THE PROSODIC PHRASING OF PARENTHETICAL COMMENT CLAUSES IN SPONTANEOUS SPOKEN LANGUAGE: EVIDENCE FROM ICELANDIC *HELD ÉG**

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Abstract. Based on the analysis of corpus data, this paper investigates the prosodic phrasing of the Icelandic parenthetical comment clause (CC) *held ég* ('believe/think I'; *I think, I believe*) and relates the results to current prosodic theory. The main findings are as follows. (i) A variety of intonational phrasing patterns is possible with CC *held ég*, allowing both for prosodic separation such that the CC is phrased in its own Intonational Phrase (IP), and prosodic integration, such that the CC is phrased in one IP with surrounding material. (ii) Prosodic integration is by far the more common pattern. (iii) The prosodic phrasing of CCs is related to their meaning via prominence. In particular, CCs which can be argued to have conventional implicatures (CI) semantics are prosodically prominent and phrased separately; CCs whose primary function is one of mitigation are unstressed and integrated. (iv) The observed intonational phrasing patterns can be accounted for in terms of the interaction of the syntax-prosody interface constraint MATCH CLAUSE with prosodic markedness constraints.

1. Background and hypotheses

1.1. *The prosodic phrasing of parenthetical comment clauses*

This paper analyses the prosodic phrasing of the Icelandic parenthetical comment clause (CC) *held ég* ('believe/think I'; *I think, I believe*), pronounced ['helt.jex] in its citation form, and discusses the findings in terms of prosodic theory, specifically the interaction of syntax-prosody interface constraints with prosodic markedness constraints. The meaning and use of Icelandic *held ég* is similar to English *I think, I believe* and German *glaub ich* (see (1)), and like CCs in German and Dutch, Icelandic *held ég* is verb-initial.

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- (1) Sentence-medial comment clauses (CCs)
- a. John arrived *I think/believe* later than Mary.
 - b. John ist *glaub(e) ich* später als Maria
John is think I later than Mary
angekommen. (German)
arrived
 - c. Jón kom *held ég* seinna en María. (Icelandic)
John arrived think I later than Mary

In the present study, sentence- or utterance-final CCs (e.g. (2)) as well as clause-internal ones (e.g. (3)) are considered. A typical non-final position in the present data set is between copula and following phrase (e.g. (3)a). Other non-final positions were, for example, between head and complement (see e.g. (3)b for a CC positioned between verbal head and complement) and within the verbal complex (see (3)c).

- (2) CC *held ég* in final position (Source: Talmál, *Samtöl ÍSTAL*)¹
- já sko hann er níutíuogþrjú *held ég*
yes so he is ninety-three think I
‘Yes, he is ninety-three, I think’
- (3) CC *held ég* in non-final position (Source: Talmál, *Samtöl ungs folks* (a, c) and *Samtöl ÍSTAL* (b))
- a. já það væri *held ég* ágætis svona
yes it would.be think I fine such
‘Yes, I think this would be fine [unfinished]’
 - b. ... hann er búinn að eyða *held ég* ja yfir eitthvað
he is finished to spend think I Part over something
yfir fjögurhundruðþúsundkallinn
over four.hundred.thousand.crowns
‘He has spent, I think, more than four hundred thousand crowns.’
 - c. ... þeir eru *held ég* búnir að framlengja sko ...
they are think I finished to extend so
‘They have, I think, extended [Obj], so ...’

From a semantic-pragmatic point of view, CCs of the kind under discussion here have often been argued to attach an illocutionary commitment to an utterance or to serve metalinguistic functions, rather than contributing to the truth-conditionality of the host utterance (e.g., Urmson 1952, Hand 1993). CCs may function as mitigators, i.e. they are used to modify, correct, reinforce or soften a speech act performed by the host utterance (e.g. Mittwoch 1979, Fraser 1980, Quirk, Greenbaum et al. 1985, Schneider 2007a,b, Kaltenböck 2010). Since functions like these can also be achieved by message-oriented or attitudinal adverbs, CCs have been treated as epistemic adverbials,

¹ See Section 2 below for details on the corpora used in this study.

pragmatic markers and discourse markers in the literature (e.g. Thompson & Mulac 1991, Murphy 1993, Aijmer 1997, Kärkkäinen 2003, Brinton 2008, Dehé & Wichmann 2010). Rooryck (2001) lists a range of evidential meanings expressed by CCs. Given their evidential meaning, Scheffler (2009) proposes a two-dimensional semantics for CCs. In her view, their main semantic contribution is to lower the epistemic threshold, which determines whether the speaker is sure of the proposition; their secondary contribution is to contribute a side comment in the domain of conventional implicatures (CIs): the actual content of the verb (e.g. *think*). Potts (2005:92) maintains that elements such as CC *it seems* and generally Ross' (1973) *slifting* constructions as well as question tags (*isn't he*) are parentheticals (or: supplements in his terminology) syntactically and that, like other types of parentheticals such as *as*-parentheticals and appositions, they are “intonationally isolated”. Semantically, however, they are different from other types of parentheticals. In particular, Potts maintains that CCs and question tags affect the “at-issue core” of the utterance, thus they cannot be removed without affecting the main proposition. With respect to the relation between prosody and a two-dimensional semantics for CCs à la Scheffler, Dehé (2014) suggests that CCs whose function it is to affect the epistemic threshold and which have a polite, mitigating effect are typically without prominence and thus prosodically integrated; being without their own nuclear accent, they cannot be phrased in an Intonational Phrase of their own. CCs which have CI semantics, on the other hand, are typically prosodically prominent and phrased separately (see also Dehé & Wichmann 2010 for related ideas). However, no formal analysis of the relation between prosody and meaning is offered in these works.

I assume that non-initial CCs of the kind under discussion here are main clause parentheticals syntactically (see most recently Griffiths 2015). They differ from their sentence-initial counterparts (as given in (4)) in a number of significant ways. For example, in languages such as German, Dutch and Icelandic, CCs have obligatory subject-verb inversion (see (5); Dutch example from Griffiths 2015:200). Kluck & de Vries (2015) assume an operator object to the CC verb, which originates in the postverbal position and ends up in the pre-subject position as a result of movement (see (6)). This operator is co-referential with the host clause and may be null or spelled out as *zo/so* in Dutch and German, respectively (e.g. (7), Dutch example from Kluck & de Vries 2015); see also the discussions in Reis (1995, 2002), Fortmann (2007) and Steinbach (2007) for German. Following this analysis, it is impossible for non-initial CCs to be the result of a movement operation taking sentences such as (4) as input. It has also been noted that sentences containing *I think* and related elements in initial vs. non-initial position are not paraphrases of each other

semantically (e.g. Jackendoff 1972, Quirk, Greenbaum et al. 1985 for English).

- (4) a. *I think/believe* John arrived later than Mary.
 b. *Ich glaube*, John ist später als Maria
 I believe John is later than Mary
 angekommen.
 arrived
 ‘I think John arrived later than Mary.’
 b’. *Ich glaube*, dass John später als Maria angekommen ist.
 I believe that John later than Mary arrived is
 ‘I think that John arrived later than Mary.’
 c. *Ég held* að Jón hafi komið seinna en
 I think that John has arrived later than
 María.
 Mary
 ‘I think that John arrived later than Mary.’
 (German)
 (Icelandic)
- (5) Obligatory subject-verb inversion in non-initial CCs
 a. Josef ist *glaube ich* / **ich glaube* schon wieder zu
 Josef is think I I think already again too
 spät.
 late
 ‘John is, I think, late again.’
 b. Ik heb *beken ik* / **ik beken*, niet echt een
 I have confess I I confess not really an
 mening.
 opinion
 ‘I don’t really have, *I confess*, an opinion.’
 c. Jón kom *held ég* / **ég held* seinna en
 John arrived think I I think later than
 María.
 Mary
 (German)
 (Dutch)
 (Icelandic)
- (6) Syntactic analysis of CCs according to Kluck & de Vries (2015)
 Bob, [OP_i/zo_i *vermoed ik* t_i], kent Bea goed.
 Bob OP/so suspect I knows Bea well
- (7) Object operator in preverbal position
 a. Bob is, (zo) *vermoed ik*, een echte charmeur.
 Bob is (so) suspect I a real charmer
 b. Tina, (so) *glaube ich*, möchte eine neue Theorie
 Tina (so) believe I wants.to a new theory
 entwickeln.
 develop
 ‘Tina, I believe, would like to develop a new theory.’
 (Dutch)
 (German)

Furthermore, as Griffiths (2015) shows, CCs behave like other types of parentheticals in that narrow syntax relations cannot be established between CC and host. For example, CCs are not within the scope of linearly preceding operators (e.g. negation in (8)), and they do not license binding dependencies which require c-command; see (9), both examples from Griffiths (2015:196). Notice that parentheticals of this kind are not subordinate clauses, either. For example, they are in the indicative unlike many embedded clauses in Icelandic, which are subjunctive (Thrnsson 1986:187).

- (8) John won't be late, *I reckon*.

Interpretation: a. $\text{reckon}(p, I) \wedge \neg[\text{will-be-late}(\text{John})]$
 b. $*\neg[\text{reckon}(p, I) \wedge \text{will-be-late}(\text{John})]$

- (9) a. $*\text{Who}_i \text{ will John, } t_i \text{ thinks, be late?}$
 b. John won't, $\{\text{everyone/} * \text{anyone}\}_i \text{ thinks, be late.}$
 c. Billy has, $[\text{every girl in the class}]_i \text{ admits, a crush on her}_k/*_i.$

CCs are main clause parentheticals (ParP) adjoined to the host clause. The Par head and the CC are joined by *parenthetical-merge* (henceforth par-merge; de Vries 2007, 2012 and related work), which prevents elements in the host clause from c-commanding into the parenthetical. This is illustrated for the CC *I think* in (10), where dashed lines represent par-merge (adapted from Griffiths 2015:199).

- (10) Par-merge of CCs

a. John will *I think* be late.

Given their clausal syntactic status as CP and their parenthetical relation with the host clause, CCs have often been assumed to be phrased in their own Intonational Phrase (IP) in the prosodic structure (e.g. Nespor &

Vogel 1986, Potts 2002, 2005, Truckenbrodt 2005, Brinton 2008 among others). Also, current prosodic Match theory (Selkirk 2009, 2011; see (11)), predicts for a clause in syntactic constituent structure to be matched by an IP in prosodic structure, thus predicting prosodic separation of the CC in either a non-recursive (see (12)a) or a recursive (see (12)b, c) prosodic structure, depending on what kind of syntactic constituent precedes and follows the CC in the linear structure (see also Dehé 2014). (In (12) and elsewhere below, optional material is indicated by left and right arrowheads < > to avoid confusion.)

(11) Match theory (from Selkirk 2009:40, 2011:439)

- (i) MATCH CLAUSE
A clause in syntactic constituent structure must be matched by a corresponding prosodic constituent (i.e., the IP) in phonological representation.
- (ii) MATCH PHRASE
A phrase in syntactic constituent structure must be matched by a corresponding prosodic constituent (i.e., the phonological phrase) in phonological representation.
- (iii) MATCH WORD
A word in syntactic constituent structure must be matched by a corresponding prosodic constituent (i.e., the prosodic word) in phonological representation.

(12) Prosodic phrasing of CCs as predicted by MATCH CLAUSE

- a. $IP(\text{clause1})_{IP} \text{ } IP(CC)_{IP} < IP(\text{clause2})_{IP} >$
- b. $IP(XP1 \text{ } IP(CC)_{IP} \text{ } XP2)_{IP}$
- c. $IP(PWd \text{ } IP(CC)_{IP} \text{ } \dots)_{IP}$

However, careful prosodic analysis of English CCs has shown that it is prosodic integration rather than separation that is the most common pattern of prosodic phrasing for CCs in actual spoken language. In other words, CCs are commonly phrased together with surrounding host material in one prosodic domain, yielding structures as in (13)c-e; see e.g. the corpus studies by Dehé (2009a), Dehé & Wichmann (2010), and Dehé (2014), confirming earlier assumptions for English by e.g. Crystal (1969), Bing (1985) and Gussenhoven (2004). In particular, these results show that CCs are commonly tonally integrated as prenuclear or postnuclear material without a nuclear (or even non-nuclear) accent of their own. In Dehé's (2014: Chapter 4) analysis based on data from the spoken part of the British Component of the International Corpus of English (ICE-GB), the two prosodic phrasing patterns in (13)c and (13)e together accounted for 67% of the CCs analysed (100%: N = 147), while separation as in (13)a and (13)b accounted for only 18% and 5%, respectively. In Peters' (2006) corpus study on the prosodic phrasing of parentheticals in German (N = 96), on the other hand, the pattern equivalent to (13)b was

most prominent (>40%) and prosodic incorporation corresponding to (13)e was the least frequent pattern (<10%). However, while Peters (2006) does not give details about the types and distribution of the parentheticals that made up his data set, he reports that there is a relation between prosodic structure and size of parenthetical such that shorter parentheticals (i.e., fewer syllables) are more likely to be integrated than longer ones. This in turn is not fully in line with Dehé's (2014) extensive corpus study on English, where question tags are phrased in a separate IP much more frequently than CCs, suggesting that if length affects phrasing, it may be overridden by other factors. Crucially in the present context, phrasing of CCs together with host material is common in languages which have undergone empirical prosodic research, and separation as given in (13)a and b, despite being assumed in much of the theoretical literature, represents the minority of cases in actual spoken language.

(13) Observed prosodic phrasing of CCs in English; from Dehé (2014:176)²

Prosodic separation:

- a. ... IP(...)IP IP(CC)IP IP(...)IP ... 27 (out of 147) CCs (18%)
 b. ... IP(...)IP(CC)IP ...)IP ... 8 (out of 147) CCs (5%)

Prosodic integration:

- c. ... IP(...)IP (...) CC)IP IP(...)IP ... 45 (out of 147) CCs (31%)
 d. ... IP(...)IP IP(CC ...)IP IP(...)IP ... 9 (out of 147) CCs (6%)
 e. ... IP(...)IP IP(...) CC ...)IP IP(...)IP ... 53 (out of 147) CCs (36%)

Given that Match constraints are violable interface constraints in competition with other constraints (Selkirk 2009, 2011), prosodic phrasing violating Match should follow from the possibility of other constraints outranking Match. Selkirk (2011:468–472), for example, discusses prosodic markedness constraints such as size constraints, left-edge strengthening and prosodic stress prominence assignment. In previous work on English CCs (Dehé 2009a, 2014), these constraints have not been taken into account; instead prosodic integration has been accounted for in terms of restructuring in Nespor & Vogel's (1986) sense, considering factors such as prosodic constituent size, speech rate and pragmatic function of the CC. Prosodic separation as in (13)a, where it does not follow from MATCH CLAUSE (e.g. because the constituent preceding CC is a prosodic phrase or word rather than an IP) has been vaguely put down to promotion of a lower-level prosodic boundary to a higher-level one, but again without relating to prosodic markedness constraints. For example, Myrberg's (2013) constraint *Equal Sisters*, demanding for sister nodes in prosodic structure to be instantiations of the same prosodic category, may account for the

² The prosodic phrasing of five out of 147 CCs (4%) remained unclear after careful analysis by three annotators, adding up to 147 tokens (100%).

promotion; this has not previously been thought through for the phrasing of CCs.

To add another language, to further test the intonational phrasing of CCs, and to provide a first account in terms of the interaction of syntax-phonology interface constraints and prosodic markedness constraints, the present paper studies the Icelandic CC *held ég*.

1.2. Cues to IP-boundaries in Icelandic

Previous work in Icelandic prosody has identified tonal and segmental cues to Intonational Phrase (IP) boundaries in this language. First, tonal cues include the presence of at least one pitch accent and a boundary tone. If there is more than one pitch accent in one IP, one of them is nuclear. This is typically the final one because phrase-level and sentence-level stress in Icelandic is rightmost (Árnason 1998 among others). The Icelandic tonal inventory has two boundary tones: L% and H% (Árnason 1998, 2005, 2011, Dehé 2009b). Moreover, in Icelandic the IP is the domain for downstep; pitch reset can be observed at the beginning of a new IP (Árnason 1998, 2011, Dehé 2009b). An example is given in (14)/Figure 1.³ The utterance is made up of two IPs as indicated in (14)b. The first IP is terminated by H% indicating non-finality, the second by L%. Both IPs are also the domain of downstep, such that the pitch peak associated with the first syllable of *Sigurður* (281 Hz) in IP1 is lower than the one associated with the first syllable of *Siggi* (314 Hz), and the pitch peak associated with the first syllable of *Kristín* (260 Hz) in IP2 is lower than the one associated with the first syllable of *Stína* (297 Hz). Pitch reset can be observed in IP2 such that the pitch peak associated with the first syllable of *Stína* is reset as compared to the peak associated with *Sigurður* in IP1. Overall, the pitch level in IP2 is slightly lower than in IP1. In this particular example, the two IPs are also separated by a pause of 240 milliseconds (<SIL> in Figure 1).

- (14) a. Siggi heitir auðvitað Sigurður, en Stína heitir Kristín.
 Siggi is.called of.course Sigurður and Stína is.called Kristín
 ‘Siggi’s real name is of course Sigurður, and Stína’s name is
 Kristín.’
 b. _{IP1}[Siggi heitir auðvitað Sigurður]_{IP1} _{IP2}[en Stína heitir Kristín]_{IP2}

³ The example in (14)/Figure 1 is taken from the *Siggi og Stína* data set, which is based on a recording of the Icelandic children’s story *Siggi og Stína*. The version used here was originally tape-recorded for use as a comprehension exercise in foreign language teaching. It was read and recorded by a trained female speaker in a colloquial way. At the time of the recording, the speaker did not know that it would be used for any other purpose than her intended one. The recording was digitised into individual sound files for the purpose of linguistic analysis. Selected utterances were also used in Dehé (2008, 2009b); examples (17)c and (19) below, taken from Dehé (2008), are also from this data set.

Figure 1. Utterance (see example (14)) made up of two IPs, signalled by H% terminating IP1, downstep within IPs, and pitch reset at the beginning of IP2.

Second, Icelandic has a number of segmental processes which (frequently though not obligatorily) occur in connected speech, but not across IP boundaries. In other words, even if these processes are optional to a certain extent, their application clearly indicates the lack of an IP-boundary. Particularly relevant in the present context are word-initial /h/-dropping and word-final vowel deletion. In Icelandic connected speech, a word-initial glottal fricative /h/ such as the initial /h/ on *held* in the CC *held ég* may be dropped. This has been described for pronoun cliticisation (Árnason 2009, 2011), see (15), and it also follows from phonetic transcriptions such as those given in (16). If /h/-dropping results in a sequence of two vowels, there may be word-final vowel deletion on the preceding word. The sequence *treysti honum* in (15) is pronounced such that the initial /h/ on *honum* and the preceding word-final vowel /ɪ/ on *treysti* are both dropped, as illustrated by the transcription. In (16), the word-final /r/ of *fór* has been resyllabified as onset of the following syllable after /h/-dropping.

- (15) Pronoun cliticisation involving /h/-dropping (Árnason 2009:287, 2011:263)

Ég treysti honum ekki ['threistɔnum]
 I trust him not
 'I don't trust him'

- (16) /h/-dropping in connected speech (Árnason 2011:293)

Jón fór heim ['jouʋfou'rei:m]
 John went home
 'John went home'

Icelandic word-final vowel deletion (FVD) is a process which deletes word-final vowels before initial vowels on the next word (Einarsson 1973, Árnason 1980, 2011, Helgason 1993, Dehé 2008). It is a common process, which, according to Árnason (1980:219), also occurs in formal styles.⁴ However, the process has been found to be prosodically constrained such that it is affected by prosodic phrasing along with focal emphasis and eurhythmy (Dehé 2008). Specifically, Dehé (2008) argues that FVD is obligatorily blocked at the right edge of an IP-boundary (see (17)a), which is also the domain for rhythmic adjustments. Within IP, FVD is not obligatory but it is common, and it is most frequent within a syntactic XP (see (17)c), and significantly less frequent at syntactic XP-edges (see (17)b; in (17), underlining marks the relevant vowels; parentheses around vowels indicate the option of FVD). In (17)a, deletion of the final vowels on *barninu* and *konnunni* is blocked despite being followed by an initial vowel on the following word. This is because an IP-boundary intervenes, indicated here by the comma in writing. In (17)b the final vowel on *Jónína* and the initial vowel on the next word are within the same IP, thus FVD is possible and probably favoured because it results in a regular rhythmic pattern. In (17)c, FVD is likely to occur given that *borgina* and *okkar* are in the same prosodic and syntactic phrase and deletion would result in a regular trochee within the phrase *yfir borgin(a) okkar*. FVD is also possible if the word which loses a vowel is reduced to one syllable (see (18) and pronoun cliticisation in (15)), regardless of whether the reduced word is a lexical or a functional category, and it may also occur if the affected word is reduced to non-syllabic status (see the attested example in (19)).⁵ In (18)b, notice the palatalisation of the final vowel of *ekki*, which is /ɪ/ in citation form, instead of deletion.

(17) Final vowel deletion; examples from Dehé (2008)

- a. Auður hjálpaði barninu, Anna hjálpaði konnuni, Elísabet
 Auður helped the.child Anna helped the.woman E.
 hjálpaði læknum.
 helped the.doctor
- b. Jónín(a) eldar ekki fisk.
 Jónína cooks not fish
 ‘Jónína does not cook fish’
- c. Heðan sjáum við vel yfir borgin(a) okkar.
 From.here see.1.Pl. we well over town.ACC.Sg.def our
 ‘From here we have a good view over our town.’

⁴ Árnason (2009:294–295, 2011:296) reports that FVD does not apply to the vowels /i/, /æ/ and /ɔ/.

⁵ Note that orthographic <ú> as in *nú* corresponds to /u:/, while orthographic <u> as in *upp* corresponds to /ʏ/, thus deletion here cannot be put down to a sequence of identical vowel, as a reviewer suggests.

- (18) Final vowel deletion; examples and transcriptions of relevant sequences from Einarsson (1973:27)

- a. Ekki er að tala um það. [tʰa:lɪm]
 Not is to talk about it
 'No need to discuss that'
- b. Ertu ekki enn búinn? [ɛrːtɛʰk;ɛnː]
 are.you not yet ready

- (19) Final vowel deletion on a mono-syllabic word; example from Dehé (2008:741)

- Helgi tók nú upp marga lykla [tʰoukʰ.nɪʰp]
 Helgi took now up many keys

If an IP-boundary intervenes between *held ég* and the preceding word, /h/-dropping and FVD are blocked. If there is no IP-boundary in this position, both processes are free to apply.

1.3. Hypotheses

Against the background outlined in the sections above, the hypotheses in (20) will be tested.

- (20) Hypotheses

- I: Like English CCs, Icelandic CCs exhibit a variety of intonational phrasing patterns (as identified on the basis of tonal and segmental cues).
- II: The observed intonational phrasing patterns can be accounted for in terms of the interaction of the syntax-prosody interface constraint MATCH CLAUSE with prosodic markedness constraints.
- III: Pragmatics is essential because CCs may or may not be prosodically prominent according to their meaning in context.

The intonational phrasings we predict to find largely correspond to the ones found for English given in (13) above. We predict that CCs may either be prosodically separate, i.e. phrased in their own prosodic domain associated with a nuclear accent of their own (see (13)a-b and (21)), or they may be prosodically integrated with host material, in which case they are typically realised without prominence (see (13)c-e/(24)). First, prosodic separation as given in (13)a-b and (21) and illustrated in (22) and (23) is in line with the interface constraint MATCH CLAUSE as given in (11)i. (Round brackets () indicate prosodic structure; square brackets [] indicate syntactic structure; left and right arrowheads <> indicate optional material.)⁶ (21)a,

⁶ Notice that the patterns in (22) and (23), as well as in (25) through to (27), are example patterns. The actual, attested phrasings of these corpus examples may deviate from these illustrations.

exemplified in (22), represents a non-recursive prosodic structure, which is predicted by MATCH CLAUSE for CCs in sentence-final position and for CCs wedged between two (e.g. coordinated) clauses. (21)b, illustrated in (23)b, represents a recursive prosodic structure, which is predicted by MATCH CLAUSE if the syntactic string preceding the CC is not a clause, and if MATCH CLAUSE is not dominated by another constraint demanding prosodic sister constituents to be of the same prosodic category (EQUALSISTERS; Myrberg 2013). A CC phrased in its own IP bears nuclear prominence; prominence may be associated with either the verb or the pronoun. The blocking of both /h/-dropping on *held* and FVD of the IP-final vowel (underlined in (22) and (23)), as well as relevant tonal events will serve as cues to the IP-boundaries separating *held ég* from surrounding material.

- (21) Prosodic phrasing of comment clause *held ég*: prosodic separation
- a. $IP(\text{clause})_{IP} IP(\text{held } \underline{ég})_{IP} <_{IP(\text{clause})_{IP}} >$
 - b. $IP(\dots IP(\text{held } \underline{ég})_{IP} \dots)_{IP}$
- (22) Prosodic phrasing of comment clause *held ég*: *held ég* phrased separately according to (21)a, following MATCH CLAUSE (Source: Talmál, *Samtöl ÍSTAL*)
- a. $CP[\text{þetta er allt sjálfboðavinna}]_{CP} [\text{held } \underline{ég}]$
That is all voluntary.work think I
 - b. $IP(\text{þetta er allt sjálfboðavinna})_{IP} IP(\text{held } \underline{ég})_{IP}$
- (23) Prosodic phrasing of comment clause *held ég*: *held ég* phrased separately according to (21)b (Source: Talmál, *Samtöl ungs fólks*)
- a. $CP[\text{það eru}]_{CP} [\text{held } \underline{ég}]$ mörg lönd $CP[\text{sem þurfa að}]_{CP}$
it are think I many countries that need to
líða fyrir það]]
suffer for it
 - b. $IP(\text{það eru})_{IP} IP(\text{held } \underline{ég})_{IP} \text{ mörg lönd})_{IP} \dots$

Second, prosodic integration of *held ég*, i.e. phrasing of the CC together with host material in one IP (see (24) and the illustrations in (25) through to (27)), requires for MATCH CLAUSE to be violated and outranked by other (prosodic markedness) constraints. A CC phrased with host material in one IP is typically not associated with prominence. It makes up either postnuclear ((24)a/(25)b; possibly also (24)c)/(27)b) or prenuclear ((24)b, c/(26)b, (27)b) material in its IP. The potential application of both /h/-dropping on *held* and FVD on the word-final vowel preceding *held* (underlined in the examples below) in (24)a,c, (25) and (27), and their absence in (24)b and (26), as well as relevant tonal events, will serve as cues to intonational phrasing.

- (24) Prosodic phrasing of comment clause *held ég*: prosodic integration
- $\langle \text{IP}(\dots)_{\text{IP}} \rangle \text{IP}(\dots \text{held ég})_{\text{IP}} \langle \text{IP}(\dots)_{\text{IP}} \rangle$
 - $\text{IP}(\dots)_{\text{IP}} \text{IP}(\text{held ég} \dots)_{\text{IP}} \langle \text{IP}(\dots)_{\text{IP}} \rangle$
 - $\langle \text{IP}(\dots)_{\text{IP}} \rangle \text{IP}(\dots \text{held ég} \dots)_{\text{IP}} \langle \text{IP}(\dots)_{\text{IP}} \rangle$
- (25) Prosodic phrasing of comment clause *held ég*: *held ég* integrated according to (24)a, violating MATCH CLAUSE (Source: Talmál, *Samtöl ÍSTAL*)
- $\text{CP}[\text{þetta er allt sjálfboðavinna}] \text{CP}[\text{held ég}]$
That is all voluntary.work think I
 - $\text{IP}(\text{þetta er allt sjálfboðavinna} \text{ held ég})_{\text{IP}}$
- (26) Prosodic phrasing of comment clause *held ég*: *held ég* integrated according to (24)b, violating MATCH CLAUSE (Source: Talmál, *Samtöl ÍSTAL*)
- $\text{CP}[\text{það eru}] \text{CP}[\text{held ég}] \text{mörg lönd} \text{CP}[\text{sem þurfa að}]$
it are think I many countries that need to
líða fyrir það]]
suffer for it
 - $\text{IP}(\text{það eru})_{\text{IP}} \text{IP}(\text{held ég mörg lönd})_{\text{IP}} \dots$
- (27) Prosodic phrasing of comment clause *held ég*: *held ég* integrated according to (24)c, violating MATCH CLAUSE (Source: NDC)
- $\text{CP}[\text{Ég hef nú bara}] \text{CP}[\text{held ég}] \text{einu sinni farið á}$
I have now only think I once went
skíði sko ...]
skiing so
 - $\text{IP}(\text{Ég hef nú bara} \text{ held ég einu sinni farið á skíði sko})_{\text{IP}}$

Pragmatics is essential (Hypothesis III in (20) above). If in its utterance the CC has CI semantics in Potts' (2005) sense, i.e. functions as a true side remark, it will have prominence. If, on the other hand, the CC's function is to lower the epistemic threshold (Scheffler's 2009 primary function), it will not be prominent. This is crucial because prominence affects intonational phrasing.

In order to test these hypotheses against the background laid out above, a corpus study was carried out and 47 instances of CC *held ég* as used in spontaneous spoken language entered the prosodic analysis. The results confirm the predicted variation (Hypothesis I in (20) above) in the intonational phrasing of CC *held ég*. Section 2 reports on the data sources for the analysis and data treatment, the analysis of *held ég* and the results. Section 3 discusses these results in light of current prosodic theory, addressing hypotheses (20)II and III. Section 4 is a short summary.

2. Materials, analysis and results

The hypotheses formulated in (20) above were tested on the basis of a set of spontaneous spoken language data. To this end, two corpora were searched for *held ég*: Talmál and The Nordic Dialect Corpus (hereafter NDC). The Talmál is part of the MÍM corpus, a morphosyntactically tagged corpus of written and spoken Icelandic (Helgadóttir, Svavarsdóttir et al. 2012).⁷ The spoken part is made up of about 54 hours (approximately 500 000 words) of natural speech, all recorded between 2000 and 2006, making up 2.2% of the MÍM corpus. It consists of four subparts (see Thráinsson, Angantýsson et al. 2007, Helgadóttir, Svavarsdóttir et al. 2012 for details): (i) the *Alþingisumræður* (Parliament Speech Corpus) consists of recordings from unprepared/unscripted meetings in the Icelandic parliament recorded in the winter of 2004–2005; the (ii) *Samtöl ÍSTAL* and (iii) *Samtöl ungs fólks* parts consist of conversations of 2–6 participants recorded in informal settings such as work places or private homes; (iv) the *Viðtöl* part contains more formal interviews between one interviewer and three interviewees. The Talmál corpus is separately searchable for specific strings via the Lexis-Corpus web interface.⁸ The sound files of the Parliament Speech Corpus are accessible via its website.⁹ The sound files of three of the four parts of the Talmál, notably the sound files of the Parliament Speech Corpus and the two *Samtöl* parts of the corpus, were available for use in the present study.

The NDC (Johannessen, Priestley et al. 2009) contains data from Danish, Faroese, Icelandic, Norwegian and Swedish, but only the spoken Icelandic part (Thráinsson, Angantýsson et al. 2007) was searched for the purpose of this study. As of 2009, the corpus contained approximately 466 000 words overall, 10 287 Icelandic, but it has been growing since then, most recently in 2013 while the present study was conducted. The corpus is web-based and fully searchable and audio as well as video files may be downloaded.¹⁰

The two corpora are partly overlapping, because the Talmál also entered the NDC (see Thráinsson, Angantýsson et al. 2007). However, new recordings have been added to the NDC, thus in the present data set, nine instances of *held ég* were found in the NDC which were not part of the output of the Talmál search. Note that given the nature of the corpora, the data set extracted from them is a cross-section across different registers.

⁷ <http://mim.arnastofnun.is/> (last accessed 12 July 2016)

⁸ <http://corpus.arnastofnun.is/> (last accessed 12 July 2016)

⁹ <http://www.malfong.is/> (last accessed 12 July 2016)

¹⁰ <http://www.tekstlab.uio.no/nota/scandiasyn/index.html> (last accessed 12 July 2016)

Both the Talmál and the Icelandic part of the NDC were searched for *held*, yielding 857 and 152 matches, respectively. These outputs were then submitted to manual sorting, such that (i) all items which were not *held ég* were removed, and (ii) all sequences of *held* preceded by a word ending in a vowel (V) were kept, all other sequences were removed in order to allow for segmental cues to IP-boundaries along with tonal cues. In a next step, only instances of *held ég* as a CC were considered, and all other items were discarded. Examples for items discarded under step (iii) are given in (28). The main criteria were syntactic ones: Icelandic being a verb-second language, non-CC items were mostly instances of *held* as main verb of the sentence, ending up in a position preceding its subject *ég* as a result of subject verb inversion due to a constituent other than the subject in initial position, e.g. adverbs or conjunctions (see (28)a-c), and occasionally topicalisation out of an embedded *að*- ('that') clause (see (28)d). In addition, there were also uses of the verb *að halda* with lexical meaning other than 'think, believe' (see (28)e). Finally, (iv) all available sound files were retrieved and those items were discarded for which there was either no sound file available or the quality of the sound file was not good enough for auditory and/or instrumental analysis due to overlapping speech in the target area or too much background noise. Two of the remaining NDC items were also contained in the remaining Talmál set and (v) were therefore removed from the analysis. Table 1 summarises the steps of the manual sorting procedure and the numbers of instances of *held ég* remaining after each step. After the manual sorting, forty-seven instances of *held ég* entered the analysis.

Table 1. Manual sorting process after corpus search; V = vowel

	Talmál: instances of <i>held</i> <i>ég</i> remaining	The Nordic Dialect Corpus: instances of <i>held</i> <i>ég</i> remaining
input	857	152
(i) all instances of <i>held</i> other than <i>held ég</i> removed	242	57
(ii) reducing the set to V- <i>held</i> sequences	113	15
(iii) discarding all instances which were not CCs	59	15
(iv) accessibility and quality of sound files	39	10
(v) removing items present in both data sets	39	8
output; items analysed overall		47

(28) Examples of non-CC *held ég* discarded from the analysis (Source: Talmál, *Samtöl ÍSTAL* (a, e), *Viðtöl* (b, d), *Alþingisumræður* (c))

- a. en nú *held ég* að það sé náttúrliga næsta
 but now think I that it would.be naturally next
 ár sem skiptir mestu máli tíunda bekkur
 year that divide most case tenth class
 ‘But now I think that it would naturally be the next year,
 which would be most important the tenth class’
- b. náttúrliga *held ég* líka að sko þróunin að hún
 naturally think I also that so development that she
 hafði líka rosalega mikið með þetta að segja
 had also extremely much with that to say
 ‘Naturally I think that the development played a big role’
- c. þess vegna *held ég* að menn þurfi nú ekki að
 therefore think I that men-Nom.Pl. need now not that
 deila mikið um það að
 argue much about it that
 ‘Therefore I think that people don’t have to argue much about it’
- d. hjá eldra fólki *held ég* að þetta sé mjög
 with older people think I that that would.be very
 algengt
 common
 ‘I think that that this would be very common with older people.’
- e. náttúrliga í tímum hjá mér þá hef ég eða þá *held*
 naturally in class at me then have I or then hold
 ég upp stífum aga
 I up stern discipline
 ‘And of course in my class I have or I hold up strong discipline.’

2.1. Data treatment and annotation

The prosodic analysis of the 47 remaining instances of *held ég* was done in Praat (Boersma 2001, Boersma & Weenink 2012) on the basis of careful inspection of the spectrogram and native speaker perception. The analysis comprised three tiers: a tonal tier for intonational analysis in terms of pitch accents and boundary tones, a segmental tier focusing on the segmental processes relevant here (i.e., /h/-dropping and FVD), and a text tier. The annotation was done by the author of this paper (mostly tonal tier and text tier) and by Sigrún Gunnarsdóttir (segmental tier and text tier), a native speaker of Icelandic, who is trained in phonetic annotation with a focus on Icelandic vowels (see Gunnarsdóttir 2012). Items for which the analysis was not immediately clear were given to another expert in Icelandic phonology. The tonal analysis focused on boundary tones to identify IP-boundaries, but all utterances were also

annotated for pitch accents, following previous work on pitch accents and boundary tones in Icelandic (Árnason 1998, Dehé 2010). In particular, two bitonal pitch accents, L*+H and L+H*, have been identified for Icelandic (Dehé 2010). Note that a prosodic hierarchy has not yet been established and it cannot be done in this paper. However, as mentioned in Section 1.2 above, it has been observed that Icelandic has two boundary tones at IP level (L%, H%) and that the IP is the domain for downstep (Árnason 1998, Dehé 2009b). There is preliminary evidence for a level between the IP and the prosodic word from the environment of FVD application (Dehé 2008), and preliminary evidence for phrase accents L- and T-, i.e. the edge tone of intermediate phrase (ip), in Dehé (2009b), but more systematic research is necessary. In the present study, boundaries are therefore annotated T-T% (e.g., L-L%) if they are clear IP-boundaries, and occasionally # if they are clear boundaries above word level but can be ip or IP (see e.g. Figure 4 below). In determining prosodic separation, this work follows the definition of prosodic separation developed in Dehé (2014), which is given in (29) and crucially involves nuclear prominence associated with the prosodically separate constituent as well as tonal and other boundary cues (e.g. pauses) to its left and right.

(29) Prosodic separation (from Dehé 2014:103)

A segmental string (e.g. a parenthetical) is prosodically separate if it has a nuclear accent and is immediately preceded and followed by a phrasal prosodic boundary marked by edge tones along with other phonetic parameters marking the edge of a phrasal prosodic constituent.

The segmental analysis was straightforward. For each utterance containing *held ég*, the sequence <word1 word2> was segmentally annotated, with word2 being *held* and word1 being the word immediately preceding *held*. Two examples of the segmental analysis are given in Figure 2 and Figure 3, both by the same speaker, showing only *held ég* and the word preceding the CC. In Figure 2, as can be seen on the segmental tier plotted together with spectrogram and waveform, the initial glottal fricative /h/ on *held* is realised and the preceding vowel on *abbey* is clearly pronounced. In Figure 3, on the other hand, both /h/-dropping on *held* and FVD on the preceding word (here: *bara*) apply.

Ten further items had to be discarded because the quality of the sound file was not good enough for instrumental analysis, for example due to overlapping speech or bad recording quality, or because the actual utterance did not correspond to the corpus transcriptions such that no *held ég* was present in the utterance. The final data set was thus reduced to thirty-seven items.

Figure 2. Target sequence: *abbey held ég*; no /h/-dropping on *held*, no FVD on *abbey*

Figure 3. Target sequence: *bara held ég*; /h/-dropping on *held* and FVD on *bara* apply

All remaining 37 CCs were also coded for their syntactic position. Four syntactic positions were considered: (i) clause-final and utterance-final (see (30)); (ii) clause-final but utterance-internal (see (31)); (iii) utterance-internal and following a syntactic XP (see (32)); (iv) utterance-internal and XP-internal (see (33)).

- (30) Position (i): Clause-final and utterance-final (Source: Talmál, *Samtöl ÍSTAL*)

Speaker B: já sko _{CP}[hann er níutíuogþrjú] _{CP}[held ég]
 yes so he is ninety-three think I

Speaker A: já

- (31) Position (ii): Clause-final and utterance-internal (Source: Talmál, *Samtöl ÍSTAL*)

CP[kæraðan hans er í Háskólanum Kópavogi] CP[held
girlfriend his is in university Kópavogur think
ég] CP[og hérna já Kiddi og Jóna voru að kaupa
I and here yes Kiddi and Jóna were to buy
sér íbúð]
self flat
'His girlfriend is at the university in Kópavogur I think and
Kiddi and Jóna bought a flat together.'

- (32) Position (iii): Utterance-internal and following a syntactic XP (Source: Talmál, *Samtöl ÍSTAL*)

CP[PP[á síðasta ári] CP[held ég] reyndar ...]
on last year think I in.fact

- (33) Position (iv): Utterance-internal and XP-internal (Source: Talmál, *Samtöl ungs fólks*)

CP[það eru CP[held ég] mörg lönd CP[sem þurfa að
it are think I many countries that need to
líða fyrir það]]
suffer for it

MATCH CLAUSE (see (11)i) predicts prosodic separation of the CC in a non-recursive structure as given in (12)a above for the two clause-final positions in (30) and (31). It predicts prosodic separation of the CC in a recursive structure as given in (12)b and c for the two clause-internal positions in (32) and (33), respectively. In the results section immediately below, the positions are therefore combined accordingly.

2.2. Results

As a result of the instrumental analysis described in the previous section, and based on the tonal and segmental cues to intonational phrasing in Icelandic as outlined in Sections 1.2 and 2.1 above, essentially three patterns were found with regard to the phrasing of CC *held ég*. They are summarised in (34); representative examples for these phrasing patterns are given in (35) through to (37), plotted in Figures 4 through to Figure 6. In Table 2 below, the phrasing results are given according to the position of the CC in its utterance.

- (34) Observed phrasing patterns

- a. CC prominent; N = 3
IP(... IP(*held ég*)IP ...)IP
b1. CC unstressed; N = 18
<IP(...)IP> IP(... *held ég*)IP <IP(...)IP>

- b2. CC unstressed; N = 1 (encliticisation)
 $\langle_{IP(\dots)IP} \rangle IP(IP(\dots)IP \text{ held } \acute{e}g)_{IP} \langle_{IP(\dots)IP} \rangle$
 c. CC unstressed, either pre- or postnuclear; N = 15
 $\langle_{IP(\dots)IP} \rangle IP(\dots \text{ held } \acute{e}g \dots)_{IP} \langle_{IP(\dots)IP} \rangle$

First, the CC was prominent with its own pitch accent and phrased in its own prosodic domain (see (34)a; N = 3). All three CCs realised in this way were in sentence-medial position, and were phrased in a recursive prosodic structure, i.e. according to (21)b/(23).

An example of this pattern is given in (35)/Figure 4. The CC-verb *held* is associated with a pitch accent, which is one in a sequence of L+H* pitch accents. The hash in the tonal tier in Figure 4 represents a prosodic boundary of a level above the prosodic word. The downward F0 trend is such that the peak associated with *máli* is higher than the one associated with *held*, which in turn is higher than the one associated with *forseti* ('president'), possibly suggesting one long IP. Pitch reset is then observable in the H* associated with the first syllable of *kalla* ('call'), not plotted in Figure 4 for space reasons. On the other hand, *held ég* is clearly set off by boundary markers from the surrounding material: pauses of considerable length on both sides as well as the absence of segmental processes and a pitch fall following the peak associated with *held* to a low level in the speaker's pitch range, clearly suggesting prosodic separation. The syntactic structure is complex and there are two syntactic interpolations of parenthetical nature, the CC *held ég* and the vocative *hæstvirtur forseti* ('honorable president'), the latter also being separated from preceding and following material by pauses. The downward F0 trend seems to provide evidence for a sequence of intermediate phrases, such that the sequence *það skiptir ekki öllu máli* ('It does not matter'), the CC *held ég* and the vocative *hæstvirtur forseti* all form ips of their own within IP. However, since a prosodic hierarchy has not yet been established for Icelandic, # indicates a boundary above word level.¹¹ Given the prominence associated with the CC, the presence of pauses on both sides and the blocking of segmental processes, (35)/Figure 4 represents a clear case of prosodic separation of the CC.

(35) CC prominent (Source: Talmál, *Alþingisumræður*)

það skiptir ekki öllu máli held ég hæstvirtur forseti hvað
 it divide not all case think I honorable president what
 menn vilja kalla það sem að að hér er sett fram
 men want call it Rel-prn to to here is sit forth
 'It does not matter, I think, honorable president, what men want
 to call what is being put forward here'

¹¹ Alternatively, the downward trend can be seen as evidence for outer IP brackets and a structure along the lines of $IP(IP(\dots)IP \text{ held } \acute{e}g)_{IP} IP(\dots)_{IP}$. See Myrberg (2013) for a related line of argumentation for Stockholm Swedish, and references given there. I leave this question to future research for Icelandic.

Figure 4. Prosodic separation (pattern (21)b/(34)a)

Second, the CC was non-prominent postnuclear material and as such was phrased in one prosodic domain with preceding host material and followed by an IP boundary ((34)b1; N = 18), i.e. it was phrased according to (24)a. In addition to these 18 items, there was one item which was encliticised to the preceding domain (see (34)b2); the CC was set off from the preceding host material by a boundary tone and pause but was not prominent. Tonally, the CC receives a copy of the preceding tonal targets, i.e. the edge tones (see Gussenhoven 1990, 2004 on encliticisation and tone copy); in the following discussion, this item is subsumed under one phrasing pattern with prosodic integration as in (34)b1/(24)a.

A representative example of pattern (34)b1 is provided in (36)/Figure 5. The CC is post-nuclear without prominence and final in its IP. Along with the lack of prominence associated with CC, the absence of an IP-boundary between *danska* and *held ég* is cued by the application of the segmental process of /h/-dropping on *held* as well as tonal cues; *danska* is associated with the nuclear accent of the relevant IP, which is a rise to H* (masked in Figure 4 by the voiceless plosive onset of *danska*). From H* the F0 contour falls towards the low boundary, the second syllable of *danska* and the CC being associated with this fall. The right edge of the IP is marked by a low boundary tone L% and creaky voice. After the boundary tone, there is a step-up in pitch from the low level reached at the end of the IP, not plotted here. Figure 5 zooms in on the IP containing the CC (IP3 in (36)b) for reasons of space. The phrasing pattern including material to the left and right of this stretch of the utterance is given in (36)b.

Figure 5. Prosodic integration in IP-final position (pattern (24)a/(34)b1)

(36) CC postnuclear, unstressed, domain-final (Source: Talmál, *Samtöl ÍSTAL*)

- a. svartur maður sem að kom hérna sem á
 black man Rel-Prn to came here Rel-Prn has
 danska konu eða íslenska nei danska held ég a
 Danish woman or Icelandic no Danish think I uh
 skiptir ekki máli hún er allavega hvít
 divide not case she is in.any.case white
 ‘A black man, who came here, who has a Danish wife, or
 Icelandic, no Danish I think, it doesn’t matter, she is in any
 case white’
- b. ... sem á danska konu L%)_{IP1} IP₂(eða íslenska L%)_{IP2} IP₃(nei
 danska held ég L%)_{IP3} IP₄(a skiptir ekki máli hún er allavega
 hvít H%)_{IP4}

Third, the CC was without prominence and was preceded and followed in its prosodic domain by host material (see (34)c/(24)c). It was either part of a prenuclear (N = 14) or a postnuclear (N = 1) string. A representative example is given in (37)/Figure 6; see (27) for its syntactic phrasing. The CC *held ég* is clearly without prominence and it is placed between two non-nuclear accents associated with *hef* (‘have’) and *einu* (of *einu sinni* ‘once’), respectively. Another cue to the absence of an IP-boundary to the left of the CC is the fact that both /h/-dropping (on *held*) and FVD (on *bara*) apply. The nuclear accent is associated with *skíði* (‘skiing’).

Figure 6. Prosodic integration in IP-medial position (pattern (24)c/(34)c)

- (37) CC prenuclear, unstressed, domain-internal (Source: NDC)
 ... nei en það ég hef nú bara *held ég* einu sinni
 no but that I have now only think I once
 farið á skíði sko
 went on skiing so
 ‘But then I think I only went skiing once, so ...’

Table 2 lists the phrasing results in (34) according to syntactic position. Sixteen CCs were placed in clause final position either at the end of an utterance ($N = 9$; see example (30)) or non-utterance finally ($N = 7$; see (31)). Twenty-one CCs were placed in clause-medial position either following a syntactic XP ($N = 3$; see (32)) or XP-internally ($N = 17$; see (33)).

Table 2. Intonational phrasing of CC *held ég* according to syntactic position; clause-final = $_{CP}[\text{clause1}] \text{ } _{CP}[\text{CC}] < _{CP}[\text{clause2}] >$; clause-internal = $_{CP}[\text{clause1}] \text{ } _{CP}[\text{CC}] \text{ clause 1}$

Syntactic position of CC with respect to host clause	Attested phrasing; number of occurrences			Occurrences overall
	(21)b/(34)a: $_{IP}(\dots \text{ } _{IP}(\textit{held}$ $\textit{ég})_{IP} \dots)_{IP}$	(24)a/(34)b: $_{IP}(\dots \textit{held}$ $\textit{ég})_{IP}$	(24)c/(34)c: $_{IP}(\dots \textit{held}$ $\textit{ég} \dots)_{IP}$	
Clause-final (see (30) and (31))	0	15	1	16
Clause-internal (see (32) and (33))	3	4	14	21
Occurrences overall	3	19	15	37

Overall, CC *held ég* is most frequently realised without prominence and integrated as prenuclear or postnuclear material in an IP together with host material. Only three CCs were prosodically prominent, all with a nuclear accent and phrased as a separate prosodic constituent.

Two phrasing patterns anticipated in (21) and (24) were not observed in the current data set: prosodic separation of the CC in a non-recursive structure (see (21)a; but see footnote 11), and phrasing of the CC as in (24)b, with the CC at the left edge of its IP followed by host material in the same IP. An obvious explanation for this is the size of the data set. However, notice that the distributional numbers of observed phrasing patterns are in line with results previously found for English (Dehé 2014; see (13) above), where integration of the CC as pre- or postnuclear material was the most common pattern like in the present study, and phrasing as in (24)b was very infrequent. It is most striking, perhaps, that none of the CCs following clauses were phrased in their own separate IP. Instead, they were typically integrated with the preceding syntactic clause in one prosodic constituent (N = 15 out of 16, see Table 2).¹²

3. Discussion

It immediately follows from the results presented in the previous section that CCs add to the existing evidence for non-isomorphism between syntactic and prosodic structure. The results are furthermore in line with results reported in previous work for English. They are thus fully in line with Hypothesis I (see (20)I above) that Icelandic CCs, like English ones, exhibit a variety of intonational phrasing patterns. Clearly, prosodic markedness constraints will have to interact with the syntax-phonology interface constraint MATCH CLAUSE (see (11)i) in order to account for the observed patterns. In this section, the observed patterns as given in Table 2 above will be addressed.

Before turning to these cases, it is essential to take another look at the syntax and semantics of CCs as they relate to prosody. Remember the properties of CCs outlined in Section 1. Syntactically, they are parenthetical clauses (Kluck & de Vries 2015, Griffiths 2015, among others), attached to the host clause as parenthetical adjuncts, involving par-merge, which makes them invisible for the host clause in terms of

¹² A reviewer notes that in the Icelandic data set, the CC, if integrated, is never integrated rightwards, i.e. such that it is leftmost in its IP and phrased with host material following the CC ($_{IP}(CC \dots)_{IP}$; compare the pattern in (13)d observed for English). Quite generally speaking, the direction of phrasing changes the semantic scope of the respective CC over host material. Dehé (2009a:604–605, 2014:39–40) explains a relevant example of English *I think*. Note that the $_{IP}(CC \dots)_{IP}$ phrasing pattern was also infrequent in the English data set (N = 9 out of 147; see (13) above), perhaps suggesting that CCs have scope over preceding material more often than over following material. Given the occurrence but relative infrequency of the $_{IP}(CC \dots)_{IP}$ phrasing in the English data set, it is likely that it would be found in a larger corpus for Icelandic.

c-command relationships (de Vries 2007, 2012). Being parenthetical clauses, MATCH CLAUSE predicts them to be matched by an IP in the prosodic structure (Selkirk 2009, 2011). By definition, an IP has at least one accent position, thus a CC matched by an IP has nuclear prominence. Semantically, remember Scheffler's (2009) two-dimensional semantics for CCs. In her view, their primary function is to lower the epistemic threshold, which determines whether the speaker is sure of the proposition, an assumption which has also long been made by other authors noting that CCs have mitigating functions and evidential meaning (see Section 1 for references). Their secondary contribution, according to Scheffler (2009), is to make a side comment in the domain of conventional implicatures (CIs). Previous work on English already suggests a relation between the prosodic realization of CCs and their meaning (Dehé 2009a, Dehé & Wichmann 2010, Kaltenböck 2010, Dehé 2014, among others). Dehé (2014) specifically relates the prosodic realization of CCs to Scheffler's (2009) two-dimensional semantics, such that Scheffler's (2009) primary function of lowering the epistemic threshold relates to prosodic integration in terms of phrasing and lack of nuclear prominence, while Scheffler's secondary function, i.e. CI semantics, relates to prosodic separation and prominence. The assumption that CI semantics is related to prosodic separation goes back to Potts (2005) and puts parenthetical CCs with CI semantics in one class with other types of parentheticals such as parenthetical main clauses, non-restrictive relative clauses and nominal appositions.

The relation between prosody and meaning assumed here is illustrated in examples (38), illustrating Scheffler's primary, mitigating function, and (39), illustrating Scheffler's secondary, CI semantics function. In (38), repeated from (36)/Figure 5, the speaker is clearly not sure whether the woman she is talking about is Danish or Icelandic, thus the primary function of the CC is to lower the epistemic threshold and convey uncertainty on the part of the speaker as to the truth value of the proposition. This function is reflected in prosodic integration and lack of prosodic prominence associated with the CC. In (39), on the other hand, repeated from (35)/Figure 4, there is no reason to assume that the speaker tries to mitigate the proposition of the host clause. The example is taken from a parliamentary debate and the topic being discussed is given different names in the course of the debate. The current speaker underlines that these names should not disguise the real topic. The CC *held ég* is prominent, reinforcing the side comment, which is that the speaker believes what he says to be true, therefore there is no reason for the epistemic threshold to be lowered.

- (38) CC with mitigating function; non-prominent, postnuclear in IP
together with host material (Source: Talmál, *Samtöl ÍSTAL*)
- a. svartur maður sem að kom hérna sem á danska
black man Rel-Prn to came here Rel-Prn has Danish
konu eða íslenska nei danska *held ég*
woman or Icelandic no Danish think I
a skiptir ekki máli hún er allavega hvít
uh divide not case she is in.any.case white
'A black man, who came here, who has a Danish wife, or
Icelandic, no Danish I think, it doesn't matter, she is in any
case white'
- (39) CC prominent (Source: Talmál, *Alþingisumræður*)
- það skiptir ekki öllu máli *held ég* hæstvirtur forseti
it divide not all case think I honorable president
hvað menn vilja kalla það sem að hér er sett
what men want call it Rel-prn to to here is sit
fram
forth
'It does not matter, I think, honorable president, what men want
to call what is being put forward here.'

Hypothesis III, which holds that meaning is essential because CCs may or may not be prosodically prominent according to their meaning in context, is thus borne out. How does it relate to the prosodic markedness constraints which are in interaction with MATCH CLAUSE to derive the observed pattern? I will make use of an idea related to the constraints DESTRESS-GIVEN and STRESS-FOCUS in Féry & Samek-Lodovici (2006) (see also Selkirk 2011 for discussion, and references given in both works). DESTRESS-GIVEN states that a discourse-given phrase is prosodically nonprominent, i.e. it prohibits a phrase from carrying phrasal stress prominence. As Selkirk (2011:471) explains, the absence of phrase-level prominence leads to an absence of phrase-level constituent status for a phrase thus marked. This is because another class of constraints, referred to as PROSPROM(π) by Selkirk (2011) and going back to earlier work, requires that a prosodic constituent π be headed, i.e. it must contain a most prominent constituent. If PROSPROM(IP) outranks MATCH CLAUSE, then a clause cannot have constituent status if it is not associated with prominence. For a clause not to be associated with prominence, it must follow a constraint DESTRESS. Since non-prominence in the case of CCs is related to mitigating function, let us call this constraint DESTRESS-MITIG. We also assume a constraint STRESS-CI, which relates to the idea that a phrase with CI semantics must be prosodically prominent. The four constraints relevant at this stage are listed in (40).

(40) Constraints

- a. Syntax-phonology interface constraint **MATCH CLAUSE** (Selkirk 2009, 2011):
A clause in syntactic constituent structure must be matched by a corresponding prosodic constituent (i.e., the IP) in phonological representation.
- b. Prosodic markedness constraint **PROSPROM(IP)** (Selkirk 2011 and references given there)
An IP must be headed, i.e. it must contain a most prominent constituent.
- c. Prosodic markedness constraint **DESTRESS-MITIG**
A clause whose function is one of mitigation, i.e. to lower the epistemic threshold, which determines whether the speaker is sure of the proposition, is prosodically non-prominent.
- d. Prosodic markedness constraint **STRESS-CI**
A clause with CI semantics is associated with a nuclear accent position.

I will now return to the observed cases (see Table 2) and start with CCs in clause-final position (examples in (30) and (31) above, repeated in (41); square brackets in (41) indicate syntactic clauses). Two phrasing patterns were observed for clause-final CCs, both being patterns of prosodic integration (see Table 2).

(41) CC clause-final

- a. CC clause-final and utterance-final
já sko _{CP}[hann er níutíuogþrjú] _{CP}[held ég]
yes so he is ninety-three think I
- b. CC clause-final and utterance-internal
_{CP}[kærastan hans er í Háskólanum Kópavogi] _{CP}[held
girlfriend his is in university Kópavogur think
ég] _{CP}[og hérna já Kiddi og Jóna voru að kaupa
I and here yes Kiddi and Jóna were to buy
sér íbúð]
self flat
'His girlfriend is at the university in Kópavogur I think and
Kiddi and Jóna bought a flat together.'

Table 3 shows how a clause-final CC with CI semantics behaves with respect to the constraints in (40), while Table 4 shows the same for a CC that serves a mitigating function. Underlining indicates main prominence.

In Table 3, all candidates trivially satisfy **DESTRESS-MITIG** because it does not apply to a CC with CI semantics. Candidates (i) and (ii) satisfy **MATCH CLAUSE**, but candidate (i) violates **PROSPROM(IP)** because the CC-IP has no prominence, and it violates **STRESS-CI** because the CC with CI semantics is not associated with prominence. Candidates (iii) and (iv)

both violate MATCH CLAUSE twice, because both the CC and clause1 fail to match an IP in prosodic structure. Candidate (iii) also violates STRESS-CI because the CC with CI semantics has no prominence. Note that candidate (iv) satisfies STRESS-CI (only) if clause1 is associated with prominence; we will assume that prenuclear prominence is realised within clause1. Candidate (ii) wins because it satisfies all three constraints. This case does not occur in the present data set; all CCs with prominence in the present data set are placed in clause-internal position, and all clause-final CCs are non-prominent and integrated with respect to phrasing.

Table 3. Clause-final CC, CI semantics; underlining indicates main prominence

Clause-final CC with CI semantics	STRESS-CI	PROSPROM (IP)	MATCH CLAUSE
(i) $IP(\underline{\text{clause1}})_{IP} IP(CC)_{IP} <IP(\underline{\text{clause2}})_{IP}>$	*!	*	√
(ii) $IP(\underline{\text{clause1}})_{IP} IP(\underline{CC})_{IP} <IP(\underline{\text{clause2}})_{IP}>$	√	√	√
(iii) $IP(\underline{\text{clause1}} CC)_{IP} <IP(\underline{\text{clause2}})_{IP}>$	*!	√	**
(iv) $IP(\underline{\text{clause1}} \underline{CC})_{IP} <IP(\underline{\text{clause2}})_{IP}>$	√	√	*!*

In Table 4, Candidates (i) and (ii) satisfy MATCH CLAUSE, but candidate (i) violates PROSPROM(IP) because the CC-IP has no prominence, and candidate (ii) violates DESTRESS-MITIG because the CC with mitigating function is associated with prominence. Candidates (iii) and (iv) both violate MATCH CLAUSE twice because clause1 and the CC fail to match IPs in prosodic structure; however candidate (iv) also violates DESTRESS-MITIG because the CC with mitigating function is associated with prominence. STRESS-CI is trivially satisfied for the CC because it does not apply to a CC with mitigating function, and is thus ignored. Candidate (iii) wins if both DESTRESS-MITIG and PROSPROM(IP) outrank MATCH CLAUSE, although the ranking between the two does not follow from the comparison.

Table 4. Clause-final CC, mitigating semantics; underlining indicates main prominence

Clause-final CC with mitigating function	DESTRESS-MITIG	PROSPROM (IP)	MATCH CLAUSE
(i) $IP(\underline{\text{clause1}})_{IP} IP(CC)_{IP} <IP(\underline{\text{clause2}})_{IP}>$	√	*!	√
(ii) $IP(\underline{\text{clause1}})_{IP} IP(\underline{CC})_{IP} <IP(\underline{\text{clause2}})_{IP}>$	*!	√	√
(iii) $IP(\underline{\text{clause1}} CC)_{IP} <IP(\underline{\text{clause2}})_{IP}>$	√	√	**
(iv) $IP(\underline{\text{clause1}} \underline{CC})_{IP} <IP(\underline{\text{clause2}})_{IP}>$	*!	√	**

The interaction of these constraints and their ranking accounts for the fifteen observed cases of prosodically integrated clause-final CCs, as shown in Table 2. Their semantics and intonational phrasing correspond to candidate (iii) in Table 4. Note that the remaining case of clause-final CC in Table 2, phrased such that material following the CC is also phrased in the same IP, can be accounted for if the material following the CC is either discourse-given or has a mitigating function and is therefore without prominence. This turns out to be the case; the respective item is given in (42). The CC is followed by *og eitthvað* ('or something'), which is without prominence due to its discourse status. This is immediately followed by the end of the turn of the speaker.

- (42) Clause-final CCs phrased $IP(\dots held\ \acute{e}g\ \dots)_{IP}$ (Source: Talmál, *Samtöl ungs folks*)
 þeir ætluðu [pron=mismæli] fóru eitthvað
 they intended [pronoun=speech error] went something
 til Ástralíu líka held ég og eitthvað
 to Australia also think I or something
 'I think they also went to Australia or something'

Next, we will account for the intonational phrasing of clause-internal CCs (examples in (32) and (33) above, repeated in (43) for convenience). The observed cases are repeated from Table 2 in (44) below.

- (43) CC clause-internal
 a. CC clause-internal and following a syntactic XP
 $CP[PP[á\ síðasta\ ári]\ CP[held\ \acute{e}g]\ reyndar\ \dots]$
 on last year think I in.fact
 b. CC clause-internal and XP-internal
 $CP[það\ eru\ CP[held\ \acute{e}g]\ mörg\ lönd\ CP[sem\ þurfa\ að\ líða\ fyrir\ það]]$
 it are think I many countries that need to suffer for it

- (44) Intonational phrasing of clause-internal CCs (repeated from Table 2)
 a. CC phrased according to (21)b/(34)a (prosodic separation in recursive structure)
 $IP(\dots IP(held\ \acute{e}g)_{IP}\ \dots)_{IP}$ 3 out of 21 cases
 b. CC phrased according to (24)a/(34)b (CC phrased with preceding host material)
 $IP(\dots held\ \acute{e}g)_{IP}$ 4 out of 21 cases
 c. CC phrased according to (24)c/(34)c (CC phrased with preceding and following host material)
 $IP(\dots held\ \acute{e}g\ \dots)_{IP}$ 14 out of 21 cases

We will once again begin with a CC with CI semantics, which is straightforward (see Table 5). DESTRESS-MITIG is trivially satisfied since it does not apply to CCs with CI semantics and is therefore not considered here. Candidate (ii) satisfies all constraints and is thus the natural winner under any ranking. The CCs in candidates (iii) and (iv) violate MATCH CLAUSE because they do not match an IP in prosodic structure. MATCH CLAUSE is violated twice by candidates (v) and (vi), because both the CC and the host clause (clause1) fail to be matched by an IP in prosodic structure. Candidates (iii) and (v) also violate STRESS-CI because the CC with CI semantics does not bear prominence. Candidate (i) violates STRESS-CI for the same reason and it also violates PROSPROM(IP) because the CC-IP has no prominence.¹³

Table 5. Clause-internal CC, CI semantics; underlining indicates main prominence

Clause-internal CC with CI semantics	STRESS-CI	PROSPROM(IP)	MATCH CLAUSE
(i) IP(clause1 IP(CC)IP <u>clause1</u>)IP	*!	*	√
(ii) IP(clause1 IP(CC)IP <u>clause1</u>)IP	√	√	√
(iii) IP(clause1 CC <u>clause1</u>)IP	*!	√	*
(iv) IP(clause1 <u>CC</u> clause1)IP	√	√	*!
(v) IP(<u>clause1</u> CC)IP IP(<u>clause1</u>)IP	*!	√	**
(vi) IP(<u>clause1</u> <u>CC</u>)IP IP(<u>clause1</u>)IP	√	√	*!*

Table 6. Clause-internal CC, mitigating semantics; underlining indicates main prominence

Clause-internal CC with mitigating function	DESTRESS-MITIG	PROSPROM(IP)	MATCH CLAUSE
(i) IP(clause1 IP(CC)IP <u>clause1</u>)IP	√	*!	√
(ii) IP(clause1 IP(CC)IP <u>clause1</u>)IP	*!	√	√
(iii) IP(clause1 CC <u>clause1</u>)IP	√	√	*
(iv) IP(clause1 <u>CC</u> clause1)IP	*!	√	*
(v) IP(<u>clause1</u> CC)IP IP(<u>clause1</u>)IP	√	√	**(!)
(vi) IP(<u>clause1</u> <u>CC</u>)IP IP(<u>clause1</u>)IP	*!	√	**

¹³ Note that in Tables 5 and 6, in candidates where clause1 is in one IP with an intervening CC, only one part of clause1 is underlined, because underlining indicates main prominence. In actual speech, prominence in clause1 may be realised before or after the CC, depending on the position of the CC and on the host clause material preceding and following the CC, and there may be more than one prominence position, one of them being the nuclear one. Candidate (iv) in Table 5 satisfies STRESS-CI only if clause1 is realised with some (e.g. non-nuclear) prominence because it carries CI-semantics. The same holds for candidate (iv) in Table 6, if STRESS-CI is added to the evaluation.

Candidate (ii) in Table 5 corresponds to the three cases of prosodic separation in a recursive prosodic structure observed in the data (see Table 2/(44)a). One of these cases was discussed in (35) and (39) above, explaining intonational phrasing and meaning.

The final case is that of a clause-internal CC serving a mitigating function. STRESS-CI is trivially satisfied for the CC because it does not apply to a CC with mitigating function, and is thus ignored.

In Table 6, Candidates (i) and (ii) satisfy MATCH CLAUSE, but candidate (i) violates PROSPROM(IP) because the CC-IP has no prominence, and candidate (ii) violates DESTRESS-MITIG because the CC with mitigating function is associated with prominence. Candidates (iii) and (iv) both violate MATCH CLAUSE because the CC fails to match an IP in prosodic structure; however candidate (iv) also violates DESTRESS-MITIG because the CC with mitigating function is associated with prominence. MATCH CLAUSE is violated twice by candidates (v) and (vi), because both the CC and the host clause fail to be matched by an IP in prosodic structure. Candidate (vi) also violates DESTRESS-MITIG because the CC with mitigating function bears prominence. Candidate (iii) turns out to be the winner in this competition. Table 2/(44) shows that 14 of 21 cases of clause-internal CCs were phrased in this way.

The remaining four cases not yet accounted for by the tables above were clause-internal CCs phrased according to (44)b. Their realisation corresponds to candidate (v) in Table 6. This candidate behaves worse than the optimal candidate on MATCH CLAUSE (one more violation) but crucially behaves alike on the other constraints, i.e. the prosodic markedness constraints are satisfied. The rating differences between the two candidates, i.e. the optimal candidate (iii) and the suboptimal candidate (v), which follows from the additional violation of MATCH CLAUSE by candidate (v), is reflected in the number of occurrences in the corpus, with candidate (iii) being much more frequent than candidate (v).

In the remainder of this discussion, and in order to arrive at a more complete picture, we will consider three further prosodic markedness constraints employed in previous research and not yet included in the tables above. They are listed in (45) and addressed immediately below.

(45) Further constraints to be considered

- a. EQUALSISTERS (Myrberg 2013)
Sister nodes in prosodic structure are instantiations of the same prosodic category.
- b. EGDEMOST-R(PROM-IP, EDGE-IP) (Selkirk 2011 and references given there)
Main prominence is located at the right edge of an IP.
- c. *IP (Féry 2011; see her NOPHRASE constraint)
Avoid the proliferation of IPs.

EQUALSISTERS (Myrberg 2013) requires for sister nodes in prosodic structures to be of the same prosodic category, i.e. the sisters of IP should be IPs. It renders the earlier constraints NON-RECURSIVITY and EXHAUSTIVITY (e.g. Selkirk 1996) redundant and it militates against structures such as (44)a. Depending on the ranking of EQUALSISTERS, a prosodic structure may be recursive or not. In Myrberg's (2013) work, EQUALSISTERS interacts with MATCH to account for the phrasing patterns of coordinated and embedded clauses in Stockholm Swedish. The prosodic structures observed here for Icelandic *held ég* suggest ranking of EQUALSISTERS below MATCH CLAUSE. In Tables 3 and 4, with the CC in clause-final position, EQUALSISTERS has no effect because it is satisfied by the respective optimal candidates.¹⁴ Note incidentally that candidates with recursive phrasing ($IP(\dots IP(held\ \acute{e}g)_{IP} \dots)_{IP}$), not given in Tables 3 and 4 above, would violate EQUALSISTERS as well as MATCH CLAUSE and would thus behave worse than the optimal candidates. In Table 5, the case of clause-internal CC with CI semantics, the optimal candidate violates EQUALSISTERS, while candidates (iii) through to (vi) satisfy it, suggesting evidence for the rank of EQUALSISTERS below MATCH CLAUSE. In Table 6 (clause-internal CC, mitigating function), the optimal candidate as well as its runner-up satisfy EQUALSISTERS, which has thus no effect.

With respect to the location of main prominence within its prosodic constituent, I assume that EGDEMOST-R(PROM-IP, EDGE-IP) is active at the level of IP in Icelandic since prominence has been shown to be rightmost at phrase- and sentence level in this language (Árnason 1998 among others). If the CC *held ég* is prosodically separate and associated with prominence as in Tables 3 and 5, prominence falls onto the verb unless the pronoun has contrastive focus. This can be accounted for along the lines of DESTRESS-GIVEN (Féry & Samek-Lodovici 2006), since the information conveyed by the pronoun is inherently given. If the CC is clause-final, final in its IP and realised without prominence due to its mitigating function (Table 4), EGDEMOST-R is violated, but is without effect if outranked by the prosodic markedness constraints DESTRESS-MITIG and PROSPROM(IP). If the CC is clause-internal, prosodically integrated in medial position in its IP and realised without prominence due to its mitigating function (Table 6), EGDEMOST-R has no effect since main prominence is still rightmost in its IP given that main sentence stress is rightmost in Icelandic.

Finally, NoPHRASE "militates against the creation of unnecessary structure" (Féry 2011:1909; see also Truckenbrodt 1999 for a constraint

¹⁴ Similar results as for EQUALSISTERS would be obtained throughout for STRONGSTART, which demands that a "prosodic constituent optimally begins with a leftmost daughter constituent which is not lower in the prosodic hierarchy than the constituent that immediately follows" (Selkirk 2011:470).

*P-PHASE, which seeks to avoid p-phrases altogether, and Prince & Smolensky's 2004:30 fn. 13 constraint family *STRUC, which bans structure altogether). According to Féry, the formation of prosodic constituents higher in the prosodic hierarchy is worse than that of constituents lower in the hierarchy. In the present context, *IP, which militates against IP-formation, is particularly relevant. The phrasings observed here are supportive of the assumption that *IP is ranked below the interface constraint MATCH CLAUSE. In Table 3, the optimal candidate has two or three (depending on the presence of clause2) *IP violations, while candidates (iii) and (iv) only have one or two (again depending on the presence of clause 2), thus the optimal candidate always has one more *IP violation than candidates (iii) and (iv). However, candidate (iii) violates STRESS-CI and MATCH CLAUSE, and candidate (iv) violates MATCH CLAUSE. Similarly, in Table 5, the optimal candidate has one more violation of *IP compared to candidates (iii) and (iv). However, candidate (iii) violates STRESS-CI and MATCH CLAUSE, and candidate (iv) violates MATCH CLAUSE. In Tables 4 and 6, the optimal candidate behaves alike or better on *IP compared to their competitors.

Finally, a reviewer notes – rightly – that STRESS-CI is not needed in Tables 3 and 5. The optimal candidate can be identified as a result of the interaction of PROSPROM(IP) and MATCH CLAUSE, none of which is violated by the optimal candidate, while remaining candidates violate either PROSPROM(IP) (candidates (i) in Tables 3 and 5) or MATCH CLAUSE (candidates (iii) and (iv) in Table 3 and candidates (iii)–(vi) in Table 5). However, while CCs are clauses and thus subject to MATCH CLAUSE it is not clear that all elements with CI semantics are clauses in the syntactic structure. Accordingly, MATCH CLAUSE and STRESS-CI will have to be separated in the analysis. At the same time, it is clear that while DESTRESS-MITIG takes care of some rephrasing, non-violation of STRESS-CI results in default phrasing. As suggested by Shin Ishihara (personal communication) it is also conceivable that STRESS-CI can be interpreted as a special instance of (and can thus be replaced by) STRESS-FOCUS, which demands that a “focused phrase has the highest prosodic prominence in its focus domain” (Féry & Samek-Lodovici 2006:135). I leave these issues for future research, which will have to include other types of constituents conveying CI semantics and their prosodic realisation.

Overall, the discussion clearly shows that the observed intonational phrasing patterns can be accounted for in terms of the interaction of the syntax-prosody interface constraint MATCH CLAUSE with prosodic markedness constraints, and in particular by ranking DESTRESS-MITIG, PROSPROM(IP) and STRESS-CI above MATCH CLAUSE, fully in line with Hypothesis II given in (20) above. Based on the current data set, the constraint rankings given in (46) emerge for Icelandic. The relative rankings for constraints separated by commas cannot be established in

the present context. All other rankings have been established and explained above.

(46) Constraint ranking

- a. DESTRESS-MITIG, PROSPROM(IP), STRESS-CI >> MATCH CLAUSE >> NOPHRASE(*IP), EQUALSISTERS
- b. DESTRESS-MITIG, PROSPROM(IP) >> EGDEMOST-R(PROM-IP, EDGE-IP)

Some open questions remain. For example, more empirical work, based on a larger data set, will have to confirm that mitigating elements are generally non-prominent. For the current Icelandic data set, this correlation holds. However, in the English data reported on in Dehé (2014), there are CCs with nuclear prominence phrased according to (24)a, i.e. prosodically integrated with respect to phrasing, as well CCs with non-nuclear (prenuclear) prominence phrased in one IP with host material along the lines of (24)b-c. Future work will show how those patterns can be accounted for in terms of constraint ranking. Moreover, the semantic division – CI semantics vs. mitigating function – may not always be so clear-cut. I leave these questions to future research.

4. Summary

This paper has investigated the prosodic phrasing of the Icelandic parenthetical CC *held ég* on the basis of data taken from Icelandic spoken language corpora. Three intonational phrasing patterns were observed in the data: (i) the CC may be phrased in a separate IP in a recursive prosodic structure with nuclear prominence of its own; (ii) it may be non-prominent and followed by an IP-boundary but phrased together in one IP with preceding material; (iii) it may be non-prominent and phrased together with preceding and following material in one IP. Patterns (ii) and (iii), which have in common that the CC is without prominence and phrased together with host material, are by far more common than prosodic separation of the IP, in line with previous results for English. The observed patterns were accounted for in terms of the interaction of the syntax-prosody interface constraint MATCH CLAUSE with prosodic markedness constraints: PROSPROM(IP), which demands that an IP must be headed; DESTRESS-MITIG, which demands that a clause whose function is one of mitigation is prosodically non-prominent; STRESS-CI, which demands that a clause with CI semantics is associated with a nuclear accent position. The ranking of these constraints is such that the prosodic markedness constraints outrank MATCH CLAUSE, although more research is necessary in order to determine the ranking of the prosodic markedness constraints with respect to each other. Other prosodic markedness constraints (NOPHRASE(*IP), EQUALSISTERS) are ranked below MATCH CLAUSE. Future research will verify the claims made here with respect to

the relation between prominence and meaning, in particular concerning elements with mitigating functions. However, the analysis suggested here does fully account for the current data set and observed phrasing patterns.

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