, and *sváda-te* ‘be sweet; make sweet’) only appear in intransitive usages:

**Table 1:** Labile middle presents in the Ṛgveda and the decline of lability in later texts

	Intransitive	Transitive
<i>códa-te</i> ‘rush, hasten; impel’	only RV	only RV
<i>náma-te</i> ‘bends’ <sup>18</sup>	RV+ <sup>19</sup>	only RV <sup>20</sup>
<i>váha-te</i> ‘carries; drives, goes’	RV+	RV, AV 7.97.4 ~ YV <sup>m</sup> , JB 2.254:5
<i>śráya-te</i> ‘lean on; lay on, fix on, fasten’	RV+	RV (2× <sup>21</sup> )
<i>sváda-te</i> ‘be sweet; make sweet’	RV+	RV (2×), MS <sup>p</sup> 3.1.9:12.10 <sup>22</sup>

In some cases, the non-labile character of the middle presents after the RV is trivially due to the fact that the corresponding is unattested at all, as is the case with *códa-te* ‘rush, hasten; impel’, which is unattested after the RV.

Although the scenarios of the loss of lability may vary for different presents, the general decline of labile syntax within this group of forms may be due to a

**18** It is interesting to note that, from the RV onwards (but especially after the RV), the active present *náma-ti* attests the labile syntax. For the explanation of this rare (and probably secondary) instance of lability, see Gotō 1996 [1987]: 195–196.

**19** I.e., from the RV onwards and in later texts.

**20** Except for two transitive occurrences in middle and late Vedic: KS<sup>m</sup> 18.2:266.8 (*sám ... námate*) and AĀ 2.1.7:106.17 (*saṃnamante*), both probably due to erroneous text transmission; see Gotō 1996 [1987]: 193–194.

**21** 2× = ‘attested two times’ (RV 7.45.3, 10.85.37; both occurrences with the preverb *ví*; see Gotō 1996 [1987]: 312).

**22** This only attestation in middle Vedic (MS) may be an archaism, according to Gotō (1996 [1987]: 341, fn. 839).

general tendency to rebuild the verbal system and, in particular, to the loss of one of the basic functions of the Vedic middle. Already in early Vedic, the binary oppositions of the type mid. *várdhate* ~ act. *várdhati*, mid. *códate* ‘rushes, hastens (intr.)’ ~ act. *códati* ‘urges, impels (tr.)’ are often complicated by a third member, the more characteristic causative with the suffix *-áya-*: *vardháyati*, *codáyati*. While, initially, the active/middle opposition alone bears the function of encoding the transitivity of the verbal form, in later period this function is transferred to the opposition of present stems (class I thematic root presents vs. *-áya*-presents), as shown in Figure 2:

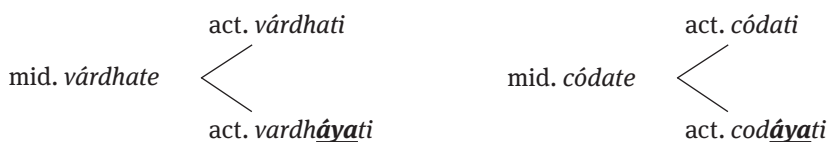


Fig. 2: Causative/anticausative opposition within the system of the present

In post-Ṛgvedic texts, the causative meaning is even more regularly rendered by the suffix *-áya-*, which still further decreases the functional weight of the active/middle opposition. Furthermore, the middle forms such as *svádate* become limited to intransitive usages, so that the labile type *svádate* ‘be sweet / make sweet’ virtually disappears by the end of the early Vedic period.

### 3.2 The decline of the labile syntax of active perfects

The loss of labile forms is particularly obvious in the case of active perfects that attest the labile syntax in the RV. Already in the second-most ancient Vedic text, the Atharvaveda (AV), we find very few labile forms. Most of the active perfects which show labile syntax in the Ṛgveda are either attested in intransitive usages only (e.g., (*ā*) *vā́varta* ‘has turned / has made turn’, both intransitive and transitive in the RV, as opposed to AV *-vāvarta* ‘has turned’ (intr.); see Kümmel 2000: 462–469), or in transitive usages only (RV *mamáda* ‘has rejoiced, has been exhilarated / has exhilarated’ (tr.), as opposed to AV 7.14.4 3sg.subj.act. *mamádat* ‘he should exhilarate’ (transitive); see Kümmel 2000: 356–360), or do not occur at all (as is the case with RVic *vāṽṛdhúḥ* ‘have grown / have increased’, *rurucúḥ* ‘have shone / have made shine’). Cf. Table 2, which summarizes these developments:



Table 2: Labile active perfects in the Ṛgveda and the decline of lability in the Atharvaveda

	Ṛgveda	Atharvaveda
(ā) vāvárta	‘has turned’ (intr.) / ‘has made turn’ (tr.)	‘has turned’ (intransitive)
mamáda	‘has been exhilarated’ (intransitive) / ‘has exhilarated’ (transitive)	3sg.subj.act. <i>mamádat</i> AV 7.14.4 ‘he will exhilarate [him]’ (tr.)
vāvṛdhūḥ	‘have grown’ (intr.) / ‘have increased’ (tr.)	–
rurucúḥ	‘have shown’ (intr.) / ‘have made shine’ (tr.)	–
3sg. <i>pipáya</i> ,	‘has, have swollen’ (intr.) / ‘has, have made	– <sup>23</sup>
3du. <i>pipyathur</i>	swell’ (tr.)	

## 4 Concluding remarks

### 4.1 Old Indo-Aryan lability: archaism, innovation, or both?

The lability of the Old Indo-Aryan (Vedic) verb, however common it might appear, is mostly of secondary character. In contrast to the situation in English or many Daghestanian (East-Caucasian) ergative languages, where labile patterning appears to be one of the inherent features of verbal syntax, lability in Old Indo-Aryan may, in part, represent the scattered debris of an earlier system, which, furthermore, tends to disappear within the earliest stage of the historical period. Alongside with a few archaisms, we also find a number of labile formations of clearly secondary character. These scattered phenomena can be grouped into a few well-delineated classes:

- i. A few groups of forms which may continue the older, presumably Proto-Indo-European, types of labile forms. These include:
  - i.a. active perfects
  - i.b. middle presents
- ii. A few formations which could become labile through the rapid restructuring of the older (Proto-Indo-Iranian or Proto-Indo-European) verbal system and because of the creation of new forms supplying some gaps in the verbal paradigm, which, in turn caused grammatical homonymy. These must include:

<sup>23</sup> This perfect does not appear in the Atharvaveda, but occurs in somewhat younger texts, in the mantras of the Yajurveda – that is, at the very end of the early Vedic or at the beginning of the middle Vedic period.

- ii.a. newly-built transitive middle perfects, which share stems and inflection (3sg. *-e* and 3pl. *-re*) with passive statives built on perfect stems, thus being homonymous with them;
- ii.b. middle participles belonging to the passive aorist and stative paradigms, which again share stems and are homonymous with middle root aorist and perfect participles.
- iii. Some isolated instances of forms which could become labile due to reanalysis of certain constructions (as in the case of *púṣya-ti* ‘prosper; make prosper’) or influence of non-Indo-Aryan (Iranian?) dialects (as with *rīṣya-ti* ‘be hurt, injured; injure’).

## 4.2 The decline and disappearance of Old Indo-Aryan lability in a diachronic typological perspective

In the course of the history of Indo-Aryan languages, from the Old Indo-Aryan (Vedic) period onwards, we observe two basic tendencies which determine the main changes in the verbal system and syntax (see Kulikov 2012b for further details and a broader Indo-European and typological perspective). These include:

- i. the rise and development of new valency-changing categories, causatives with the suffix *-áya-* and passives with the suffix *-yá-*, which, in general, manifests a drift towards more overt and non-syncretic morphological marking of the transitivity oppositions;
- ii. the degrammaticalization of the middle diathesis, most intransitivizing functions of which are transferred to specialized markers.

These two processes are accompanied by a few other minor developments, the most important of which is the loss of the category of stative (which is historically related to the Proto-Indo-European middle, probably going back to the same source).

These basic tendencies, the grammaticalization of new valency-changing categories, and the degrammaticalization of the middle, may be responsible, in part, for the third development, the loss of labile syntax, as attested within Old Indo-Aryan period. The earliest layers of Old Indo-Aryan, attested in the most ancient Vedic text, the Ṛgveda (particularly, in its oldest parts), appear to preserve the same, relatively high, degree of lability that can be reconstructed for Proto-Indo-European syntax. However, from the end of the RV and, especially, from the second most ancient Vedic text onwards, the Atharvaveda, we observe drastic changes in the verbal syntax that affect, in particular, the system of labile verbs

and, eventually, lead to the decline of labile patterning. Already in the middle Vedic period this syntactic feature appears to have heavily deteriorated. Due to a number of dramatic changes in the morphological system of Indo-Aryan in the Middle Indic period (in particular, collapse of the Old Indo-Aryan verbal morphology), further development of this phenomenon is not always straightforward, and unexpected deviations from the general tendency to decrease the number of labile verbs are not exceptional (for details, see Keidan, this issue and Kulikov 2013). Nevertheless, and even in spite of these deviations, the basic trend remains unchanged, so that, eventually, we observe the loss of lability after the Middle Indo-Aryan period. A detailed study of the most important developments in the (late) Middle Indo-Aryan as well as their continuation in New Indo-Aryan languages, based on thorough scrutiny of evidence available from the last two millennia of the history of this branch of Indo-European language family remains a desideratum for further research.

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## Appendix A: Abbreviations of texts (text sigla)

AĀ	Aitareya-Āraṇyaka
AV(Ś)	Atharvaveda, Śaunakīya recension
AVP	AV, Paippalāda recension
AVP-Kashm.	AVP, Kashmir manuscript
JB	Jaiminiya-Brāhmaṇa
KauśS	Kauśika-Sūtra
KS	Kāṭhaka(-Saṃhitā)
MS	Maitrāyaṇī Saṃhitā
PB	Pañcaviṃśa-Brāhmaṇa
RV	Ṛgveda
ŚB	Śatapatha-Brāhmaṇa
TB	Taittiriya-Brāhmaṇa
V	Videvdat
X <sup>m/p</sup>	mantra or prose part of text X
YV	Yajurveda(-Saṃhitā)

## Appendix B: Grammatical abbreviations in morphological glosses

ACC	accusative
ACT	active
ADJ	adjective
AOR	aorist
DAT	dative
DU	dual
F	feminine
GEN	genitive

IMPF	imperfect
IMPV	imperative
INF	infinitive
INS	instrumental
LOC	locative
M	masculine
MID	middle
NMZ	nominalizer
NOM	nominative
PART	participle
PF	perfect
PL	plural
PREV	preverb
PRTCL	particle
PRES	present
SG	singular
STAT	stative
VOC	vocative