

NOMINAL COMPOSITION, NOUN INCORPORATION AND NON-FINITE FORMATIONS IN SANSKRIT: DELIMITING THE BOUNDARIES OF THE VERBAL PARADIGM¹

Leonid Kulikov

ABSTRACT

Noun incorporation is unusual for the Indo-European linguistic type. Nevertheless, in some Indo-European languages, such as Sanskrit and Frisian, we find examples based on converbs (in Sanskrit) or gerunds (in Frisian). It is argued that the existence/lack of incorporated complexes based on particular (de-) verbal formations can be used as a criterion for delimiting the verbal paradigm, distinguishing its members from nominal derivatives that do not belong to the paradigm properly speaking.

1. NOMINAL COMPOSITION VS. NOUN INCORPORATION: INTRODUCTORY REMARKS

The present paper concentrates on distinguishing between formations that are members of verbal paradigm and verbal derivatives that do not belong to the paradigm. While finite forms, constituting the core of the paradigm, pose no difficulties, problems may arise at the periphery of the paradigm – for instance, when distinguishing between participles (= word-forms) and verbal adjectives (separate lexemes), or between infinitives (usually treated as members of the paradigm) and deverbal nouns.

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In what follows, I will discuss a criterion that, to my knowledge, has never been used as a test for membership in the verbal paradigm. This criterion rests on the notion of noun incorporation (NI), and thus requires a brief discussion of this phenomenon.

The canonical NI can be determined, with some simplifications, as follows:

- (1) Noun incorporation is a particular type of productive compounding in which a verb and a noun combine to form a new verb.

The noun bears a specific semantic relationship to its host verb (patient, location, instrument, etc.) and typically corresponds to some syntactic function in the pendant construction without noun incorporation (most often, to direct object).

The synchronic features of this linguistic phenomenon have been the subject of a number of studies;² therefore it suffices to quote here a few examples from some typical incorporating languages:

- (2) Paiute (Sapir 1911: 263)

qām'Ú-yaai-nUm-puya'

rabbit-hunt-USITATIVE-REMOTE.PAST

'(He) used to hunt rabbits', lit. 'He rabbit-hunted.'

- (3) Chukchee (Nedjalkov 1977: 110–111)

atlag-ən k'aa-nm-at-γə

father-NOM deer-kill-INTR-3SG.SUB.PAST

'The father killed a deer.'

- (4a) Yukatec Mayan (Mithun 1984: 857)

č'ak-č'e'-n-ab-en

chop-tree-ANTIPASS-PERF-1SG

'I chopped wood', lit. 'I wood-chopped'

Cf. also the variant of (4a), (4b), where the direct object is not incorporated into the verbal form:

- (4b) Yukatec Mayan (Mithun 1984: 857)

t-in-č'ak-θ-ab č'e'
COMP-1SG-chop-it-PERF tree

'I chopped a tree.'

2 See, e.g. Sapir 1911; Nedjalkov 1977; Mithun 1984; de Reuse 1994; Van Geenhoven 1998.

Generally, the incorporating strategy indicates the low referential status of the incorporated argument (generic, non-individuated, indefinite, etc.).

The following aspects of definition (1) are of particular importance for our discussion: (1.1) the morphological unity of the incorporating complex; (1.2) the full verbhood of the compound; and (1.3) the productivity of NI. To put it differently, definition (1) amounts to the following three constraints:

- (1.1) the incorporated N+V complex displays the morphological properties of a grammatical word;
- (1.2) the stem of the incorporated N+V complex has the properties of a regular verbal stem (in particular, it can serve as a base for finite conjugation);
- (1.3) noun incorporation is a productive morphological process, operating on a large (ideally, unlimited) set of verbs.

Constraint (1.1) distinguishes the canonical (morphological) noun incorporation from some related phenomena, foremost from the “analytical incorporation” (on which see, in particular, Steever 1979/1981; Gnanam 1981; Mithun 1984: 849 ff.; Muravyova 1992; forthcoming). Of particular interest for our purposes is constraint (1.2), which distinguishes the incorporation from compounds consisting of nouns combined with verbal nouns and adjectives. Such formations are common in many languages of the world (cf. German *Arbeitsausführung* and *Arbeitsausführen*, *Pflichterfüllung* and *Pflichterfüllen*, *Straßenreinigung* and *Straßenreinigen*; Russian *neftedobyča* ‘petroleum production’, *molokovoz* ‘milk tanker’; cf. also the Sanskrit examples in Section 3.1), in contrast to compounds based on finite forms, which clearly belong to the paradigm (cf. the impossible forms such as **arbeit-ausführt*, **straßen-reinigt* in German or **moloko-vozt* (lit.) ‘milk-transport’ in Russian). Thus, in accordance with (1.2), these languages should be qualified as non-incorporating.³

Constraint (1.3) excludes compounds (complex predicates) consisting of a ‘light verb’, such as ‘be’, ‘become’, ‘make, do’, ‘give’, with nominal stems, which are quite numerous in some languages, in particular, in Indo-Iranian and Dravidian; cf. Kurdish formations based on verbs *kirin* ‘do’ and *dan* ‘give’, cf. *çap-kirin* ‘publish’ (lit. ‘print-do’), *den-kirin* ‘call’ (lit. ‘voice-do’), *av-dan* ‘irrigate, water’

3 Note that verbs of the type *babysit* (as in *He babysits for the Smiths tomorrow*) do not form true exceptions, since they instantiate a back derivation from nominal compounds (*babysitter*); see, e.g. Kiparsky 1974: 271–272 = 1982: 213; Mithun 1984: 847; Baker 1988: 78.

(lit. ‘water-give’); Sanskrit formations with *bhū* ‘become’, *kr* ‘make, do’ and *as* ‘be’ (see examples in Section 3.1, Dravidian examples in Section 4, and Bossong 1985: 144–145; Haig 2002 for evidence from Iranian languages). Intuitively, this type of derivation does not instantiate true noun incorporation. Such complex predicates can only be built on a handful of verbal lexemes (cf. Haig 2002: 28–29). The few verbal lexemes involved in such compounds behave as (semi-) auxiliary verbs, also called ‘support verbs’ or ‘light verbs’.⁴ Rather, we are faced in such cases with denominative-like formations, meaning ‘be X’, ‘become X’, ‘make, do X’, ‘give X’, etc.

Note that, according to constraint (1.2), one of the constitutive features of incorporation is the non-nominal character of the verbal form. Since this feature distinguishes canonical NI from compounds built on verbal nouns, it can, supposedly, be used as a criterion for testing verbal derivatives for their membership in the paradigm. In general terms, this criterion can be formulated as follows:

(CVI) Composition VS. Incorporation Criterion (CVI-criterion)

In a non-incorporating language, a verbal formation F that can be compounded with nouns (N+F) most probably does not belong to the verbal paradigm *sensu stricto*.

Thus, by virtue of the CVI-criterion, German verbal nouns in *-en* und *-ung*, albeit very regular and productive, can be excluded from the paradigm, since they easily form numerous compounds such as *Arbeitsausführung* and *Arbeitsausführen*, *Pflichterfüllung* and *Pflichterfüllen*, *Straßenreinigung* and *Straßenreinigen*. On the contrary, compounds based on finite forms, which clearly belong to the paradigm, such as **arbeit-ausführt* or **straßen-reinigt*, are impossible – quite in accordance with our linguistic intuition.

2. NOUN INCORPORATION IN GERMANIC: EVIDENCE FROM FRISIAN

As is well known, noun incorporation, quite common in Amerindian and Paleo-Siberian languages, is unusual for the Indo-European linguistic type. Nevertheless, a few Indo-European languages, such as Sanskrit and Frisian, furnish valuable evidence for the study of some peripheral types of NI.

Frisian represents a rare exception among the typologically rather homogenous Indo-European languages. Unlike closely related West-Germanic languages, such

4 Cf. Jespersen’s (1942: 117–118) description of such constructions as consisting of “an insignificant verb” “placed before the really important idea”.

as Dutch or German, Frisian has developed noun incorporation, illustrated by examples (5–8) (all taken from Dijk 1997):

(5a) Frisian (Dijk 1997: 3)

Wy wolle messe-slyppj-e
we want knife-sharpen-INF

‘We want to sharpen knives.’ (lit. ‘to knife-sharpen’)

(6) Frisian (Dijk 1997: 25)

Dy mynhaer kaem to brea-weag-en
the gentleman came to bread-weigh-INF

‘The gentleman came in order to weigh the bread.’

Cf. also the non-incorporating construction (5b) corresponding to (5a):

(5b) Frisian

Wy wolle de messen slyppj-e
we want the knives sharpen-INF

‘We want to sharpen knives.’

Examples of incorporating complexes based on finite forms are rare, but possible, too, especially with a habitual meaning:

(7) Frisian (Dijk 1997: 29)

Hja bôle-bak-t al jierren mei nocht
she loaf-bake-3SG.PRES already years with pleasure

‘She bakes loaves already for many years with pleasure.’

(8) Frisian (Dijk 1997: 30)

Syn kreas wiif fisk-sutel-t, wjirm-dol-t...
his pretty wife fish-sell-3SG.PRES worm-dig-3SG.PR

‘His pretty wife sells fish, digs worms ...’

Examples (5–8) meet all requirements of the definition of canonical noun incorporation (1): (1.1) the morphological unity of the incorporating complex; (1.2) the verbhood of the verbal form; and (1.3) the productivity of this process.

As Dijk (1997: 165 ff.) rightly notes, Dutch and other closely related West-Germanic languages lack similar constructions; cf., in particular, Dutch sentences (9–11) corresponding to examples (5a, 6 and 8):

(9) Dutch

Wij willen messen scherpen
we want knife:PL sharpen:INF

‘We want to sharpen the knives.’

(10) Dutch

De mijnbeer kwam om brood te wegen
 the gentleman came at bread to weigh:INF

‘The gentleman came in order to weigh the bread.’

(11) Dutch

Zijn aardige vrouw verkoch-t vis ...
 his pretty wife sell-3SG.PRES fish

‘His pretty wife sells fish ...’

According to the plausible scenario of the rise of incorporating complexes outlined by Dijk (1997), the starting point was the verbal noun (gerund) in *-ane* (yielding Frisian infinitive in *en*). In contrast to what we observe in German or Dutch, this form did not merge with the old infinitive in *-en* (yielding Frisian infinitive in *-e*), but transferred some of its syntactic properties to this latter form.

Abandoning the non-incorporating Indo-European type, Frisian has lost the important distinction between (nominal) composition based on verbal nouns, on the one hand, and noun incorporation properly speaking, on the other.

3. NOUN INCORPORATION VS. NOMINAL COMPOUNDING IN SANSKRIT

3.1 Compounds based on finite forms?

Still more relevant for our discussion of the CVI-criterion is Sanskrit, which, in contrast with Frisian, does not apply the noun incorporation strategy at full scale. Sanskrit is one of the textbook examples of a rich system of nominal composition, but it does not form compounds on the basis of forms belonging to the verbal paradigm in the strict sense of the word. In particular, compounds based on finite forms, such as **śatru-jayati* ‘s/he conquers (an) enemy/enemies’ (lit. ‘s/he enemy-conquers’), or **dharmā-veda* ‘s/he knows (the) law’ (lit. ‘s/he law-knows’), are ungrammatical. Thus, compounds attested in Sanskrit do not meet one of the canonical parts of definition (1), verbhood constraint (1.2).

The lack of such verbal complexes is a general feature of both Vedic and post-Vedic (Classical) Sanskrit grammar. An apparent exception to this principle is formed by compounds made from the nominal stems, where the final segment of the stem (in the majority of the attested examples, the stem vowel *a*) changes

to \bar{i} ,⁵ and forms of the verbs *kr* ‘make, do’, *bhū* ‘become’ and, more rarely, *as* ‘be’; see Whitney 1889: 401–403; Wackernagel 1908: 126–136 = 1955: 1347–1357; Renou 1930: 150–153; Schindler 1980. These include such compounds as

(12) Middle Vedic

- a. *krūrī-kurv-ānti* (ŚB)
wound-make:PRES-3PL.ACT
(they) wound, make sore (*krūrā-* ‘wound’ + *kr*)
- b. *muṣṭī-karo-ti* (TS)
fist-make:PRES-3SG.act
(s/he) closes the hand, clenches the fist (*muṣṭī-* ‘fist’ + *kr*)
- c. *brāhmaṇī-bhū-ya* (ŚB)
Brahman-become-CONV
(having become a Brahman) (*brāhmaṇa-* ‘Brahman’ + *bhū*)

This type of derivation is limited to as few as three verbal lexemes (‘light verbs’), which behave as (semi)auxiliary verbs, and, in fact, serve to form denominatives of the type *X-bhū-/X-kr-*, meaning ‘become/make X’, ‘become/make related to X’, and the like. Thus, by virtue of constraint (1.3), such compounds do not instantiate true noun incorporation.⁶

By contrast, compounds built on verbal nouns are very common (see, e.g. Whitney 1889: 491–494). Thus, we find numerous compounds built on root nouns (*śatru-jit-* ‘enemy-conqueror’, *dharmā-vid-* ‘law-knowing’), verbal nouns in *-a* (*havir-adā-* ‘oblation-eater’, *-ana* (*śatru-bādhana-* ‘enemy-oppressor’), passive perfect participles (also called verbal adjectives) in *-ta/-na* (cf. *vīrā-jāta-* ‘born of a hero’, *hāsta-kr̥ta-* ‘hand-made’), which is thus an additional argument against including these derivatives in the verbal paradigm.

5 Such stems are called ‘*cvi*-formations’ in the Indian grammatical tradition. Wackernagel (1908: 128 = 1955: 1349) saw here the residual of a hypothetical ‘adverbial case’. For a historical explanation of this morphological type as going back to constructions consisting of the instrumental case of nomina abstracta with the suffix *-i* (derived from Indo-European **o*-adjectives) with ‘light verbs’ (‘make’, ‘become’, ‘be’), see Schindler 1980.

6 Another exceptional example of NI is the compound *śrād-dhā-* ‘believe’ (with the etymological meaning ‘heart-put’), which forms a finite paradigm (cf. RV 10.147.1 *śrāt te dādāmī prathamāya manyāve* ‘I believe your first wrath’ etc.). It might represent an archaic Proto-Indo-European type (cf. Lat. *credō*), but is isolated in Vedic and, again, does not instantiate productive noun incorporation. For a morphosyntactic analysis of this compound, see, in particular, Scarlata 1999: 262–263.

Of particular interest for our discussion are verbal formations or derivatives that do form compounds, but only rarely. According to the CVI-criterion, they should be located at the very boundary between the verbal paradigm and verbal derivatives.

3.2 Gerundive-based compounds

This is, for instance, the case with gerundives, or future passive participles, built with the suffix *-ya*, such as *dóhya-* ‘to be milked’ (*dub* ‘milk’), *kāryà-* ‘to be done; task’ (*kr* ‘do’), *vācya-* ‘to be said’ (*vac* ‘say’) (see, in particular, Whitney 1889: 492; Reuter 1892: 530 ff.; Wackernagel 1905: 191 ff.; Wackernagel/Debrunner 1954: 789 ff.). In contrast to finite forms and infinitives belonging to the verbal paradigm properly speaking, a few compounds built on gerundives of the type N + V_{GER}-*ya* (mostly with the first member corresponding to the instrumental or locative) are attested. In early Vedic (RV and AV) we only find:

(13) Early Vedic

a. *bala-vijñā-yá-* (RV 10.103.5)
force-recognize-GER

‘recognizable by (his) force’

b. *nīvi-bhār-yà-* (AV 8.6.20)
cloth-bear-GER

‘to be borne under clothes’

In middle and late Vedic texts gerundive-based compounds remain rare (cf. (14)); but in post-Vedic texts we find more examples of this type, given in (15):

(14) Middle/Late Vedic

a. *śīrṣa-hār-yà-* / *śīrṣa-hārya-* (YV)
head-carry-GER

‘to be borne on the head’

b. *sūktóc-ya-* [= *sūktá-* + *ucya-*] (MS, TB)
hymn:say-GER

‘to be pronounced in the form of a hymn’

(15) Post-Vedic Sanskrit

a. *śrotra-peya-* (Kalidāsa’s Meghadūta 1.13 etc.)
ear-drink:GER

‘to be heard attentively’ (lit. ‘to be drunk by the ear’)

b. *sindhu-math-ya-* (Bhāgavata-Pur.)
stream-stir-GER

‘to be produced by stirring the stream’

The exceptional character of the gerundive-based compounds in Vedic texts must indicate, in accordance with the CVI-criterion, that they are located at the very periphery of the Vedic verbal paradigm. The fact that gerundive-based compounds become more common in late Sanskrit, can be interpreted in two ways: either (i) we assume that gerundives drift outside the paradigm, thus being deparadigmatized (or degrammaticalized); or (ii) we are forced to admit that late Sanskrit is becoming an incorporating language. The former explanation appears more natural.

3.3 Compounds based on agent nouns in *-tar-*

Very similar is the case of the agent nouns in *-tar-*, found only in a few compounds in the Ṛgveda. Compounds based on *-tar-*nouns (in particular, those where the first member corresponds to the direct object of the verb) remain exceptional in middle and late Vedic (see Wackernagel 1905: 188–189; Wackernagel/Debrunner 1954: 679):

(16) Vedic

- a. *mṛ-pā-tár-* (RV)
protect-man-N.AG.
'man-protector'
- b. *man-dhā-tár-* (RV)
thought-put-N.AG.
'thoughtful man'
- c. *has-kar-tár-* (RV 4.7.3)
liveliness-make-N.AG.
'stimulator, inciter' (lit. 'liveliness-maker')
- d. *rāja-kar-tar-* (AB)
king-make-N.AG.
'the one who places a king on the throne'
- e. *kṣīrā-ho-tar-* (ŚBM 2.3.3.15 = ŚBK 3.1.11.3)
milk-pour-N.AG.
'milk-offerer'
- f. *apriya-vet-tar-* (ChU 8.10.2)
unpleasant-know-N.AG.
'knowing unpleasant [things]'

Note that in all Ṛgvedic examples, the first member is a root noun, while the agent noun in two of these examples (as well as in (16d)) is based on 'light verbs' (*dhā* 'put', *kr* 'make').

Only in post-Vedic Sanskrit, in particular, in Epics and Smṛtis, do such compounds become more common. We find a few dozen examples such as:

(17) Post-Vedic Sanskrit

a. *kanyā-duṣayi-tar-* (Mārkaṇḍeya-Pur.)
girl-spoil-N.AG.

‘defiler of a maiden’

b. *kanyā-dā-tar-* (ManuSmṛ. 9.73)
girl-give-N.AG.

‘(a father) who gives a girl (in marriage)’

c. *go-saṃkhyā-tar-* (MBh. 4.3.6)
cow-count-N.AG.

‘cowherd’ (lit. ‘counting the cows’)

d. *brahma-vak-tar-* (Hariv.)
sacred.knowledge-proclaim-N.AG.

‘proclaimer or teacher of sacred knowledge’

e. *madhu-ban-tar-* (Rām. 1.75.17)
Madhu-kill-N.AG.

‘killer of Madhu’

It is interesting to note that the results of the CVI-test for agent nouns in *-tar* in early Vedic correlate with another feature of this formation. In contrast to most other nominal derivatives, which are constructed with the genitive of the object, the acrostatic *-tar*-nouns derived from transitive verbs are typically constructed in early Vedic with the accusative of the direct object (see Tichy 1995: 333 ff., 341), thus being similar in syntax to finite forms and participles, cf.:

(18) Early Vedic (RV 4.17.8)

hántā yó vṛtrám sánitā utá [...] vājam [...]
slayer:NOM.SG who:NOM.SG.M Vṛtra:ACC.SG winner:NOM.SG and prize:ACC.SG

‘Who [is] the slayer of Vṛtra-dragon, and the winner of the prize ...’

Both the CVI-criterion and the syntactic behaviour of the *tar*-nouns point to their borderline status, that is, their position at the boundary of the verbal paradigm. In other words, there are good reasons to qualify the status of this formation

as intermediary between participles (= members of the paradigm) and deverbal nouns outside the paradigm.⁷

3.4 Compounds based on converbs (absolutives)

3.4.1 *Converbs with the suffixes -tvā and -ya*

In what follows, I will examine the paradigmatic status of yet another non-finite formation, converbs with the suffixes *-tvā* and *-ya* (traditionally called absolutives, or gerunds), which denote activities anterior to that of the main clause. A comprehensive description of this formation was offered by the addressee of this volume (Tikkanen 1987).

According to some grammars (e.g. Renou 1930: 129), compounds based on *-tvā* and *-ya* converbs (absolutives) are impossible. Thus, in accordance with the CVI-criterion, converbs should be included in the verbal paradigm.

In fact, however, we find a few such forms in early Vedic (i.e. in the language of the Ṛgveda and Atharvaveda); see Whitney 1889: 356, 401. These include:

(19) (RV 8.70.15)

karṇa-gṛh-ya
ear-grasp-CONV
'having grasped by the ear'

(20) (RV 4.18.12, 10.27.4)

pāda-gṛh-ya
foot-grasp-CONV
'having grasped by the foot'

(21) (RV 10.85.26)

<i>pūṣā</i>	<i>tvā</i>	<i>itó</i>	<i>nayatu</i>	<i>hasta-gṛh-ya</i>
Pūṣan:NOM	you:ACC	from.here	lead:3SG.IMPV	hand-grasp-CONV

'Let Pūṣan lead you from here by the hand.'

(22) (RV 7.103.3)

akḥkhalī-kṛtya
akḥkhalī-make:CONV
'having performed *akḥkhalī* (= a croaking)'

7 Cf. Whitney's (1889: 446) remarkable note: "Agent-nouns [in *-tar*] [...] in the oldest language are very frequently used participially".

(23) (AV 7.102.1)

namas-kṛtya
 reverence-make:CONV
 ‘having made a reverence’

Compounds quoted under (19–23) do not instantiate true noun incorporation. The converb-based compounds of the type *namas-kṛtya*⁸ can only be derived from the ‘light verb’ *kṛ* ‘make’, and thus do not meet constraint (1.3) (productive character of compounding). As to *gṛhya*, it is employed, as a matter of fact, as a syntactic postposition, thus functioning as a quasi-case (proto-case) marker.⁹

Yet in some late Sanskrit texts, in particular, in the architectural treatise *Kāśyapaśilpa* (around 12th century AD), we find a few irregular compounds built on converbs with the suffix *-ya* (attested at least as variant readings):¹⁰

(24) (*Kāśyapaśilpa* 1.37) (Ślāczka 2007: 113)

gavyābhiṣic-ya [v.l. °ṣec-ya] *phelāṃ* *tu*
 cow.product:besprinkle-CONV casket:ACC.SG but
snāpayed *gandhatoyakailḥ*
 bathe:pres.caus:3SG.OPT.ACT fragrant.water:INS.PL
 ‘Having besprinkled the casket with cow products
 (milk etc.), he should bathe [it] by means of fragrant waters.’
 (*gavyābhiṣecya* = *gavya-* ‘cow product’ + *abhiṣecya* ‘having besprinkled’)

8 From the *Brāhmaṇas* onwards, we even find finite forms based on this compound (*nāmas-karoti* AB, ŚB, TB etc.).

9 Cf. some other postpositions based on converbs, such as *ā-dāya* ‘with’ (lit. ‘having taken’) and *muktvā* ‘without’ (lit. ‘having become free (of)’); see Andersen 1979.

10 My sincerest gratitude goes to Anna Ślāczka, who drew my attention to these forms, for a pleasant discussion of the relevant constructions with me. I would also like to thank Alexander Dubjansky, Dominic Goodall, and Herman Tieken for valuable comments and suggestions on the forms under discussion. Of course, all responsibility for possible mistakes and misinterpretations is mine.

(25) (Kāśyapaśilpa 1.40, v.l.) (Ślāczka 2007: 115–116)

<i>+viśveśvarādi-kuṃbha-sthān</i>	<i>stotrābhyarc-ya</i> ¹¹
Viśveśvara.etc.-jar-residing:ACC.PL	praise:worship-CONV
<i>svamantrataḥ [...] homaṃ</i>	<i>samārabhet</i>
own.mantra:ADV oblation:ACC.SG	perform:3.SG.OPT.ACT

‘Having worshipped [the gods] residing in the jars, Viśveśvara and others, with praises, using their own mantras, he should begin the fire oblation.’
(*stotrābhyarcya* = *stotra-* ‘praise’ + *abhyarcya* ‘having worshipped’)

(26) (Kāśyapaśilpa 1.50, v.l.) (Ślāczka 2007: 125)

...	<i>namoccār-ya</i> ¹²	<i>kandān</i>	<i>nyaset</i>	<i>tatopari</i>
	reverence.utter-CONV	bulb:ACC.PL	place:3.SG.OPT.ACT	there.top

‘... having uttered [a formula of] reverence, he should place the bulbs on the top of this.’ (*namoccārya* = *nama(s)-* ‘reverence’ + *uccārya* ‘having uttered’)

In all three cases, instead of the compounds of the type N + V_{CONVERB} (*gavyābhiṣecya*, *stotrābhyarcya*, *namoccārya*), we expect converbs constructed with direct objects in the accusative. Another morphological irregularity found in these forms is the full (in *-ṣec-*, attested in several manuscripts) or lengthened (*-cār-*) root grade, instead of the zero (*-ṣic-*) or normal (*-car-*) grade expected in the *-ya* converbs.¹³ Thus, instead of (24–26), we might expect in standard Sanskrit constructions (24a–26a):

(24a) *gavyāny abhiṣicya ...*

(25a) *stotrāny abhyarcya ...*

(26a) *nama uccarya...*¹⁴

In fact, many irregularities of Sanskrit attested in the Kāśyapaśilpa may merely betray the poor grammatical training of its auteur/redactor (see Ślāczka 2007: 33, with n. 35). Furthermore, in some cases the rise of such compounds may have been caused by metrical considerations: *gavyābhiṣecya*, *stotrābhyarcya* and *namoccārya*

11 The reading accepted by Ślāczka is: *vidyeśādhipakuṃbhāṃs tān sthāpyābhyarcya svamantrataḥ*, translated by her as ‘[...] having placed jars dedicated to the Vidyēśvaras, having worshipped them with their own mantras [...]’.

12 Ślāczka adopts the reading *tam āpūrya*.

13 In the case of *ṛc* (*arc*) the full grade is not abnormal: in the post-Vedic language this root generalized the full grade and has *arc-* (instead of *ṛc-*) in a number of formations where we expect the zero grade, in particular, in absolutives (*-arcya*, *arcitvā*).

14 Note that the attested form *namoccārya* may result from the double sandhi *-as + u- → -a + u- → -o-* (not uncommon in late Sanskrit). This consideration makes the noun incorporation analysis not necessary, but does not rule it out.

have one syllable less as compared to the regular constructions *gavyāny abhiṣicya*, *stotrāṇy abhyarcya* and *nama uccarya*. Nevertheless, the phenomena illustrated by (24–26) seem to be not entirely isolated in late Sanskrit. Moreover, while the three above-discussed formations attested in the Kāśyapaśilpa are built on converbs, in some other late texts, Tantras and Āgamas, we find a few examples of compounds built on finite forms.¹⁵ Below I quote two of these:

(27) (Aṃśumad-Āgama 66:40)

... *jalaiḥ snāp-ya*
water:INS.PL wash-CONV

pañca-gavyābhiṣecayet (= *pañca-gavya-* + *abhiṣecayet*)
five-cow.product:besprinkle:3SG.OPT.ACT

‘... having washed [it] with water, he should besprinkle [it] with five cow products.’

(28) (Siddha-Tantra (MS T.69, p.12))

paṭam astrābhimantrayet (= *astra-* + *abhimantrayet*)
cloth:ACC astra:utter:3SG.OPT.ACT

‘... he should utter the astra(-mantra) over the cloth.’

The verbal compounds in (24–28) meet the main constraints of the definition of noun incorporation (1), the morphological unity and the verbhood of the incorporating complex (cf. (1.1–2)); and the base verb does not belong to ‘light verbs’, such as ‘become’ or ‘make’ (cf. constraint (1.3)).

3.4.2 *Converbs with the suffix -am*

The relatively rare converbs with the suffix *-am* express activities simultaneous with that of the main clause. In contrast to *-tvā* and *-ya* converbs, they are not exceptional in nominal compounding (see Renou 1935: 368–370). We find, for instance, *padāvagrāham* (*pada-* + *avagṛh-*) ‘separating words’ (AB 6.33.14), as in (29a); *aṅga-samākhyāyam* (*aṅga-* + *samākhyā-*) ‘enumerating members’ (AB 6.33.14); *kṣīra-leham* (*kṣīra-* + *lih*) ‘licking milk’ (Kauśīka-Sūtra 30.5). Instructive are parallel passages that attest both compounds based on *-am* converbs and corresponding constructions with accusatives, as in (29a–b):

¹⁵ I owe these examples to Dominic Goodall. I wish to express my sincerest thanks to him for valuable comments on the forms under discussion.

(29a) (AB 6.33.14)

aītaśapralāpaṃ śaṃsa-ti padāvagrāb-am
 Aītaśapralāpa:ACC recite:PRES-3SG.ACT word.separate-CONV

‘(He) recites the Aītaśapralāpa-section, separating words.’

(29b) (KB 15.4.8)

ekaikaṃ padam avagrāb-am śaṃsa-ti
 one.one:ACC word:ACC.SG separate-CONV recite:PRES-3SG.ACT

‘(He) recites, separating words one by one.’

The *-am* converbs, attested only from middle Vedic texts (Brāhmaṇas) onwards, are much less frequent and younger than the *-tvā* and *-ya* converbs, well attested already in early Vedic. Historically, they originate in adverbial uses of the accusative of the action nominals with the suffix *-a* (see Whitney 1889: 359–360). Most likely, the fact that they can function as second members of compounds is due to their relatively recent nominal origin (cf. the chart in Section 6).

It is important to note that converb-based compounds are not found in the later stages of the Indo-Aryan languages, i.e. in Middle or New Indo-Aryan, and therefore cannot be explained by the influence of these languages – for instance, as Prakritisms. Parallels to such formations exist, however, in some non-Indo-European languages of South Asia – in particular, in Dravidian.

4. NOUN INCORPORATION IN DRAVIDIAN: OLD TAMIL

Compounds based on verbal forms are not uncommon in the Classical Tamil poetry. A few examples are quoted below under (30–32), taken from the rich collection of examples given by Rajam (1992: 501–520):¹⁶

(30) Classical Tamil, Nārrinai 273:3–4 (Rajam 1992: 510)

tān varuttuṟṟī nam vayiṅ ariyātu ayanṟa aṇṇai
 self pain:be.close:CONV us about not.knowing weak mother

‘... mother who herself was in pain (anxious) and weak, not knowing about us ...’

(31) Classical Tamil, Kalittokai 9:23 (Rajam 1992: 517)

cīraṅṅānai vaḷi-paṟṟī c ceṇṇaṅ
 eminent:ACC path-befall:CONV leave:PAST:3SG.F

‘She left (us) following the path of the eminent one.’

¹⁶ I am much indebted to Alexander Dubjansky and Priya Svaminathan for their help with Tamil examples.

(32) Classical Tamil, Kalittokai 5:12 (Rajam 1992: 518)

āḷpavar *kalakkura* *alai-perra* *nāṭu*
 rulers agitation:be.close:INF shaking:obtain:PART.PAST country

‘... the country which was shaken as its rulers experienced agitation.’

In (30), the compound *varuttuṭṭi* ‘who was in pain, anxious’ consists of the verbal noun *varuttu* ‘grief’ and the converb *uṭṭi* of the verb *uru* ‘be close, experience’. In (31), the nominal stem *vali-* ‘path’ is compounded with the converb *paṭṭi* of the verb *paṭu* ‘befall, happen’, forming the incorporating complex *vali-paṭṭi* ‘following the path, respecting’. Finally, example (32) has two compounds, *kalakkura* ‘experience agitation’ (= *kalakku* ‘agitation’ + infinitive *ura* of the verb *uru* ‘be close, experience’) and *alai-perra* ‘which was shaken, which obtained shaking’ (= *alai-* ‘shaking’ + past participle *perra* of the verb *perta* ‘obtain’).

The genesis of such incorporated complexes is unclear. As mentioned above, exact parallels to such formations (i.e. verbal-based compounds) are lacking in Classical Sanskrit. Nevertheless, it cannot be ruled out that the rich system of composition attested in Sanskrit could indirectly influence the genesis of Old Tamil formations¹⁷ – even in spite of the nominal character of the Sanskrit compounds.

5. PARADIGMATIC MECHANISMS FOR THE RISE OF NOUN INCORPORATION IN SANSKRIT

Let us return to Sanskrit examples (24–28) and the incorporating complexes *gavyābhiṣecya* etc. As mentioned in Section 3.4.1, these forms attest the irregular root grades: full (in *-sec-*) or lengthened (in *-cār-*) – instead of zero (*-ṣic-*) or normal (*-car-*). This may be the key to our problem. The same alternation grade is also attested in another formation, in gerundives (future passive participles), derived with the suffix homonymous to the suffix of converbs, i.e. *-ya*, cf. *dōhya-* ‘to be milked’ (*dub* ‘milk’), *kāryā-* ‘to be done; task’ (*kr* ‘do’), *vācya-* ‘to be said’ (*vac* ‘say’) (see, e.g. Whitney 1889: 345–346, 463; Wackernagel/Debrunner 1954: 789 ff.). Note that in examples (24–26) the forms in question appear in modal contexts, rendering prescriptions of different kinds: ‘... he should bathe ...’, ‘... he should perform the oblation’, ‘... he should place the bulbs ...’. One may assume that the abnormal grade could be borrowed from the corresponding gerundives: *secya-/sekyā-* ‘to be besprinkled’, *arçya-* ‘to be worshipped’ and *cārya-* ‘to be

17 For the sociolinguistic status of Sanskrit in Ancient India, see, in particular, Houben (1996: 175 et passim), as well as other contributions to the volume Houben (ed.) 1996.

performed'.¹⁸ Alongside the identity of the converbial and gerundive markers (-ya), the secondary association of these two formations could be supported by an additional morphological parallelism: in addition to more common gerundives with the full or lengthened root grade, some verbs also form gerundives with the zero grade, cf. -sekyā- (in *prati-sekyā-*)/-sicya- (in *prati-ṣicya-*), *dóhya/-dúhya-* (in *abhi-dúhya-*), etc. (see Wackernagel/Debrunner 1954: 789ff.). Quite remarkably, the zero grade variant is mostly attested with prefixed verbs, which could even further increase the parallelism with converbs/absolutives, being indirectly associated with the rule of the distribution of the suffixes -tvā and -ya (-tvā with simplex verbs, -ya with compounds).

The influence of the gerundives may account for the rise of converb-based compounds, which, in turn, implies a weak tendency towards noun incorporation. Unlike forms belonging to the verbal paradigm properly speaking, gerundives in -ya could form compounds of the type N + V_{GER}-ya, such as *bala-vijñāyā-* 'recognizable by (his) force', *nīvi-bhāryā-* 'to be borne under clothes', *sūktócyā-* 'to be pronounced in the form of a hymn', etc. As mentioned in Section 3.2, they are rare in early Vedic but become more common in later texts (see Whitney 1889: 492; Reuter 1892: 530 ff.; Wackernagel 1905: 191 ff.; Wackernagel/Debrunner 1954: 789 ff.). By analogy with gerundives, the composition (henceforth, the noun incorporation) could be expanded to some converbs.

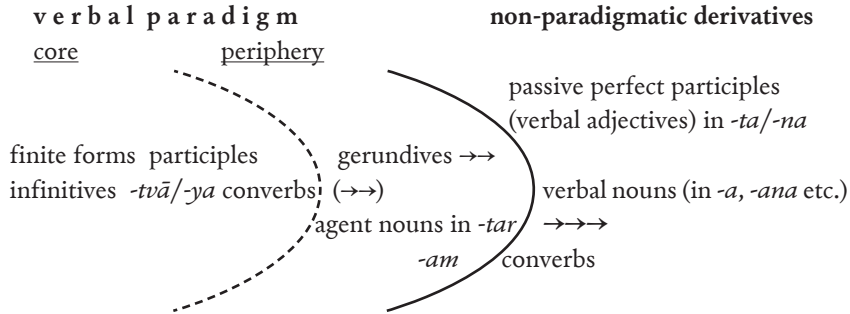
6. CONCLUDING REMARKS: SANSKRIT VERBAL PARADIGM IN A DIACHRONIC PERSPECTIVE

The results of the analysis of the Sanskrit verbal system in terms of the CVI-criterion are presented below in the form of a chart. This chart localizes a variety of formations with regard to the core and periphery of the verbal paradigm, and distinguishes between verbal formations that are members of the paradigm and non-paradigmatic derivatives.

The core consists, foremost, of finite forms as well as participles and infinitives. They are followed by -tvā/-ya converbs (absolutives), which occupy a somewhat less central position and, in late Sanskrit (or at least in some of its varieties), show a weak tendency to drift towards the periphery. At the periphery of the paradigm, we find gerundives and agent nouns in -tar, drifting outside the paradigm. The rare -am converbs can be tentatively localized at the very boundary of the verbal

¹⁸ The variants *abhi-ṣecya-/abhi-ṣekya-* (with a different final consonant) are attested in the Sūtras; *abhy-arçya-* occurs, for instance, in the Pañcatantra; *uccārya-* appears in the Śaiśiriyā-śikṣa.

paradigm. Finally, a number of derivatives are located outside the paradigm. These include, in particular, passive perfect participles (verbal adjectives) in *-ta/-na*, root nouns and verbal nouns in *-a*, *-ana* etc.



Besides important theoretical implications for delimiting the boundaries of a verbal paradigm, the history of the inventory of Frisian and Sanskrit verbal formations also furnishes valuable evidence for a diachronic typology of noun incorporation.¹⁹ Specifically, it illustrates some of the basic scenarios for the rise of NI in a non-incorporating language.

While the starting point for the rise of NI in Frisian was the verbal noun (gerund) in *-ane* (yielding Frisian infinitives in *-en*), in late Sanskrit (or, to be more exact, in some of its varieties), it must have originated in the nominal composition on the basis of some verbal nouns and gerundives that did not belong to the core of the verbal paradigm or were located outside the paradigm. This type of compounding was later analogically expanded to the *-ya* and *-am* converbs.

Thus, in both cases, the incorporation arises when the composition is expanded from a verbal derivative (i.e. a formation *outside* the paradigm properly speaking, or belonging to the periphery of the paradigm) to non-finite forms occupying a more central position within the paradigm to the periphery of the paradigm: in Sanskrit – from gerundives to converbs; in Frisian – from gerunds to infinitives. The further path of the development of noun incorporation is obvious: from the periphery of the verbal paradigm to its core, from non-finite forms to finite forms.

¹⁹ For further details and discussion of this issue, see Kulikov 2002; forthcoming.

ABBREVIATIONS

AB	Aitareya-Brāhmaṇa
ACC	accusative
ACT	active
ADV	adverbial suffix
AV	Atharvaveda
CAUS	causative
ChU	Chāndogya-Upaniṣad
CONV	converb (absolutive)
CVI-criterion	Composition VS. Incorporation Criterion
DAT	dative
DIR	direct (case)
FUT	future
GER	gerundive
Hariv.	Harivaṃśa
IMPV	imperative
INF	infinitive
INS	instrumental
KB	Kauṣītaki-Brāhmaṇa
M	masculine
ManuSmṛ.	ManuSmṛti
MBh.	Mahā-Bhārata
MED	middle
MS	Maitrāyaṇī Saṃhitā
N.AG.	agent noun
NI	noun incorporation
NOM	nominative
OPT	optative
PART	participle
PF	perfect
PL	plural
PRES	present
Pur.	Purāṇa
Rām.	Rāmāyaṇa
RV	Ṛgveda
ŚB(M)	Śatapatha-Brāhmaṇa (Mādhyandina recension)
ŚBK	Śatapatha-Brāhmaṇa, Kāṇva recension

SG	singular
TB	Taittirīya-Brāhmaṇa
TS	Taittirīya-Saṃhitā
YV	Yajurveda

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