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in Honor of

Sasha Lubotsky

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Prosody in Indo-European Corpora

ROSEMARIE LÜHR

1 Introduction

Listeners are predisposed to interpret accents or utterances as being categorically either “normal,” i.e. neutral, or “emphatic” (Ladd and Morton 1997; Erekson 2010). In this decision, a variety of acoustic and pragmatic parameters play a role, including pitch range, voice quality, lexical content, discourse background, the relationship between the speaker and listener, etc. But in the case of written languages, only a few features are suited for detecting the speaker’s or writer’s emotional state, for example written markers for special pitches, emphatic stresses and contours, or expressive lengthening in utterances exhibiting a special pragmatic or paralinguistic function. Those markers provide direct evidence for prosodic structure. Unlike the direct evidence, the indirect evidence is elusive (Hale 1990). However, in the case of contrast the context supplies indirect evidence.

One old Indo-European language that has written markers for emphatic prosody and hence direct evidence for emphasis is Vedic. It has expressive lengthening, emphatic stress, and emphatic pluti. Therefore, this language is at the center of the following investigation. But not every secondary lengthening is of emphatic origin. As Lubotsky (1993; cf. 1983) has shown, in certain accent patterns, pluti is found with neutral prosody. This case will be treated first, because it provides information about emphatic prosodic structures. Next we will discuss utterances with markers for emphatic prosody. Finally the indirect evidence for emphatic prosody in contrastive constructions will be discussed. For this topic, we will also adduce data from Hittite and Ancient Greek.

2 Direct evidence for prosody

2.1 Nasalization of final ā in the Rgveda

In his seminal article on nasalization of final ā in the Rgveda, Lubotsky (1993) specifies the conditions under which this vowel is nasalized.

\[
\begin{align*}
-ā & > -āṃ/\_\{\acute{e}, \acute{o}\} \\
-ā & > -āṃ/\_r
\end{align*}
\]
The reciters had difficulty with Rgvedic pāda-final accented -ā in hiatus. Realization of two tonal movements on one syllable led to protraction of this syllable and to its nasalized pronunciation (Lubotsky 1993:206).1

Lubotsky sees a parallel to this phonetic phenomenon in Vedic pluti, a trimoraic rising contour usually provided with an udātta for a rising tone (Strunk 1983); cf. the yes-no question in (2):

(2) a. RV 10.129.5d
   adhāh svīd āśād upāri svīd āśāt “Was it above? Was it below?” (Etter 1985:49, 56, 120)
   b. AV 9.6.18
   idāṁ bhāyāḥ idāñm ēti “Is this larger? Or this?”

Let us now consider the functional aspect of pluti.

2.2 Lengthening with and without nasalization and rising contour

2.1.1 Vocatives

What distinguishes the vocative from the nominative is always a special exclamatory or appellative intonation, as well as a pause preceding any following sentence. As the examples discussed by Strunk (1983) and results from experiments in modern languages show, both situational and social factors govern the choice of a particular vocative intonation. Intonation may reflect the speaker’s attitude to the hearer as in (3). Therefore, it can be regarded as representative of emphatic prosody.

(3) ŚB 14.6.1.3 etāḥ saumyódaja sāmaśravāḥ ēti
   “Lead these (cows) to my house, dear Sāmaśravas”
   “Treib nur diese (Kühe) hinaus, lieber Sāmaśravas” (Strunk 1983:26)

2.2.2 Polar questions

While in many languages a falling pitch movement is associated with statements, a rising pitch turns a statement into a polar or yes–no question. According to the World Atlas of Language Structures (WALS), most languages employ rising intonation at the end of such questions.² Formally, polar questions present an exclusive disjunction, a pair of alternatives of which only one is acceptable:

(4) He’s going ↗home?

But there also exists another type of answer to a polar question. The answer may consist of a so-called verum focus. In assertions, this emphasizes the propositional truth. The emphasis lies on what is expressed by the verb. The verb must have been mentioned previously:

---


2Appleton (2012:33) considers pluti as a phonological autosegment (perhaps a phonological feature like [tense]) associated with the C position, and so it could be seen as a type of final complementizer.
Prosody in Indo-European Corpora

(5) Speaker A: *Karl hat bestimmt gelogen.* Speaker B: *Karl HAT gelogen.*
  Karl has for-sure lied. Karl HAS lied.
  “Karl surely lied.” “Karl DID lie.” (Höhle 1992)

The same kind of answer appears with Vedic polar questions:

(6) ŚB II.6.1.3
  sá hovācāsṭihā práyaścittızr ity astīti?
  “He said, ‘Is there atonement for this?’ ‘Yes, there is’” (Strunk 1983:39)

And with incomplete pluti writing:

(7) ŚBM 8.3.20
  aṅān aṅṅīd ity aṅan . . .
  “Has he gone, Agnīdh? ‘Yes, he has . . .’” (Strunk 1983:47)

Romero and Han (2002) describe verum focus as focus on a high degree of certainty, not just on polarity. Thus, since in polar questions special implicatures appear, their pragmatic description varies. To put it simply, polar questions are asked to check whether one should really revise one’s previous state of information with the incoming information. As they exhibit a strong appeal to the hearer for confirmation, they can undoubtedly carry emphasis.

2.2.3 Requests

Especially requests are an appeal to the hearer. Compare (8), again with pluti:

(8) ĀĀ 4.1.1: 145, 15–6
  ehy evā idam madhvā idam madhu imām tīrutasu tām pibā idam madhvā idam madhv iti
  “Come over! This here is mead! This here is mead! Drink this spicy Soma! This here is mead! This here is mead!” (Hoffmann 1967:94 n. 192; Strunk 1983:33ff.)

Alongside two times pluti on the object, the text contains the lengthened particle evā and one imperative with pluti. If Strunk’s translation of evā with ‘doch’ is correct—“Komm doch her!”—the first imperative is not a command in the strict sense, but an encouragement, whereas the pluti-imperative is an offer or invitation. Due to the situation, the hearer already knows the wish of the speaker. The hearer fulfills his desire. Rising intonation on the pluti is therefore the appropriate intonation pattern. As in polar questions, the speaker uses the rising tone to indicate an unfinished and continuative speech act, showing overtones of encouragement and pleading, etc., and hence emphatic features in his utterance.

Cf. further with incomplete pluti:

(9) MS I.4.12: 60, 14–5
  angā no yajñāṃ vyācāksvā iti
  “Explain the sacrifice to us!”
  “Erkläre uns doch das Opfer!” (Strunk 1983:32; Delbrück 1888:44)
2.2.4 Affirmative particles

A fourth type of *pluti* appears with confirmations:

(10) TS 7.1.6
    \textit{tāv abravīd āstu mé ’trāpīty āstu bīṣ īty abrūtām}
    “He (Yama) said to the two (Soma and Indra): ‘Something of that should belong to me!’ ‘It should indeed’, both said.”
    “Er sprach zu den beiden: ‘Mir soll davon auch (etwas) gehören!’ ‘Es soll, fürwahr!’ sprachen die beiden.” (Strunk 1983:30)

In the sense of confirming German *jawohl*, Skt. *bīṣ* can get a rising contour: “Es soll, jawöhl!” It expresses the speaker’s or writer’s feelings about the truth-value of a proposition. Like Latin, Vedic has no single word for *yes*. Its function is taken up by sentence adverbs that are classed as truth-value adverbs (Pinkster 2004). Cf. further *tvī* ‘well’ in (11) with Latin *certe* as emphatic foci (11):

(11) TS 2.4.12.6
    \textit{tāt te prā dāiyāmīti tvī īty abravit}
    “‘I will give you this,’ (said he). ‘Well!’ the other said.” (Delbrück 1888:333; Strunk 1983:33)

In languages like German and English with a nuclear pitch accent, affirmative particles like *yes* bear such an accent. Cf. further with nasalization:

(12) AB 7.22.3
    \textit{tad tad ītiṣm}
    “‘So, just like that’ (he said!)”
    “‘So, (genau) so’ (sagte er!” (Strunk 1983:91)

A ritual spell must have exactly the wording just mentioned.

To sum up so far: Only nasalization of final ∼ā in the Rgveda shows neutral prosody according to Lubotsky’s rule. The other usages of *pluti* are motivated differently. *Pluti* on affirmative particles represents a clear emphatic prosody and *pluti* with vocatives, polar questions, and requests is a device for appealing to the hearer. In the latter instances *pluti* can serve to indicate overtones for attitudinal meanings. This explains why their denotation is always optional. *Pluti* appears on the last syllable of a colon, i.e. a rhythmic unit of one or more words which form a discourse-structuring entity or rather speech act.\(^3\) Here, pre-boundary or domain-final lengthening takes place. This pattern of temporal modification of segments near the end of a prosodic constituent before a prosodic boundary is a universal phenomenon (Blevins 2004; 2006): in an active process, speakers lengthen vowels at the right edge of a prosodic boundary in order to cue juncture location. This cue facilitates speech comprehension and is thus a condition of spoken language (Byrd 2000; Krivokapić 2007; Cho 2015).\(^4\)

\(^3\)Overlong syllables are avoided in Rgvedic cadences (Hoenigswald 1989; Kobayashi 2004).

2.3 Lengthening of vowels in Rgvedic auslaut

It is generally accepted that in the Rgveda long vowels mostly appear in places where a long vowel is expected metrically, and short a i u in the 6th syllable of octosyllabic verses and in the 8th and 10th syllables in verses of eleven and twelve syllables if the following word does not start with a vowel or with more than one consonant (cf. Benfey 1875:46–80 for counterexamples). However, a prosodic feature again representing an appeal strategy is claimed by Krisch (2009), who extends the following rule of Wackernagel by the functional aspect of intensification (Wackernagel 1896:310): “Auslauting vowels normally remain unchanged before anlauting consonants. But there is ample lengthening of -a, -i, -u in the metrical Samhitās and the liturgical sayings . . . Lengthening only appears inside the sentence and verse before a single consonantal anlaut.” Ibid. 312: “One has to assume that in living discourse of the oldest times most of the final sounds of a word which are short vowels could be lengthened under [these, Krisch] conditions.” According to Krisch, optional lengthening is used in the Rgveda “to underline a summons to a partner who is directly (or, in case of a god, virtually) present in communication” (2009:264). Indeed, most forms are second-person imperatives.

We may compare long-vocalic imperatives, which, as Krisch (ibid. 265) shows, often turn up in a series of imperatives. The long vowel is on the “prominent” form as in (13) and (14).

(13) RV 3.62.8
	tāṁ jusasva gīram māma vājyāntīṁ avā dhīyam |
“And be fond (jusasva) of this praise of mine, support (avā) the song which is longing for a reward!”

(14) RV 1.1.9
	sā nah pitéva sūnāvē, įjne sūpāyanō bhava | sācasvā nah svastāye ||
“You, o Agni, be (bhava) easily accessible to us like a father to the son! Escort (sacavā) us to benefit!”

Another view could be that the lengthened vowel -ā in the Vedic imperative is an extension of a length alternation, caused by Brugmann’s law for example. Hale (1990; 1999) would consider such a distribution as a type of morphological analogy for metrical convenience, restricted to the poetic grammar. But since the imperative of the thematic stems continues the Proto-Indo-European ending *-e, it is questionable if such an analogy would work here.

However, there are a lot of other words ending in a lengthened vowel in the Samhitā (but in a short vowel in the Padapātha); cf. (15):

(15) RV 1.120.8b akūtrā no, RV 1.2.2b āchā jāritāvah

RV 1.163.05c átrā te, RV 1.055.5c ádha canā

As regards the type of consonant after a lengthened vowel, it is agreed that lengthening may occur when the vowel is followed by a voiced consonant (Blevins 2006:146f.). In the Samhitā lengthening also appears before voiceless consonants. But if Wackernagel’s assumption that most of the auslauting short vowels could be lengthened in living discourse is
correct, in the case of requests an original neutral intonation must have been reinterpreted as an expressive one, since vowels can commonly undergo expressive lengthening.\textsuperscript{5,6}

2.4 Stress on verbs

2.4.1 Stressed verb . . . unstressed verb

Since affirmation by particles, requests, vocatives, and polar questions concern speech acts with appeal character, the following rising intonation may also be included, such as stress on verbs. As recently shown by Klein (1992) and Lühr (2008), all relevant Old Indic examples are coordinating structures. In discussing Oldenberg’s material Klein uses intonation to explain the verb stress: stress on the verb of the first coordinated clause is a signal to expect a second clause. This stress is again an \textit{ud¯atta}, the sign for rising stress.

It is compulsory in bipartite phrases of the type “either X or Y,” “X as well as Y,” “the one X the other Y,” and with antonyms; cf. (16) with \textit{vā} . . . \textit{vā} “either . . . or”:

(16) RV 7.104.9

\begin{tabular}{l}
\textit{abhaye} & \textit{vā} & \textit{tān} & \textit{pradādātu} & \textit{soma} \\
\text{snake(M):DAT.SG} & \text{either the:ACC.M.PL} & \text{surrender:IMP.PRES.ACT3SG} & \text{Soma(M):NOM.SG} \\
\end{tabular}

\begin{tabular}{l}
\textit{ā} & \textit{vā} & \textit{dadbātu} & \textit{nirṛter} & \textit{upāṣthe} \\
\text{PFX or} & \text{bring:IMP.PRES.ACT3SG} & \text{destruction(f):GEN.SG} & \text{womb(M):LOC.SG} \\
\end{tabular}

“Those who conscientiously twist simple speech or want only to make the good bad, those Soma either shall surrender to the snake or bring to the womb of destruction.”

With \textit{ca} . . . \textit{ca} “X as well as Y”:

(17) RV 1.120.9

\begin{tabular}{l}
\textit{rāyē} & \textit{ca} & \textit{no} & \textit{mimītām} & \textit{vājavatya}\textit{i}/ \\
\text{wealth(M):DAT.SG} & \text{and us:DAT.PL} & \text{help:IMP.PRS.ACT2DU} & \text{bringing.reward:DAT.SG} \\
\textit{isē} & \textit{ca} & \textit{no} & \textit{mimītām} & \textit{dhenumāt\textit{yai}} \\
\text{food(f):DAT.SG} & \text{and us:DAT.PL} & \text{help:IMP.PRS.ACT2DU} & \text{rich.of.milk:DAT.SG} \\
\end{tabular}

“Entitle us to wealth, bringing reward, and entitle us to food and cows, full of milk!”

(Oldenberg 1906:716)

\textsuperscript{5}Moulton (1962) refers to the “short” \textit{a} of Dutch \textit{dag} ‘day’ that is very frequently long when this word is used in the meanings ‘hello’ and ‘goodbye’.

\textsuperscript{6}Instead of the suggestions given above, Lubotsky (p.c.) considers the following development: On the assumption “that final lengthening was . . . of Proto-Indo-Iranian date, then, Sanskrit also had a stage when all final vowels were long and which later were all shortened, except for some fixed formulas that are preserved in the RV. In other words, there was no metrical lengthening involved, but rather preservation of the original length. This scenario is concordant with the fact that many imperatives have a final long vowel, because we usually find it in the formulas with an aberrant word order IMPF + OBJECT (type \textit{srudh´¯ı hávam}). One of the difficulties with this new scenario is, however, that the long final vowels in the nom.sg. of \textit{r-} and \textit{n}-stems (the type \textit{piṭā, rījā}) were not shortened (\textit{a}-stems still had -\textit{aH}, so they are no problem). This can be solved by assuming older forms in a resonant, like in Greek (*\textit{piṭar}, *\textit{rj\textit{a}n}), but then the loss of this final resonant must have happened independently in Iranian and Indo-Aryan.”

\textsuperscript{7}Klein (1992:38, 89, 91) assumes “two fundamentally different phonetic bases for verbal accentuation in the Rigveda: salience/emphasis and heightened intonation”
And with anyā- . . . anyā- ‘the one . . . the other’, the verb is always stressed when both this clause and the following clause form a pāda (Oldenberg 1906:724). In (18) anyād . . . anyād are contrastive or Intonational Topics:

(18) RV 1.123.7

\[
\begin{array}{llll}
\text{ápānỳád} & \text{éty} & \text{abby} & \text{ànyád} \\
\text{away:} & \text{PRX-ONE:} & \text{NOM. N.SG go:} & \text{PRS. IND. ACT}3\text{SG to:} \text{PRX other: NOM. N.SG} \\
\text{eti} & \text{vīṣurūpe} & \text{áhaní} \\
\text{come:} & \text{PRS. IND. ACT}3\text{SG in_diff shapes:} & \text{NOM. N.DU day. and. night(n):} & \text{NOM. DU} \\
sám & \text{carete /} & \text{together:} & \text{PRX go: PRS. IND. MID}3\text{DU} \\
\end{array}
\]

“The one (half of the day) goes, the other comes: both dissimilar halves of the day meet.”

The hearer knows that the utterance is about day and night both from the context and from his world knowledge.

Searching for comparable structures in modern languages, where the intonation in the first conjunct is caused by the expectation of a second conjunct, we refer to Lang’s (2004:58) analysis of German bipartite coordinated clausal structures:

(19) Was machen denn deine Eltern?

\[
\begin{array}{llllllll}
\text{Mein Vater} & \text{ist ernsthaft krank,} \\
\text{[ [ [ Mein VAtre } & \text{[ ist ernsthaft KRANK } & \text{IP ] } & \text{F] } & \text{F]} \\
\text{L*H} & \text{L*H} & \text{H} \\
\text{meine Mutter} & \text{geht arbeiten.} \\
\text{[ o [ meine MUtter } & \text{[ geht ARbeiten } & \text{IP ] } & \text{F] } & \text{F]} \\
\text{L*H} & \text{H*L L} \\
\end{array}
\]

“What are your parents doing? – My dad is seriously ill, my mom is going to work.”

(Lang and Umbach 2002:155)

The two essential properties of this construction are:

a. \textit{mein Vater, meine Mutter} are evoked by the previously mentioned \textit{deine Eltern} . . . Prosodically they are contrastive topics, marked by “↑” (“L*H”).

b. Both conjuncts form prosodically symmetrical Intonational Phrases (IPs) with a difference at the end of both conjuncts: the first conjunct has ↑, a rising accent, the second ↓, a falling accent. Thus, the rising accent denotes openness iconically or that the sentence is not yet finished. It is an open proposition.\footnote{Klein (1992:88, 91) interprets the verb stress in Vedic subordinate clauses as a signal that “the accented clause is incomplete.” If this is true, verb emphasis must have started in preposed subordinate clauses, being transferred from there to postposed subordinate clauses (ibid. 91).}
The contour described differs from contours in neutral contexts. Whereas a contour in neutral contexts consists of one (high) accent on the focus exponent, utterances formulated in contrastive contexts are often produced with two very prominent accents, a rising one and a falling one, whereby the pitch remains high between the two accents. This contour is therefore generally called “hat pattern” or “hat-contour” (Braun 2004).

In a similar way, the udāṭta on the clause-final verb ēti “he goes” in the first conjunct of (18) is a rising contour comparable to that (L*H H) in the German example, which was probably accompanied by a rise in volume and/or pitch (“von einer Stimmverstärkung”) (Wackernagel 1896:284; Klein 1992:86).

A contrast can also be expressed by antonyms. In (20) ‘truth’ and ‘untruth’ are contrastive foci:

(20) a. first conjunct . . . vérb↗/ ... préfix verb second conjunct
b. RV I.152.3

\[
\begin{array}{llll}
\text{ṛtām} & \text{piparty} & \text{ānṛtaṇu} & \text{ni} \\
\text{truth(N):ACC.SG} & \text{foster:PRS.IND.ACT3SG} & \text{untruth(N):ACC.SG} & \text{down:PFX}
\end{array}
\]

\[
\begin{array}{l}
tārit \\
\text{press:PRS.IND.ACT.3SG}
\end{array}
\]

“Truth he fosters, untruth he suppresses”

### 2.4.2 Stressed verb . . . stressed verb

There are also instances in which the first conjunct is stressed and in final position. The verb of the second conjunct is stressed as well and is in clause-initial position:

(21) first conjunct . . . vérb↗/ vérb . . . second conjunct

Oldenberg (1906:728; cf. Klein 1992:33ff.) terms the middle of the pāḍa, where both (stressed) verbs clash, the culmination point. But I assume here as well that the udāṭta in conjunct-final position on the verb of the first conjunct is a signal for bipartiteness. Lexical means are lacking:

(22) RV I.135.8

\[
\begin{array}{llllll}
\text{yām} & \text{aśvathám} & \text{upatisthanta} \\
\text{which:ACC.M.SG} & \text{aśvatta-tree(M):ACC.SG} & \text{reach:PRS.IND.MID3PL}
\end{array}
\]

\[
\begin{array}{llllll}
jāyāvo & \text{'smē} & \text{té} & \text{santu} \\
\text{winner(M):NOM.PL} & \text{we:LOC.PL} & \text{those:NOM.M.PL} & \text{bc:IMP.PRS.ACT3PL}
\end{array}
\]

---

9Tichy (2000:43) assumes that clausal structures in Vedic and Proto-Indo-European had a similar intonation to the Modern German type:  
*Hätt' ich's gewusst (↗), hätt' ich's gesagt (↘)* “If I had known it, I would have said it.” We do not gain much, however, from a comparison with Modern German clauses that contain a complex predicate, as Proto-Indo-European surely had no such predicates. The assumption that main-clause verb stress started from cases with contrastive focus on this part of speech (Der eine kommt (↗), der andre geht (↘)) is not very likely either. Expectation of another proposition seems to be a much more plausible starting point.
The hearer knows that the soma sacrifice causes wealth and happiness for human beings. Thus ‘cows’ and ‘grain’ are again Intonational Topics.

2.4.3 Stressed verb . . . gapping

Gapping constructions are also of interest here (Lang 2004; Lang and Umbach 2002:161; Selkirk 1995:355; Hartmann 2000:126); cf.

(23) a. ER trank BIER und WIR tranken WEIN.
    b. MAX wurde KRANK und WIR wurden GESUND.

In these constructions the following principle is at work:

(24) Maximal Contrast Principle
    In a Gapping construction, maximize the number of contrasting remnant-correspondent pairs (Hartmann 2000:165).

This principle only works if two constituents are identical in structure. The result is increasing stress on the remaining contrasting pairs, here the nominal phrases.

In Vedic such constructions are documented, too. With gapping of the second verb the remaining verb is stressed, again signaling expectation of a second conjunct:

(25) ŚB 3.6.2.2

\[
\text{diví} \quad \text{vai} \quad \text{sómah} \quad \text{ásit} \quad \text{átha ihá}
\]

heaven(M):LOC.SG part soma(M):NOM.SG be:IPF.IND.ACT3SG and here
deváh
god(M):NOM.PL

“In heaven there was Soma and here the gods.”

diví and ihá are Intonational Topics and sómah and deváh contrastive foci.¹⁰

2.4.4 Unstressed verb . . . unstressed verb

Finally, there are cases in which the verb in the first conjunct is unstressed if it is identical to the verb of the second conjunct. An example with identical verbs, too, but stress on the verb of the first conjunct was (17). The difference between these two examples is that (17) has the double conjunction ca . . . ca, whereas (26) has no such conjunctions:

¹⁰Cf. also Bodewitz (2001:20) for stress on parenthetical ŚB 10.6.3.2 násti viekkita “there is really no doubt (that this will happen).”
The Maximal Contrast principle may be in effect here, too. Phonological deaccenting could have occurred here to increase stress on the remaining contrasting elements “cows” and “plants, rivers, seas, trees.” However, the two conjuncts are not completely parallel, because the second is longer and contains a tetracolon. It is therefore possible that the poet did not intend contrast but accumulation, so the verbs are unstressed as otherwise in main clauses. However, with (26) we already have an example without special markers for prosody. We now turn to indirect evidence for prosody.

3 Indirect evidence for prosody

3.1 Partial contrastive topics

Whereas in examples like (18) two contrastive topics are to be found, in the case of implicit contrasts there is only one Intonational Topic. The other has to be derived from a specific intonation, again a hat-contour. Büring (1997) speaks of a partial contrastive topic in these cases. Like two contrastive topics, partial topics are semantically and pragmatically elements of alternative sets. Cf. German:

(27) Ein \HAUS haben sie sich noch \KEINS gekauft. Sie wohnen immer noch in diesem grässlichen Plattenbau.

A sentence with a continuous sequence of words does not fit into the context of (27). In order to obtain a certain scope, reading the discontinuous order of the quantifier phrase is obligatory. Such sentences also exist in Vedic. In the following example a vocative separates the quantifier phrase such that a hyperbaton arises. The verb remains unstressed:

(28) ŚB II.1.6.10

ná te amítrah maghavan káścana
not you:DAT.SG enemy(M):NOM.SG Maghavan(M):VOC.SG any:NOM.M.SG
asti
be:PRS.IND.ACT3SG

“You have not a single enemy, Maghavan,” lit. “No enemy (exists) for you, anyone”
The Intonational Topic *amítrah* and the Contrastive Focus exponent *káścana* appear within one clause, but the corresponding phrases need to be separated in order to provide different positions for the accent distribution. Two adjacent sentence accents within a single nominal phrase are not possible (Mehlhorn 2001).

In our corpus we did not find special denotations for stress in such sentences.

### 3.2 Contrastive focus with focus particles

With focus particles too, no markers for emphatic prosody are documented. Focus particles are focus-sensitive operators binding parts of the utterance as their focus exponent.

#### 3.2.1 Unstressed focus particles

An example of an unstressed focus particle is (29):

(29) RV 4.16.6

\[
\text{áśmānam} \quad \text{cid} \quad \text{ye} \quad \text{bibhidúr} \quad \text{vācobbih}
\]

rock(M):ACC.SG even who:NOM.PL cleft:PF.IND.ACT3PL word(N):INSTR.PL

“who with their songs cleft open even the mountain”

*cid* ‘even’ is a scalar focus particle assigning to its domain an extreme position on a scale formed by its contextually relevant alternatives (cf. Krisch 1990:65). These alternatives are contextually given or at least derivable (Steube and Sudhoff 2007; Sudhoff 2010:34).

While the contrastive focus *áśmānam* is not provided with an additional stress marker, in the following example with *cid* connected to a contrastive focus, the negation *ná* is lengthened:

(30) RV 10.34.8c

\[
\text{ugrāśya} \quad \text{cin} \quad \text{manyáve} \quad \text{ná} \quad \text{namante}
\]

mighty:GEN.M.SG even rage(M):DAT.SG not bow:PRS.IND.MID.3PL

“They do not bow even to the rage of the mighty.”

According to Joseph (1991), *ná* is either an instance of metrical lengthening or else represents an inherited long vowel alternant; cf. Latin *né* or Gothic *nē*. But also an emphatic lengthening of the negation could have occurred, as suggested for the lengthened imperative endings in §2.3.

#### 3.2.2 Stressed focus particles

With stressed focus particles, no special accent markers on the contrastive focus appear either:

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*11* A different notion is Bayer’s (2001) “emphatic topicalization.” It is a type of movement to the specifier of a dependent CP found in Bavarian, distinct from wh-movement.
(31) RV 8.6.10

ahám id dhlí pitús pári medhám
i:NOM.SG especially for father(M):GEN.SG PFX wisdom(F):ACC.SG

rtásya jágrábbha
truth(N):GEN.SG have.received:PF.IND.ACTISG

“For I, especially, have received knowledge of the truth from my father”

(32) RV 10.4.4

mūrā amūra nā vayām cikitvo
foolish:NOM.M.PL wise:VOC.M.SG not we:NOM.PL sagacious:VOC.M.SG

mahitvām agne tvām aṅgā vitse
grandeur(N):ACC.SG agni:VOC.SG you:NOM.SG alone understand:PF.IND.MID2SG

“We foolish ones, o wise and sagacious Agni, do not (understand) your grandeur. You alone understand it.”

In German, postposed stressed auch is comparable. Following the contrastive focus auch itself is stressed; cf. the additive focus particle auch in:

(33) auch PETER vs. Peter AUCH

In accordance with the phenomenon, association with focus auch takes the preceding focus exponent in its scope domain.

In connection with focus particles, the udātta on the contrastive foci is apparently strong enough to denote contrasts. Its volume may be reinforced. As with partial contrastive topics in hat-contours, the contrastive meaning of the nominal phrases results only from the context.

4 Hittite and Ancient Greek

4.1 Direct evidence for prosody

Let us now look for corresponding emphatic structures in the oldest Indo-European language, Hittite.

Plene-writing sometimes appears in polar questions. As Hoffner and Melchert (2008:348) point out, this use in writing is likely derived from scribes in Assyria and Babylonia.

(34) KBo 22.1 rev. 30’–t’, CTH 272: A Royal Reprimand of the Dignitaries

nu kiššan AWĀT ABI™ YA arh˘ ¯an ḫar-te-ni-i
“Is this the way you have performed my father’s word?”

And in a New Hittite letter:

(35) KBo 18.22 obv. 6, CTH 209

[IŠTU?/PANI?] ABU-KA-ya GIM-an sør nu me-ma-ah-ḫi-i
“And shall I tell (you) how they were [with(?)] your father?”
Since to date this phenomenon has only been rarely found, Melchert and Hoffner conclude that it did not become a regular scribal method of indicating an interrogative contour. But, similar to the Vedic findings, there may have been a rising contour.

Also in Ancient Greek some direct evidence for emphatic prosody is documented, for example the imperative κλάθι ‘hear!’ (ved. śrūḍhi) or emphatically prominent words as Πόθων (Watkins 1995:461); cf. Vedic śōṁsā ‘recite!’ with affective lengthening of a to o or snīhan-‘snot’ with expressive lengthening denoting disgust (Hoffmann 1976a:552; 1976b:451).

4.2 Indirect evidence for prosody

4.2.1 Contrastive topics

More often contrastive constructions are documented in Hittite. They consist of two conjuncts as in Old Indic. Special prosody markers are not present:

(36) KUB 29.1 i 19–20 (OH/NS), CTH 414.1: Rituals for Building a New Palace

zik ammel É-na lē uwaši ug-a tuēl parna ĮL uvāmi
“You must not come to my house, and I will not come to your house”

Hoffner and Melchert’s (2008:278) description agrees exactly with the Old Indic structures with contrastive or Intonational Topics: zik and uk are contrastive topics, and ammel É-na and tuēl parna contrastive foci. One can suppose that the two conjuncts represent the hat-contour mapped in (19).

Or, with ²tta ‘you’ and ug-a ‘but me’ as contrastive or Intonational Topics as well (Lühr 2015b):

(37) a. KUB 6.45 iii 59, CTH 381

mu²tta DINGIRMES ŠAMEHUR.SAGMES Í[DMES waliy]anzi
“The gods of the sky, the mountains, the rivers praise thee.”

b. Ibid. iii 60–1

ug =a škán ANA МNIR.GÁL [ANA ÎR =K]A ZI-anza anda
I:DAT but PART to Muwatalli to servant your soul: NOM. C.SG inside
dušgai
rejoice:PRS.IND.ACT3SG
“As for me, Muwatalli, your servant, my soul will rejoice inside me”

4.2.2 Partial contrastive topics

Partial contrastive topics are also found. As mentioned, such topics are semantically and pragmatically elements of alternative sets. The preceding context of (38) is: and he/she takes the kurtali vessel of dough with the tongues and speaks as follows:
The contrastive focus is on Ziplantawiya.

Finally, indefinite pronouns may appear as contrastive foci. In (39) the alternative set consists of ‘inhabitants of Neša’ and ‘nobody’:

(39) KBo 3.22 i 7–8, CTH i: Proclamation of Anitta, King of Kuššara

U DUMU\textsuperscript{MES} URU\textsuperscript{eš} [id]\textsuperscript{lålu} natta kuđanikki
 Takkišta
inflict:PRET3SG

“of the inhabitants of Neša he inflicted harm to nobody” (Lühr 2015a:216; 2016)

In Ancient Greek there are such intonation patterns, too:

(40) Titus Flamininus 6

τὰ µὲν οâν ἄλλα προσεχώρει καθ᾿ ἡσυχίαν αὐτù . . .
“Die anderen Gebiete (Griechenlands) schlossen sich ihm nun (Titus) friedlich an . . .”

τὰ . . . ἄλλα µὲν refers to an evoked alternative reference quantity. The quantities form part of a partially ordered set, “die einen” vs. “die anderen,” denoting a special kind of contrast. As in the Hittite example the contrastive or Intonational Topic is connected to a contrastive particle, here µὲν, viz. in τὰ . . . ἄλλα µὲν. The contrastive focus is on ἡσυχίαν ‘peacefully’ (Lühr 2015a).

4.3 Focus particles

In Hittite as well as in Ancient Greek there are, of course, focus particles. Examples are (41) and (42):

(41) KUB 13.35 i 30–1, CTH 293: Court Protocol Concerning Ukkura

nu =wa =za apêda\textsuperscript{n}ji =ya memini
and QUOT PART that:DAT.SG also cause(C):DAT.SG
iššihalbanza
being.committed.by.contract: NOM.C.SG

“Auch jener Sache bin ich durch Vertrag verpflichtet.”

“I am also committed to that thing by contract.”
However, neither in Hittite, in Ancient Greek, nor in Vedic Sanskrit do special graphic prosodic markers for emphasis caused by contrast exist in our corpora. This is of relevance for sentences with two contrastive topics and partial contrastive topics with hat-contour and structures with contrastive foci connected to focus particles.

5 Conclusion

So what does it mean if there are no graphic markers on contrastive constructions? Graphic markers for emphatic prosody are not necessary in the case of direct contrast with antonyms:

(43) John is tall but Bill is short. (Lakoff 1971:133)

With an antonymy-based semantic opposition the hearer expects the proper intonation, since there is a tendency for antonyms to be in focus. The same is true for other terms of opposites that are triggered by contrastive topics. That Vedic Sanskrit, Hittite, and Ancient Greek agree on this point is not coincidental, but seems to be a universal. These languages still have in common the fact that focus particles highlight the focus exponent. Here too, special markers are superfluous, even if it is written language of whatever type of text.

The situation is different with written records reflecting oral speech. Appeals to the addressee that require a response from him or her, an answer to polar questions, the execution of an instruction as a result of an imperative, the acceptance of a statement affected by affirmative particles, attention to managing interactions elicited by vocatives with additional attitudinal functions, the expectation that a second conjunct is to come in bipartite structures—all these types of address demand emphatic prosodic features in dialogues. In Old Indic they are sometimes encoded in writing. As Wennerström (2001) accurately describes this state of affairs, in these cases the language gives insight into the music of everyday speech.

Abbreviations


References


