Second Position in the *Ṛgveda*

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1 The *Ṛgveda*

The earliest surviving text in Sanskrit, the oldest surviving Indo-Aryan language. Collection of c. 1000 'hymns', metrical texts with ritual function, composed 1500–1200 B.C. Ṛgvedic syntax: free word order, based on Information Structure (Viti, 2010); discontinuous constituents.

1.1 Second Position

Wackernagel's Law (Wackernagel, 1892): unaccented elements occur in second position in the clause. This is an over-simplification. Ex. (1) fits the pattern, but exx. (2, 3) do not.

(1) mó   sú   nah soma   mṛtyáve párā dāḥ
     not=and indeed us   soma.V death.D.S away give

     'And do not hand us over to death, Soma.' (10.59.4a)

(2) utá vā yó   no marcáyād   ánāgasaḥ
     also or who us would_harm   innocent

     'or also who would harm us innocent'. (2.23.7a)

(3) divyā́ ā́po   abhí yád   enam ā́yan
     divine waters to   when him   came

     'when the divine waters came upon him' (7.103.2a)

Not all enclitics are unaccented, and not all unaccented words are enclitic. Several enclitics are written with accent, e.g. *hí*, *sú*, *nú*. Finite verbs in main clauses are unaccented but not syntactically enclitic.

1.2 The Initial String

Previous approaches to RV word order and the initial string: the 'Phonological Template' approach (e.g. Hock, 1982, 1989, 1996, 1997; Schäufele, 1996). A movement-based (GB) approach by Mark Hale (e.g. 1987, 1996, 2007). Hock's 'Phonological Template' is based on the observation that descriptively the initial string of a RV clause appears to consist of a series of optional elements, a kind of template.

(4) (Conj/*Conj*) (XP) (XP) (Preverb) (Dem./Rel. Pronouns) (*Particles*) (*Pronouns*)

2 Clitic Sequences in LFG

Bögel et al. (2010) – Serbian/Croatian/Bosnian:

(5) *taj joj ga je   čovek poklonio*
    that her it AUX man   presented

    'that man presented her with it'. (Bögel et al., 2010, ex. 12a, p.112)

(6) C-Structure for ex. 5 (Bögel et al., 2010, ex. 26, p.118)

	LB$_S$	CL CL CL	D	N	V
interface	($_S$	joj ga je	taj	čovek	poklonio
mapping	($_S$		taj joj ga je	čovek	poklonio

(7) *taj   čovek joj ga je   poklonio*
    that man   her it AUX presented

    'that man presented her with it'. (Bögel et al., 2010, ex.11a, p.112)

(8) C-Structure for ex. 7 (Bögel et al., 2010, ex. 39, p.123)

(9)   a.   Prosodic Second Position:
           S → LB$_S$ (CCL)   RHS$_S$
                    ↑=↓

     b.   Prosodic or Syntactic Second Position:
           S → LB$_S$ [(CCL) RHS$_S$ | Second(RHS$_S$,CCL)]
                    ↑=↓   ↑=↓

     c.   Interface Mapping:
           $[\Sigma^* \; (\bigcup [\; (_S \; CS_i{:}0 \; W \; 0{:}CS_i \;]) \; \Sigma^* \;]^*$
              CS_i

The architecture developed by Bögel et al. (2009, 2010) - question marks:

- Should we project LB$_s$ and RB$_s$ in the c-structure?

- The 'interface mapping rule'? Why should it require a CCL?

- Should the prosodic flip be treated as a last resort (Halpern, 1995)?

- What about more complicated data?

2.1 'Movement'

(10) τό τε βαρβαρικὸν καὶ τὸ Ἑλληνικόν
   tó *te* *barbarikòn* *kaì* *tò* *Hellēnikón*
   ART and barbarian and ART Greek
   'Both the barbarian and the Greek (force).' (X.A. 1.2.1)

(11) *frah* *ina,* *ga-u-hva-selvi*
   asked him PRVB=Q=anything=sees
   'He asked him whether he could see anything.' (Mk. 8:23)

But we can rarely prove syntactic constituency in Ṛgvedic Sanskrit, due to the potential for discontinuity.

(12) *imáṃ* *ca* *no* *gavéṣaṇam* *sātáye* *sīṣadho* *gaṇám*
   this and our cow-seeking for_victory direct company
   'and direct this our cow-seeking company to victory'. (6.56.5ab)

Even so there is evidence that enclitics can interrupt constituents which are syntactically so 'tight' that they would otherwise be analysed as indivisible lexemes. PN *nárāśáṃsa-* (lit. 'praise of men') separated by conjunctions: *nárā ca śáṃsam* (9.86.42d) and *nárā vā śáṃsam* (10.64.3a).

3 Ṛgvedic Clitic Data

3.1 Enclitic Conjunctions

According to Bögel et al. (2010, p.121, on Russian *li*) second position clitic conjunctions such as *ca* in Sanskrit are generated in a CCL, but one which has only the Prosodic Second Position rule, not the Syntactic Second Position option.

(13) *ávobhir* *vā* *mahádbhiḥ* *sá* *prá* *śṛṇve*
   assistance.I.PL or great.I.PL this PRVB is_famed
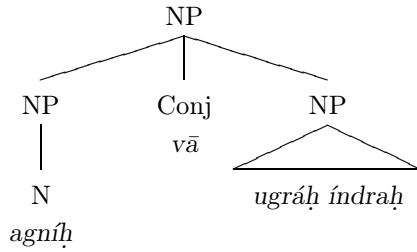   'or through your great assistances this one is famed' (4.41.2d)

(14) C-Structure for RV 4.41.2d (ex. 13) fllg. Bögel et al. (2010)
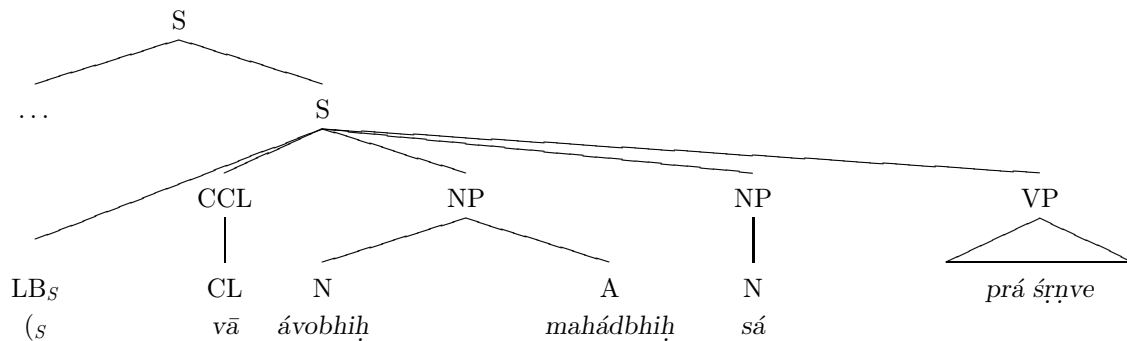
However this is effectively the same position as for a 'normal', non-enclitic conjunction.
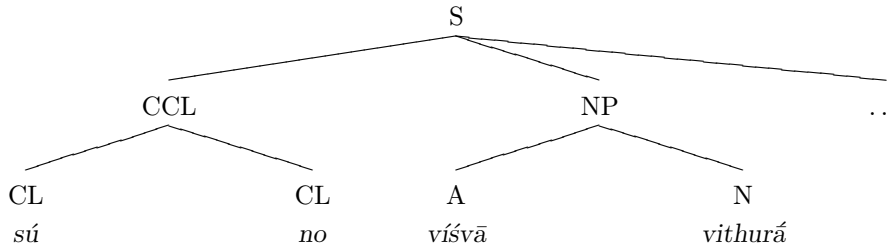
(15)

3
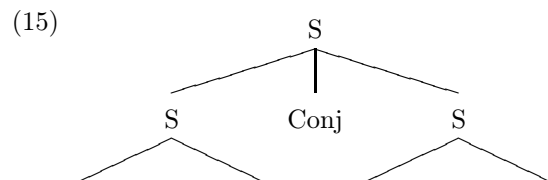
(16) *agnír ugró véndraḥ* 'Agni or fierce Indra'

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                        NP
          ┌──────────────┼──────────────┐
         NP            Conj             NP
          │             vā         ┌─────┴─────┐
          N                      ugráḥ índraḥ
        agníḥ
```

An exception (cf. Hale, 2007, p.205–207):

(17) | *sahásradhāro* | *asadan* | *ny* | *àsme* | *mātúr* | *upásthe* | *vána* | *ǻ* | *ca* | *sómaḥ* |
|---|---|---|---|---|---|---|---|---|---|
| thousand-flow | sat | down | us.L | mother.G.S | lap.L.S | wood.L.S | in | and | Soma |

'Thousand-flowing Soma sat down in us, in the lap of the mother and in the wood.' (9.89.1cd)

3.2 Clitics in the CCL

In some contexts a CCL *is* justified. This is most clear, as in SCB, where more than one clitic of different lexical categories appear together in a particular position in the clause which cannot be justified on the basis of their lexical categorization.

(18) | *vidmǻ* | *hí* | *tvā* | *vásupatiṃ* | *vásūnām* |
|---|---|---|---|---|
| know.1PL | for | you | wealth_lord | wealth.G.PL |

'For we know that you are the lord of all wealth.' (3.36.9b)

(19) | *víśvā* | *sú* | *no* | *vithurǻ* | *pibdaná* | *vaso* | *'mitrǻn* | *suṣáhān* | *kṛdhi* |
|---|---|---|---|---|---|---|---|---|
| all | indeed | us.D | unstable | firm | good.V | enemies | easy_to_conquer | make.IMP |

'Indeed, make everything which is unstable firm for us, (and make) our enemies easy to conquer.' (6.46.6cd)

(20) C-Structure for ex. (19)

```
                                    S
          ┌─────────────────────────┼──────────────────────┐
         CCL                       NP                      . . .
     ┌────┴────┐              ┌─────┴─────┐
    CL        CL             A           N
    sú        no           víśvā      vithurǻ
```

Sometimes a clitic pronoun or sentence particle (but not conjunction) appears after the first *constituent*; as in SCB the CCL can be generated in second *syntactic* position, and the clitics do not 'move'.

(21) | *mahé* | *kṣatrǎya* | *śávase* | *hí* | *jajñé* |
|---|---|---|---|---|
| great.D.S | dominion.D.S | might.D.S | for | born.PERF.3SG |

For he is born to great dominion (and) might.' (7.28.3c)

3.3 Clitics later than second position

(22) | *divyǻ* | *ǻpo* | *abhí* | *yád* | *enam* | *ǻyan* |
|---|---|---|---|---|---|
| divine | waters | to | when | him | came |

'when the divine waters came upon him' (7.103.2a)

3.3.1 Left-dislocated topics

(23) brahmā́   kó   <u>vah</u>   saparyati
     priest.N.S. who you(pl) honour..3SG

     'which priest honours you?' (8.7.20c)

(24) C-Structure for RV 8.7.20c (ex. 23)

```
                        E
            ┌───────────┴───────────┐
           NP                       S
            │              ┌─────────┼─────────┐
            N             NP        CCL        VP
         brahmā́           │          │          │
                          N         CL         V
                          kó        vah      saparyati
```
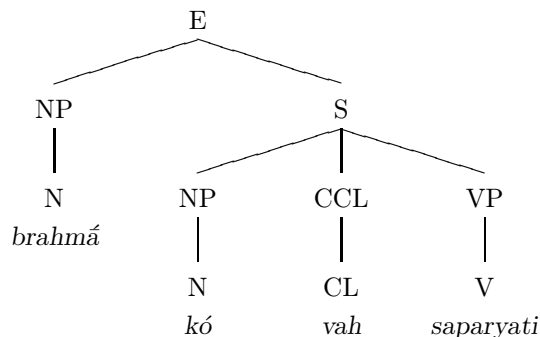
3.3.2 Relative/Demonstrative Pronouns

Sandhi (saṃdhi): external vs. internal.

(25) nákiḥ   <u>só</u>   asty   áraṇo, jahúr   hí   tám
     no-one this   is   enemy leave.PF.3PL for him

     'This one is no enemy, for they left him' (2.24.7d)

(26) níṣ <u>táj</u> jabhāra   camasáṃ ná   vṛkṣā́d   bŕ̥haspátir viravéṇā   vikŕ̥tya
     out that   bring.PF.3SG ladle   like wood.AB.S Bṛhaspati   roar.I.S   having_opened

     'Bṛhaspati brought that out like a ladle from wood, having opened (the mountain) with a roar.'
     (10.68.8cd)

Evidence for relative pronouns as enclitics from other Indo-European languages: identical position in Old Irish (Watkins, 1963, p.29); the definite adjective declension in Balto-Slavonic; ezafe in Iranian languages; clitic positioning of relatives in Ancient Greek (Fraser, 2001, p.141).

3.3.3 Preverbs

Directional adverbs - in initial string (often first) or preceding verb. Former = topicalized (40–60%)? Or topicalizing verb? There are c. 200 clauses with yám (a.s.m. rel. pron.) where the verb has no preverb - the verb precedes in 3.5% of them; there are c. 70 clauses with a preverb, the preverb precedes in 28.3% of them.

(27) prá yó   vām   mitrāvaruṇā- ajiró dūtó   ádravat
     forth who you.DU M-V   swift messenger runs

   'which swift messenger runs forth to you two, Mitra-Varuṇa' (8.101.3ab)

(28) índro vidvā́m̐ ánu   hí   tvā cacákṣa
     Indra wise   PRVB for you look

     'For wise Indra looks at you' (5.2.8c)

In the following example, we appear to have two distinct topicalized phrases *preceding* the preverb, which itself is followed by the CCL.

(29)   *agnír máhyam prá íd   u   vocan manīṣā́m*
      Agni me.D.S. PRVB PTCL also spoke intent

      'Agni has also revealed to me his intention' (4.5.3d)

Preverbs are clearly not enclitic, but are often *proclitics*. If we assume that the CLL could host not just enclitics, but also proclitics, then both the position of the preverbs and the late position of the 'second-position' clitics can be easily explained.

(30) C-Structure for RV 7.103.2a (ex. 3=22)
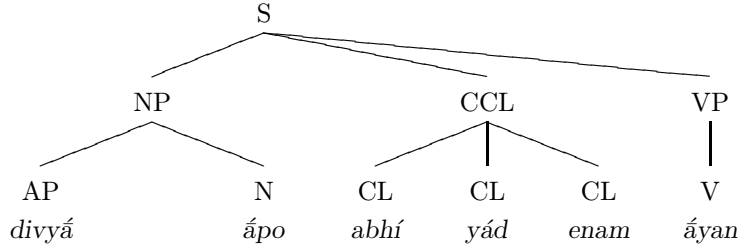
As proclitics, there is no restriction against preverbs occurring in clause-initial position (cf. ex. 27): therefore it is possible for the elements of a CCL to remain in first position in a clause if the first element of the CCL is a proclitic.

3.4   Combinations

The following shows both an enclitic conjunction, generated in Conj, and an enclitic pronoun, generated in the CCL, which both undergo phonological movement to within the first constituent of the clause.

(31) *kéna*   <u>*vā*</u> <u>*te*</u> *mánasā*   *dāśema*
      what.I.S.N. or you attitude.I.S. worship.PRS.OPT.1PL

      'or with what attitude should we worship you?' (1.76.1d)

(32) C-Structure for RV 1.76.1d (ex. 31)
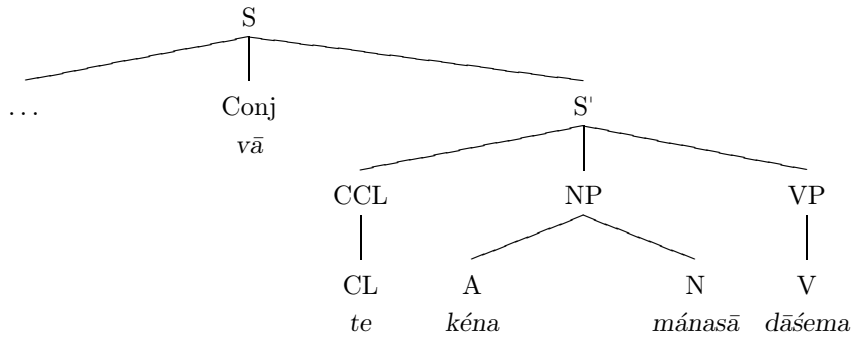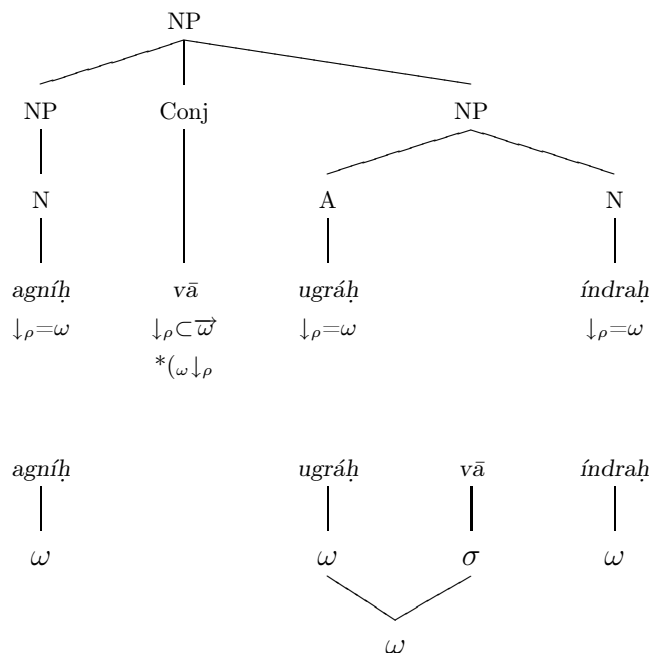

3.5   Summary of RV clitics

- Not all clitics are generated in the CCL
- Clitic conjunctions *always* 'move', CCL clitics only when necessary.
- Preverbs and non-initial demonstrative/relative pronouns can appear within the CCL.
- A proclitic at start of a CCL removes need for 'movement'.
- 'Movement' may occur despite discontinuity of constituents.

4 An OT analysis of 'movement'

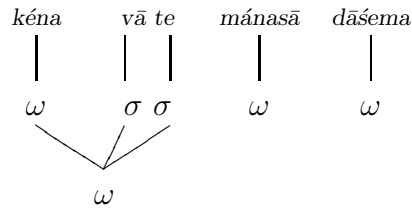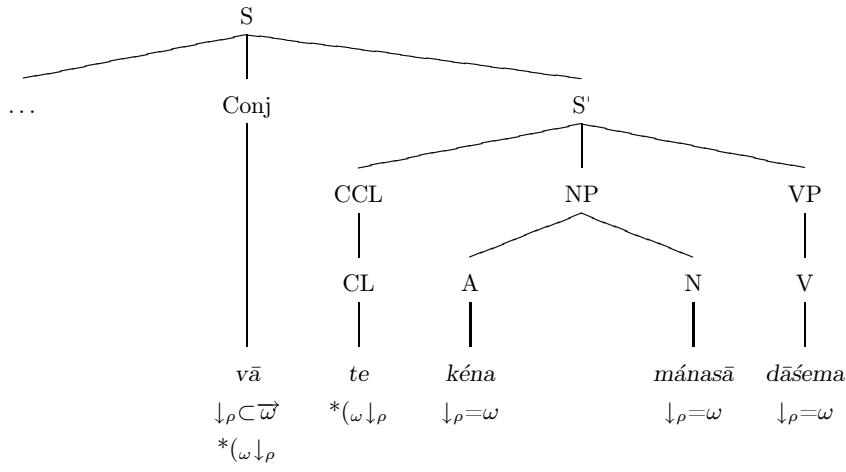(33) Correspondence relations in the projection architecture (fragment)

$$\bullet \xrightarrow{\quad \rho \quad} \bullet \xrightarrow{\quad \phi \quad} \bullet$$
$$\text{P-structure} \qquad \text{C-structure} \qquad \text{F-structure}$$
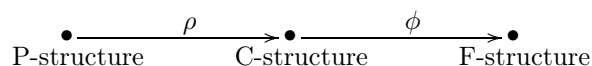
(34) *agnírugróvéndraḥ* (ex. 16)

```
                        NP
           ┌─────────────┼──────────────────┐
          NP           Conj                 NP
           │             │            ┌──────┴──────┐
           N             │            A             N
           │             │            │             │
         agníḥ          vā          ugráḥ         índraḥ
        ↓ρ=ω          ↓ρ⊂ω⃗         ↓ρ=ω          ↓ρ=ω
                      *(ω↓ρ


         agníḥ                  ugráḥ        vā        índraḥ
           │                      │           │          │
           ω                      ω           σ          ω
                                   └─────┬─────┘
                                         ω
```

agníḥ ugráḥ vā índraḥ	F-Al	P-Al	ω-Al	Economy	S-ord.
☞ a. [NP [NP [N *a.*]] [CNJ *vā*] [NP [A *u.*] [N *í.*]]]				6	*
b. [NP [NP [N *a.*] [A *u.*]] [CNJ *vā*] [NP [N *í.*]]]		*!		6	

Constraints:

- F-Al: the c-structure is coherent with a possible/given f-structure.

- P-Al: the c-structure is coherent with a possible/given p-structure.

- ω-Al: preserve the order and integrity of phonological words.

- S-ord.: preserve the order of lexical items as given in the p-string.

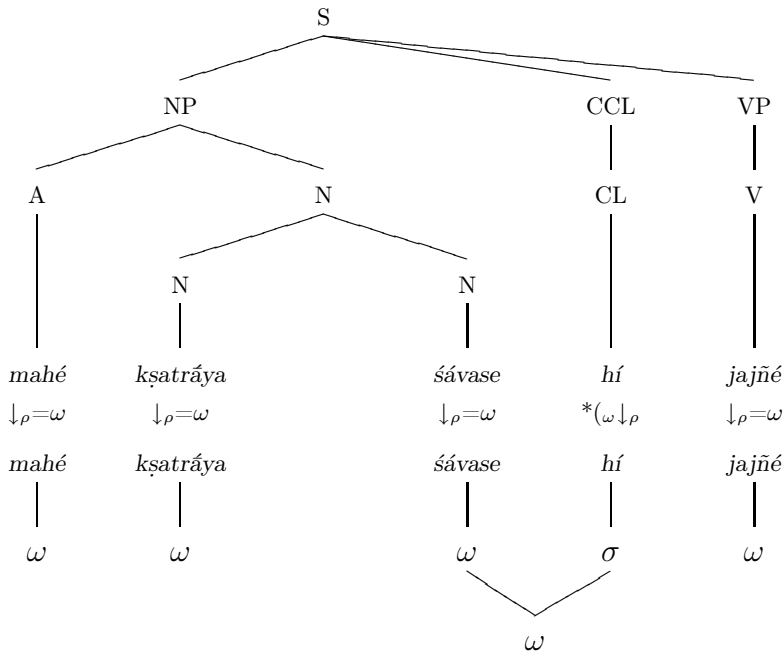- Economy: Economical structure is preferred (every XP and X^0 is penalized).

The constraint system is set up to require coherence between the c-structure and f- and p-structure, but not requiring preservation of the order of lexical items (the string) *only* in the case of clitics and only where necessary to produce valid structures.
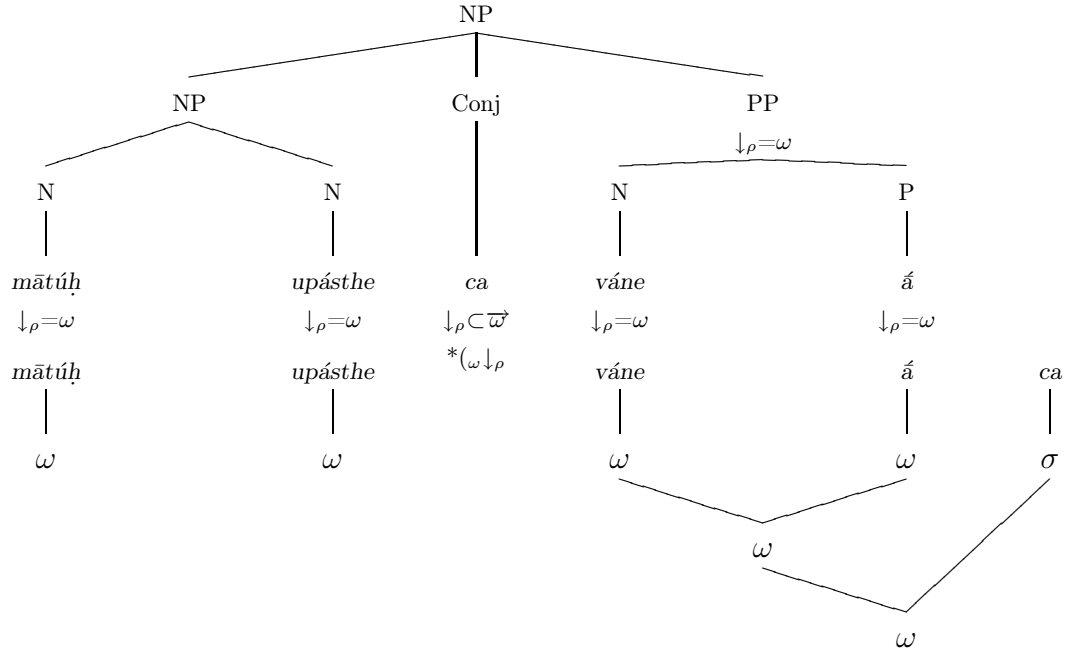
(35) *kénavātemánasādāśema* (ex. 31)

S
... — Conj — S'

Conj: *vā*
$\downarrow_\rho \subset \overrightarrow{\omega}$
$*(_\omega \downarrow_\rho$

S' → CCL, NP, VP

CCL → CL → *te* $*(_\omega \downarrow_\rho$

NP → A → *kéna* $\downarrow_\rho = \omega$; N → *mánasā* $\downarrow_\rho = \omega$

VP → V → *dāśema* $\downarrow_\rho = \omega$

kéna ω | *vā te* $\sigma\ \sigma$ → ω | *mánasā* ω | *dāśema* ω

kéna vā te mánasā	F-Al	P-Al	ω-Al	Economy	S-ord.
☞ a. ...[CNJ *vā*] [S [CCL *te*] [NP *k. m.*]...]				7	**
b. ...[CNJ *vā*] [S [NP *k.*] [CCL *te*] [NP *m.*]...]				8!	*
c. ...[CNJ *vā*] [S [NP *k. m.*] [CCL *te*]...]			*!	7	**

(36) *mahékṣatrāyaśávasehíjajñe* (ex. 21)

S
NP — CCL — VP

NP → A — N

A → *mahé* $\downarrow_\rho = \omega$

N → N → *kṣatrāya* $\downarrow_\rho = \omega$; N → *śávase* $\downarrow_\rho = \omega$

CCL → CL → *hí* $*(_\omega \downarrow_\rho$

VP → V → *jajñé* $\downarrow_\rho = \omega$

mahé ω | *kṣatrāya* ω | *śávase* ω + *hí* σ → ω | *jajñé* ω

mahé kṣatrāya śávase hí jajñe	F-Al	P-Al	ω-Al	Economy	S-ord.
☞ a. [S [NP *m. k. ś.*] [CCL *hí*] [VP *jajñe*]]				9	
b. [S [CCL *hí*] [NP *m. k. ś.*] [VP *jajñe*]]			***!	9	***
c. [S [NP *m. k.*] [CCL *hí*] [NP *ś.*] [VP *jajñe*]]				10!	*
d. [S [NP *m. k. ś.*] [VP *jajñe*] [CCL *hí*]]		*!	*	9	*

8

(37) *mātúrupásthevána ā́ca* (ex. 17)

$$\text{NP}$$

[Tree diagram]

NP — Conj — PP

Under NP: N, N
Under PP: $\downarrow_\rho = \omega$, N, P

Under the leaves:

N	N	ca	N	P

mātúḥ   *upásthe*   *ca*   *váne*   *ā́*

$\downarrow_\rho = \omega$ $\downarrow_\rho = \omega$ $\downarrow_\rho \subset \overrightarrow{\omega}$ $\downarrow_\rho = \omega$ $\downarrow_\rho = \omega$

                     $*(_\omega \downarrow_\rho$

mātúḥ   *upásthe*   *váne*   *ā́*   *ca*

ω ω ω ω σ

$$\omega$$

$$\omega$$

mātúr upásthe vána ā́ ca	F-Al	P-Al	ω-Al	Economy	S-ord.
☞ a. $[_{NP}\ [_{NP}\ m.\ u.]\ [_{CNJ}\ ca]\ [_{PP}\ [_N\ váne]\ [_P\ ā́]]]$		┊		7	**
b. $[_{NP}\ [_{NP}\ m.\ u.]\ [_{CNJ}\ ca]\ [_{PP}\ [_P\ ā́]\ [_N\ váne]\ ]]$		┊		7	***!
c. $[_{NP}\ [_{PP}\ [_{NP}\ m.\ u.]\ [_P\ ā́]]\ [_{CNJ}\ ca]\ [_{NP}\ [_N\ váne]\ ]]$		┊	*!	7	**

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