Annotation Guidelines for the Vedic Treebank

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This file contains annotation decisions and examples for the Vedic Treebank (Hellwig et al., 2020). It is not meant as a comprehensive guide to Vedic syntax, but records the results of our discussions while annotating the first release of the Vedic Treebank. The brief overview of Universal Dependencies in Section 1 maps UD types to the most typical cases found in our data. Section 2 takes the opposite approach: Starting from linguistic constructions found in our texts, it explains which UD structures we used for annotating them.

Expressions of the form A ← `obj` ← B indicate that A is dependent from B, and their syntactic relation is `obj`. For the sake of simplicity, accents are given only exceptionally and all sandhi phenomena are resolved.

Contents

1 UD → Sanskrit

1.1 Nominal relations

Definitions given in quotes in this sections are taken from the UD guidelines, if not mentioned otherwise.

advmod "(non-clausal) adverb or adverbial phrase that serves to modify a predicate or a modifier word". Sanskrit: *adya*, *tasmāt*; prefixes used in compounds (*su-*, *a(n)-*, *dus-*, *sa-* 'together'; see Sec. 2.7.1); also see preverbs (Sec. 2.23).

amod is used for adjectives: *daivena* ← amod ← *manasā*; also see secondary predication (Sec. 2.28).

appos marks a noun that modifies another noun, word order is irrelevant for Sanskrit: *somas* → appos → *rājā* 'King Soma'. For our extended use of appos see Sec. 2.4.

aux marks an auxiliary, these are generally rare in Sanskrit (see Sec 2.5).

case "used for any case-marking element which is treated as a separate syntactic word (including prepositions, postpositions, and clitic case markers). Case-marking elements are treated as dependents of the noun they attach to or introduce." – Examples: *saha*, *upa*; for *iva* see the discussion of comparison in Sec. 2.6.

cc marks coordinating conjunctions such as *ca* 'and' or *vā* 'or'.

compound is used for compounds or similar multiword expressions. Since we annotate the relations between the members of a compound in a wider range, this relation is not used that often, see Sec. 2.7.

conj "two elements connected by a coordinating conjunction, such as and, or, etc." Can be asyndetic (= conjunction missing). The conjuction itself is labeled as cc and connected with the 2nd (3rd, 4th, ...) element. See coordination (Sec. 2.8) and repeated words (Sec. 2.27).

cop is used for the copula, a verb that links the subject to a nonverbal predicate. The prototypical case of a copula is *as-* 'be', but cf. also *bhū-* 'become, be'; see copular clauses (Sec. 2.9).

det Pronouns and some indefinite quantifiers: *sas* ← det ← *aśvas* 'this horse'; see Sec. 2.24.

dislocated is the label for extraclausal nominals such as hanging topics and nominativus pendens; see Sec. 2.12 on such disjunct nominals and Sec. 2.4 on how to distinguish them from appositions.

discourse is used for interjections (*dhik* 'Fie!'), discourse particles (*vai*, *hi*) and back-channeler, repairs, etc. (en. *um*, germ. *äh*). On the annotation of various particles see Sec. 2.22.

fixed is used in multiword expressions that always appear in the same order of components, like *ha* → fixed → *vai* .

flat is also used in multiword expressions. All components are linked in bouquet analysis to the first one. A typical case of `flat` in Sanskrit would be personal names consisting of multiple words or the heavenly place of *svargas* → `flat` → *lokas* . The distinction from `appos` is not always easy (see Sec. 2.4).

iobj marks a nominal expression that assumes the G role in a three-place verb, i.e. the argument that is usually affected, stationary, or experiences a change of state (cf. Malchukov et al. (2010); Bickel (2011)). Typically, this includes datives with ditransitive verbs such as *dā-* 'give' or the person robbed in the accusative with double accusative constructions as in *muṣ-* 'rob, steal', see Sec. 2.14 and 2.10.

mark stands for *marker* and signals the subordination of the respective clause, e.g. *iti* as marker for direct speech (see Sec. 2.11) or the subordinating conjunctions in adverbial clauses, some of which are discussed in Sec. 2.22.

nmod "used for nominal dependents of another noun or noun phrase and functionally corresponds to an attribute, or genitive complement". Used, for example, for genitives expressing a possessive relation between head and dependent (see Sec. 2.24.2), but other cases occur as well: some Brāhmaṇa texts use the dative in possessive function (see 2.10).

nsubj marks a nominal which has the S role (single argument of an one-place verb) or the A role (agent-like argument of a two- or three-place verb; cf. Malchukov et al. (2010); Bickel (2011)).

nummod modifies a noun with a quantity. See Sec. 2.24 for pronouns and Sec. 2.16 for indefinite quantifiers, which are also annotated as `det`.

obj labels a nominal expression that assumes the function of the direct object, i.e. in a two-place predicate the second, non-agent-like P argument, in a three-place predicate the T argument which is usually manipulated or moved (cf. Malchukov et al. (2010); Bickel (2011)). Typically, P/T arguments take the accusative case, but other cases are also possible, e.g. the genitive with *īś* 'reign, command, possess', as are adpositional phrases. See Sec. 2.2 on nominals in the accusative in relations other than `obj`.

obl "used for a nominal expression (noun, pronoun, noun phrase) functioning as a non-core (oblique) argument or adjunct. This means that it functionally corresponds to an adverbial attaching to a verb, adjective or other adverb." Sanskrit: all oblique cases, esp. place, time, direction (also for accusative of direction , see Sec. 2.2), ablative, instruments; except for indirect objects (see above, `iobj`).

orphan is critical for the annotation of sentences with ellipsis, see Sec. 2.15. Here, the highest ranking argument is promoted to the clausal head and all other relations in the sentence with ellipsis depend as `orphan` from this new head, because other annotations would be misleading.

root marks the root of the syntactic tree, i.e. the highest ranking component of the clause, which is typically the predicate. Nominal sentences (see Sec. 2.9) and clauses with ellipsis (see Sec. 2.15) can have other elements as their roots.

vocative is used for a directly adressed participant which is grammatically expressed by a vocative. A vocative form is linked to the main predicate of the clause; other relations such as `nmod` may depend from it.

1.2 Clausal dependents

acl marks the "clausal modifier of a noun" such as relative clauses, participial clauses, exocentric compounds as well as depictive secondary predicates and content clauses. N.b.: If the referent is not overtly expressed or if the clausal modifier entails conditional aspects, the clausal modifier is linked to the predicate with `advcl` (see Sec. 2.26).

advcl "modifies a verb or other predicate (adjective, etc.), as a modifier not as a core complement. This includes things such as a temporal clause, consequence, conditional clause, purpose clause, etc. The dependent must be clausal". See Sec. 2.3 on various types of adverbial clauses.

ccomp "A clausal complement of a verb or adjective is a dependent clause which is a core argument" and which is not controlled by elements of the superordinate clause, e.g direct speech (see Sec. 2.11).

csubj labels the clausal subject of a superordinate clause; formally realized as a relative clause in most cases (see Sec. 2.26).

xcomp "An open clausal complement (xcomp) of a verb or an adjective is a predicative or clausal complement. Its subject is determined by an argument external to the xcomp . . . " `xcomp` is also used for secondary predicates not covered by `acl` such as obligatory predicatives of an argument (see secondary predication in Sec. 2.28).

2 Sanskrit → relation

This section discusses how syntactic phenomena in Sanskrit are annotated in the Vedic treebank.

2.1 Absolutive

See Sec. 2.3.2, p. 7.

2.2 Accusative

Rule of thumb:

- When in direct object function, accusatives are annotated as `obj`. Note that direct objects can be expressed by other cases as well; e.g. the genitive with *īś-* 'have at one's disposal' or *cit-* 'become aware of'.
- As a target or goal of a motion, a nominal expression in the accusative may be annotated as `obl`, even if no preverb or preposition is present. We apply a passivization test (restricted, if possible, to the Vedic corpus) to decide between the annotations `obj` and `obl`.
- When used adverbially, e.g. for denoting durations, accusatives are also labeled as `obl` (see the example AB 7.15.2 on p. 19).

On double accusatives, see Sec. 2.14.

2.3 Adverbial clauses

2.3.1 Basic annotation

The subordinationg conjuction is labeled as `mark` and depends from the verb of the adverbial clause. The verb of the adverbial clause is linked as `advcl` to the verb of the main clause.

apas ... upa hvaye yatra gāvas pibanti nas
waters ... to call where cows drink our

'I call the waters where our cattle drinks.' (AVŚ 1.4.3ab)
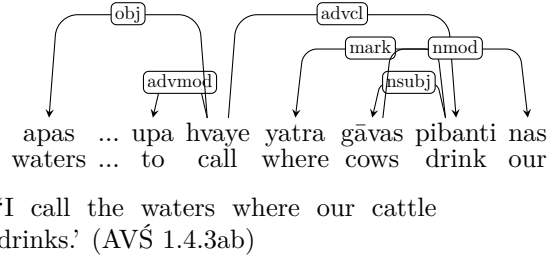
The same procedure applies to infinitives (see Sec. 2.3.3) and correlative constructions, e.g. *yāvat* (`mark`) – *tāvat* (`advmod`).

Dative nouns indicating the purpose of a verbal action are also annotated as `advcl` as at AB 1.1.10:

enam tat prajayā prajanayati prajātyai
him then offspring he propagates generation

'Then he makes him reproduce through (his) offspring, in order to prosper.'
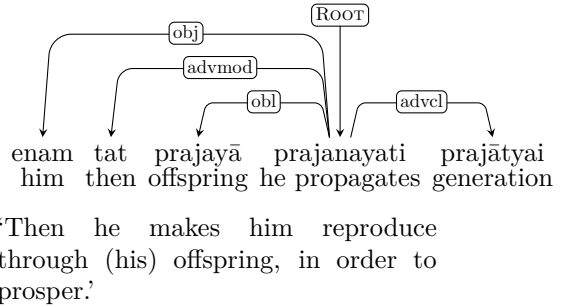
2.3.2 Absolutives

Absolutives, which often express temporal precedence, are annotated like adverbial clauses with a finite verbal form:

rāmas vanam gatvā sītām paśyati
Rāma forest having gone Sītā sees

'Having gone into the forest, Rāma sees Śitā.'
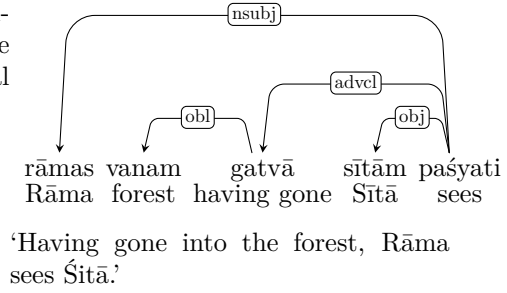
2.3.3 Verbal nouns

Grammaticalized verbal nouns in adverbial or complement functions (e.g. infinitives etc.)   are annotated as `advcl`:

na ayam kālas vilambitum
not this moment for hesitating

"This is not the right time for hesitating."

priyas dṛśe
dear to see

"pleasant to look at"
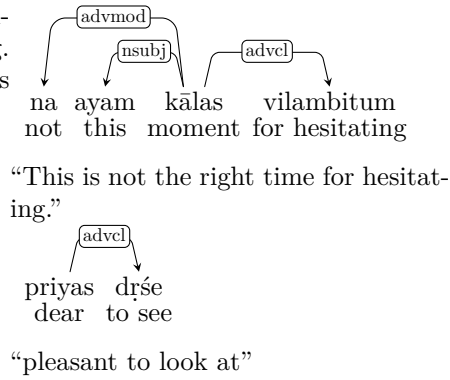
For constructions with *śak-* 'can', see Sec. .

This annotation is also applied if the verbal noun depends from an adjective such as *īśvara-* 'able to:'

īśvaras enam roddhos
able him block

"able to block him"
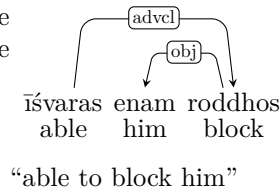
2.3.4 Locativus absolutus

In absolute constructions, the logical subject is labeled as `nsubj`. The participle in the locative (genitive, ablative) case serves as the main verb and is connected with `advcl` to the verb of the superordinate clause.

ROOT
advcl
obj
nsubj

tṛcam	anvāha	agnau	mathyamāne
triad	speaks	fire	being kindled

"this triad . . . he recites when the fire is being kindled" (AB 1.16.7; (Keith, 1920, 118))

For another example see AB 7.16.13 in Sec. 2.27, p. 39.

2.4 Appositions

We use `appos` for a wider range of syntactic constructions than proposed in the UD guidelines.[1]

The default example for appositions are names with an additional information such as *varuṇas* → `appos` → *rājā* 'King Varuṇa; Varuṇa, the king '. Here, the name is the head, the explanation is the dependent; see also Sec. 2.25.

ROOT
obj
advmod
appos
nsubj

somam	ā	devī	aharat	vaśā
soma	to	goddess	took	Vaśā

'*Vaśā*, the goddess, took the soma' (AVŚ 10.10.12ab)

This usage is also found with personal pronouns.

ROOT
nsubj
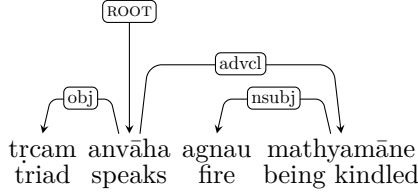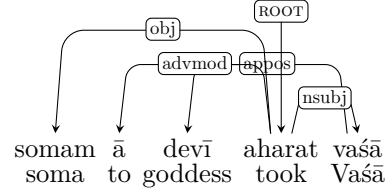appos

namas	te	stanayitnave
worship	you	thunder
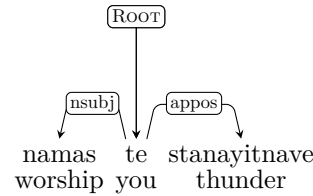
"Homage [be] to you, the thunder!" (AVŚ 1.13.1ab, [simplified])

Note that the standard test given for appositions in English (*name-function, e.g. *Obama President) does not work conclusively for Sanskrit due to its free word order. We therefore use `flat` only, if the annotator has corpus-based evidence that a combination (almost) exclusively occurs in the given order; e.g. *agnis* → `flat` → *vaiśvānaras* or for *svarga loka* 'the celestial world' in this example:

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[1]On `appos`; "nominal immediately following the first noun that serves to define, modify, name, or describe that noun". Test: "Good tests include to ask whether the two halves are full nominals, whether the two halves can be swapped or not, and whether there is case or agreement concord (in a language with rich morphology)."

svarge loke bahu straiṇam eṣām
sky space many womankind of them
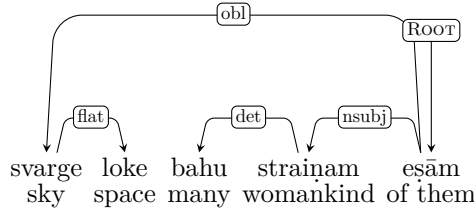
'in the celestial world, they have many women' (AVŚ 4.34.2d)

If one word has more than one apposition (quite frequent in Sanskrit), all appositions "should be marked as modifying the first noun, rather than being chained".

Contrary to the UD standard, we also use `appos` if the nominal is not directly adjacent, as in amplified sentences ('Schleppe').

Note that both nominals need to have matching morpho-syntactic information in this case; if not, the non-adjacent nominal is annotated as `dislocated` (see Sec. 2.12).

ambayas yanti adhvabhis jāmayas adhvarīyatām
mothers go ways sisters sacrificing
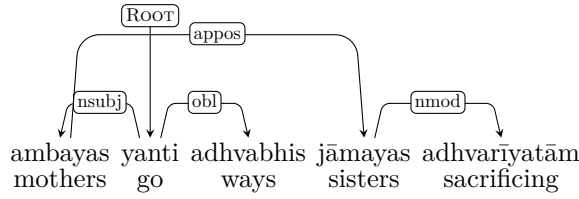
"The mothers go on their ways, sisters of them that make sacrifice" (AVŚ 1.4.1ab, Whitney and Lanman (1905)

ā tvā vahantu harayas vṛṣaṇam soma- pītaye
to you lead fallow bull Soma drinking
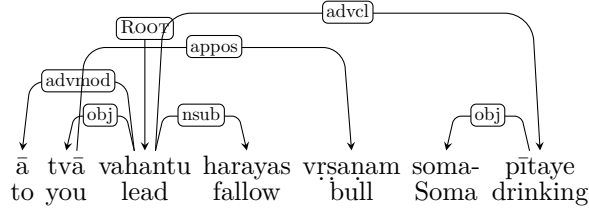
'Let the fallow bays convey *you* here, *the bull*, to drink soma.' (RV 1.16.1ab)

2.5 Auxiliaries

Auxiliaries are rare in Sanskrit, and we use `aux` as their basic annotation. Verbs such as *as-* 'be' or *bhū-* 'be, become' are in most of the cases annotated either as full verbs or as `cop`. Other possible auxiliaries are *kar-* 'make' and occasionally *i-* 'go'. Typical instances of `aux` in Sanskrit are e.g. the periphrastic future or the periphrastic perfect.

Verbal arguments are connected with the head of `aux`, but not with the auxiliary itself (see e.g. the annotation of English EWT).

tvam	nas	asi	...	āhutas
you	for.us	are	...	poured
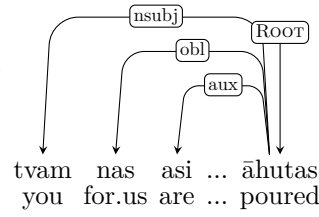
'You are poured [as an oblation] for us.' (RV 2.7.5)

bhū- 'become' can also be used in this function:

asya	vanaspatīnām	kāmas	upāptas	bhavati
his	of.trees	desire	obtained	becomes
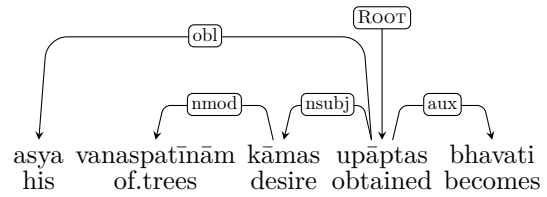
'the desire in ... trees is obtained by him' (AB 2.1.13, following Keith 1920)

i- 'go' used as auxiliary indicates the duration or repetition of the main action (see Delbrück, 1888, §218).

te	*vai*	samāvat	*eva*	yajñe	kurvāṇās	āyan
these	vai	equally	so	sacrifice	making	went
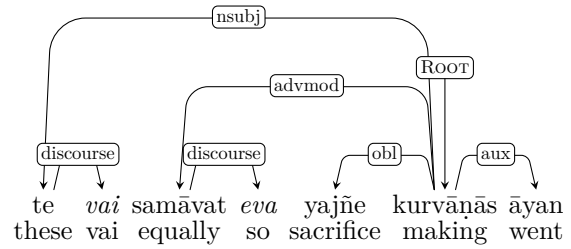
'They kept doing the very same during the sacrifice' (MS 2.5.3.2)

Following the annotation of English treebanks, we label *śak-* 'can' as `aux`, when it is connected to an infinitive.

na	kiṃcana	śaknuvan	kartum
not	anything	they.could	do.INF
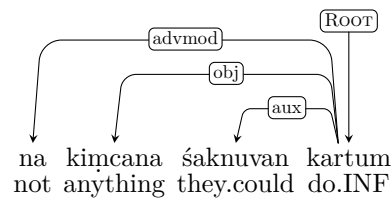
'they could not do anything' (AB 1.7.3)

2.6 Comparison, similes

Delbrück (1888) claims that *iva* 'like' is only used when comparing nominals, while *yathā* 'like' is used for verbs and whole phrases. However, both particles

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can appear in both environments and are thus annotated in the same way. For comparison with ellipsis see Sec. 2.15.3. Some sample annotations follow below, the basic rules are:

- "X is like Y": X (*comparandum*) compared to Y (*comparatum*) is annotated as `nmod`, thus X → `nmod` → Y.
- The standard marking particles (*iva* 'like', *na* 'like', *yathā* 'like') are always annotated as `case` to Y, e.g. Y → `case` → *iva*.
- If Y expresses a kind of role or the passage is best translated with 'as if X were Y' or similarly, the suiting annotation is `acl`. The reason for this is, that it is similar to a depictive and thus possesses clausal qualities: X → `acl` → Y (see Sec. 2.28).
- "X does something like Y [does it]": In that case, Y is connected as `advcl` to the *predicate* (not to X), for example VERB → `advcl` → Y.
- So called "milderndes iva", lit. "mitigating *iva*" (Delbrück, 1888, §242). In this function, *iva* is to be translated as en. "as if", "so to speak" or similarly and is annotated as `advmod` of X.

2.6.1 Similative constructions

"X does something like Y [does it]."

tasya bhājayata iha nas uśatīs iva mātaras
of it distribute here us wishing like mothers
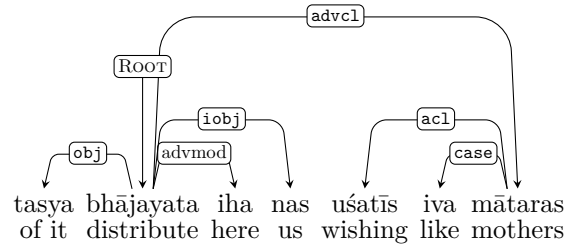
'Let us have part in it here like well-wishing mothers do (let somebody have part in something).' (AVŚ 1.5.2)

This construction also occurs with *yathā* 'like'.

aśvas kanikradat yathā ... āgamam
horse neighing like ... I came
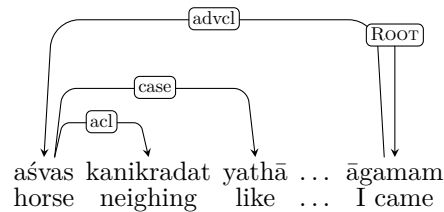
'I have come hither like a neighing horse.' (AVŚ 2.30.5cd)

"X is like Y", respectively "X as if Y"

śvā iva ekas
dog like one
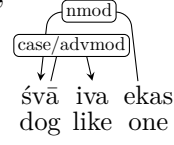
'one [Gandharva looking] like a dog', resp., with Whitney and Lanman: "one as it were a dog" (AVŚ 4.37.11)

Similes can also be expressed by compounds.

ūrṇa- mradas-
wool softness
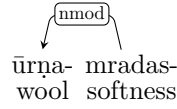
'having the softness of wool = soft as wool' (RV 10.18.10)

2.6.2 Comparison with gradation

Comparison is often found with the comparative or superlative of adjectives, see the pertinent workgroup page in UD. The standard the comparee is compared to commonly takes the ablative case (rarely also instrumental or genitive); we label it `obl`.

The comparee (i.e. the expression compared to some standard) is connected to the standard of comparison with `obl`.

atas cid indras sadasas varīyān
from that indeed Indra seat wider
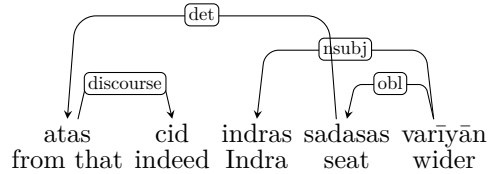
'Indra is indeed wider than this seat' (RV 3.36.6)

2.7 Compounds

The copious use of nominal compounds is among the most characteristic traits of Vedic Sanskrit and even more so of Classical Sanskrit. Perhaps surprising but worth knowing: the bulk of the nominal compounds in Vedic Sanskrit consists of exocentric compounds, i.e. – in poor words – of complex words which can be used as adjectives.

The main reference for the formation of compounds (and their use) is still Wackernagel and Debrunner, 1957, II.1.

2.7.1 Inner structure

Unlike UD, we treat inner dependencies of compounds as if they were regular dependencies. This means that we use all dependency relations that can be used for outer dependencies such as `nmod`, `amod` etc. When the head of a compound is a verbal expression, nominalized or not (verbal noun, root, stem) as in the

so-called verbal governing compounds or synthetics we use `obj`, `obl`, `xcomp` etc. according to the following **rule of thumb**: If the head occurs as an independent word, we rather tend not to assign verbal values to the relation. For example *somapīti-* 'draught of Soma', where *pīti-* 'draught' occurs independently, therefore *soma-* ← `nmod` ← *pīti*. But for *somapeya-* 'the drinking of Soma, draught of Soma', *peya-* 'drinking, draught' does not occur independently in Vedic (but does so in Classical Sanskrit), therefore *soma-* ← `obj` ← *peya-*.

- The following cases are **not** labeled with `nmod`:
  - Verbal governing compounds ending on roots (cf. for the RV Scarlata (1999)): *gātu-* ← `obj` ← *vid-* 'knowing/finding the way', *dhana-* ← `obj` ← *spṛt-* 'winning the prize', *āhutī-* ← `obl` ← *vṛdh-* 'growing strong through the poured offering',
  - with redundant or opaque extensions: *anna-* ← `obj` ← *ād-a-* 'eating food', *vasu-* ← `obj` ← *dā-van-* 'giving good(s)', or regularly after roots ending on a short vowel with the extension *-t-* as in *kṛt-* 'making', cf.:
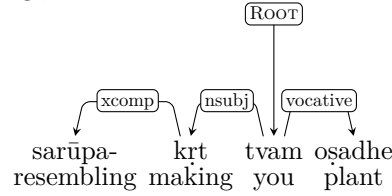
'You are uniform-making, O plant.' (AVŚ 1.24.3) – see Sec. 2.14

  - also with overt case marker in the dependent: *apsu-* ← `obl` ← *jā-* (besides *ab-* ← `obl` ← *jā-*) 'born in the waters', *rathe-* ← `obl` ← *sthā-* 'standing on a chariot; charioteer'
  - or with adverbial first member: *sākam-* ← `advmod` ← *ukṣ-* 'growing up all at once', *raghu-* ← `advmod` ← *syad-* 'rushing swift(ly)' – the latter might be also annotated as *raghu-* ← `advcl` ← *syad-*, if the first member is understood as participant-oriented depictive
  - the same applies to other verbal governing compounds such as those ending on thematic stems and influenced by and blended with verbal present stems, e.g.: *vājam-* ← `obj` ← *bhara-* 'carrying off the prize'; *dhiyam-* ← `obj` ← *jinva-* 'quickening thought(s)', *viśvam* ← `obj` ← *inva-* 'setting everything or everyone in motion', *ugram* ← `advmod` ← *paśya-* 'looking dreadfully', *agnim* ← `obj` ← *indha-* 'kindling fire'
  - or those ending on *ana-*: *deva-* ← `obj` ← *harṣaṇa-* 'gladdening the gods'
  - final *to-* adjectives ("PPP"): *brahma-* ← `obl` ← *saṃśita-* 'sharpened by brahman'
  - Less common are verbal governing compounds with the first member as head of the formation. The verbal heads consist of inflected verbal forms or of opaque verbals, cf. e.g. *bharad-* → `obj` → *vāja-* 'carrying off the prize', synonym to *vājam-* ← `obj` ← *bhara-* (see above), where the formation and status of the first member is disputed, or *dāti-* → `obj` → *vāra-* 'who donates wished goods' – the only form matching the first member is the 3.sg.sor.sbjv.act of the root *dā-* 'give'.
- Prepositional governing compounds are annotated as prepositional phrases

are: *ati-* ← `case` ← *avi-* '[passing] over or through the strainer', *anu-* ← `case` ← *kāma-* 'according to one's desire, agreeable' (cf. Sadovski (2000)) – Note that this type yields also adverbs when the formation is used event-oriented.

- **with `nmod`, `amod`** etc. (as in nominal phrases): `nmod` is used to express various kinds of relations between nouns in a compound, except for dvand-vas (see below Sec. 2.7.3). Adjectives which form part of a compound are typically annotated with `amod`, as in a regular clause:
  - when the compound yields a hyponym of the compound's head: *viś-* ← `nmod` ← *pati-* 'lord of the clan' (*tatpuruṣa*), *pūrṇa-* ← `amod` ← *mās-(a-)* 'full moon' (*karmadhāraya*)
  - when the compound is used as an adjective (*bahuvrīhi*), also often adressed as *possessive compound*): *go-* ← `nmod` ← *vapus-* 'sb. with the beauty of a cow', *ugra* ← `amod` ← *bāhu-* 'sb. with strong arms', *tad-id* ← `amod` ← *artha-* 'sb. who has/envisages exactly that goal'. Bahuvrīhi are often expanded by (redundant) adjectival suffixes to reinforce their status as adjectives, so e.g. with unaccented *-ka-* or with *-á-*, *-ya-* etc.

Note that it is not always possible to keep apart bahuvrīhis from verbal governig compounds; this applies e.g. to *vṛṣṭi-dyāv-* 'who lets the sky rain', generally interpreted as *vṛṣṭi-* → `obj` → *dyāv-* , but where the analysis as *vṛṣṭi-* ← `nmod` ← *dyāv-*, i.e. as so-called factitive bahuvrīhi or "Doppelpossessivum", literally 'having the sky have rain', is perhaps to be preferred.

A recurrent type of compound shows a *to-* adjective ("PPP") as first member. Such compounds can often be interpreted in two ways, thus e.g. *suta-soma-* could mean 'who hás pressed soma (at his disposal)': *suta-* ← `amod` ← *soma-*, but also 'who has préssed soma (himself)' or even 'who has soma préssed', i.e. 'who prompts sb. to press soma': *suta-* → `obj` → *soma-* (synonym to *soma* ← `obj` ← *su-t-*).

The frequent compounds with second member *kāma-* such as *paśu-kāma-* 'sb. who craves for/wants cattle' are annotated *paśu-* ← `nmod` ← *kāma-* or, against our rule of thumb given in the introductory notes above, *paśu-* ← `obj` ← *kāma-*, since the noun *kāma-* 'lust, love for' and its derivations can also be constructed with verbal complements, so e.g. already in the RV *kāma- ... rāye* (DAT) 'sb. craving for riches', *kāmin- ... pītim* (ACC) 'sb. craving for a drink', or in the AV *mām* (ACC) *... kāmena* 'out of love for me'.

The differences between these two types of compounds have been over-emphasized, but for further pertaining considerations, pointing out the similarities, cf. Scarlata and Widmer (2015) and Olsen (2017).

The dvandvas are structured with `conj`. Contrary to the annotation of individual words in sentences, all elements are connected to the *rightmost* word in the dvandva, using bouquet annotation.

kāsa- pratiśyāya- galagrahān ca
cough cold throttling and

'coughs, colds and compressions of the throat' (Suśrutasaṃhitā Utt. 55.7)
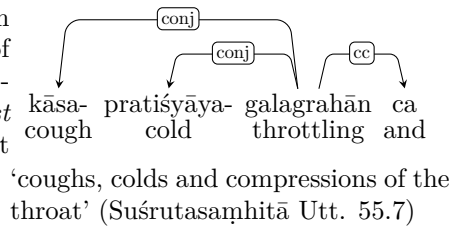
Indeclinables such as *sa-* 'with, together', *su-* 'well, good', *a(n)-* 'not, without', *dus-* 'badly, poorly' as first members of a compound are connected with `advmod`.

Note: *sa-* 'same' is annotated as `det`.

tā   su-   jihvā   upa   hvaye
these   good   tongue   on   call
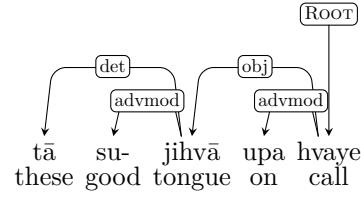
'These two well-tongued ones I invite' (RV 1.13.8)

2.7.2 Connection with other words

In Sanskrit, bahuvrīhis, verbal and prepositional governing compounds (see above) and other exocentric compounds are used as adjectives, and may thus express a secondary predication, cf. Scarlata and Widmer (2015). They also correspond or are even equivalent to relative clauses, and are therefore linked with `acl` to their referent or with `advcl` to the verb when the referent is an covert subject, see Sec. 2.28.

2.7.3 Dvandvas and other copulative compounds

Dvandvas are structured using `conj`. Contrary to the annotation of individual words in sentences, all elements are connected to the *rightmost* word in the dvandva, using bouquet annotation.

kāsa-   pratiśyāya-   galagrahān   ca
cough   cold   throttling   and
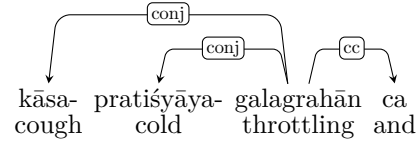
'coughs, colds and compressions of the throat' (Suśrutasaṃhitā Utt. 55.7)

2.7.4 Āmreḍitas

See Sec. 2.27.

2.8 Coordination

The default label for coordination is `conj`, and the coordinating conjunctions are labelled as `cc` . The conjunction (*ca*) is normally placed after the first word of a nominal. The conjuncts are connected in *left-to-right* bouquet analysis starting from the first, leftmost, conjunct, which then functions as head of the phrase.

obl						
nsubj						
conj						
		det				
cc		cc				
tam ...	ādityās	ca	viśve	ca	devās	anuvyacalan
him ...	Ādityas	and	all	and	gods	after.out.moved
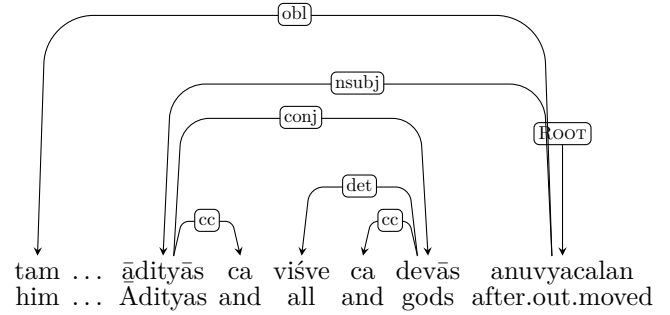
"after him moved out both ...   the Ādityas and all the gods" (AVŚ 15.2.1; Whitney and Lanman (1905))

The conjuncts can be connected asyndetically. Note that for for dvandva compounds we use a *right-to-left* bouquet analysis, see Sec. 2.7.3.

		conj			
	conj				
conj				conj	
paśavas	vāc	indriyam	prāṇa-	apānau
cattle	speech	vigour	inhalation	exhalation
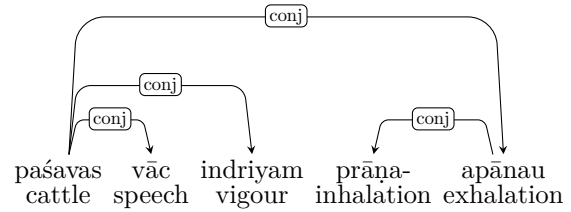
'cattle, speech, vigour, in-breathing (and) out-breathing' (MS 3.10.6)

For the concatenation of sentences in direct speech see Sec. 2.11.

2.9 Copular clauses

The verb *as-* 'be' is connected with `cop` to the root, whereas *bhū-* 'become' is only rarely used in this function in Vedic. Note, however, that both these verbs can also be used as full verbs.

Clauses without overt copula:

	Root		
nsubj			
discourse	nmod		
agnis	vai	devānām	avamas
Agni	vai	of gods	lowest
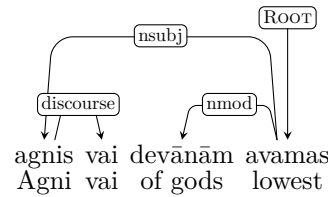
'Agni [is] the lowest of the gods.' (AB 1.1.1)

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Also used for the frequent construction *namas* 'homage to'.

paśupatī   namas   vām
lords of cattle   reverence   to you

'O lords of cattle, [let] reverence [be] to you (both).' (AVŚ 11.2.1)

Without overt subject:

naktaṃjātā   asi   oṣadhe
nightborn   you are   herb

'You are grown at night, O herb.' (AVŚ 1.23.1)
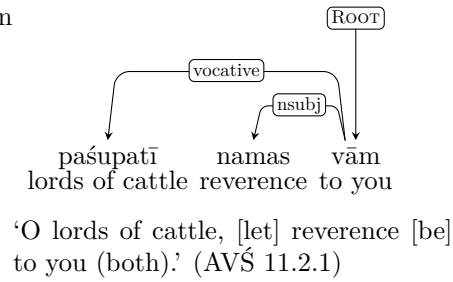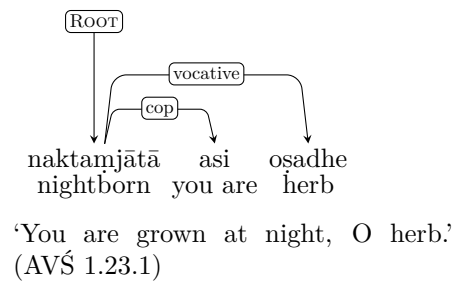
An analogous annotation is chosen, when *as-* occurs as a participle. In this example, the clause *vājī̆ san* can be annotated as `advcl` (alternatively, but dispreferred, also as `csubj`).

vājī̆   san   pari   nīyate
steed   being   around   is.lead

'Being a steed he (Agni) is carried around.' (RV 4.15.1b)
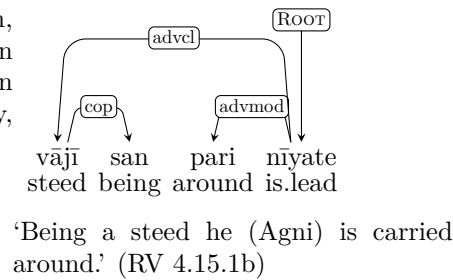
2.10 Dative

Nominal expressions in the dative case assume a wide range of functions and the assignment of relations varies accordingly. The most prominent relations include `iobj` with three-place predicates (see Sec. 2.13).

The second, dative argument of the two-place verb *krudh-* 'be angry at' is assigned the label `obj`, see Delbrück (1888, 140–145).

sa   śāryātebhyas   cukrodha
he   Śāryātas   was.angry

'he was angry at the Śāryātas' (ŚB(M) 4.1.5.3)
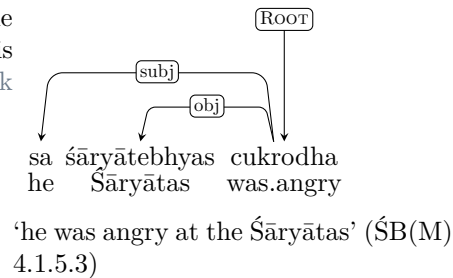
Datives that don't belong to the argument frame of the verb are labeled according to their function.

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Instances of *Dativus commodi or incommodi* are labeled `obl`.

prajābhyas   eva   enam   śamayati
creatures   indeed   him   appeases

(obl, discourse, obj, ROOT)

'in the interest of the creatures he appeases him' (TS 5.2.2.3)
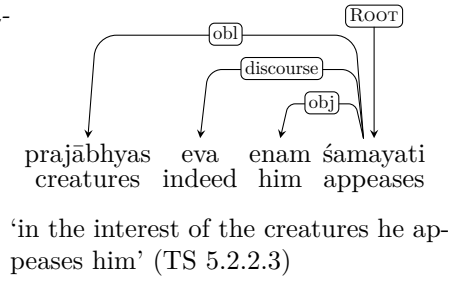
Dative deverbal nouns indicating the purpose of a verbal action are annotated as `advcl` as at AB 1.1.10.

enam   tat   prajayā   prajanayati   prajātyai
him   then   offspring   he propagates   generation

(obj, advmod, obl, ROOT, advcl)

'Then he makes him reproduce through (his) offspring, in order to prosper.' (AB 1.1.10)
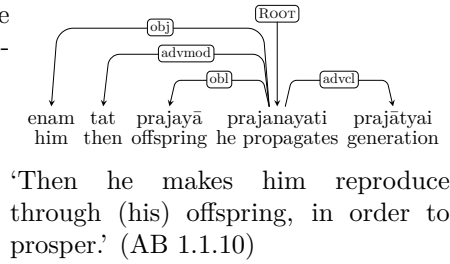
Occasionally, the dative case is used in adnominal modification.

varṣma   pṛthivyai
surface   earth

(nmod)

'the surface of the earth' (AB 2.2.7)
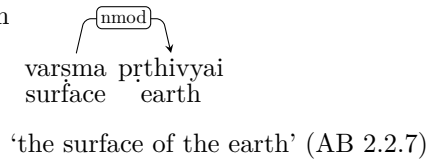
2.11 Direct speech

The utterance is a clausal complement (`ccomp`) of the speech verb and *iti* depends from the main verb of the speech with `mark`; see also Sec. 2.22.2.

vasudhām   prāpsyasi   iti   mā   abravīt
earth   you will reach   iti   me   he said

(obj, ccomp, mark, iobj, ROOT)

"'You will get the Earth", he said to me.' (MBh 1.133.29; post-Vedic)
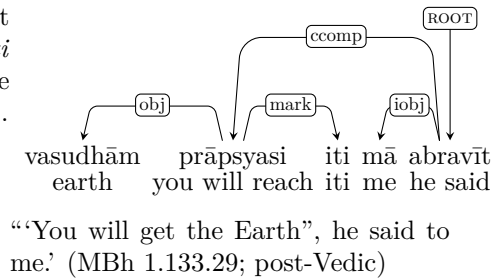
Multiple statements within the *iti*-section are connected with `parataxis` in chaining mode from left to right, i.e. the leftmost sentence is parent of the following one on the left etc., and the predicate of the rightmost sentence is linked to the quotative particle.

If no verb of speech is present and the speech cannot meaningfully be connected with any other verb, the leftmost statement of the speech is made the root, cf. the following example (shortened to the essentials):

Dependency tree (first diagram):

```
         ROOT                    ROOT ──── parataxis ────────── mark ──────
          │                       │                              │
    ┌ obj ┐                 ┌ obj ┐         ┌ nsubj ┐      ┌ obj ┐
    ↓     ↓                 ↓     ↓         ↓       ↓      ↓      ↓
   tam  niyuñjyāt         paśum badhnāmi ... yamas gṛhṇātu ... sapatnān iti
   him  he.should.fasten  victim I.bind  ... Yama shall.grab ...  rivals  thus
```
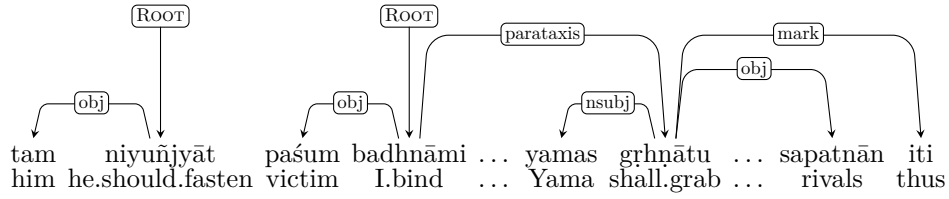
'Him (the aforementioned ram) [the sacrificer] shall fasten [to the post] [speaking] thus: "I bind the victim. ... Yama (Death) shall grab the rivals."' (MS 2.5.6.31-32)

References to Mantras (e.g. from the RV), which are mostly truncated verbatim quotes and therefore often without a coherent syntax, are not annotated. The last word of the citation is linked to *iti* with `mark`, and the remaining words thereof are chained with `flat` from right to left. The citation has no root.

```
                              ┌──────────── acl ────────────────┐
                              │          ROOT                    │
                     ┌ nsubj ┐│           │                      │
   ┌ flat ┐ ┌ flat ┐ ┌ mark ┐ │ ┌discourse┐ ┌amod┐   ┌ nsubj ┐  │
   ↓      ↓ ↓      ↓ ↓      ↓ ↓ ↓        ↓ ↓    ↓   ↓        ↓  ↓
vanaspate madhunā daivyena iti etad vai madhu daivyam yad  ājyam
  tree     honey   divine  thus this PTCL honey divine REL butter
```
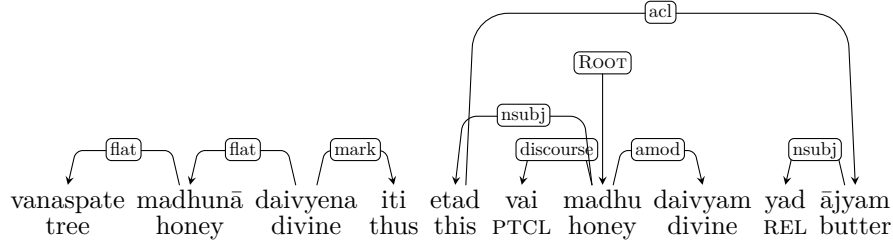
'[Mantra:] "O tree, with divine sweetness ... [they anoint you] ... " – [Explanation:] This butter (used at the current sacrifice) verily corresponds to/is the divine sweetness (mentioned in the Mantra).' (AB 2.2.4 with quote from RV 3.8.1b)

AB 7.15.2 presents a case of nested direct speech consisting of three clauses.

```
        ┌──────── ccomp ────────┐      ┌──────────── advcl ─────────────┐
        │                       │      │                                │
        │         ┌──────discourse──┐  │      ┌────── discourse ──────┐ ROOT
        │  ┌ mark ┐ ┌ iobj ┐        │  │      │              ┌ obl ┐   │
     ┌discourse┐  │ ┌nsubj┐│ ┌mark┐ │  │ ┌amod┐         ┌ obl ┐   │    │
     ↓         ↓  ↓ ↓    ↓↓ ↓    ↓  ↓  ↓ ↓    ↓         ↓     ↓   ↓    ↓
    cara  eva iti vai mā brāhmaṇas avocat iti ha dvitīyam saṃvatsaram araṇye cacāra
   wander eva iti vai me Brahmin    said   iti ha second     year       forest wandered
```
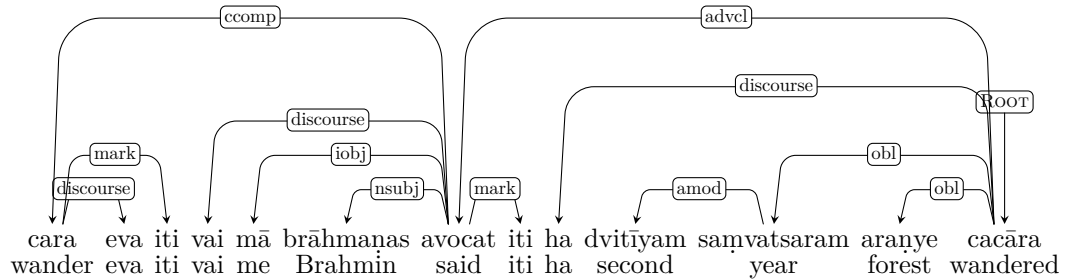
'"The Brahmin told me_j "Wander!""", hence he_j wandered in the forest for a second year.' (AB 7.15.2)

2.12 Disjunct nominals

Under this heading we subsume dislocated nominals such as hanging topics and *Nominativus pendens* constructions, which we link with `dislocated` to the head of the clause (see UD).

In the following example the preposed nominals in the nominative case (*paśavas ... apānau*) don't agree with the resumptive pronoun in the instru-
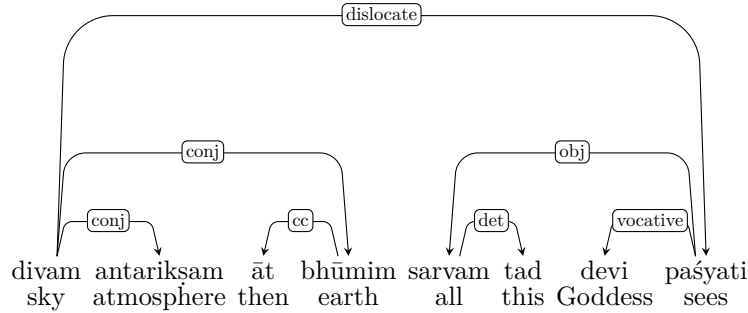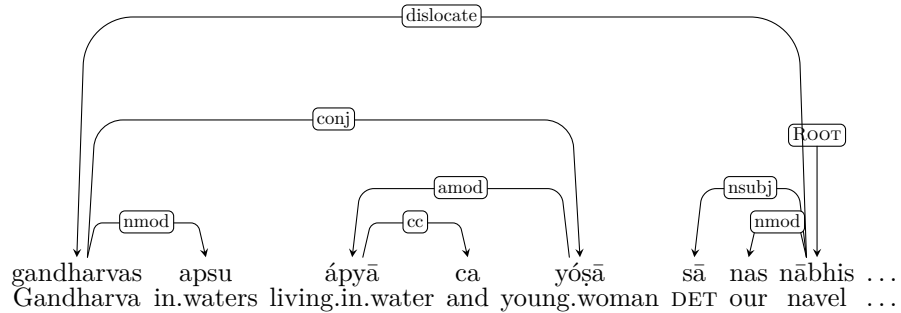
mental case (*tais*).

```
                                    dislocate
           conj                          nmod    Root
      conj                                 discourse      rcomp
   conj                  conj                  nsubj           obl      mark
paśavas  vāc  indriyam  prāṇa-  apānau   tais   vai  indras  akāmayata  sāyujyam  gacheyam  iti
cattle  speech  vigour  inhalation exhalation with.those PTCL Indra  wished    union   I.wish.to.go thus
```
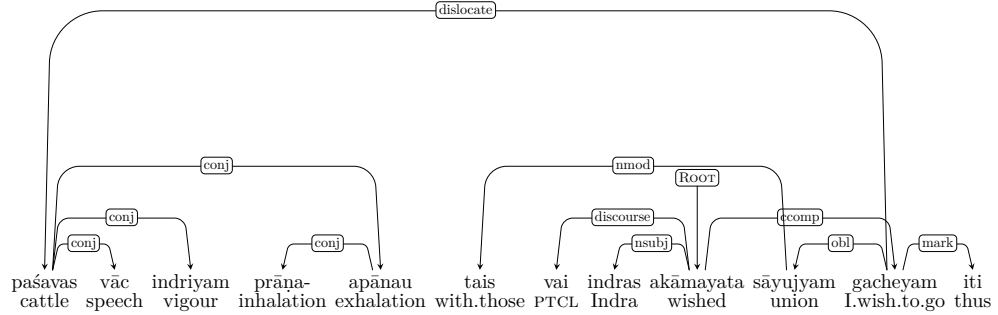
""Cattle, speech, vigour, in-breathing (and) out-breathing, – with them", Indra desired, "may I be united"." (MS 3.10.6, Oertel (1926, 30f.))

Further examples can be found in Oertel (1926, *passim*).

The dislocated nominal and the nominal resuming it in the main clause agree in case, but not in number and gender in the following two examples:

```
                         dislocate
           conj                   obj
     conj            cc       det        vocative
divam  antarikṣam  āt  bhūmim  sarvam  tad  devi  paśyati
sky   atmosphere  then  earth   all   this Goddess sees
```

'the sky, the atmosphere, then the earth – all that, O divine one (f.), he looks at.' AVŚ 4.20.1cd; Whitney and Lanman (1905)

```
                              dislocate
                  conj                       Root
           nmod          amod                nsubj
                     cc                         nmod
gandharvas  apsu   ápyā   ca    yóṣā     sā   nas  nābhis ...
Gandharva  in.waters living.in.water and young.woman DET our navel ...
```

'The Gandharva in the waters and the water nymph – that is our origin . . . ' (RV 10.10.4cd)

N.b.: The pronominal form *sā* agrees with *nābhis*.

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2.13 Ditransitive constructions

Ditransitive constructions consist of a three-place predicate (Malchukov et al., 2010; Bickel, 2011) that defines three arguments: an agent-like argument (A), which in a canonical Vedic construction takes the nominative case and is labeled **nsubj**; a second argument, T, which is usually manipulated or moved (often in the accusative case); a third argument, G, that is usually affected, stationary, or experiences a change of state, often in the dative case (e.g. in transfer verbs such as *dā-* 'give'), or in the accusative (e.g. the person robbed with *muṣ-* 'rob, steal'), etc. Importantly, we acknowledge that the exact number of arguments of a particular Vedic predicate has not yet been established and leave it, for the time being, to the annotator to decide. See also Sec. 2.14 and 2.10.

An example for the verb *dā-* 'give, bestow', where the source of the transfer is indicated as well, would be:

tatas dadāti dāśuṣe vasūni
thereof he.gives devotee goods
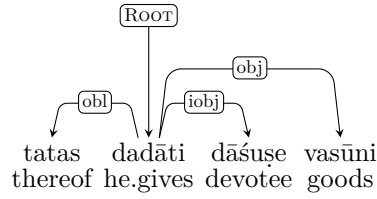
'[Indra is king … over whatever there is on earth.] Thereof/From this he gives goods to whom worships (him).' (RV 7.27.3c)

Verbs of speech vary in the assigment of case for the G argument (dative, accusative), cf. with the verb *vac-* 'speak' the following examples. In the first one, the G argument is in the dative.

avocāma rahūgaṇās agnaye madhumat vacas
we.have.spoken Rahūgaṇas to.agni sweet speech
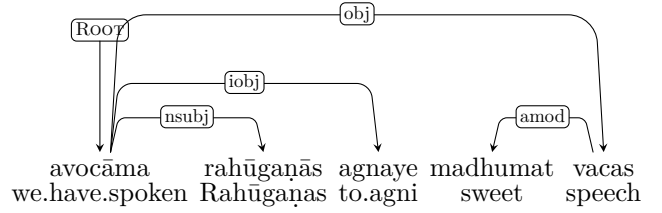
'We Rahūgaṇās have spoken a honeyed speech to Agni.' (RV 1.78.5ab, Jamison and Brereton (2014))

In this example, the G argument is in the accusative.

tām ha manus uvāca kā asi iti
to.her PTCL Manus spoke what.kind you.are thus
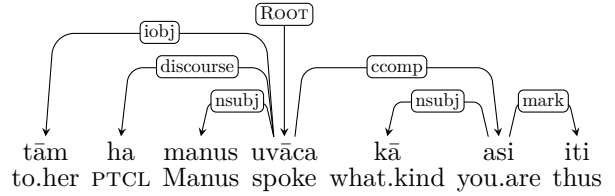
'To her (Īḍā) then Manu spoke: "(What kind of girl >) Who are you?"' (ŚB(M) 1.8.1.9)

With *ji-* 'obtain, snatch sth. from sb. by force', both the T and the G argument take accusative case.

devān asuras yajñam ajayan
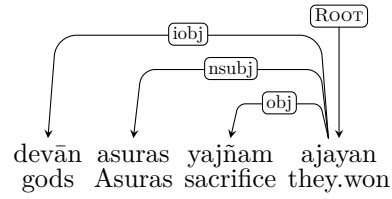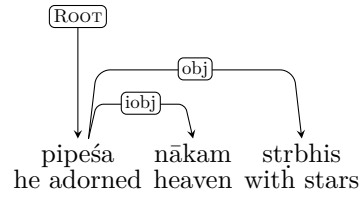gods Asuras sacrifice they.won

'The Asuras won the sacrifice from the gods.' (MS 1.9.8.2)

The verb *piś-* 'adorn' takes a T argument in the instrumental case, the G argument is in the accusative.

pipeśa   nākam stṛbhis
he adorned heaven with stars

'He (Agni) adorned heaven's vault with stars.' (RV 1.68.10)

In three-place derived causative constructions, the causee usually takes the accusative or instrumental case, the direct object of the embedded predicate is in the case assigned by the embedded predicate (Kulikov, 2011). We label the causee `iobj`, the embedded direct object `obj`.

devān uśatas pāyayā   havis
gods eager make.drink oblation
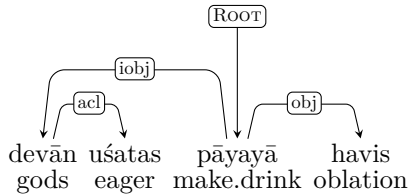
'Make the eager gods drink the oblation!' (RV 2.37.6)

Verbs like *kṛ-* 'make someone [turn into] x, cause someone to become x' with a double accusative case frame follow the same scheme: The argument that undergoes the transformation is annotated as `obj` and the (planned) result as `xcomp`. The same also goes for *dhā-* with this meaning and *bhū-* 'become'.

vas asmai   satrasadas   kṛṇomi
you for him *sattra*-sitters I make
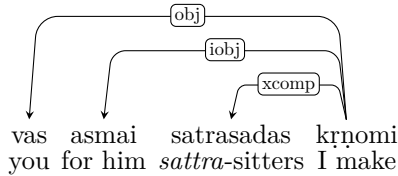
'I cause you to become sitters at the session of this man' (AVŚ 1.30.4)

For another example see RV 2.1.13ab, here Sec. .

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2.14 Double-accusative constructions

Double-accusative constructions are common, e.g. with *yāc-* 'request, ask something from somebody'. We assign the thing asked for the label `obj`, the person asked `iobj`.
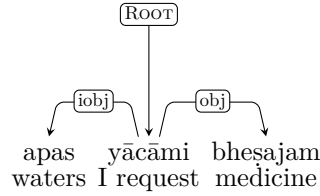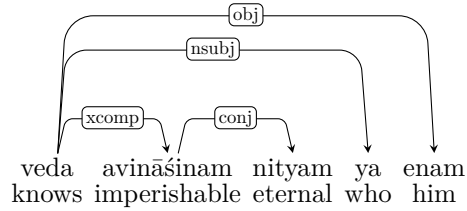

apas   yācāmi   bheṣajam
waters I request medicine

'I ask medicine from the waters.' (RV 10.9.5)

In predications such as 'know/consider sb. (P) as x, call sb. (P) x' the second argument (P) is annotated as `obj`. The predicative nominal expression is labeled `xcomp` (following UD guidelines).

veda   avināśinam   nityam   ya   enam
knows   imperishable eternal who   him

'who knows him as imperishable and eternal' (MBh 6.24.21, post-vedic)

This annotation is also found with participal predicates or in clauses with seemingly elided copula:

śeṣās   āgantavas   smṛtās
remaining accidental thought of
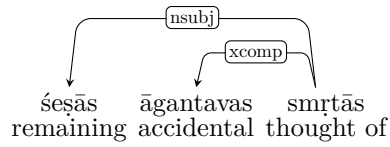
'The remaining ones are considered accidental.' (Suśrutasaṃhitā Sū. 34.6)

In ditransitive double-accusative causative constructions, the causee is assigned the label `iobj`, the embedded direct object `obj`. See also 2.13

devān   uśatas   pāyayā   havis
gods   eager   make.drink oblation
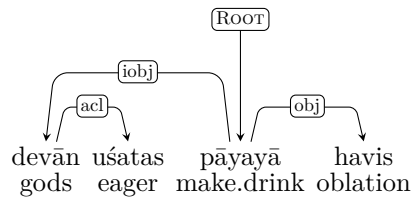
'Make the eager gods drink the oblation!' (RV 2.37.6)

2.15 Ellipsis

See the UD guidelines on `ellipsis` for a general overview.

2.15.1 Elision in nominals

In the following interrelated sequence, where some sentences in between have been omitted, the subject of the clauses is not overtly expressed, but is known from the context. The participial clause in the first sentence depicts this known subject and is linked with `advcl` to the predicate of the superordinated clause. In the second sentence the object proper (*petvam* 'ram') is elided and the dependent and orphaned compounded adjective is according to UD promoted to function as object of the verb:

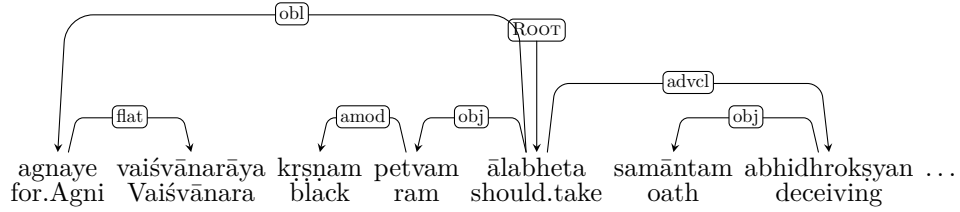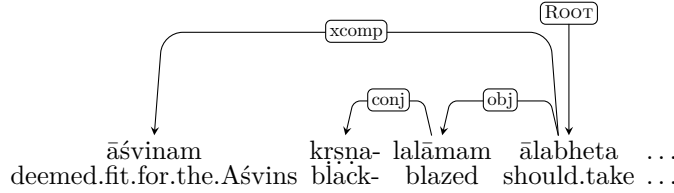| agnaye	vaiśvānarāya	kṛṣṇam	petvam	ālabheta	samāntam	abhidhrokṣyan ...
for.Agni	Vaiśvānara	black	ram	should.take	oath	deceiving

'For Agni Vaiśvānara he [i.e. the sacrificer] should seize a black ram, if he intends to break an oath. ...' (MS 2.5.6.3)

āśvinam	kṛṣṇa-	lalāmam	ālabheta	...
deemed.fit.for.the.Aśvins	black-	blazed	should.take	...

'(As a victim deemed fit for the) Aśvins [he] should seize a black (ram) with a blaze. ... ' (MS 2.5.6.4)

2.15.2 Elision of verbs or other predicates

The verb is elided, but the truncated sentence can be constructed as a clause with non-overt copula (*asi* is missing with *rocanas*):

rathe	tvam	asi	darśatas	iṣudhau	rocanas	tvam
chariot	you	are	visible	quiver	radiant	you
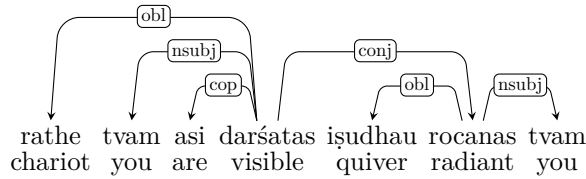
'You are conspicuous on the chariot, you [are] radiant on the quiver.' (AVŚ 4.10.6)

In the following example the first nominal predicate is represented by a noun (*pratigaras*) with a nominal dependent in the genitive (*ṛcas*, `nmod`). In the second, conjunct clause the head of the nominal predicate is gapped. The dependent (*gāthāyās*) of the gapped nominal inherits the dependents of the gapped nominal, which are then linked with `orphan`:

om iti ṛcas pratigaras evam tathā iti gāthāyās
om iti Ṛc responsive call thus tathā iti Gāthā
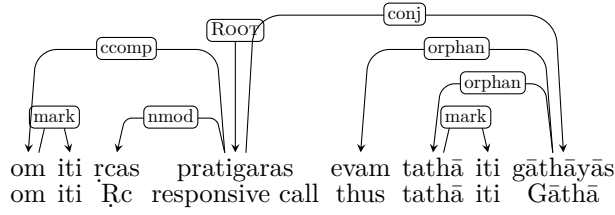
"'Om" is the responsive call for a Ṛc, and "tathā" [the one] for a Gāthā.' (AB 7.18.13)

In the case of leftward gapping, the dependent which in the first conjunct has the highest rank is promoted to the "new-head" position. The second conjunct, i.e. the one bearing the verb, is connected to the "new head" via conj and does not require any orphan relation:

tvām agne ādityāsas āsyàm tvām jihvām śúcayas cakrire kave
you Agni Adityas mouth you tongue pure ones made poet

'The Adityas made you, Agni, their mouth; the pure ones made you their tongue, o poet!' (RV 2.1.13ab)
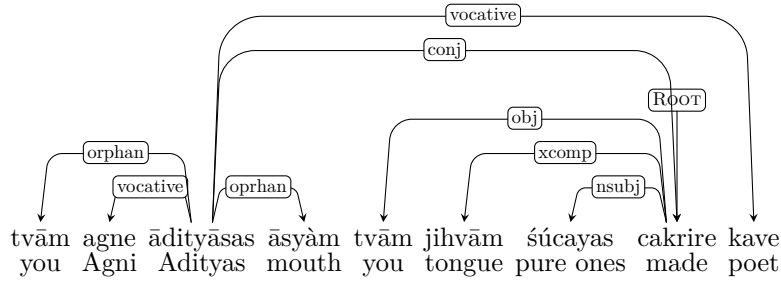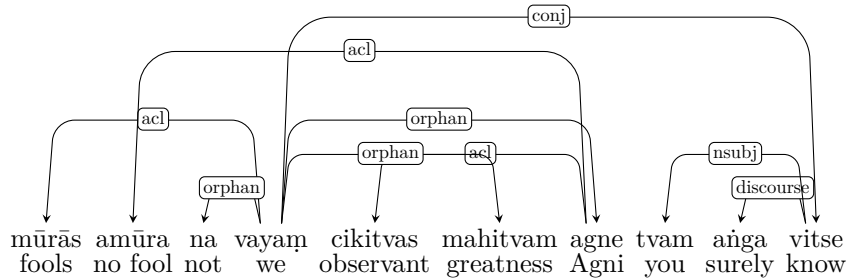
The following is another example of clausal coordinate ellipsis, where the elliptical form is not completely identical to its model (sloppy identity). Here, the overt verbal form *vitse* is a second person singular form of the verb *vid-* 'to know', but one has to recover a first person plural. This phenomenon has no consequences on the annotation label.

mūrās amūra na vayaṃ cikitvas mahitvam agne tvam aṅga vitse
fools no fool not we observant greatness Agni you surely know

'We fools do not (know) your greatness, o Agni who have perceived (everything) being anything but a fool, but you surely know (it).' (RV 10.4.4ab)

According to the UD guidelines, "the orphan relation is only used when an ordinary relation would be misleading (for example, when attaching an object to a subject)". Therefore, *mūrās* 'fools' retains its acl relation to the "new

25

head" *vayam*, and the same do *amūra* and *cikitvas* with respect to their head *agne*; all other dependents are instead connected via `orphan`.

2.15.3 Comparisons

Also see Sec. 2.6.
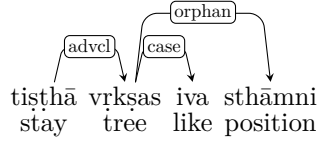
'Stay like a tree [stays] in position.' (AVŚ 4.7.5)

2.15.4 Complex cases

The following example (RV 7.46.2ab) elides the subject, the verb and the indirect object of the second clause, leaving only an `obl` (*sāmrājyena*) and the adjective of the second object (*divyasya*).

In such cases, the dependent with the highest rank is promoted and becomes the "new verb" (*divyasya* in the following example). The hierarchy is the following, where the leftmost dependent has got the highest rank: nsubj > obj > iobj > obl > advmod > csubj > xcomp > ccomp > advcl (cf. UD, "Ellipsis in Clauses").

This "verb" is now connected as `conj` with the most appropriate non-elided verb (*cetati*). Dependents with lower ranks are connected via `orphan` to the "new verb" (*sāmrājyena* in the example):
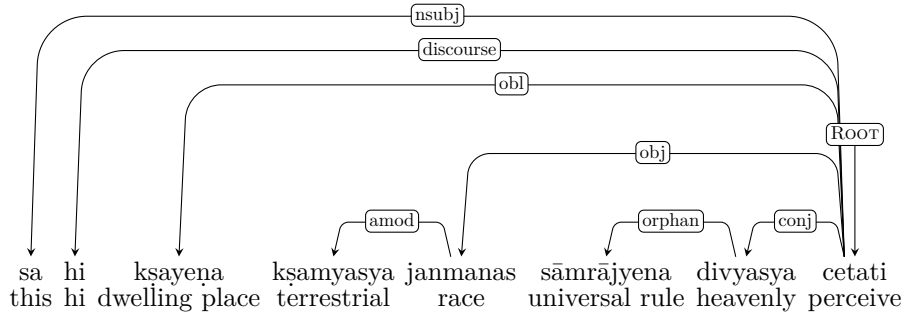
'For in consequence of his dwelling place he takes cognizance of the earthly race and, in consequence of his universal rule, of the heavenly.' (RV 7.46.2ab, Jamison and Brereton (2014)). – The complete sentence would read like this: *sa hi kṣayeṇa kṣamyasya janmanas cetati, sāmrājyena [ca sa] divyasya [janmanas cetati].*

In the following example from MS 2.5.2, *āgneyīm* 'being for Agni' is interpreted as secondary predicate of *ālabheta*, and *vasantā āgneyīm* is elliptical. As *āgneyīm* in the ellipsis takes up the `xcomp` argument, the oblique *vasantā* (`obl`) is promoted before it (`obl` > `xcomp`).

śvetās malhās ālabheta brahmavarcasa- kāmas āgneyīm ... vasantā āgneyīm
white dewlapped take divine splendour desire for Agni ... spring for Agni

'White [heifers] with dewlaps shall he take [for the sacrifice], if he wishes for the divine splendour, one for Agni, [one for Bṛhaspati and one for Sūrya]: for Agni in the spring time, [for Bṛhaspati in the rainy season and for Sūrya in the cold season]' (MS 2.5.2.27, following (Amano, 2009, 559))

MS 2.5.2.3-4 shows another complex case, where `orphan` is used for an orphaned `acl` (*dvitīyam*) as well as for the orphaned adjective modifier (`amod`) *lohinī* 'red (fem.)' of the unexpressed noun *avis* 'sheep' in the clausal complement (`xcomp`):

yad prathamam tamas apāghnant sā avis kṛṣṇā abhavat yad dvitīyam sā lohinī ...
which first darkness repelled this sheep black became which second this reddish ...

'What darkness [the gods] carved out first, that turned into a black sheep, what [they carved out] second, that [turned into a] ruddy [sheep] ...' (MS 2.5.2.3-4)

In AśvGS 1.5.5, the ellipsis refers back to a sentence uttered in a direct speech and to an adverbial clause dependent from it (*ced* 'when'). According to the order of promotion suggested in the UD guidelines *paśumatī* 'rich in cattle' becomes the head, and *goṣṭhād* 'from the cowpen', a dependent (`obl`) of the elided verb of the adverbial clause (*gṛhṇīyāt*), is linked to the new head with `orphan`.

kṣetrād ced gṛhṇīyāt annavatī asyās prajā bhaviṣyati iti vidyāt goṣṭhād paśumatī
field when takes rich in food his offspring becomes iti knows cow-pen rich in cattle

'He should know: When he takes (something) from a field, his offspring will become rich in food; [when he takes] from a cow-pen, [his offspring will become] rich in cattle.' (AśvGS 1.5.5)

2.16 Indefinite quantifiers

Our annotation is based on decisions found in the English UD treebanks, where quantifiers such as 'all', 'every', 'each' etc. are annotated as `det`.

viśvāni rūpāni bhūri vāmam
all forms much/great good

Some lexical items can oscillate between quantification and other uses, for example *bhūri-* 'much; great' or *sarva-* 'whole; all'. Depending on the context of its use, annotators are free to annotate individual instances with `amod` or `acl` as well.

The label `det` also applies to *eka* 'only, single, sole', whereas 'one' should be annotated as `nummod`.

```
        ┌─────┐
        │ ROOT │
        └─────┘
            │
  ┌det┐ ┌xcomp┐ │
  eka-   vṛṣas bhava
  single- bull  become
```
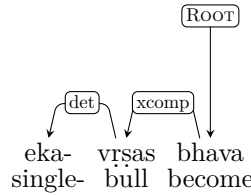
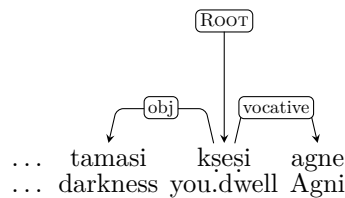'Become the single bull!'   (addressed to a ruler; AVŚ 6.86.1)

2.17   Infinitive

2.18   Interjections

... and exclamations: `discourse` of the main verb, e.g. *om*, *svāhā*, *hanta*, *uve*; or of a noun: *pataṃga hai* 'hey locust'
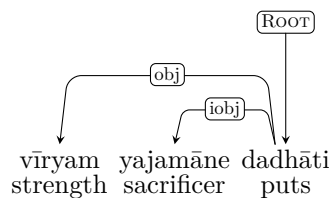
2.19   Locative

Often annotated as `obl`. With two- and three-place predicates a nominal expression in the locative can assume the P, T or G role (Delbrück, 1888, 118–120); see also Sec. 2.3.4.

With locational two-place verbs such as *kṣit-* 'dwell in, reside in, abide in' the second argument is often expressed with a locative, cf.:

```
           ┌─────┐
           │ ROOT │
           └─────┘
               │
    ┌obj┐   │  ┌vocative┐
 ... tamasi   kṣeṣi   agne
 ... darkness you.dwell Agni
```

'Yet you dwell in darkness, Agni.' (RV 10.51.5b, Jamison and Brereton (2014))

With three-place predicates the G role may be assumed by a nominal expression in the locative, cf. *dhā-* 'put something somewhere, place something somewhere':

```
              ┌─────┐
              │ ROOT │
              └─────┘
                  │
      ┌obj┐    │
         ┌iobj┐ │
 vīryam yajamāne dadhāti
 strength sacrificer  puts
```

'he places strength into the sacrificer' (TS 2.3.7.4; Delbrück (1888, 121))

The T role with *ā-bhaj* 'share something with someone':

'the Maruts to whom you gave a share in soma, Indra!' (RV 3.35.9; Jamison and Brereton (2014))
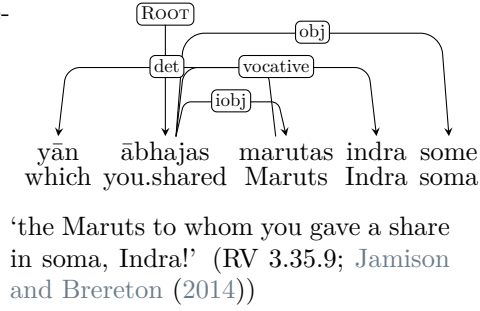
For the locativus absolutus see Sec. 2.3.4, p. 8.

2.20 Names

See Sec. 2.25

2.21 Numerals

The basic annotations for Vedic Sanskrit are:

- NUMERAL OR ADJECTIVAL NUMERAL ← **nummod** ← COUNTED UNITS – see e.g. *trī* [PL.N] ← **nummod** ← *sahasrāṇi* [PL.N] ← **nummod** ← *devās* [PL.M] in the example further down p. 29.

- NUMERAL SUBSTANTIVE → **nmod** → GEN. OF COUNTED UNITS – e.g. *gavām* [GEN.PL] ← **nmod** ← *sahasrais* [INS.PL.N] 'with thousands [of] cows' (RV 5.30.13b) or (*dvé . . . śaté*) [NOM/ACC.DU.N] → **nmod** → *gós* [GEN.SG!] 'two hundred[s of] cow(s)' (RV 7.18.22a)

- NUMERAL SUBSTANTIVE → **amod** → ADJECTIVAL DERIVATION OF COUNTED UNITS – e.g. (*ṣaṣṭís sahásram*) [NOM.SG.N] → **amod** → *gávyam* [NOM.SG.N] '1,060' or '60,000 cows' (RV 1.126.3c)

Numerals can be complex, either formed parathetically or compositionally or in both ways, cf. for a detailled account Wackernagel and Debrunner, 1957, III, 337–400. Following the UD guidelines, we annotate according to the syntactic structure of complex numerals wherever possible; if no clear syntactic structure is discernible, **flat** is used for joining the elements of the complex numeral (using bouquet notation).

At RV 3.9.9ab, the number 3,339 (dependent as **nummod** from the subject *devās* 'gods') is constructed as the sum $3 \cdot 100 + 3 \cdot 1000 + 30 + 9$ using a weak, albeit discernible internal syntactic structure:

29
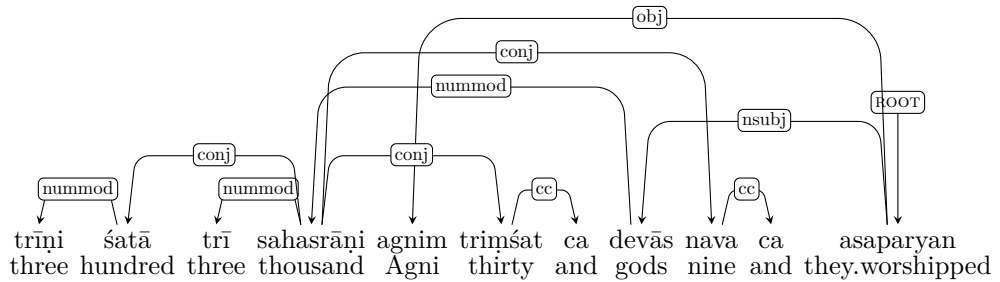
'Three hundred (and) three thousand[s] and thirty and nine gods worshipped Agni.' (RV 3.9.9ab)

2.22   Particles

This section summarizes our annotation decisions for enclitics and particles and is not meant as an exhaustive treatment of Vedic particles, which are summarily discussed in Delbrück (1888, p. 22, §13, p. 471f.; pp. 472-546).

2.22.1   Negation particles

In clause-initial position the polarity operator *ná* usually negates the clause or has scope over the following expression, in all other positions its scope extends over the immediately following element. In prohibitive sentences the particle used is *mā́*, see the example in Sec. 2.22.8, p. 31. The nominal negation *a(n)-* is used in compounds including non-finite verbal forms. All these are linked with `advmod` to their respective heads. Note that postponed *ná* is also used as a marker in similative constructions, accordingly annotated as `case` (See Sec. 2.6.1).

2.22.2   Quotative particle

For *íti* as quotative particle, i.e. following, but also preceding a direct speech, see here Sec. 2.11: `mark`. Occasionaly, *íti* is used as adverb 'thus, so' (`advmod`).

2.22.3   Interrogative particles

Beside their pronominal use *kát* and *kím* are also found as interrogative particles, cf. Etter (1985, *passim*), and are in such cases annotated parallel to *íti*, i.e. with `mark`. Note that there are also instances where the interpretations as interrogative adverbs 'why, how?' are possible; ⇒ `advmod`.

2.22.4   Particles with scope over words or phrases

According to Delbrück the scope of some particles is the word or the phrase to which they are attached to. These are coordinating *ca* (`cc`), disjunctive *vā* (`cc`), comparative *iva* (`case`), emphatic *cid* and *ā́* (`discourse`), and emphatic/expository *evá* (`discourse`). The latter, when sentence-initial, is also used as adverb (`advmod`) in the RV and AV. N.b.: *ca* and *cid* are found after the first word of a nominal, thus e.g. *víśve ca devās* 'and all the gods'.

2.22.5   Particles with scope over clauses and sentences

Particles in Wackernagel position tend to have the whole sentence in their scope: *vái, khálu, kíla, íd, aṅgá, svid, ha, sma, kam*. These are linked with `discourse` to the predicate. The same position is held by the following particles, but the relation to the predicate might vary in context: sentence-connective also adding a moment of immediacy *u* (`cc` or `discourse`), temporal *nú*, which is as well used in evaluative function as in English "*now*, let's see . . . " (`advmod`, `discourse`), adversative-connective *tú*, which is also used in various pragmatic functions as in German "Er ist *doch* da." ("*Yes*, he is here.") (`cc`, `discourse`) affirmative *áha* (`discourse`), and causal-explicative *hí* (`discourse`).

### 2.22.6 Particles which take or can take first position in a clause or sentence

ápi 'close' in the RV is a preposition construed with the locative case (`case`). From the RV onwards it is also used as emphatic particle pre- or postponed to a word (`discourse`). *utá* 'and' is a word or clause connective in the RV (`cc`). On *íti* see Sec. 2.22.2. *evám*, found only once in the RV, supersedes *evá* (see Sec. 2.22.4) as adverb (`advmod`). *átha* (in the RV also *ádha*) is used as an adverb in main clauses (`advmod`) marking a consequence of preceding statements, 'then, thereupon', quite often with an adversative notion, 'but then'. In main and independent clauses these particles may also be annotated as conjunctions with `cc`.

2.22.7 Varia

- Whereas the adverbial and adjectival use of *sú* 'good, well' and of its antonym *dus-* 'bad(ly)' are well established as first members of compounds (see Sec. 2.7.1, p. 15) an independent adverb *sú* is not attested. Independent *sú* is used as a particle with as its scope a clause imparted with the speaker's hope for the satisfactory fulfillment of his pronouncements, often left out in translations (see below RV 3.53.2a Sec. 2.22.8, p. 31). We annotate *sú* ← `discourse` ← VERB.
- The particles *ca*, *cid* and then also *cana* serve generalizing functions when combined with interrogative pronouns, thus e.g. *kas ca*, *kas cid*, *kas cana* mean all 'whoever', see here example AB 2.6.5 in Sec. 2.24, p. 34.

2.22.8 Particle chains

Particles can occur in chains or/and in groups. In groups we declare the most salient element as head, and link the other particles to it with the label `fixed`, thus e.g. *ha* ← `fixed` ← *vai* which seems equivalent to *ha*, whereas *khalu* → `fixed` → *vai* seems equivalent to *vai*. In other cases, where an additive or cumulative use is assumed, we chain the particles, as e.g. in :
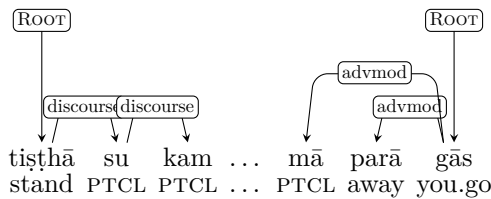
'Stay (here), please! Don't go away!' (RV 3.53.2a)

2.23 Prepositions and preverbs

Also see Sec. 2.22 on particles.

The term *preposition* was (and is occasionally still) used as hyperonym for both, adpositions (pre-, post-, circumpositions) and preverbs, but is gradually shifting to denote only the former. Following Hettrich, Casaretto and Schneider (Hettrich et al., 2004) we will use the term *local particles*.

Rule of thumb:

case   local particles used as adpositions with governed nouns in independent prepositional phrases. According to the UD, independent prepositional phrases bear the `obl` relation to their heads.

advmod   local particles used as preverbs, i.e. modifying verbs.

The local particles listed by Delbrück (1888, 440-470) and there labelled as "(echte) Praepositionen" (prepositions proper) can often be used in both manners. These are contrasted with words which are used only adnominally (called "unechte Praepositionen" (prepositions "improper") by Delbrück (1888, 470-471)).

In the following example we focus on the local particles *ud* and *anu*.

anu sūryam ud ayatām
after sun up they.both.shall.go
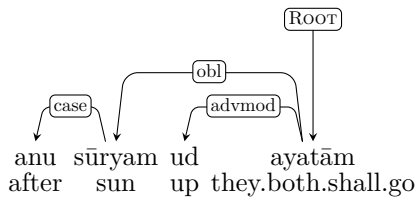
"Let them (both) go up toward the sun." (Whitney and Lanman (1905)), or with a marked interpretation of *anu* as adposition: 'Let them both go upward after/following the sun.' (AVŚ 1.22.1)

Following Delbrück (1888, 453) *ud* is only used with verbs, thus we link this word with its predicate with `advmod`. *anu* as well is often used as preverb, so *inter alia* with the verb *i-* 'go'; the interpretation of *anu* as an adposition is made probable by the univerbations with its governed nouns such as in *anuṣvadham* (adverb) from *anu svadhām* resp. *svadhām anu* (adverbials), all meaning 'according to one's own nature', or as in preposition governing compounds such as *anu-vrata-* (adjective) 'sb. who follows a behest, a bidding' from *anu vratam* (adverbial) 'following a behest'. Thus in our example both interpretations and annotations (`case` or `advmod`) are possible.

Multiple preverbs are linked individually to the verb.:

. . . śatravas parājitāsas apa ni layantām
. . . enemies defeated away down they.shall.cling
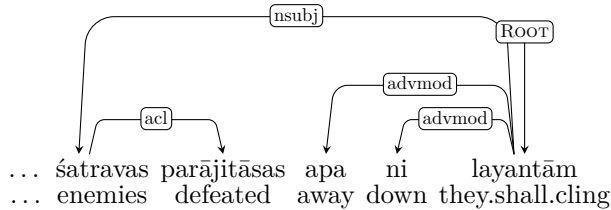
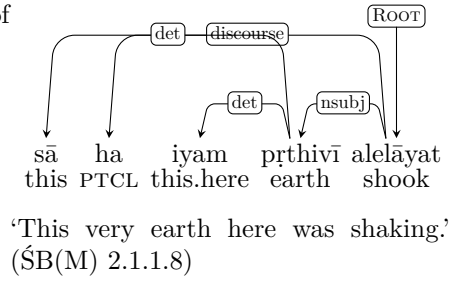'(And) once completely defeated the enemies shall hole up themselves (far) away.' (RV 10.84.7cd)

2.24   Pronouns

Basic annotation for pronouns relating to nominal heads, i.e. for demonstratives, relatives, adjectival interrogatives: PRONOUN ← det ← HEAD.

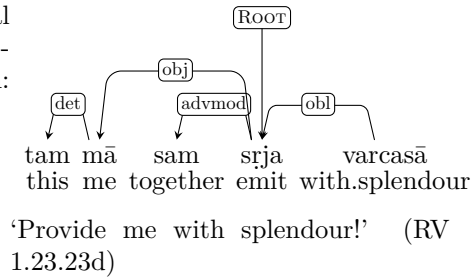Possible combinations of pronouns are discussed in Delbrück (1888, 211-212).

Not uncommon are combinations of two demostratives such as in:

sā ha iyam pṛthivī alelāyat
this PTCL this.here earth shook

'This very earth here was shaking.' (ŚB(M) 2.1.1.8)

or of a demonstrative and a personal pronoun, where the head is represented by the personal pronoun, as in:

tam mā sam sṛja varcasā
this me together emit with.splendour

'Provide me with splendour!' (RV 1.23.23d)

Note that some scholars read the pronoun *sa-/ta-* in such cases as depictive, thus 'This earth [*sā* = as she appears in the present condition] here [*iyam* denoting proximal deixis] was shaking.' respectively 'Provide me [*tam* = as such, as described afore] with splendour!'. Since this issue is much discussed and still under investigation, it is left to the annotator to decide between determinative and depictive value of *sa-/ta-*. Note however that, in case of depictive interpretation, *sa-/ta-* depends on its referent via `acl`. If the referent is not overtly expressed, *sa-/ta-* is instead connected to the superordinate predicate via `advcl`:

sa ā vaha marutām śardhas acyutam
this hither convey Maruts flock unshakable
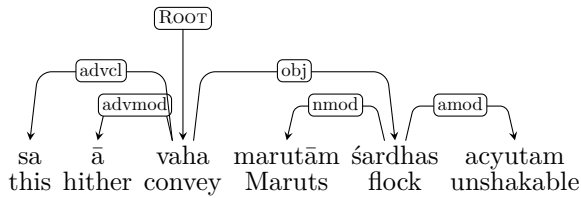
'As such, convey hither the unshakable flock of the Maruts.' (RV 2.3.3c)

See also Sec. 2.28 on Secondary predication.

A special combination consists in the sequence of relative, interrogative pronoun, and a generalizing particle, i.e. *ya- ... ka- ca, cid, cana*, found in relative clauses, cf. Delbrück (1888, 569-570). Here the interrogative element (*ka- ca*) is subordinated to the relative *ya-*, hence we annotate HEAD → `det` → *ya-* → `det` → *ka- ca*, as in:
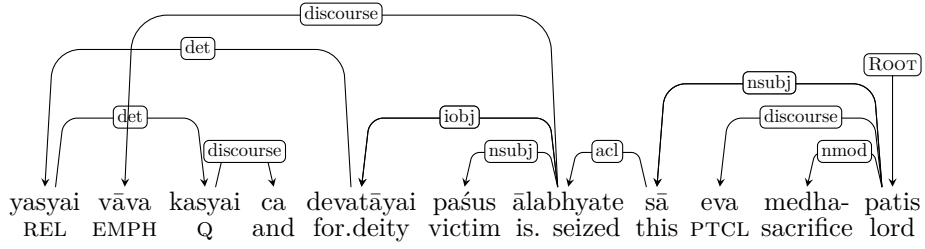
"To whatever deity the victim is slaughtered, that is the lord of the sacrifice."
(AB 2.6.5; Keith (1920))

2.24.1 Adverbial usage of pronominal forms

Some forms of the determinative pronouns can appear in adverbial functions,
so e.g. *tasmāt* 'hence, therefore' (ABL.SG. of *ta*-) or *tena* 'therewith, thereby'
(INS.SG.). Most common are the subordinating *yad* 'when, if, because of' and
its correlate *tad* 'then, thus, there' which correspond and are probably originally
identical with the NOM./ACC.SG.N. of *ya*- respectively *ta*-.

As with other relative adverbs (see Sec. 2.3, and Sec. 2.26, ex. AVŚ 15.11.6
on p. 38) we annotate *yad* as conjunction linking the predicate of the relative
clause to the superordinated sentence, as e.g. in:
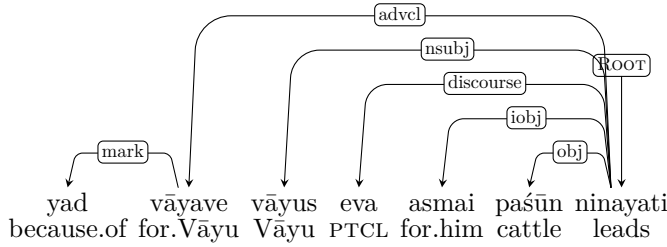
'Since (the victim was consecrated) to Vāyu, Vāyu verily thus brings up cattle
for him (= the sacrificer).' (MS 2.5.1.82)

For an ex. of adverbial *tad* see Sec. 2.10, ex. AB 1.1.10 on p. 18.

2.24.2 Pronominal possessors

Adjectival possessive pronouns are rare. We find occasionally but from old adjec-
tival derivations from the oblique (non-nominative) stems of personal pronouns
such as *mama-ka*- or *māma-ka*- both from *mama* GEN.SG to *aham* 'I'. Also the
reflexive adjective *sva*- is used as possessive of all persons. The most common
means is the use of GEN-forms or of the enclitic forms of the personal pronouns,
thus *mama* or encl. *me*, *asmākam* or encl. *nas* for *asmāka*- 'our; of ours', then
tasya 'his; of his', and *teṣām* 'their; of theirs', etc. The basic annotation is, just
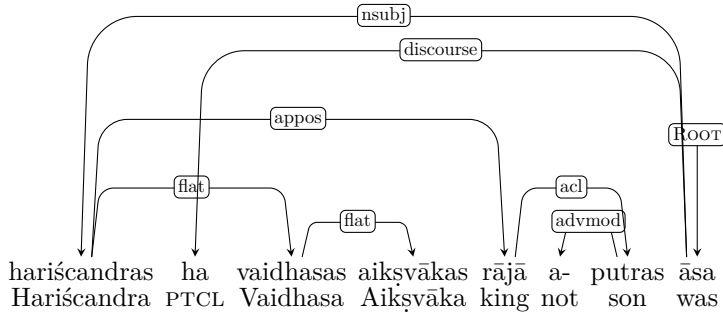as with nouns, PRO (GEN. or encl.) ← nmod ← HEAD.

In the predicative possession construction with an oblique possessor in the
genitive, the possessor is promoted to root, cf.

| tasya	ha	śatam	jāyās	babhūvus
of.his	PTCL	hundred	wifes	were
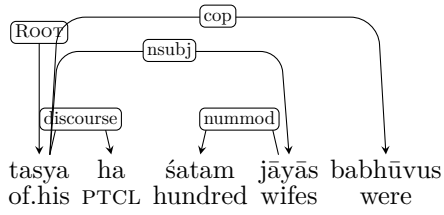
'He had hundred wifes.'(AB 7.13.1)

2.25 Proper names

When the name consists of several words in the same case the elements are chain-linked with `flat` to the leftmost part of the name, which becomes the head, cf.:

hariścandras	ha	vaidhasas	aikṣvākas	rājā	a-	putras	āsa
Hariścandra	PTCL	Vaidhasa	Aikṣvāka	king	not	son	was

'(There) was (once) Hariścandra Vaidhasa Aikṣvāka, a king who had no son.' (AB 7.13.1)
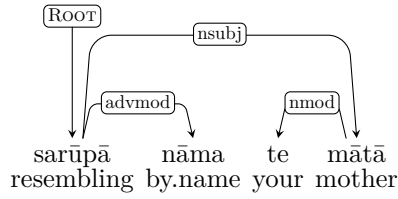
When the name consists of a name and a fixed epithet, the head is the name, e.g. *agni-* in *agnaye jātavedase* (dat.) and in *jātavedasam agnim* (acc.). In juxtapositions the head consists in the part of the name that bears the inflection, e.g. *apām napāt* : *apām napātam* or *bṛhas pati* : *bṛhas patim*, hence the heads are *napāt-*, *pati-* etc.

Proper names can be marked with *nāma*. Following Böhtlingk and Roth (1875, s.v.), we annotate *nāma*[2] as an `advmod` of the head of the name, corresponding to the engl. adverbial 'by name'.
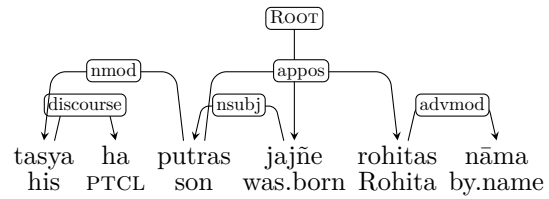

hrūḍus	nāma	asi	haritasya	deva
Hrūḍu	by.name	you.are	of yellow	god
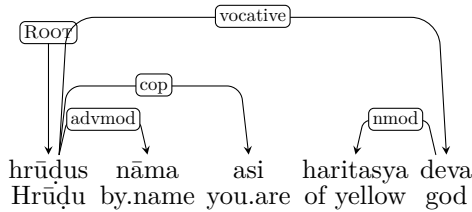
'You are Hrūḍu by name, O god of the yellow (= jaundice?)' (AVŚ 1.25.3b)

---

[2]The adverbial use of the form *nāma* goes back to naming parentheses "the name is ...".

Dependency tree:

ROOT — sarūpā (resembling), nāma (by.name), te (your), mātā (mother)
nsubj, advmod, nmod

sarūpā   nāma   te   mātā
resembling by.name your mother

'Your mother is called "resembling".' (AVŚ 1.24.3a)

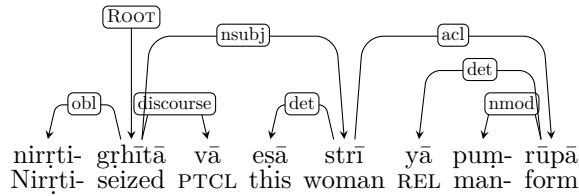When the name introduced by *nāma* modifies another word, the name becomes `appos` of this word.

Dependency tree:

ROOT — tasya (his), ha (PTCL), putras (son), jajñe (was.born), rohitas (Rohita), nāma (by.name)
nmod, discourse, appos, nsubj, advmod

tasya   ha   putras   jajñe   rohitas   nāma
his   PTCL   son   was.born   Rohita   by.name

'To him, a son called Rohita was born.'
(AB 7.14.2)
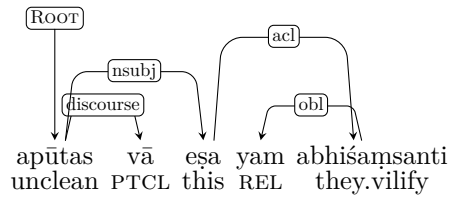
See also Sec. 2.4 for names with additional qualifiers.

2.26 Relative clauses

A full account on relative clauses in the RV is given in Hettrich 1988.

Relative clauses modifying a nominal (noun, pronoun): The clause is connected with `acl` to the referent in the superordinate clause.
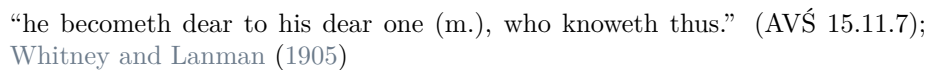
Dependency tree:

ROOT — nirṛti- (Nirṛti-), gṛhītā (seized), vā (PTCL), eṣā (this), strī (woman), yā (REL), puṃ- (man-), rūpā (form)
obl, discourse, nsubj, det, acl, det, nmod

nirṛti-   gṛhītā   vā   eṣā   strī   yā   puṃ-   rūpā
Nirṛti-   seized   PTCL   this   woman   REL   man-   form

'That woman indeed is seized by Nirṛti (void, death), who has a man's looks.'
(MS 2.5.5.38)

Dependency tree:

ROOT — apūtas (unclean), vā (PTCL), eṣa (this), yam (REL), abhiśaṃsanti (they.vilify)
discourse, nsubj, acl, obl

apūtas   vā   eṣa   yam   abhiśaṃsanti
unclean   PTCL   this   REL   they.vilify

'He (the sacrificer), whom they speak against, is not purified.' (MS 2.5.5.11)

Headless relative clause (`csubj`) as subject of a verb:

priyas priyasya bhavati yas evam veda
dear of.dear he.becomes REL thus he.knows

"he becometh dear to his dear one (m.), who knoweth thus." (AVŚ 15.11.7); Whitney and Lanman (1905)

If the referent is known but not overtly expressed, the clause has depictive value and is connected to the superordinated predicate with `advcl` or with `acl` if there is a pronoun representing it. Thus:

- 'who(ever) knows thus . . . ': `csubj`

- 'he (the afore mentioned), who knows thus/if he knows thus, . . . ': `acl` with a head noun or pronoun or lacking it: `advcl`.

When the verb of the main clause is an imperative of the second person, and thus entails a 2.SG subject, the dependent relative clause can only be read as depictive to this covert subject: `advcl`

asau yas eṣi vīrakas gṛham- gṛham vicākaśat imam jambha- sutam piba . . .
DEM[there] REL you.go little.hero house house looking.out DEM[here] tooth pressed drink! . . .

'(You), who (just like any) pubescent male roam over there from house to house desperately looking out (for your pleasure), drink this (soma) here, pressed with (my very own) teeth . . . !' (RV 8.91.2abc)

See also Sec. 2.29.

Sometimes subordinate clauses introduced by relative forms such as *yatra* 'where' or *yatas* 'from where' can be interpreted as relative clauses.

yatra tū bhūmes jāyeta tad prajijñāseta
where PTCL of.earth he.might.be.born that he.should.want.declare

'Where on earth he might have been born – that he should want to make known.' (MS 2.5.5.31)

But normally clauses with relative adverbials (*yathā*, *yatra*, *yad* etc.) are linked to the predicate of the superordinate clause with `advcl`; the relative adverbials are treated as conjunctions and linked to the predicate of adverbial clause with `mark`, cf.:

vrātya	yathā	te	priyam	tathā	astu
Vrātya	how	to.you	dear	so	shall.be
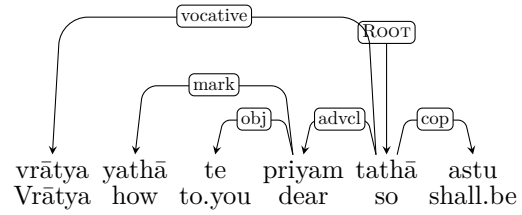
"Vrātya, be it so as is dear to thee!" (AVŚ 15.11.6); Whitney and Lanman (1905))

See also Sec. 2.3, and on *priya*- Sec. 2.30, p. 43.

If the verb of a relative clause expresses potentiality, eventuality, etc. as with a grammatical mood such as the optative, the clause is treated as an adverbial, and is linked to the predicate of the superordinate clause with `advcl`, cf.:

yas	pāpmanā	tamasā	gṛhītas	manyeta	sa	etam	aindram	ṛṣabham	ālabheta
who	with.evil	with.darkness	caught	he.might.think.to.be	he	this	for.Indra	bull	he.should.seize
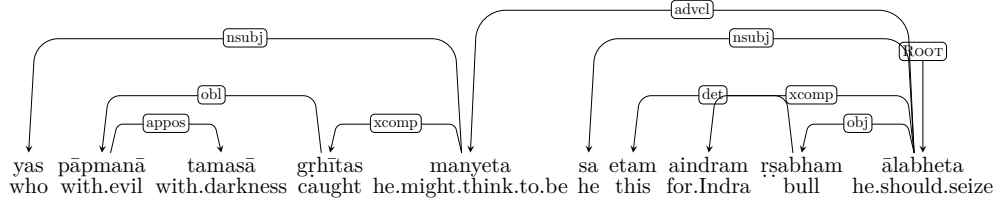
'If (a sacrificer) might think he has been caught by the evil "darkness", he should seize said bull as [a victim] deemed fit for Indra.' (MS 2.5.3.28)

- Annotating relative pronouns:

    - as subject of the relative clause: `nsubj` (see above)
    - referring to a noun in the relative clause: `det`

yena	indrāya	samabharas	payāṃsi …	brahmaṇā …,	tena	…
with.what	for.Indra	you.collected	drinks …	with.formula …,	with that	…
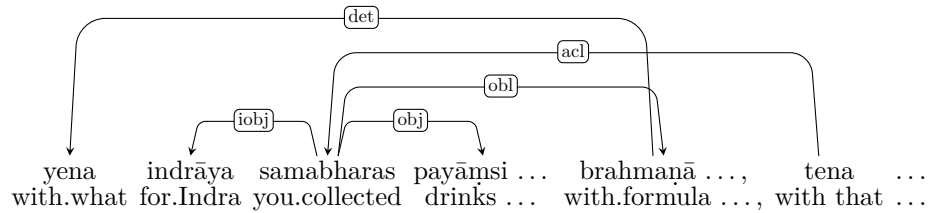
"With what … worship … thou didst bring together draughts … for Indra, therewith, (O Agni, do thou increase this man here;)" (AVŚ 1.9.3); Whitney and Lanman (1905)

2.27 Repeated word forms

Repeated word forms coalesce regularly to so-called *āmreḍita*-compounds, i.e. a group of two successive homonymous word forms of which only the first bears an accent. Just as with other copulative compounds (for dvandvas see Sec. 2.7.3) the two elements are connected with `conj` however with the accented respectively first word form functioning as the head, e.g.
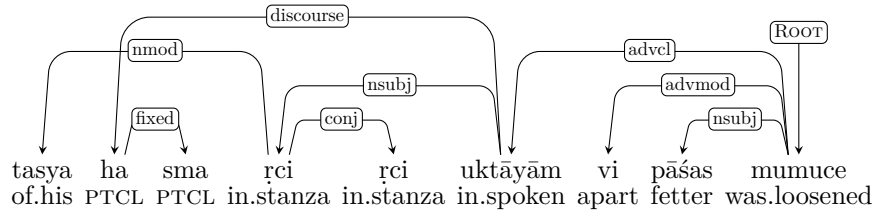
'And just as each stanza of his (of Śunaḥśepa) was spoken a (single) bond came off.'[3] (AB 7.16.13)

## 2.28 Secondary predication

Basic annotation:

- `acl` (if the secondary predicate is depictive)

- `xcomp` (if the secondary predicate is a core argument of the superordinated predicate or resultative)

See also Double accusative (Sec. 2.14), UD `acl` and UD `xcomp`

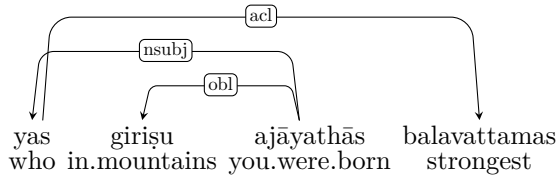**acl:** typically participles are used as depictives, see *pṛṣṭa-*, respectively *stanayan* in:
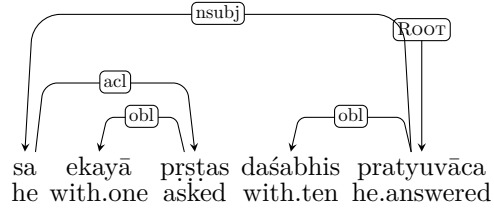
'He, having been asked with one (stanza), replied with ten.' (AB 7.13.3)
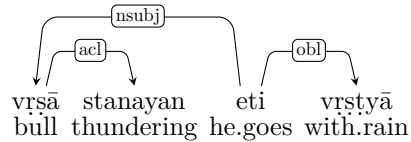
'The bull goes thundering with rain.' (AVŚ 1.12.1b)

Of course depictives are not limited to participles, but comprise all sort of adjectives and even nouns. For a fitting English translation we often use the adverb 'as', cf.:

---

[3]Note that *tasya* might as well depend from *pāśas* and thus the particles *ha sma* from *mumuce*.

```
                    ┌──────────acl──────────────────┐
              ┌──nsubj──┐                            │
              │    ┌─obl─┐                            │
              ↓    ↓     ↓                            ↓
             yas  giriṣu ajāyathās              balavattamas
             who  in.mountains you.were.born      strongest
```

'you who were born in the mountains, [being/as] the strongest one' (AVŚ 5.4.1ab)

```
                                                    ┌ROOT┐
              ┌──────nsubj──────┐                   │
         ┌acl┐┌─advmod─┐        │   ┌───nsubj───┐   │
         │    │        │  ┌acl┐  │   │  ┌acl┐    │   │
         ↓    ↓        ↓  ↓    ↓  ↓   ↓  ↓    ↓   ↓
        yas  adya   stenas   āyati   sa  sampiṣṭas  apāyati
        who  today  thief  he.will.come  he  crushed  he.will.go.forth
```
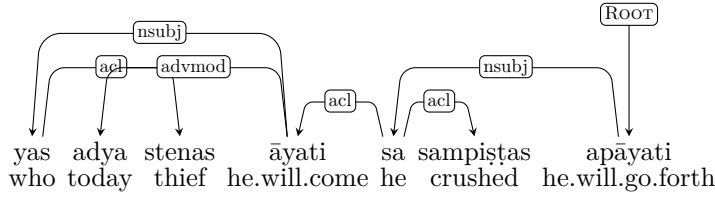
'He, who arrives as a thief today, will leave crushed.' (AVŚ 4.3.5ab)

If the subject is not overt, the dependent is connected to the verb with `advcl`.	``` ┌─obj──┐ ┌(acl >) advcl┐ ┌─nmod─┐ ↓ ↓ ↓ ↓ … kalaśam bibharṣi tvaṣṭā rūpāṇām … … pot you.carry builder of.forms … ``` '(You [subject not overt]) carry a pot (full of Soma), (you being) a shaper of forms ...' (AVŚ 9.4.6ab)
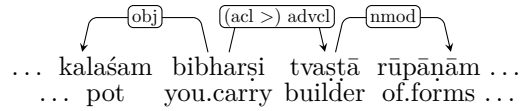
`xcomp` is used for resultatives, typically with predicates such as *bhū-* 'become, turn into (intrans.)' or *kṛ-* 'make, turn into (trans.)', cf.:	``` ┌ROOT┐ │ ┌──nsubj──┐ ┌xcomp┐ │ │ ┌─nmod─┐ ↓ ↓ ↓ ↓ ↓ aśmā bhavatu nas tanūs stone he.shall.be of.us body ``` 'Let our body become stone!' (RV 6.75.12b)
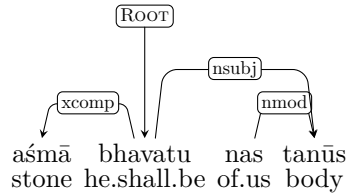
```
                                                ┌ROOT┐
              ┌──────obj───────┐                │
              │       ┌─xcomp─┐ │                │
              ↓       ↓       ↓ ↓
         takmānam  adharāñcam  parāsuva
           fever    downward (adj.)  push!
```
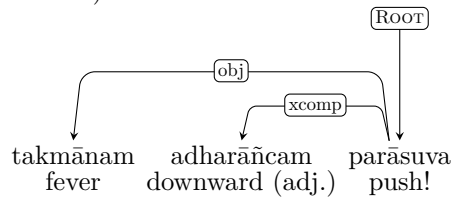
'Push the fever downwards!' (AVŚ 5.22.3cd)

xcomp is also used with *sam-pad-* 'make up, sum up to, turn into', as in:

tās   ekādaśa   sampadyante
they   eleven   they.sum.up.to

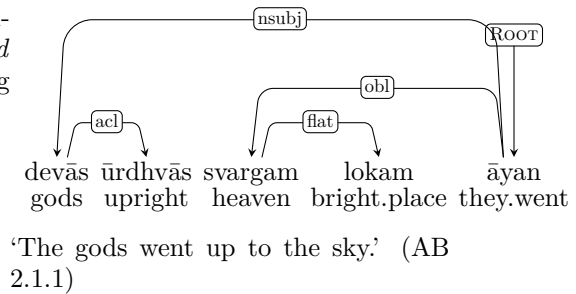'They (thus) make up eleven.' (AB 2.2.33)
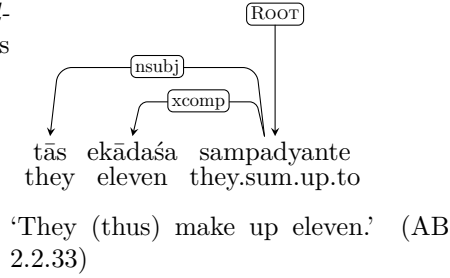
In the following two examples *ūrdhva-* 'upright, erect' is a secondary predicate to verb forms belonging to the same root *sthā-* which are however set apart by their verbal aspect, thus xcomp (as a resultative) with the aorist *asthāt*,

ūrdhvas   agnis   su-   manās   prātar   asthāt
upright   Agni   good-   thinking   early   he.has.stood.up

'(Inducing) good thoughts Agni has just arisen early in the morning (to stand) upright.' (RV 5.1.2b)
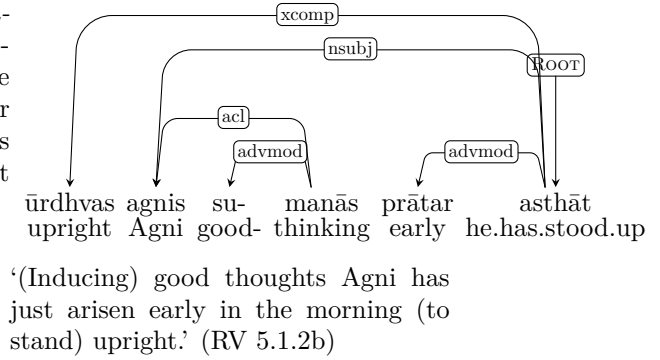
but as a depictive with the present tense *tiṣṭhasi*, virtually acl, which is however connected as advcl to the primary predicate because the head is not overtly expressed:

uṣas . . .   ūrdhvā   tiṣṭhasi   amṛtasya   ketus
Uṣas . . .   upright you.stand of.immortality beacon

'Uṣas, upright you stand as the beacon of immortality.' (RV 3.61.3ab)
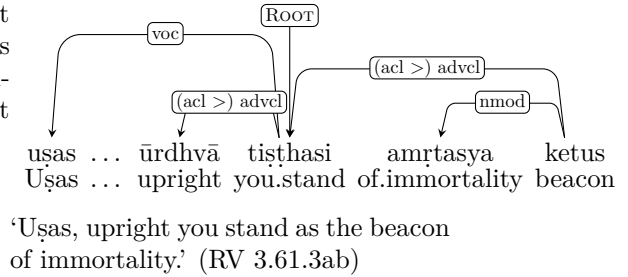
Sometimes *ūrdhva-* seems to be semantically equivalent to the preverb *ud* or the adverb *ūrdhvam*, though being clearly participant-oriented:

devās   ūrdhvās   svargam   lokam   āyan
gods   upright   heaven   bright.place   they.went

'The gods went up to the sky.' (AB 2.1.1)

2.29 Subject

Annotated as `nsubj`, when the subject is a single word, but as `csubj`, when it consists of a clause, as in this example:

priyas	agnāu	bhavāti	yas	indrāya	dadāśat
dear	to.agni	he.will.become	who	to.indra	he.will.honor
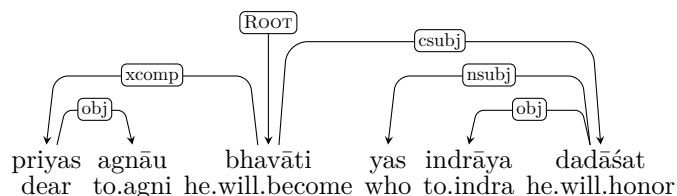
"He will become dear to Agni - the one who will do ritual service to Indra."   (RV 5.37.5cd; Jamison and Brereton (2014))

See also 2.26.

2.30 Transitive constructions

Transitive constructions consist of a two-place predicate (Bickel, 2011) that defines two arguments: an agent-like argument (A), which in a canonical Vedic construction takes the nominative case and is labeled `nsubj`, and a second argument, P (labeled `obj`), which is not agent-like and often takes the accusative case, but other cases occur as well. Importantly, we acknowledge that the exact number of arguments of many Vedic predicates has not yet been established and leave it, for the time being, to the annotator to decide.

The second, dative argument of the two-place verb *krudh-* 'be angry at' is assigned the label `obj`, see (Delbrück, 1888, 140–145).

sa	śāryātebhyas	cukrodha
he	Śāryātas	was.angry
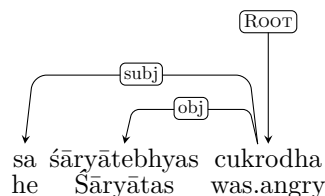
'he was angry at the Śāryātas' (ŚB(M) 4.1.5.3)

With the verb *cit-* 'be aware of, perceive' the second argument can be expressed with the accusative case or with the genitive case as in:

somas	jaitrasya	cetati
Soma	victory	perceives
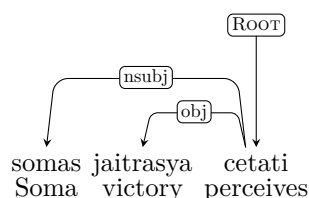
'Soma is aware of what leads to victory.' (RV 9.106.2c)

For a second case see RV 7.46.2ab, here Sec. 2.15.4, p. 26.

With the verb *kṣit-* 'dwell, reside, abide' a second argument is often expressed with a locative, cf.:

```
                    ROOT
              obj         vocative
    ...   tamasi    kṣeṣi    agne
    ...  darkness you.dwell  Agni
```

'Yet you dwell in darkness, Agni.' (RV 10.51.5b, Jamison and Brereton (2014))
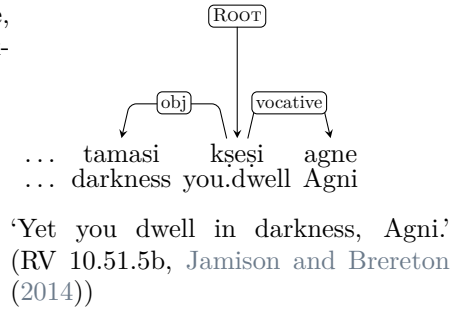
The second argument of the verb *bhī-* 'fear so. or sth., be scared of' is regularly expressed with the ablative case:

```
 ROOT                  obj
            nsubj
                det
  bhayante   viśvā   bhuvanā   marudbhyas
 they.fear.   all  living.beings  Maruts
```

'All living beings fear the Maruts.' (RV 1.85.8c)
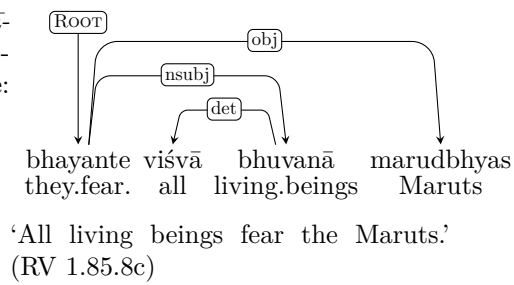
With adjectives as nominal part of a predicate (e.g. *priya* 'dear'), the second argument is linked to the adjective with `obj`:

```
                      ROOT
           xcomp
      obj
  priyas  agnāu    bhavāti
   dear  to.agni he.will.become
```

"he will become dear to Agni" (RV 5.37.5c; Jamison and Brereton (2014))
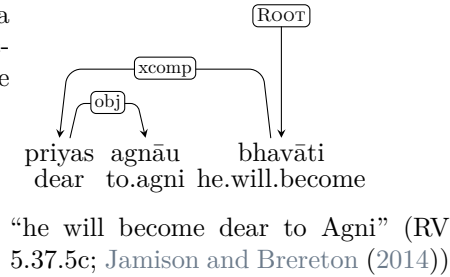
2.31 Vocative

Following UD we connect vocatives to the main verb of the host sentence with `vocative`, though, from a Vedistic point of view, vocatives rather need to be adressed as sentences on their own. When multiple vocatives are present in one sentence, they are singly linked to the verb if they have different referents or if, with the same referent, each of them constitutes an individual vocative phrase marked by an own accent. Of course the latter only applies to accented texts. For vocative phrases with the same referent, we follow the usual annotation wherever a dependency is tangible or plausible. Cf. for further details (Delbrück, 1888, 33ff., 106).

Here some examples (with the vocatives accented as in the texts):

Two vocatives, two referents with, consequently, a verb in dual form:

índra yā́tam namobhis agne arvā́k
Indra drive.yo.two reverence Agni hither

'Indra and Agni, do drive hither (led) by our reverences.' (RV 6.60.3b)
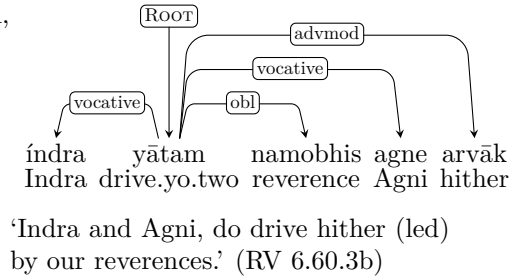
Two vocatives, one plural referent – the two vocatives bear each an accent and are thus to be treated as separated:

hayé náras márutas mr̥datā́ nas
PTCL men Maruts have.mercy to.us

'Oy! Men, Maruts, be merciful to us!' (RV 5.57.8a)
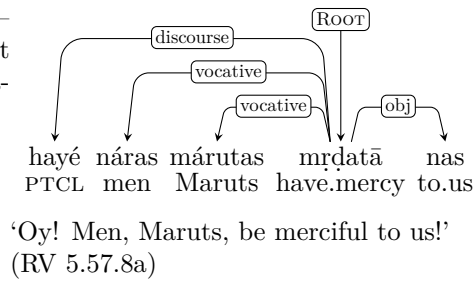
Two vocatives, one adjectival modifying the other, possibly a proper name, who has a further nominal dependent:

pra te babhrū́ vicakṣaṇa śáṃsāmi goṣaṇas napāt
forth of.yours brown farsighted praise of.Goṣaṇa child

'I offer my praise to the two bay-brown (horses) of yours, you farsighted son of Goṣaṇ/(of the winner of cows).' (RV 4.32.22ab)
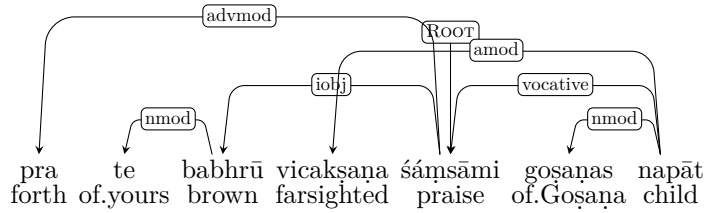
See also Sec. 2.25.

Noteworthy is also the embedding of similes in the vocative phrase, as in:

áśve ná citre aruṣi
mare like shiny ruddy

'o you red lady (Dawn) who are shiny like a mare' (RV 1.30.21c; annotation and translation following (Delbrück, 1888, 106))
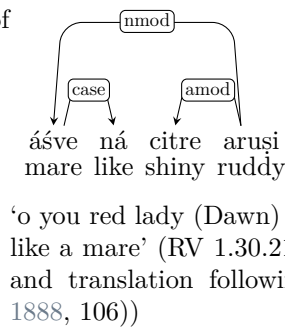
For a further complex vocative phrase see RV 10.4.4ab, on p. 25, Sec. 2.15.2 .

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