

Editorial

The editors are pleased to welcome you to second issue of the fifth volume of FULL, an open-access international journal providing a platform for linguistic research on modern and older Finno-Ugric or other Uralic languages and dialects. FULL publishes comparative research as well as research on single languages. With comparison of just Uralic languages or comparison across family lines. We are interested in formal linguistic accounts as well as empirically oriented contributions.

The first article in the present issue is by Phil Crone, titled ‘Finnish first conjunct agreement and the direction of Agree’. It addresses the syntax of agreement, based on data mainly from Finnish. In first conjunct agreement, a crosslinguistically widely attested agreement pattern, some agreement-bearing element stands in agreement with the first conjunct of a coordinated nominal expression, rather than with the full conjoined nominal phrase. Showing that none of the previous analyses are able to adequately explain the Finnish data, a new analysis is proposed, which is crucially based on the notion that the syntactic Agree(ment) process operates not only “downward” within constituent structure, as traditionally assumed, but also “upward.” In addition to bearing on general theoretical questions related to the directionality and timing of syntactic Agree(ment), Crone’s paper demonstrates that an analysis drawing on bidirectional Agree(ment) is a promising candidate for the explanation of first conjunct agreement cross-linguistically.

László Varga’s paper titled The Intonation of Topic and Comment in the Hungarian Declarative Sentence presents an accessible overview of the intonation of attitudinally neutral simple Hungarian declarative sentences with specific reference to their bifurcation into topic and comment. The succinct yet comprehensive description, formalised using the terms of the contour-based approach, concentrates on those aspects of Hungarian intonation that have grammatical or information structural functions. It identifies the preparatory, scalar and terminal contours that are composed to yield the key declarative intonational patterns of the Hungarian sentence. Not only default patterns, but also optional rules of prosodic realization are covered. While some intonational generalizations apply across the board, other properties are specific to the topic or the comment status and/or to the syntactic position of the elements to which they apply. As such, Varga’s study will be of interest to students of the information structure–prosody interface and the syntax–prosody interface alike.

We take this opportunity to thank the anonymous reviewers who generously lent their time and expertise to FULL.

Our publications can be freely accessed and downloaded without any need for prior registration. At the same time, those who register, or have already registered, are provided with the benefit of getting notified of new issues, calls, etc. via the occasional email.

FULL welcomes manuscripts from all the main branches of linguistics, including phonology, morphology, syntax, semantics and pragmatics, employing a diachronic or synchronic perspective, as well as from first language acquisition and psycholinguistics. Whatever the theoretical or empirical orientation of the contributions may be, our leading principle is to maintain the highest international standards.

The Editors

- c. *Do pokoju weszła młoda kobieta i chłopiec.* (Polish)
 to room enter.PST.3FSG young woman and
 boy.
 ‘Into the room walked a young woman and boy.’ (Citko 2004)

In each of the above examples, a verb realizes agreement with the first conjunct of a coordinated DP, rather than with the full, coordinated DP. Below, I show that Colloquial Finnish also displays patterns of FCA that are strikingly similar to patterns attested in the languages shown in (1). Due to similarities between Finnish FCA and FCA phenomena in other languages, I consider whether existing analyses of FCA may be extended to account for the Finnish data, ultimately demonstrating that existing analyses are unable to adequately account for the Finnish data. To the extent that a unified, cross-linguistic account of similar FCA phenomena is desired, the Finnish data play a crucial role in revealing the shortcomings of previous proposals.

The final analysis developed here relies on the notion that the operation Agree operates bidirectionally, both “downward”, as traditionally assumed, and “upward”. That is, a ϕ -probe may Agree with a goal with valued ϕ -features if either the probe c-commands the goal or the goal c-commands the probe. This differs from the standard assumption that Agree operates unidirectionally (Chomsky 2000, 2001), a view that has been defended in recent work such as Zeijlstra (2012), Preminger (2013), and Preminger & Polinsky (2015). However, other authors have argued for the bidirectionality of Agree in the sense proposed here (Adger 2003, Baker 2008, Bjorkman & Zeijlstra 2014, Carstens 2016, Merchant 2006, Puškar & Murphy 2015); the present analysis of Finnish FCA provides additional evidence that Agree operates bidirectionally.

The remainder of this paper is organized as follows. In §2, I lay out the Finnish FCA data that is to be explained. In §3, I present a set of assumptions about the clause structure of Finnish that will underlie each of the analyses of FCA that I consider. In §4, I consider several candidate proposals for analyzing the Finnish FCA data. I begin by considering existing proposals developed to account for FCA in Polish, Arabic dialects, Biblical Hebrew, and Dutch dialects. These candidate proposals each fail to fully account for the Finnish data, leading me to offer a novel analysis of FCA using a bidirectional version of Agree that overcomes the shortcomings of previous proposals. In §5, I conclude with final thoughts regarding the bidirectionality of Agree and the question of how to distinguish languages that allow FCA from those that do not.

2 First Conjunct Agreement in Finnish

FCA in Finnish has received little attention and appears to be restricted to non-standard dialects of Finnish; the phenomenon is not discussed in descriptive grammars, such as Karlsson (2008) and Hakulinen et al. (2004). However, van Koppen (2005) does provide a brief discussion of FCA in Finnish, giving the following example:²

² Note that van Koppen’s example in (2) contains *two* exponents of agreement with the subject DP: the auxiliary *olen* and the participle *käyneet*. While the auxiliary realizes FCA, the participle realizes full agreement. I return to this issue in §2.2.

- (2) *Sitä ole-n minä ja sinä-kin käy-neet Pariisi-ssa.*
 EXPL be-1SG I and you-too visit-PTC.PL Paris-INE
 ‘You and I have visited Paris.’

In (2), the auxiliary *olen* realizes FCA, i.e. it realizes first-person singular agreement morphology, rather than first-person plural morphology. According to van Koppen, (2) was not found acceptable by all her consultants. I have similarly found that not all speakers accept sentences including FCA, although many speakers find them extremely natural. I have conducted no systematic investigation into dialect differences with respect to the acceptability of FCA. For the majority of this paper, I will be concerned with those dialects of Finnish that do allow FCA.

A possibly related phenomenon regarding adjectival concord is discussed in Dalrymple & Nikolaeva (2006), although these data will not be a focus of the present paper. Consider the following examples:

- (3) a. *Hän ost-i vanha-n pöydä-n ja tuoli-t.*
 He buy-PST.3SG old-ACC.SG table-ACC.SG and chair-ACC.PL
 ‘He bought the old table and chairs.’
- b. **Hän ost-i vanha-t pöydä-n ja tuoli-t.*
 He buy-PST.3SG old-ACC.PL table-ACC.SG and chair-ACC.PL
 ‘He bought the old table and chairs.’
- (4) a. **Hän ost-i vanha-n tuoli-t ja pöydä-n.*
 He buy-PST.3SG old-ACC.SG chair-ACC.PL and table-ACC.SG
 ‘He bought the old chairs and table.’
- b. *Hän ost-i vanha-t tuoli-t ja pöydä-n.*
 He buy-PST.3SG old-ACC.PL chair-ACC.PL and table-ACC.SG
 ‘He bought the old chairs and table.’

According to Dalrymple and Nikolaeva, all Finnish speakers agree with the judgments shown in (3) and (4), but speakers disagree about the possible interpretations of (3a) and (4b). For all speakers, *vanhan/vanhat* may modify only the first conjunct of the coordinate NP structure. That is, (3a) may be interpreted such that the table is old and the chairs are not, while (4b) may be interpreted such that the chairs are old and the table is not. For some speakers, *vanhan/vanhat* may also take scope over both NPs such that in either (3a) or (4b), both the chairs and the table are old. Dalrymple and Nikolaeva take these speakers to allow for an analogue of FCA in the domain of adjectival concord, since a single adjective modifies both NPs but only “agrees” with one. FCA is not a major concern of Dalrymple’s and Nikolaeva’s, and they do not offer a full analysis of the data. Likewise, I will not focus on phenomena of adjectival concord, leaving this issue for future work.³

³ See Harizanov & Gribanova (2013) for a discussion of a similar phenomenon in Bulgarian.

To build upon van Koppen's original observations regarding FCA Colloquial Finnish, I collected attested examples of FCA in Colloquial Finnish from the web. These examples were gathered via web searches using Google and using the Finnish version of the Korp corpus (Borin et al. 2012). Examples from Korp originated from the internet chat website Suomi24. As I will show, the acceptability of FCA depends upon the position of the subject with respect to the inflection-bearing element in linear order. To test acceptability patterns of FCA with different word orders, attested sentences were altered to yield new word order patterns. Judgments were then collected from native speakers regarding these altered examples. In the following sections, original, attested examples are indicated with their source, either web search or Korp.

Note that Colloquial Finnish exhibits morphological levelling between verbal agreement morphology for third-person singular and third-person plural subjects. The syncretic form is identical to Standard Finnish's third-person singular agreement morphology.

- (5) a. *Hän tule-e.* (Standard Finnish)
 He/she come-3SG
 'He/she comes.'
- b. *He tule-vat.* (Standard Finnish)
 They come-3PL
 'They come.'
- (6) a. *Se tule-e.* (Colloquial Finnish)
 He/she come-3
 'He/she comes.'
- b. *Ne tule-e.* (Colloquial Finnish)
 They come-3
 'They come.'

For this reason, it is impossible to determine whether a verb whose subject is a conjunction of third-person DPs and that realizes third-person singular agreement truly exhibits FCA or not. Thus, all examples in the following sections involve conjoined subjects in which the first conjunct is either a first- or second-person pronoun.

A somewhat different problem arises for clauses in which the first conjunct is a first-person pronoun. The standard agreement morphology associated with first-person plural subjects in Standard Finnish (7a) generally does not appear in Colloquial Finnish. Rather, the verb appears in the passive and does not agree with the subject (7b). In clauses containing auxiliaries and participles, it is possible for both elements to appear in the passive (7c).⁴

- (7) a. *Me ole-mme käy-neet Pariisi-ssa.* (Standard Finnish)
 we be-1PL visit-PTC.PL Paris-INE
 'We have visited Paris.'

⁴ My thanks to an anonymous reviewer for drawing my attention to this data point.

- b. *Me on käy-ty Pariisi-ssa.* (Colloquial Finnish)
 we be.3SG visit-PST.PTC Paris-INE
 ‘We have visited Paris.’
- c. *Me ol-laan käy-ty Pariisi-ssa.* (Colloquial Finnish)
 we be-PASS visit-PST.PTC Paris-INE
 ‘We have visited Paris.’

However, non-conjoined first-person plural subjects never trigger first-person singular agreement in either Standard or Colloquial Finnish (8).

- (8) **Me ole-n käy-neet Pariisi-ssa.*
 we be-1SG visit-PTC.PL Paris-INE
 ‘We have visited Paris.’

Since non-conjoined first-person plural subjects cannot trigger first-person singular agreement, any instance of first-person singular agreement with a subject whose first conjunct is a first-person singular pronoun are true examples of FCA. Thus, the data in (7) are not directly relevant for examples of FCA reported below. However, these data are relevant for contrasting FCA with full agreement. In examples below, I have indicated what attested examples of FCA would look like with full agreement in Standard Finnish. For some consultants, the appearance of standard first-person plural agreement in these examples was odd, given that the sentences contained other characteristics of Colloquial Finnish. For this reason, in addition to the constructed examples I have provided attested examples in which first-person conjoined subjects trigger standard, first-person plural agreement.

2.1 Clauses with a single exponent of agreement

I first consider clauses in which there is only a single exponent of agreement. In such clauses, subjects may either appear pre- or post-verbally. When a conjoined subject appears pre-verbally, full agreement is obligatory, as shown in (9) and (10).

- (9) S V_{PL}
- a. *Minä ja rumpali-mme Hietalan Antti tul-i-mme*
 I and drummer-POSS.1PL Hietalan Antti come-PST-1PL
mukaan silloin.
 along then
 ‘Then our drummer Hietalan Antti and I came along.’
- b. *Ja mä ja kaksi muu-ta tyttö-ä ole-mme*
 And I and two other-PART girl-PART be-1PL
suomalai-sia.
 Finnish-PART.PL
 ‘And two other girls and I are Finns.’⁵

⁵ This example is based on (12b), but a direct analogue of (12b) with a pre-verbal subject would not be acceptable. This is because (12b) is a presentational construction in which new information must be sentence-

(10) *S V_{FCA}

- a. **Minä ja rumpali-mme Hietalan Antti*
 I and drummer-POSS.1PL Hietalan Antti
tul-i-n mukaan silloin.
 come-PST-1SG along then
 ‘Then our drummer Hietalan Antti and I came along.’
- b. **Ja mä ja kaksi muu-ta tyttö-ä ole-n*
 And I and two other-PART girl-PART be-1SG
suomalai-sia.
 Finnish-PART.PL
 ‘And two other girls and I are Finns.’

Although FCA is not acceptable with pre-verbal conjoined subjects, it is possible when conjoined subjects follow the verb in linear order. Post-verbal subjects may trigger either full agreement (11) or FCA (12).

(11) V_{PL} S

- a. *Silloin mukaan tul-i-mme minä ja rumpali-mme*
 then along come-PST-1PL I and drummer-POSS.1PL
Hietalan Antti.
 Hietalan Antti
 ‘Then our drummer Hietalan Antti and I came along.’
- b. *Ja sitten ole-mme mä ja kaksi muu-ta tyttö-ä.*
 And then be-1PL I and two other-PART girl-PART
 ‘And then there is me and two other girls.’

(12) V_{FCA} S

- a. *Silloin mukaan tul-i-n minä ja rumpali-mme*
 then along come-PST-1SG I and drummer-POSS.1PL
Hietalan Antti.
 Hietalan Antti
 ‘Then our drummer Hietalan Antti and I came along.’ (Web search)
- b. *Ja sitten oon mä ja kaksi muu-ta tyttö-ä.*
 And then be.1SG I and two other-PART girl-PART
 ‘And then there is me and two other girls.’ (Korp)

The examples in (9) and (11) were constructed on the basis of the examples in (12) and showcase the standard first-person plural agreement morphology that is rare in Colloquial Finnish. Yet it is also possible to find analogous attested examples in which standard first-person agreement appears on the verb:

final. Arto Anttila (p.c.) suggested the alternative (9b), which shows the possibility of full agreement with a pre-verbal conjoined subject.

- (13) a. *Minä ja aviomie-beni ole-mme häämatka-lla.*
 I and husband-poss.1SG be-1PL honeymoon-ADE
 ‘My husband and I are on our honeymoon.’ (Web search)
- b. *Toi-seksi tul-i-mme minä ja Nasu.*
 second-INE come-PST-1PL I and Nasu
 ‘Nasu and I came in second.’ (Web search)⁶

The following generalization accounts for clauses containing a single exponent of agreement: Full agreement is always acceptable, and FCA is only acceptable if the subject follows the exponent of agreement in linear order. The generalization is summarized in Table 1.

Word Order	Full Agreement	FCA
S V	✓	✗
V S	✓	✓

Table 1: *Agreement patterns in single-verb clauses.*

Note that last conjunct agreement (LCA), i.e. agreement with the last conjunct of a conjoined subject DP, is disallowed regardless of the position of the subject.

- (14) a. **Sitä ole-t minä ja sinä-kin käy-neet Pariisi-ssa.*
 EXPL be-2SG I and you-too visit-PTC.PL Paris-INE
 ‘You and I have visited Paris.’
- b. **Minä ja sinä-kin ole-t käy-neet Pariisi-ssa.*
 I and you-too be-2SG visit-PTC.PL Paris-INE
 ‘You and I have visited Paris.’

Thus, Colloquial Finnish exhibits true *first* conjunct agreement, rather than *closest* conjunct agreement (CCA), in which either FCA or LCA is realized, depending on the linear order of the subject and the verb. This distinguishes Colloquial Finnish from languages that exhibit CCA such as Hindi-Urdu (Bhatt & Walkow 2013), Serbo-Croatian (Bošković 2009, Puškar & Murphy 2015), and Slovenian (Marušič et al. 2007).

2.2 Clauses with multiple exponents of agreement

Next, I consider clauses containing multiple exponents of agreement. In particular, I focus on clauses in which both an auxiliary and participle realize agreement with the subject DP. In such clauses, the subject DP may appear in one of three positions relative to the auxiliary and participle:

- (i) Preceding the auxiliary and participle
- (ii) Medially between the auxiliary and participle

⁶ This example was provided by an anonymous reviewer.

(iii) Following the auxiliary and participle

I examine each case in turn, considering whether FCA may be realized on either the auxiliary or participle.

A complicating factor is that in Colloquial Finnish, participles may fail to realize plural agreement morphology, even if the subject is plural and the auxiliary realizes plural agreement. This occurs independently of whether the subject is coordinated or not. Consider the following example provided by an anonymous reviewer:

- (15) *Te ole-tte käy-ny/-neet Pariisi-ssa.*
You.PL be-2PL visit-PTC.SG/-PTC.PL Paris-INE
 ‘You have visited Paris.’

In (15), the participle may realize either singular or plural agreement despite the fact that the subject is plural and the auxiliary realizes second-person plural agreement. Regardless of the form of the participle, the auxiliary cannot realize singular agreement:

- (16) **Te ole-t käy-ny/-neet Pariisi-ssa.*
You.PL be-2SG visit-PTC.SG/-PTC.PL Paris-INE
 ‘You have visited Paris.’

I assume that the singular form of the participle seen in clauses like (15) is a non-agreeing default form. Thus, the appearance of the singular form of the participle in a clause with a conjoined subject does not necessarily indicate that FCA has occurred with a singular first conjunct. On the other hand, the appearance of the plural form of the participle can only be accounted for via agreement with a plural DP.

In case (i), the subject DP precedes both the auxiliary and participle. Full agreement must be realized on the auxiliary, as shown in (17); FCA on the auxiliary is not possible (18). The participle may realize either singular or plural agreement.⁷

- (17) S Aux_{PL} Ptc_{SG/PL}
- a. *Minä ja ystävä-ni ole-mme odotta-nut/neet tätä*
I and friends-POSS.1SG be-1PL wait-PTC.SG/PTC.PL this
jo kauan.
 already long
 ‘My friends and I have already waited for this for a long time.’

⁷ A reviewer raises the possibility that the sentence-initial DP may be a hanging topic, with the true subject being a null *pro*. If this were the case in (17), then the agreement realized on the auxiliary and participle would not, strictly speaking, be full agreement with the conjoined subject DP. However, the following example, provided by the reviewer, is not compatible with the sentence having a null *pro* subject and shows the same agreement pattern as the sentences in (17):

- (i) *Tätä minä ja ystävä-ni ole-mme odotta-nut/neet jo kauan.*
 this I and friends-POSS.1SG be-1PL wait-PTC.SG/PTC.PL already long
 ‘My friends and I have already waited for this for a long time.’

- b. *Sinä ja Kristi R. ole-tte anta-nut/neet*
 You and Kristi R. be-2PL give-PTC.SG/PTC.PL
vahvo-j-a ja erittäin varma-ksi väit-etty-jä
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL
ennakkopäätö-ksiä.
 precedent-PART.PL
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

(18) *S Aux_{FCA} Ptc_{SG/PL}

- a. **Minä ja ystävä-ni ole-n odotta-nut/neet tätä*
 I and friends-POSS.1SG be-1SG wait-PTC.SG/PTC.PL this
jo kauan.
 already long
 ‘My friends and I have already waited for this for a long time.’
- b. **Sinä ja Kristi R. ole-t anta-nut/neet*
 You and Kristi R. be-2SG give-PTC.SG/PTC.PL
vahvo-j-a ja erittäin varma-ksi väit-etty-jä
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL
ennakkopäätö-ksiä.
 precedent-PART.PL
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

Although the examples in (17) were constructed on the basis of attested examples below, it is possible to find attested examples illustrating this same pattern:

- (19) *Minä ja Fredrik ole-mme viettä-neet suuri-mma-n osa-n*
 I and Fredrik be-1PL spend-PTC.PL big-SUP-ACC part-ACC
aikuisiästä-mme ulkoma-illa.
 adult lives-POSS.1PL abroad-INE
 ‘Fredrik and I have spent most of our adult lives’ abroad.’ (Web search)

The observation regarding the unavailability of FCA on the auxiliary in (18) is not entirely novel. A similar point is made by van Koppen (2005) using the following examples:

- (20) a. *Minä ja sinä-kin sitä ole-mme käy-neet Pariisi-ssa.*
 I and you-too EXPL be-1PL visit-PTC.PL Paris-INE
 ‘You and I have visited Paris.’
- b. **Minä ja sinä-kin sitä ole-n käy-neet Pariisi-ssa.*
 I and you-too EXPL be-1SG visit-PTC.PL Paris-INE
 ‘You and I have visited Paris.’

In case (ii), the subject DP appears between the auxiliary and participle in linear order. In this configuration, full agreement (21) or FCA (22) may be realized on the auxiliary. Again, either singular or plural agreement may be realized on the participle.

- (21) Aux_{PL} S Ptc_{SG/PL}
- a. *Tätä ole-mme minä ja ystävä-ni odotta-nut/neet*
 This be-1PL I and friends-POSS.1SG wait-PTC.SG/PTC.PL
jo kauan.
 already long
 ‘My friends and I have already waited for this for a long time.’
- b. *Vahvo-j-a ja erittäin varma-ksi väit-etty-jä*
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL
ennakkopäätö-ksiä ole-tte sinä ja Kristi R.
 precedent-PART.PL be-2PL you and Kristi R.
anta-nut/neet.
 give-PTC.SG/PTC.PL
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

- (22) Aux_{FCA} S Ptc_{SG/PL}
- a. *Tätä ole-n minä ja ystävä-ni odotta-nut/neet*
 This be-1SG I and friends-POSS.1SG wait-PTC.SG/PTC.PL
jo kauan.
 already long
 ‘My friends and I have already waited for this for a long time.’ (Web search)
- b. *Vahvo-j-a ja erittäin varma-ksi väit-etty-jä*
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL
ennakkopäätö-ksiä ole-t sinä ja Kristi R.
 precedent-PART.PL be-2SG you and Kristi R.
anta-nut/neet.
 give-PTC.SG/PTC.PL
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

Attested examples showing the same pattern of agreement as shown in (21) include the following:

- (23) *Pellavantori-lla ole-mme minä ja turistit ihailleet*
 Pellavantori-ADE be-1PL I and tourists admire-PTC.PL
kaupunki-mme uusinta kaivuripatsasta.
 town-POSS.1PL newest digger statue.PAR
 ‘Tourists and I have admired our town’s newest digger statue at Pellavantori.’

Note that in (22), the auxiliary and participle may mismatch in agreement, since the auxiliary may realize FCA, while the participle may realize full agreement. Following Munn (1999), I refer to this pattern as “mixed agreement”.⁸

⁸ Marušič et al. (2007) report a similar phenomenon in Slovenian in which FCA is realized on a verbal element that precedes the subject in linear order, while LCA is realized on a verbal element that follows the subject in linear order. Marušič et al. (2015) refer to this phenomenon as “sandwiched agreement”.

Finally, in case (iii) the subject DP follows both the auxiliary and participle. Not all speakers accept pronominal subjects in this position, at least without the subject being contrasted.⁹ For those speakers who do accept this word order without contrasting the subject argument, either full agreement or FCA may be realized on the auxiliary. The participle may realize singular agreement regardless of the form of the auxiliary (24). However, if the participle realizes plural agreement, the auxiliary must as well (25). Plural agreement on the participle and singular agreement on the auxiliary is unacceptable (26).

(24) Aux_{FCA/PL} Ptc_{SG} S

- a. % *Tätä ole-n/-mme odotta-nut minä ja ystävä-ni jo kauan.*
 This be-1SG/-1PL wait-PTC.SG I and friends-POSS.1SG already long
 ‘My friends and I have already waited for this for a long time.’
- b. % *vahvo-j-a ja erittäin varma-ksi väit-etty-jä ennakkopäätö-ksiä ole-t/-tte anta-nut sinä ja Kristi R.*
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL precedent-PART.PL be-2SG/-2PL give-PTC.SG
 you and Kristi R.
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’
 (Korp)

(25) Aux_{PL} Ptc_{PL} S

- a. % *Tätä ole-mme odotta-neet minä ja ystävä-ni jo kauan.*
 This be-1PL wait-PTC.PL I and friends-POSS.1SG
 already long
 ‘My friends and I have already waited for this for a long time.’
- b. % *vahvo-j-a ja erittäin varma-ksi väit-etty-jä ennakkopäätö-ksiä ole-tte anta-neet sinä ja Kristi R.*
 strong-PL-PART and very certain-TRANS allege-PTC-PART.PL precedent-PART.PL be-2PL give-PTC.PL
 you and Kristi R.
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

(26) *Aux_{FCA} Ptc_{PL} S

⁹ One anonymous review rejects all examples in (24) and (25) due to the word order. Another consultant judged these examples acceptable. The divergence in opinion is indicated by the % symbol.

- a. **Tätä ole-n odotta-neet minä ja ystävä-ni jo*
 This be-1SG wait-PTC.PL I and friends-POSS.1SG already
kauan.
 long
 ‘My friends and I have already waited for this for a long time.’
- b. **vahvo-j-a ja erittäin varma-ksi*
 strong-PL-PART and very certain-TRANS
väit-etty-jä ennakkopäätö-ksiä ole-t anta-neet sinä
 allege-PTC-PART.PL precedent-PART.PL be-2SG give-PTC.PL you
ja Kristi R.
 and Kristi R.
 ‘You and Kristi R. have given strong and allegedly very certain precedents.’

For those speakers reject the word order in (24) and (25), the same basic patterns can be shown to hold if the subject argument is contrasted. An anonymous reviewer who does not accept (24) and (25) offers the following examples and judgments:

- (27) $Aux_{FCA/PL} Ptc_{SG} S$
Sinne oo-t/-tte lähte-ny sinä ja Kristi, ei-kä
 There be-2SG/-2PL go-PTC.SG you and Kristi, not-and
kukaan muu.
 anyone else.
 ‘You and Kristi have gone there, and no one else.’
- (28) $Aux_{PL} Ptc_{PL} S$
Sinne ole-tte lähte-neet sinä ja Kristi, ei-kä kukaan
 There be-2PL go-PTC.PL you and Kristi, not-and anyone
muu.
 else.
 ‘You and Kristi have gone there, and no one else.’
- (29) * $Aux_{SG} Ptc_{PL} S$
 **Sinne ole-t lähte-neet sinä ja Kristi, ei-kä kukaan*
 There be-2PL go-PTC.PL you and Kristi, not-and anyone
muu.
 else.
 ‘You and Kristi have gone there, and no one else.’

The possible patterns in clauses containing both auxiliaries and participles are summarized in Table 2 below.

Word Order	Aux _{PL} & Ptc _{PL}	Aux _{FCA} & Ptc _{PL}	Aux _{PL} & Ptc _{SG}	Aux _{FCA} & Ptc _{SG}
S Aux Ptc	✓	✗	✓	✗
Aux S Ptc	✓	✓	✓	✓
Aux Ptc S	✓	✗	✓	✓

Table 2: *Agreement patterns in clauses containing auxiliaries and participles.*

2.3 Cross-Linguistic Comparison

As noted earlier, patterns of FCA in Finnish are strikingly similar to patterns attested in other languages. Comparison of (1) and (11a) reveals that Colloquial Finnish, Lebanese Arabic, Modern Irish, and Polish all allow FCA if the subject DP follows the agreement-bearing element in linear order. Various Dutch dialects exhibit similar patterns of FCA in complementizer agreement (van Koppen 2005, 2012), and Doron (2000) shows that these patterns are also attested in Biblical Hebrew, Spanish, and Modern Greek.

Finnish also patterns with other languages in allowing full agreement when the subject follows an agreement-bearing element. This is not the case in Modern Irish, due to factors regarding the distribution of agreement morphology and *pro* subjects.¹⁰ However, in Lebanese Arabic, Biblical Hebrew, and Polish, full agreement can be realized when a conjoined subject DP follows an exponent of agreement.

- (30) a. *Raah-o Kariim w Marwaan.* (Lebanese Arabic)
 leave-PST.3PL Kareem and Marwan
 ‘Kareem and Marwan left.’ (Aoun et al. 1994)
- b. *w³-hannootereṭ mimmenaa yookluu* (Biblical Hebrew)
 and-the remainder from it will eat.3MPL
ʔab^aroon u-ḥaanaaw
 Aaron and-sons.POSS.3MSG
 ‘And the remainder thereof shall Aaron and his sons eat.’ (Doron 2000)
- c. *Do pokoju weszli kobierta i chłopiec.* (Polish)
 to room enter.PST.PL woman and boy
 ‘Into the room walked a woman and boy.’ (Citko 2004)

In Lebanese Arabic and Polish, FCA is impossible if the conjoined subject DP precedes the agreement-bearing element.

- (31) a. **Kariim w Marwaan raah.* (Lebanese Arabic)
 Kareem and Marwan leave.PST.3MS
 ‘Kareem and Marwan left.’ (Aoun et al. 1994)

¹⁰ See McCloskey (1986) for details.

- b. **Młoda kobieta i mały chłopiec weszła* (Polish)
 young woman and small boy enter.PST.3FSG
do pokoju
 to room
 ‘A young woman and a small boy entered the room.’ (Citko 2004)

In both of the above cases, the corresponding example with full agreement realized on the relevant agreement-bearing element is acceptable. Although acceptability judgments are not available for Biblical Hebrew, according to Doron (2000), only full agreement is attested with pre-verbal conjoined subjects.

- (32) a. *Kariim w Marwaan raab-o.* (Lebanese Arabic)
 Kareem and Marwan leave-PST.3PL
 ‘Kareem and Marwan left.’ (Aoun et al. 1994)
- b. *Młoda kobieta i mały chłopiec weszli* (Polish)
 young woman and small boy enter.PST.3PL
do pokoju
 to room
 ‘A young woman and a small boy entered the room.’ (Citko 2004)
- c. *U-moošee ʔab^aroon w-ħuur ʔaaluu* (Biblical Hebrew)
 and-Moses Aaron and-Hur climbed.3MPL
rooš haggibʔaa.
 head the hill
 ‘And Moses, Aaron, and Hur went up to the top of the hill.’
 (Doron 2000)

Finnish also patterns similarly to other languages with respect to clauses containing multiple exponents of agreement. Consider the case of Lebanese Arabic:

- (33) a. *Keen Kariim w Marwaan ʕam* (Lebanese Arabic)
 be.3MSG Kareem and Marwan PROG
yilʕabo.
 play.PL
 ‘Kareem and Marwan were playing.’ (Aoun et al. 1994)
- b. *Keeno Kariim w Marwaan ʕam* (Lebanese Arabic)
 be.3PL Kareem and Marwan PROG
yilʕabo.
 play.PL
 ‘Kareem and Marwan were playing.’ (Aoun et al. 1994)
- c. *Kariim w Marwaan keeno ʕam* (Lebanese Arabic)
 Kareem and Marwan be.3PL PROG
yilʕabo.
 play.PL
 ‘Kareem and Marwan were playing.’ (Aoun et al. 1994)

Sentences corresponding to either (33a) or (33b) with FCA realized on the verb *yilʃabo* are unacceptable, as are sentences corresponding to (33c) with FCA realized on either the auxiliary or *yilʃabo*. This exactly matches the patterns seen in Colloquial Finnish, with the exception that the participle in Colloquial Finnish may appear in the default singular form regardless of the position of the subject.

In Modern Irish, it is not possible to observe the full agreement paradigm exhibited by Colloquial Finnish, again due to restrictions on the distribution of verbal agreement morphology and null *pro* subjects. However, Modern Irish does show a mixed agreement pattern analogous the pattern in (22) and (33a):

- (34) *Bhínn* *pro-féin* *agus* *an* *seandúine* (Modern Irish)
 be.PST.HAB.1SG *pro-EMPH* and the old fellow
 ’nár *suí.*
 1PL sit.PTC
 ‘The old fellow and I used to be sitting.’ (McCloskey 1986)

In (34), the auxiliary *bhínn* realizes FCA, while the agreement particle *’nár* realizes agreement with the full, conjoined subject. Thus, the core part of the generalization about Finnish FCA is borne out in the other languages considered here: FCA is optional with an agreement-bearing element only if the subject DP follows this element in linear order. Otherwise, full agreement is obligatory.¹¹

3 Finnish Clause Structure

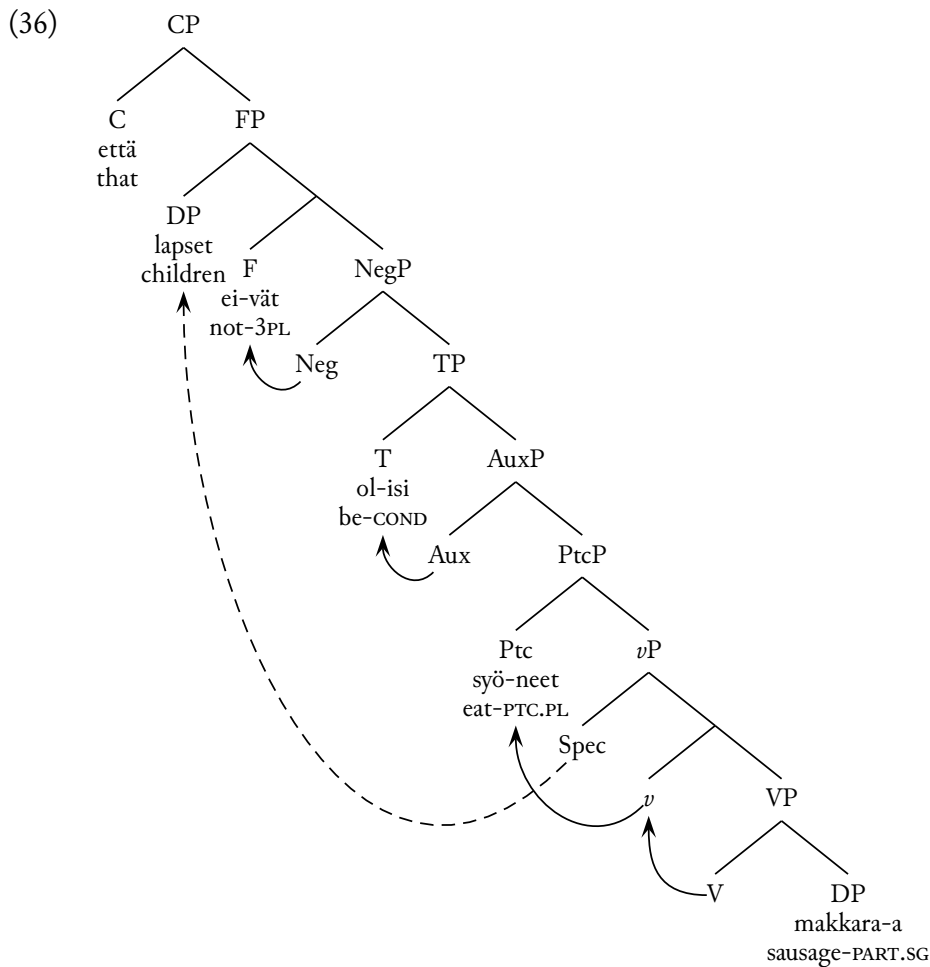
My ultimate goal is to provide a theoretical explanation for the generalization regarding agreement and word order given in §2. In order to develop such an account, it is necessary to make certain assumptions about the clause structure of Finnish. In this section, I lay out these assumptions, which are drawn from Holmberg et al. (1993) and Holmberg & Nikanne (2002), and which consistently assume that asymmetric *c*-command corresponds to linear precedence (Kayne 1994). I modify the proposals of Holmberg et al. (1993) and Holmberg & Nikanne (2002) only in assuming the existence of a functional head *v* between the Ptc and V heads, following Kratzer (1996) and much subsequent work.

To illustrate the full finite clause structure in Finnish, consider the following clause:

- (35) ...*että* *lapset* *ei-vät* *ol-isi* *syö-neet* *makkara-a.*
 ...that children not-3PL be-COND eat-PTC.PL sausage-PART.SG
 ‘...that the children wouldn’t have eaten the sausage.’

The structure of the clause in (35) is given in (36).

¹¹ One pattern not regularly observed in the cross-linguistic data is the case in which a subject DP follows two exponents of agreement in linear order. Such word orders are not discussed in McCloskey (1986), Aoun et al. (1994), or van Koppen (2012). My own fieldwork suggests that the word order Aux V S is highly dispreferred in Lebanese Arabic, although Tucker (2011) suggests it may be acceptable if the auxiliary and verb receive a contrastive focus interpretation.



The F head between T and C is a finiteness head and hosts the highest element in the clause realizing agreement with the subject DP. Ptc is a participle head that is selected by Aux.

The heads Neg, Aux, and Ptc are not present in all clauses. Main verbs are base generated in V. If the clause does not contain Aux and Ptc heads, verbs successive-cyclically raise at least to T. If Aux and Ptc heads are present, main verbs raise to Ptc, and auxiliaries raise from Aux to T. If the clause does not contain a Neg head, whatever occupies T (either an auxiliary or main verb) raises to F. If a Neg head is present, the negation particle raises to F. Agreement is realized on the element appearing in F and, at least sometimes, that in Ptc. As shown above, in Colloquial Finnish, a default, non-agreeing form may appear in Ptc. For this reason, I take F to always be a ϕ -probe that must locate a node with valued ϕ -features with which to agree. In contrast, I assume there are two forms of Ptc, one of which is a ϕ -probe, and one of which is not.¹²

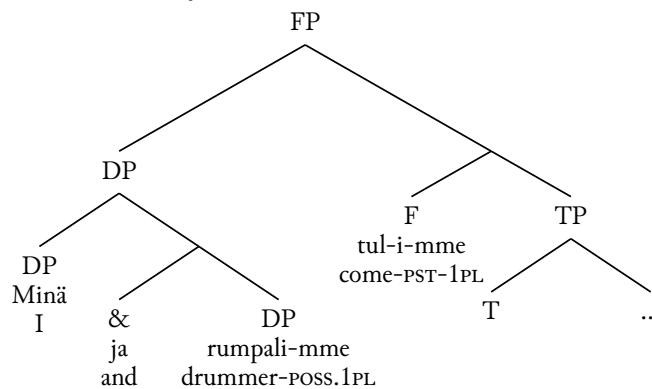
¹² A full definition of the operation Agree appears in the following section. Note that an alternative analysis would assume that only one functional head in the clause enters an agreement relationship and that the agreement morphology on the other functional head is parasitic on this first relationship. Such an analysis is proposed in accounting for FCA and LCA in Hindi-Urdu in Bhatt & Walkow (2013). I reject this analysis due to the possibility of mixed agreement in Finnish (22). Since the agreement morphology realized on an auxiliary and participle may mismatch, this suggests that the relevant functional heads enter into independent agreement relationships.

Recall that the relevant examples in §2 involved clauses containing either one or two exponents of subject-verb agreement. In the former case, the subject could appear either pre- or post-verbally. These options are illustrated in (39a) and (39b), repeated from (9a) and (11a) above.

- (39) a. *Minä ja rumpali-mme Hietalan Antti tul-i-mme*
 I and drummer-POSS.1PL Hietalan Antti come-PST-1PL
mukaan silloin.
 along then
 ‘Then our drummer Hietalan Antti and I came along.’
- b. *Silloin mukaan tul-i-mme minä ja rumpali-mme*
 then along come-PST-1PL I and drummer-POSS.1PL
Hietalan Antti.
 Hietalan Antti
 ‘Then our drummer Hietalan Antti and I came along.’

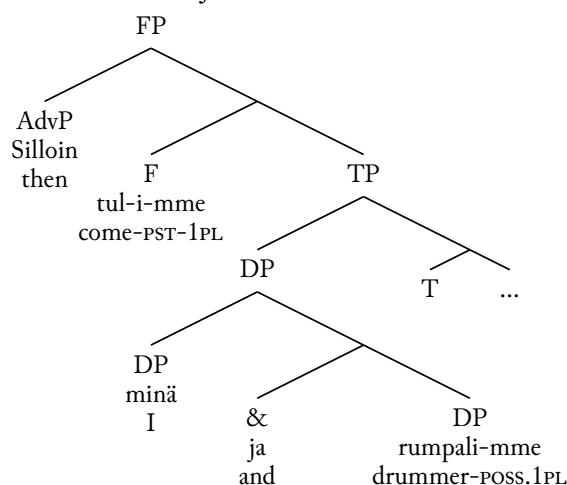
The positions of the subject in these clauses are illustrated in (40a) and (40b) below:¹⁴

- (40) a. Pre-verbal subject



¹⁴ Note that I assume that coordinated DPs have an asymmetric structure in which the first conjunct asymmetrically c-commands the second (Kayne 1994, Munn 1993, Zoerner 1995). The asymmetric structure of conjunction will be critical for the analyses of FCA discussed in §4, although one analysis assumes that coordinated subjects may have a different structure. I remain agnostic about the syntactic category or label assigned to the coordinated structure. That is, the coordinate structure may be assigned the label DP, BP, &P, etc., so long as the asymmetric relationship between the first and second conjuncts is maintained.

b. Post-verbal subject



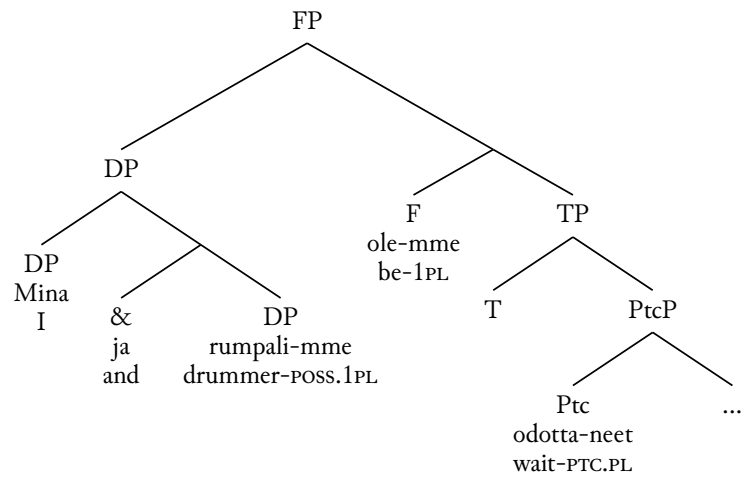
Pre-verbal subjects occupy Spec, FP. In (40b), the subject is shown in Spec, TP, but this is done only for the sake of concreteness. The surface word order is compatible with the subject occupying either Spec, TP or Spec, *v*P. The choice about the exact position of the subject DP within such clauses will have no consequences for the analyses of FCA discussed in the following section.

In clauses containing both an auxiliary and a participle, the subject may appear either preceding the auxiliary, medially between the auxiliary and participle, or following the participle. These possibilities are illustrated in (41a), (41b), and (41c), repeated from (17a), (21a), and (25a).

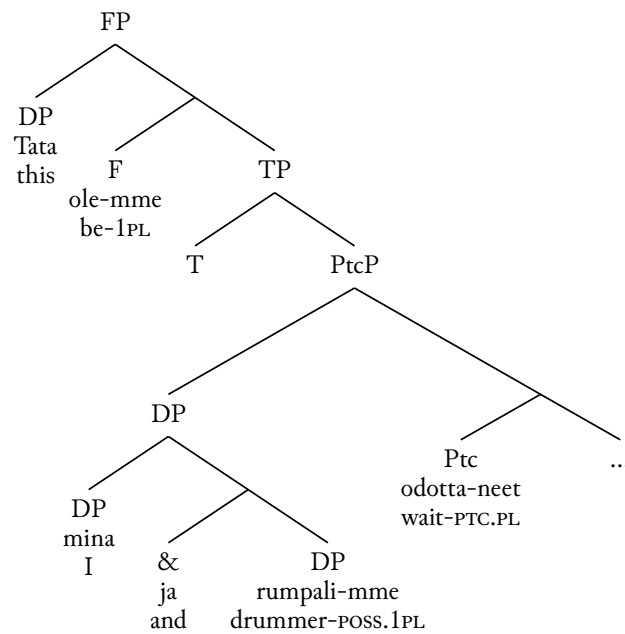
- (41) a. *Minä ja ystävä-ni ole-mme odotta-neet tätä*
 I and friends-POSS.1SG be-1PL wait-PTC.PL this
jo kauan.
 already long
 'My friends and I have already waited for this for a long time.'
- b. *Tätä ole-mme minä ja ystävä-ni odotta-neet*
 This be-1PL I and friends-POSS.1SG wait-PTC.PL
jo kauan.
 already long
 'My friends and I have already waited for this for a long time.'
- c. *Tätä ole-mme odotta-neet minä ja ystävä-ni*
 This be-1PL wait-PTC.PL I and friends-POSS.1SG
jo kauan.
 already long
 'My friends and I have already waited for this for a long time.'

The positions of the subject DP in these clauses are shown below:

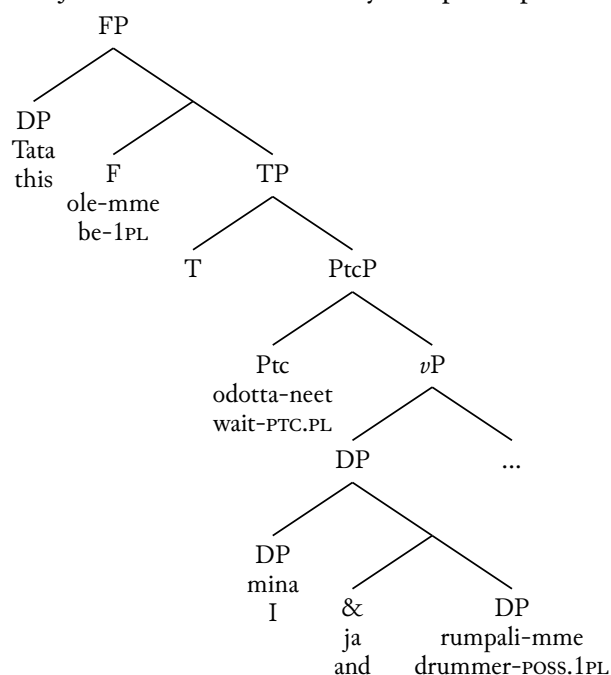
- (42) a. Subject precedes both auxiliary and participle



- b. Subject appears between auxiliary and participle



- c. Subject follows both auxiliary and participle



When clause-initial, subject DPs occupy Spec, FP. In the clause medial position, I show the subject DP occupying Spec, PtcP. Technically, the surface word order in (41b) is consistent with the subject DP occupying either Spec, PtcP or Spec, TP. As with the assumption regarding the position of the subject DP in (40b), this choice will not have consequences for the theories discussed below. Finally, if the subject follows the participle in linear order, it occupies Spec, vP .

4 Analyses of Finnish First Conjunct Agreement

Recall that the basic generalization of FCA in Colloquial Finnish is that FCA is possible if a conjoined subject follows an agreement-bearing element in linear order, but not if the subject precedes such an element. The Colloquial Finnish paradigms are attested in whole or part in a number of other languages, as discussed in §2.3. This fact will be helpful in developing an analysis of Finnish FCA in two ways. First, it suggests that it may be possible to extend existing analyses of FCA in other languages to handle the Finnish data. Second, it suggests that whatever accounts for FCA in Finnish is not an idiosyncratic feature of Finnish syntax, but rather something more fundamental about the interaction between agreement, coordination, and word order.

Below, I only consider previous analyses of languages that exhibit the same agreement patterns with coordinated subjects as seen in Colloquial Finnish. That is, I only consider existing proposals for languages in which FCA is optional when a coordinated subject DP is post-verbal, full agreement is obligatory when a coordinated subject DP is pre-verbal, and LCA is never possible. This rules out consideration of proposals for languages in which both FCA and LCA are attested. It also rules out consideration of É. Kiss's (2012) discussion of FCA-like phenomena in Hungarian in which singular agreement with

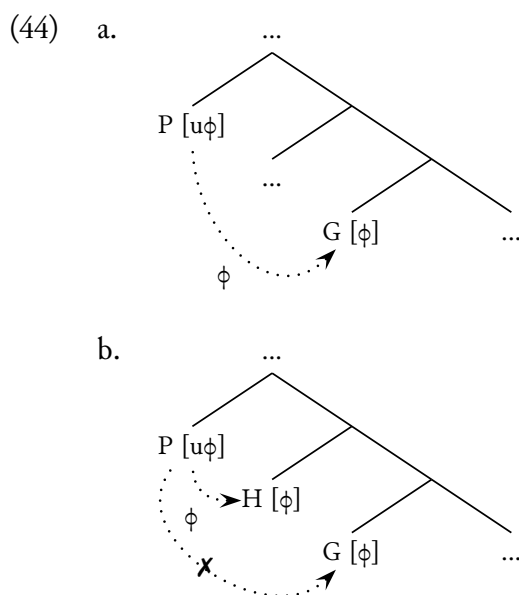
a coordinated subject DP subject may be realized when the subject is either pre- or post-verbal.¹⁵

Before considering any particular analyses, it is worthwhile to lay out some common assumptions they share. In particular, these analyses assume the existence of an operation Agree, whose definition roughly follows Chomsky (2000, 2001):

- (43) A functional head P (the “probe”) Agrees with a node G (the “goal”) iff:¹⁶
- P has unvalued, uninterpretable ϕ features ($u\phi$ features).
 - G has valued, interpretable ϕ features.
 - P c-commands G.
 - There is no node H such that P c-commands H, H asymmetrically c-commands G, and H has valued ϕ features.

Note that one of the analyses discussed below assume a definition of Agree that differs from that in (43). Where relevant, I highlight these differences.

An illustration of a probe Agreeing with a goal is given in (44a). In (44b), I show how an intervener H may block agreement between a probe and a potential goal.



It is also standardly assumed that an element with $u\phi$ -features Agrees as soon as it enters the syntactic derivation.

¹⁵ É. Kiss (2012) argues that Hungarian lacks both FCA and LCA and that the resolved number feature of a coordinate DP consisting of two or more singular conjuncts is singular, not plural.

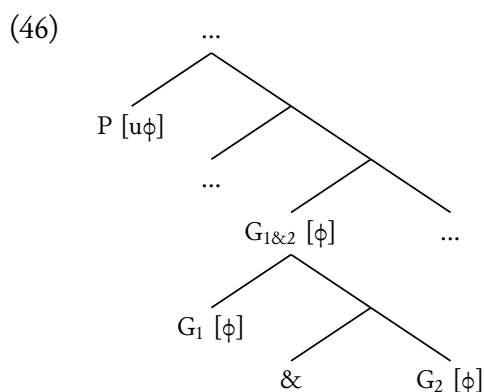
¹⁶ Notably absent from this definition is the “activity condition,” which requires that a potential goal for Agree has some unvalued, uninterpretable Case that is valued via Agree. I do not adopt this assumption due to the fact that I assume that there may be multiple Agree relationships within a single clause in Finnish: one with Ptc and one with F. If I further assumed the activity condition, DPs would be required to have two unvalued, uninterpretable features, one for each Agree relationship. There is no independent evidence for two such features. Rather than the activity condition, I assume that agreement in Finnish is case-discriminating in the sense of Bobaljik (2008) and Preminger (2014).

4.1 Structural Ambiguity

I begin by considering three proposals that argue that FCA and full agreement each arise as the result of a different syntactic structure of the coordinated subject DP. All three structural ambiguity approaches rely on an assumption about Agree that deviates from the definition in (43). In particular, these analyses assume that both asymmetric c-command and dominance are relevant for determining which node is most local to a ϕ -probe. Thus, condition (43d) is revised as follows:

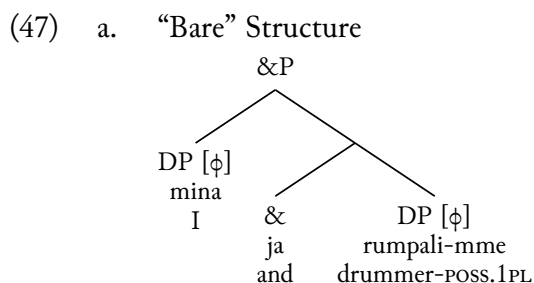
- (45) There is no node H such that P c-commands H, H asymmetrically c-commands or dominates G, and H has valued ϕ features.

To illustrate the implications of this change, consider a probe P whose c-command domain includes a coordinated constituent $G_{1\&2}$:



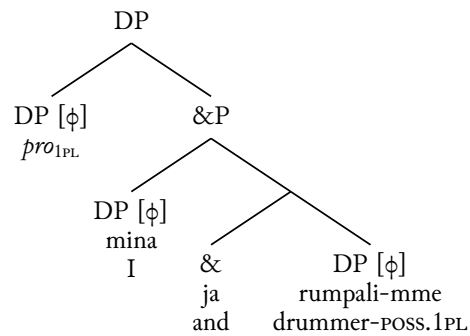
According to the definition in (43), both $G_{1\&2}$ and G_1 are potential goals for P because neither asymmetrically c-commands the other.¹⁷ In contrast, if (45) is assumed instead of (43d), only $G_{1\&2}$ is a potential goal, since it dominates G_1 . Note that G_2 is not a potential goal according to either definition, since it is asymmetrically c-commanded by G_1 and dominated by $G_{1\&2}$.

Citko (2004) offers a structural ambiguity analysis of FCA, according to which coordinated DPs may have one of the following syntactic structures:



¹⁷ This follows on the assumption that if a node α dominates a node β , neither α nor β c-commands the other (Reinhart 1976). As noted by Barker & Pullum (1990), some definitions of c-command do not make this assumption. Nonetheless, the complementarity of c-command relations and dominance relations is preserved in most recent definitions of c-command (Barker 2012, Chomsky 2001).

b. “Plural Pronoun” Structure

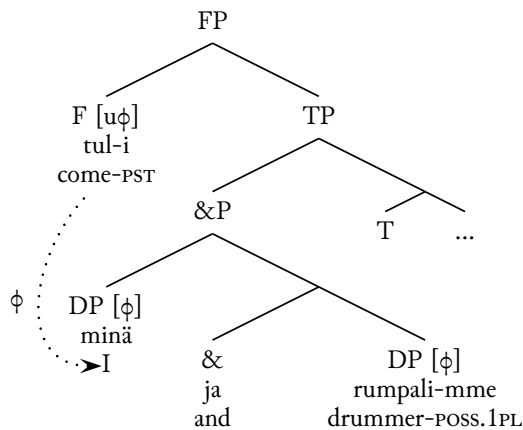


The bare structure is the asymmetric structure of coordination assumed in the previous section based on the proposals from Munn (1993), Kayne (1994), and Zoerner (1995). Note, however, that Citko (2004) assumes that the constituent formed from the coordination of two DPs is of a different syntactic category, &P, that does not possess ϕ features. That is, there is no node in the structure in (47a) that possesses first-person plural ϕ features. In contrast, the structure in (47b) contains a node containing a null *pro* with ϕ features that would be expected to arise from feature resolution of the conjuncts. With these assumptions, FCA arises via agreement with the first conjunct in the structure in (47a), whereas full agreement arises via agreement with the null *pro* in (47b).

Two recent analyses of Arabic FCA presented by Soltan (2007) and Larson (2013) share similar intuitions, but differ in the details. Each analysis assumes that some obligatory syntactic operation *O* may occur either early or late in the syntactic derivation, either before or after Agree. On Soltan’s account, *O* is the operation Merge. On Larson’s account, Merge is decomposed into two sub-operations: Concatenate and Label (Hornstein 2009). Although Concatenation must occur immediately in the syntactic derivation, Labelling may be delayed. Hence, Label is the relevant operation *O* used to account for FCA. If *O* occurs before Agree, the full conjunction is a potential goal for Agree. If *O* occurs after Agree, only the first conjunct is a goal for Agree.

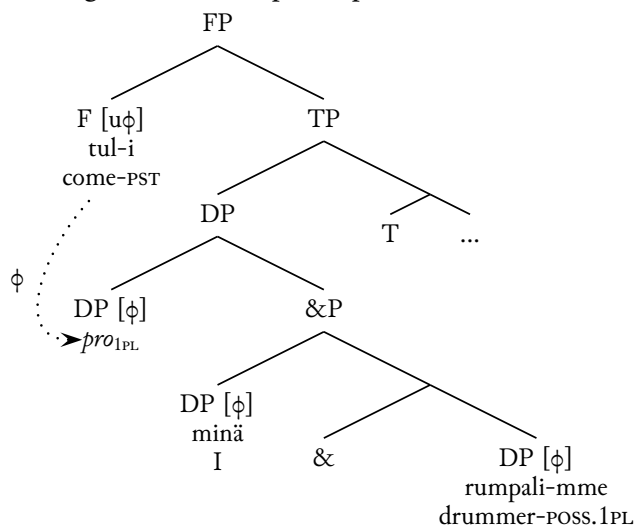
Now consider how Citko (2004), Soltan (2007), and Larson (2013) would account for a Finnish clause in which there is only a single exponent of agreement and the subject is post-verbal. In this case, the only relevant functional head for agreement is *F* and the subject DP is in the *c*-command domain of *F*. On Citko’s (2004) analysis, if the subject DP has the bare structure, only the first conjunct is a potential goal for Agree; the &P node does not possess ϕ features, while the second conjunct is not local enough to *F* because it is asymmetrically *c*-commanded by the first conjunct (48).

(48) Agreement with bare coordinate structure



If the subject DP instead has the plural pronoun structure, the silent *pro* is the only potential goal. Now, both overt conjuncts are asymmetrically c-commanded by *pro*, and are therefore too distant from F to be targeted by Agree (49).¹⁸

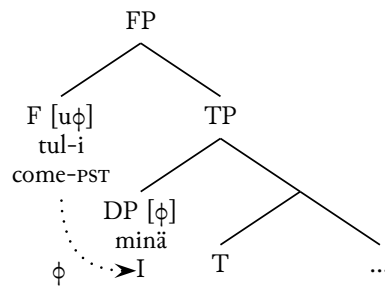
(49) Agreement with plural pronoun coordinate structure



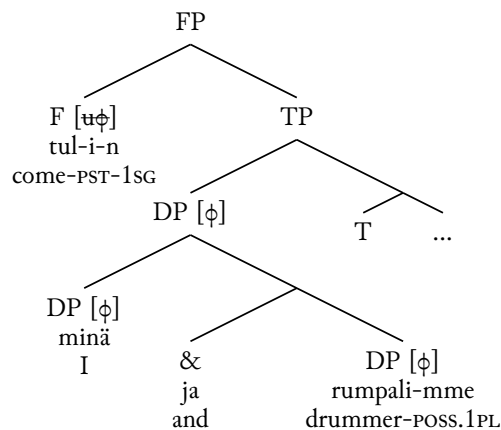
Now consider the late operations analyses. FCA arises if only the first conjunct is a potential goal for Agree (50a) due to O occurring after Agree (50b).

¹⁸ Citko (2004) does not explicitly state whether the maximal DP dominating *pro* possesses ϕ -features or not. Below I argue that it may be necessary for Citko to assume that F Agrees with this maximal DP, in which case it would be necessary to assume that this DP possesses ϕ -features. Presumably, these features would be acquired via feature percolation from *pro*. However, Citko's prose suggests that she intends for full agreement to arise from agreement with *pro* directly, rather than the node dominating *pro*.

- (50) a. Agree occurs before O

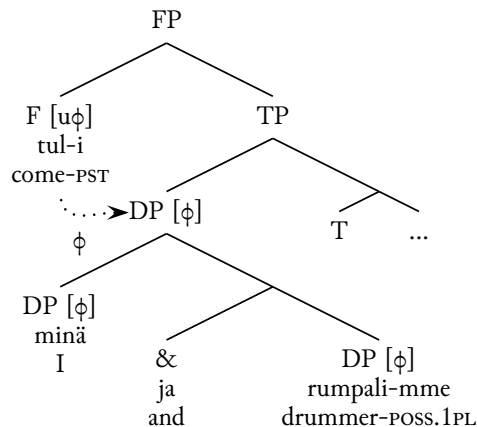


- b. O occurs



If instead O occurs early, the full, conjoined DP is targeted by F for agreement (51).

- (51) O occurs before Agree



Thus, on all three accounts, either FCA or full agreement may be realized if the subject DP remains below T.

These accounts must also have some way to exclude FCA when subjects are pre-verbal. Citko (2004) assumes that Agree feeds movement, an idea that will be discussed at greater length below. In the case of Finnish, this idea can be stated as a requirement that in order for a subject DP to raise to Spec, FP, there must be an Agree relation between F and the moved DP. Now, in the case of FCA, F has formed an Agree relation with only the first conjunct of the subject DP. The full subject cannot raise to Spec, FP because there is

no Agree relation between &P and F. The first conjunct cannot raise to Spec, FP either, because doing so would incur a violation of the Coordinate Structure Constraint (CSC; Ross 1967). Therefore, bare coordinate structures must remain below F and FCA is only observed with post-verbal subjects.

However, Citko (2004) offers no explanation for how to account for full agreement with pre-verbal subjects. On her analysis, full agreement does not arise from agreement with the full subject DP, but rather only the null *pro* within this DP. If F Agrees with *pro*, there is no Agree relation between the full subject DP and F. Thus, the subject is predicted to be unable to raise to Spec, FP. This problem can be resolved by assuming that *pro*'s ϕ features percolate to the maximal DP node. In this case, F can Agree with the full DP, which may then raise to Spec, FP. Note, however, that Citko (2004) does not explicitly endorse this analysis.

Soltan (2007) and Larson (2013) differ in their explanations for obligatory full agreement with pre-verbal subjects. Soltan assumes that pre-verbal "subjects" in Arabic are actually topics base generated in Spec, TP. These topics are coindexed with a null *pro* subject lower in the clause, and agreement is with this *pro*. Since *pro* is coindexed with the full, conjoined DP in Spec, TP, full agreement is obligatory. In contrast, on Larson's (2013) account, pre-verbal subjects are derivationally related to lower positions in the clause structure. However, in order for subjects to undergo movement to a higher position, O must have occurred. Since the application of O also ensures full agreement with a conjoined subject DP, pre-verbal subjects only co-occur with full agreement. In extending the late operations analysis to Finnish, it is easiest to follow Larson's (2013) suggestion, since this accords with the clause structure laid out in §3. On this view, only when F Agrees as in (51) can the subject DP undergo movement to Spec, FP. Thus, only full agreement may be realized when the subject is pre-verbal.

So far, I have only considered how these accounts handle clauses with single exponents of agreement. Below, I demonstrate that clauses with multiple exponents of agreement cause problems for all accounts based on structural ambiguities. But before considering such clauses, I note another issue that arises for Citko's (2004) proposal. The ϕ -features of the null *pro* in the plural pronoun structure must be constrained such that they are what would be expected from resolution of the ϕ features of the conjuncts within the &P. It is not obvious how this constraint operates. It cannot occur through Agree, since there is no node within &P that possesses the resolved ϕ features, e.g. there is no node within the &P in (47b) that possesses first-person plural ϕ features. It is also not possible for these features to be determined by percolation, since Citko (2004) explicitly states that &P lacks ϕ features. Thus, it remains mysterious how the ϕ features of this null *pro* are to be constrained.

Additional issues for all three structural ambiguity approaches emerge upon consideration of clauses containing multiple exponents of agreement, particularly clauses exhibiting mixed agreement (22). Recall that in these cases, the auxiliary realizes FCA and the participle realizes full agreement. For Citko's (2004) account, the problem is that coordinate subjects are assumed have either the bare structure, which triggers FCA, or the plural pronoun structure, which triggers full agreement. This predicts that in clauses with multiple exponents of agreement, either both exponents should realize FCA or both should

realize full agreement. But mixed agreement clauses show that it is possible for the same subject to trigger *both* FCA and full agreement.

This basic problem also arises for Soltan (2007) and Larson (2013), although the details are slightly different. Soltan (2007) and Larson (2013) assume that some operation O converts a structure from one that obligatorily triggers FCA to one that obligatorily triggers full agreement. These assumptions lead to the prediction that in a clause with two ϕ -probes, Ptc and F, such that F asymmetrically *c*-commands Ptc, the following should be possible:

- (i) If O occurs before agreement with Ptc, full agreement is realized on both Ptc and F.
- (ii) If O occurs after agreement with Ptc, but before agreement with F, FCA is realized on Ptc, and full agreement is realized on F.
- (iii) If O occurs after agreement with F, FCA is realized on both Ptc and F.

However, these analyses predict that it should be impossible for Ptc to realize full agreement, while F realizes FCA. This follows because in order for full agreement to be realized on Ptc, O must occur before Ptc Agrees. Since functional heads Agree as soon as they enter the syntactic derivation and Ptc is Merged before F is Merged, Ptc Agrees before F. But since O must occur before Ptc Agrees, it must occur before F Agrees. Finally, because O has occurred before F Agrees, only full agreement with F should be licit. Crucially, the mixed agreement examples in (22) show what the late operations analyses predict to be impossible: full agreement on Ptc and FCA on F.

All three analyses based on accounting for FCA and full agreement via differences in the structure of the coordinated subject are flawed. Therefore, in the next section I consider an alternative account that is not based on the coordinated subject being structurally ambiguous. Rather, this approach assumes a single structure of the conjoined subject DP and attempts to explain the possibility of FCA and/or full agreement on the basis of the subject's position in the clause.

4.2 Constraints on Movement

Doron (2000), van Koppen (2012), and Crone (2015) propose analyses of FCA in Biblical Hebrew, dialectal Dutch, and non-standard dialects of Arabic, respectively, that rely on assumptions about the connection between Agree and movement to subject positions. First, these analyses assume the definition of Agree given in (43). Importantly, this definition defines locality only in terms of asymmetric *c*-command (43d), rather than in terms of asymmetric *c*-command and dominance (45). Next, these analyses assume that it is impossible to extract a single conjunct from a coordinate structure, following the CSC. Note that the CSC is active in Finnish, as shown by the following examples:

- (52) a. * [*Kenet*]_i *tapas-i-t* *t_i* *ja* *Pekka?*
 who.ACC meet-PST-2SG *t* and Pekka?
 ‘Who did you meet and Pekka?’
- b. * [*Kenet*]_i *tapas-i-t* *Pekka* *ja* *t_i?*
 who.ACC meet-PST-2SG Pekka and *t*?
 ‘Who did you meet Pekka and?’

- c. * [*Psykologi*]_i *on/o-vat* *t_i* *ja* *kielitieteilijä*
 psychologist be.3SG/be-3PL *t* and linguist
ta-vanneet min-ut.
 meet-PTC.PL me-ACC
 ‘A psychologist and a linguist have met me.’
- d. * [*Psykologi*]_i *on/o-vat* *kielitieteilijä* *ja* *t_i*
 psychologist be.3SG/be-3PL linguist and *t*
ta-vanneet min-ut.
 meet-PTC.PL me-ACC
 ‘A psychologist and a linguist have met me.’

As the above examples show, it is impossible to extract only one conjunct from a coordinated phrase in either \bar{A} -movement or A-movement. Note that it has been argued that other languages allow for CSC violations. For example, Bošković (2009) develops an analysis of FCA and LCA in Serbo-Croatian that depends upon the violability of the CSC in Serbo-Croatian. If Finnish likewise allowed such violations, the following proposal would not be tenable.

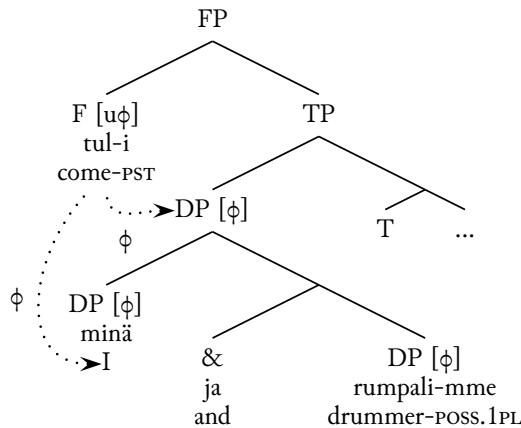
This family of analyses next makes the following assumption regarding agreement and movement:

- (53) A phrase XP will move to a position Spec, YP iff:
- a. Y has an EPP feature.
 - b. Y is in an Agree relation with XP.

Taking each of these conditions in turn, the EPP feature is a formal device used to ensure movement of the subject to the specifier position of a particular phrase. Thus, if the subject DP appears in Spec, FP, these analyses assume that F has an EPP feature; if the subject DP appears in Spec, PtcP, it is assumed that Ptc has an EPP feature. Next, the condition in (53b) encodes the idea that agreement feeds movement. This idea is present in the original definition of Agree (Chomsky 2000, 2001), and Citko (2004) also uses this assumption to rule out FCA occurring with pre-verbal subjects. More recently, Preminger (2014) has defended a more restricted version of (53b). According to Preminger, agreement between Y and XP is a prerequisite for movement to Spec, YP only if Spec, YP is a “canonical subject position” in a given language. Since I only consider movement to subject positions here, it is immaterial whether I adopt the constraint as stated in (53) or Preminger’s more restricted constraint.

To illustrate how this analysis works, again consider a clause containing only one exponent of agreement and suppose the subject DP is in the c-command domain of F. As discussed above, it follows from the definition of Agree in (43) that either the first conjunct or full conjunction is a potential goal for Agree, since neither asymmetrically c-commands the other. Because both are potential goals, F optionally Agrees with either (54).

- (54) F targets either the first conjunct or full conjunction for agreement



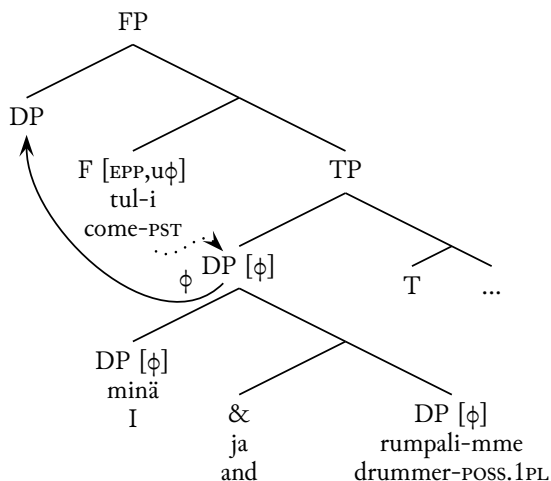
If the subject remains in this position within the c-command domain of F, the element in F may realize either FCA or full agreement.

Now suppose F has an EPP feature, requiring movement of a DP to Spec, FP. Following the constraint in (53), the DP that raises to Spec, FP must be in an Agree relationship with F. Using the same reasoning that underlies Citko's (2004) proposal for why FCA can never occur with pre-verbal subjects, it follows that if F has Agreed with the first conjunct of a coordinated subject DP, one of our assumptions must be violated:

- (i) If the first conjunct alone is moved to Spec, FP, the CSC is violated.
- (ii) If the first conjunct is not moved to Spec, FP and nothing else is moved to Spec, FP, (53a) is violated.
- (iii) If the full conjunction is moved to Spec, FP, (53b) is violated.

Assuming that a successful derivation cannot violate either the CSC or the constraints in (53), there is no derivation in which F possesses an EPP feature and Agrees with the first conjunct of a coordinated subject DP. In contrast, if F possesses an EPP feature and Agrees with the full conjunction, nothing prevents movement of the full conjunction to Spec, FP.

- (55) F targets the full conjunction for agreement, and the full conjunction moves to Spec, FP



Thus, this analysis ensures that pre-verbal subjects in Spec, FP only co-occur with full agreement on F.

The same basic account can be applied to cases involving multiple exponents of agreement. In particular, the account succeeds in explaining the mixed agreement data that proved problematic for the late operations approaches. Recall that in these cases, the subject DP appears in a clause-medial position between F and Ptc. Suppose Ptc possesses an EPP feature. Then, using the same reasoning as above, Ptc can only Agree with the full conjunction and the full conjunction raises to Spec, PtCP.¹⁹ Next, F probes its c-command domain to Agree. If F does not possess an EPP feature, then it may target either the first conjunct or full conjunction. If it targets the first conjunct, FCA will be realized on the auxiliary in F, while full agreement will be realized on the participle in Ptc (22).

Despite its success in explaining mixed agreement cases, this account suffers from other issues. First, there is a theoretical concern to the effect that the condition in (53) is insufficient to block FCA with F followed by movement of the full coordinated DP to Spec, FP. The worry is that if some constituent X is targeted for movement, but that movement of X is blocked for some reason, a general pied-piping mechanism will identify the minimal constituent Y such that Y contains X and Y may undergo movement. This constituent Y will then undergo movement. Suppose F Agrees with the first conjunct DP and targets this DP for movement. Due to the CSC, this DP cannot undergo movement. The pied-piping mechanism will then identify the entire coordinated structure as the minimal constituent that can undergo movement. The full DP will then raise to Spec, FP despite F's Agree relation with only the first conjunct.²⁰

Whether this argument proves fatal for the theory outlined here will ultimately depend upon particular details of the theory of pied-piping that is adopted. But there is independent, empirical evidence in Finnish that casts doubt on an account of FCA via constraints on movement. First, there is independent evidence that agreement does not feed movement to specifier positions in Finnish. Recall example (37b), repeated in (56) below.

- (56) [FP [Spec,FP *Tämä-n kirj-a-n*] *on* [PtcP *kirjoitta-nut*
 This-ACC book-ACC be.3SG write-PTC.SG
 [_vP *Graham Greene*]].
 Graham Greene
 ‘Graham Greene has written this book.’

In (56), the specifier of FP is occupied by an accusative DP with which F does not Agree. It is also possible to find clauses in which even the movement of a nominative subject DP to a specifier position Spec, XP does not co-occur with agreement between the DP in question and X. Recall (38a), repeated below as (57).

¹⁹ This assumes that the Ptc head in the clause is a ϕ -probe, as opposed to the non-agreeing Ptc head.

²⁰ Thanks to Boris Harizanov (p.c.) for bringing this issue to my attention.

- (57) [CP *Ui-maan* [FP [Spec,FP *sitä*]] *ei-vät* [TP [Spec,TP *nämä*
Swim-INF EXPL not-3PL these
lapset] *ol-isi* [PtcP *ikinä oppi-neet*]]].
children be-COND ever learn-PTC.PL
'To swim, these children would never have learned.'

In (57), the subject DP occupies Spec, TP and T is occupied by the conditional form of the auxiliary *olisi*. Notably, *olisi* does not realize any ϕ -agreement, as can be seen by comparing (57) to (58).

- (58) [CP *Ui-maan* [FP [Spec,FP *sitä*]] *ei* [TP [Spec,TP *tämä lapsi*]
Swim-INF EXPL not this child
ol-isi [PtcP *ikinä oppi-nut*]]].
be-COND ever learn-PTC.SG
'To swim, this child would never have learned.'

Although the agreement morphology on both the negation particle and participle differ between (57) and (58), the conditional *olisi* is unchanged. The failure of *olisi* to realize agreement cannot be explained by taking *olla* ('be') to have no morphological form that realizes both conditional mood and ϕ -agreement, since such a form can be realized in a clause in which the auxiliary, rather than *ei*, occupies F.

- (59) [CP *Ui-maan* [FP [Spec,FP *sitä*]] *ol-isi-vat*
Swim-INF EXPL be-COND-3PL
[TP [Spec,TP *nämä lapset*]] [PtcP *oppi-neet*]]].
these children learn-PTC.PL
'To swim, these children would have learned.'

Therefore, it is possible to conclude that although the subject DP occupies Spec, TP in examples (57) and (58), there is no realization of agreement with T.

A final problem for the analysis of FCA based on constraints on movement involves examples such as (20a) and (20b), repeated below as (60a) and (60b).

- (60) a. [CP [Spec,CP *Minä ja sinä-kin*]] [FP [Spec,FP *sitä*]]
I and you-too EXPL
ole-mme [PtcP *käy-neet Pariisi-ssa*]]].
be-1PL visit-PTC.PL Paris-INE
'You and I have visited Paris.'
- b. * [CP [Spec,CP *Minä ja sinä-kin*]] [FP [Spec,FP *sitä*]]
I and you-too EXPL
ole-n [PtcP *käy-neet Pariisi-ssa*]]].
be-1SG visit-PTC.PL Paris-INE
'You and I have visited Paris.'

Following Holmberg & Nikanne (2002), I assume that the expletive *sitä* occupies the Spec, FP position. The pre-verbal subject DP therefore occupies a higher position, which

Holmberg and Nikanne identify as Spec, CP. Crucially, these data show that full agreement with a pre-verbal subject is obligatory even when the pre-verbal subject does not occupy Spec, FP.²¹ The following examples similarly show that when a non-subject occupies Spec, FP and the subject occupies a higher position, only full agreement is possible.²²

- (61) a. [CP [Spec,CP *Sinä ja psykologi-ko*] [FP [Spec,FP *tämä-n*
You and psychologist-Q this-ACC
kirja-n] *kirjo-ittite*]]?
 book-ACC write-PST.2PL
 ‘Was it you and a psychologist who wrote this book?’
- b. * [CP [Spec,CP *Sinä ja psykologi-ko*]
You and psychologist-Q
 [FP [Spec,FP *tämä-n kirja-n*] *kirjo-ittite*]]?
 this-ACC book-ACC write-PST.2SG
 ‘Was it you and a psychologist who wrote this book?’

The problem that these cases pose for analyzing FCA via constraints on movement is that such an analysis enforces obligatory full agreement with pre-verbal subject DPs on the assumption that such DPs occupy Spec, FP. But if preverbal subject DPs do not occupy Spec, FP, this analysis cannot predict that they will obligatorily trigger full agreement. Put differently, the analysis based on constraints on movement predicts the possibility of the following derivation. F Agrees with the first conjunct of a coordinated subject DP. Then, some element (*sitä*, an object DP, etc.) moves to occupy Spec, FP. Next, the subject DP raises to Spec, CP. The result would be a clause in which the subject is pre-verbal, but the verb realizes FCA. Examples (60) and (61) show that this outcome is impossible.

I take these arguments to be sufficient for abandoning the analysis of FCA based on constraints on movement. In the next section, I propose a new analysis which is able to avoid the shortcomings of both this analysis as well as the structural ambiguity approaches.

4.3 Bidirectional Agree

Note that all of the empirical issues raised with the previous analysis based on constraints on movement were related to its account of how to ensure full agreement with pre-verbal subjects. I raised no objections to the analysis of FCA with post-verbal subjects. Therefore, the final approach maintains the previous analysis’s explanation of post-verbal FCA. Only the account of agreement with pre-verbal subjects will be modified.

²¹ I take the presence of the expletive in Spec, FP to also rule out the possibility that the subject DP occupied Spec, FP at some point in the syntactic derivation. On the assumption that FP possesses multiple specifiers, it would be possible to allow both *sitä* and the subject DP to occupy different specifiers of FP in the derivation. But even then, movement of the subject DP to Spec, FP would be unmotivated. Holmberg & Nikanne (2002) argue convincingly that *sitä* can satisfy the general requirement in Finnish that Spec, FP be occupied. Since *sitä* satisfies this requirement, there is no motivation for moving the subject DP to a specifier of FP.

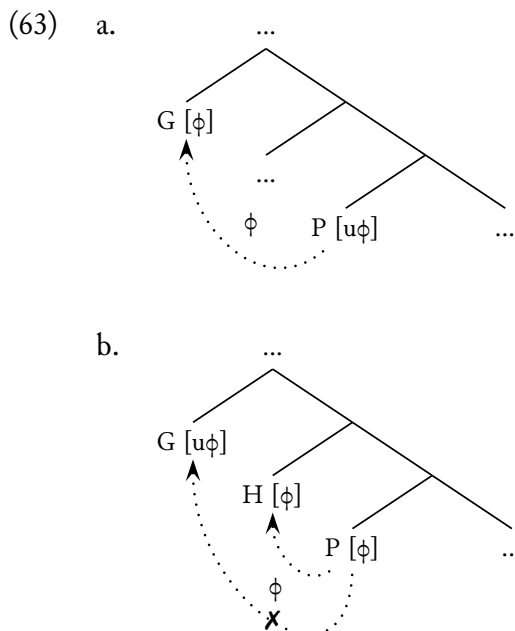
²² In the examples in (61), I assume that the object DP *tämän kirjan* occupies Spec, FP. An alternative analysis, following Holmberg (2000), would take the entire VP *tämän kirjan kirjoittite* to occupy Spec, FP. In either case, this position is not occupied by the subject DP during the syntactic derivation.

In some ways, the final account is simpler than the previous two. It requires no assumptions about late operations or about connections between agreement and movement. Rather, it relies redefining Agree as follows (changes from (43) are italicized):

- (62) A functional head P (the “probe”) Agrees with a node G (the “goal”) iff:²³
- P has unvalued, uninterpretable ϕ features ($u\phi$ features).
 - G has valued, interpretable ϕ features.
 - P *c-commands* G or G *c-commands* P.
 - If P *c-commands* G, there is no node H such that P *c-commands* H, H asymmetrically *c-commands* G, and H has valued ϕ features. *If G c-commands P, there is no node H such that H c-commands P, G asymmetrically c-commands H, and H has valued ϕ features.*

This definition is based on the proposal for Agree advanced in Baker (2008). The revised definition amounts to assuming that a probe can Agree either downward, i.e. with a goal that it *c-commands*, or upward, i.e. with a goal that *c-commands* it.

Condition (d) in the earlier definition of Agree (43) ensured that a probe had to Agree with the closest potential goal. The new condition (d) in (62) embodies the same assumption, although it is now necessary to have separate definitions for what counts as the closest potential goal depending on the direction of the Agree relation. In (63a), I illustrate how upward Agree operates. In (63b), I show how a node might intervene in a potential upward Agree relationship.



Although the definition in (62) is based on that presented by Baker (2008), a number of other authors have proposed a bidirectional version of Agree in recent years (Adger

²³ As before, I assume that Agree is case-discriminating.

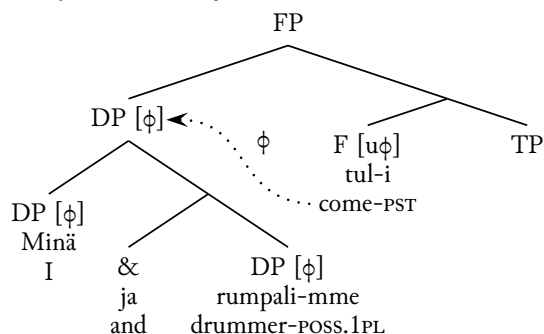
2003, Bjorkman & Zeijlstra 2014, Carstens 2016, Merchant 2006, Puškar & Murphy 2015). Many of these authors make an assumption that either downward or upward Agree is preferred, with agreement in the other direction being a last resort option. I remain agnostic on this issue here.

In order to allow for upward Agree to occur, I must assume that Agree does not occur immediately after a functional head with $u\phi$ -features enters the derivation. Baker (2008) notes this consequence of his definition of Agree and suggests that a ϕ -probe must Agree by the time that the phase containing the probe is complete, but that probes need not Agree sooner. In §5, I offer more considerations on the timing of Agree. For now, I simply assume that Agree occurs after all movement operations have taken place. Given the assumption that Agree operates after movement, it is not possible to maintain the assumption that agreement feeds movement in the way described in (53). As shown in the previous section, Finnish exhibits many cases in which agreement and movement to specifier positions are dissociated. Thus, abandoning this constraint appears to be necessary in order to account for the Finnish data irrespective of the FCA data.

With the definition of Agree in (62) established, the analysis of FCA is straightforward. Consider a clause with a single exponent of agreement. If the coordinated subject DP is in the c -command domain of F, either the first conjunct or full conjunction is a potential goal. As discussed in the previous section, F may optionally Agree with either the full conjunction or the first conjunct (54). The account correctly predicts that if the subject is post-verbal, the element in F will realize either FCA or full agreement.

Now consider a case in which the subject DP has already raised to a position above F, e.g. in Spec, FP or Spec, CP. This is illustrated below in (64), where the subject DP is shown in Spec, FP.²⁴

(64) Only the full conjunction c -commands F, so it is the only potential goal for Agree



The full conjunction c -commands F, so it is a potential goal for Agree. However, the first conjunct is too deeply embedded within the coordinate structure to c -command F; as a result, it is not a potential goal for Agree.

The reasoning is similar for clauses in which there are multiple exponents of agreement. I will not discuss each of these cases in detail, but I do wish to highlight a few points. First, as discussed above, I assume that there are two forms of the Ptc head: one of which is a ϕ -probe and one of which is not. The former enters the syntactic derivation with $u\phi$

²⁴ I do not offer an account of how the subject DP raises to Spec, FP in (64). One possibility is to assume that this movement is driven by an EPP feature on F, but that there is no connection between the EPP and agreement.

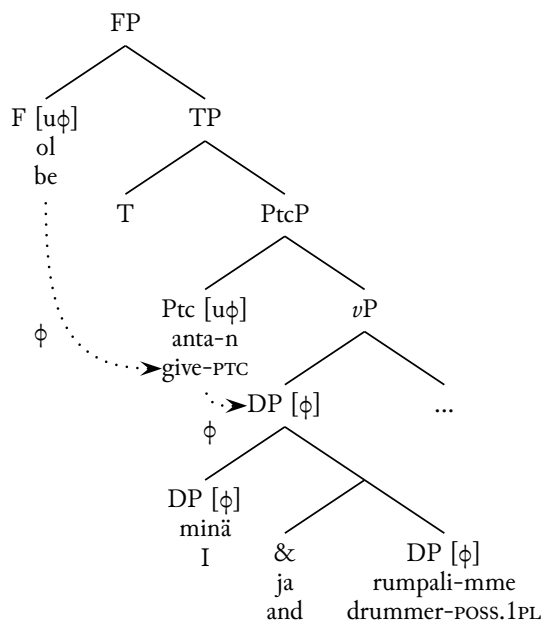
features and must Agree, while the latter does not. In clauses in which a coordinated subject DP precedes the participle in linear order and the participle appears to realize singular agreement, the Ptc head in the clause is the default, non-agreeing form. In contrast, if a coordinated subject DP follows the participle in linear order and the participle appears to realize singular agreement, this may be “true” singular agreement that resulted via FCA or the Ptc head may be the non-agreeing form.

Next, how does this approach account for cases of mixed agreement when the subject appears in a medial position? Recall that these examples were successfully handled by the previous approach based on constraints on movement, but posed a problem for the structural ambiguity analyses. In these cases, the subject DP occupies a position that c-commands Ptc, but is c-commanded by F. On the bidirectional Agree account, if Ptc is a ϕ -probe, it must realize full agreement since only the full conjunction c-commands Ptc. On the other hand, either full agreement or FCA may be realized on the auxiliary in F, since F c-commands both the full conjunction and the first conjunct. This is indeed what is shown in examples (21) and (22).

Finally, how does this analysis account for the fact that when the subject DP remains in Spec, ν P, it is impossible for the participle to realize plural agreement and the auxiliary to realize FCA? In these cases, the Ptc head must be a ϕ -probe. Otherwise, the participle could not realize full agreement. But what ensures that once Ptc has Agreed with the full, conjoined subject, F must do so as well? I propose the following. Ptc first Agrees with the full conjunction. Next, F does not Agree directly with either the full conjunction or first conjunct DP, but rather Agrees with the Ptc head. In fact, assuming that functional heads, in addition to DPs, may be targeted by Agree, the definition of Agree in (62) predicts that F *must* Agree with Ptc and that the subject DP will not be a potential goal. Ptc has valued ϕ -features as a result of its Agree relationship with either the full conjunction or first conjunct. It is also the case that Ptc asymmetrically c-commands the coordinate subject DP, thus counting as the closest node with valued ϕ -features. If F Agrees with Ptc, rather than the subject DP, both F and Ptc will realize the same agreement pattern. This process is illustrated in (65).²⁵

²⁵ An anonymous reviewer points that on the assumption that Ptc enters the syntactic derivation with uninterpretable ϕ -features, this proposal may violate the standard assumption that the goal in an Agree relation must have interpretable ϕ -features. One way to resolve this issue is to assume that for the establishment of at least some Agree relations, the goal's ϕ -features must be valued, whether or not they are interpretable.

- (65) Ptc first Agrees with the full conjunction of the subject DP. F then Agrees with Ptc.



Note that in order to pursue this analysis, it is necessary to make the additional assumption that if a clause contains multiple ϕ -probes, these probes establish Agree relations in a bottom-up manner. That is, functional heads lower in the clause structure Agree before heads higher in the clause structure.²⁶

Briefly, I review the problems that arose for the previous analysis, according to which FCA was explained via various constraints on movement. First, there was a theoretical concern that a pied-piping mechanism could allow the full, conjoined DP to raise to Spec, FP even if F had only Agreed with the first conjunct DP. On the present analysis, this is no longer an issue due to the assumption that Agree occurs post-movement. Thus, there is no possibility that F will Agree with the first conjunct and that the full, conjoined subject will subsequently raise to Spec, FP. Second, it was noted that agreement does not appear to feed movement to specifier positions in Finnish. Since the present analysis abandons this assumption, this objection is no longer relevant. Finally, pre-verbal subjects trigger full agreement even when they do not occupy Spec, FP. On the current proposal, full agreement is predicted so long as the coordinated subject DP c-commands the ϕ -probe, regardless of the identity of the structural position it occupies. Thus, the present analysis based on bidirectional Agree is able to fully capture the Finnish FCA data while avoiding the issues that arose for the other candidate proposals considered here.

²⁶ Alternatively, it is possible to make no assumption about which head Agrees first and instead assume that upward Agree is preferred over downward Agree. Then, even if F Agreed before Ptc, F would first probe upward and locate no potential goal. It would then probe downward, Agreeing with either the first conjunct or full conjunction. Next, Ptc would probe upward and Agree directly with F. This reverses the dependency between F and Ptc shown in (65), but still derives the desired outcome.

5 Conclusion

Pre-existing analyses of FCA in other language cannot be extended to Finnish due to various theoretical and empirical shortcomings. These issues are avoided by a novel proposal based on a bidirectional version of Agree. Although this proposal handles the data related to Finnish FCA, there are a number of outstanding issues. In this section, I consider several consequences of the final analysis for our understanding of the role of agreement in syntax and our understanding of languages that do not exhibit FCA.

One of the most significant consequences of assuming that Agree operates bidirectionally is that it is not possible to maintain that agreement between X and Y feeds movement of Y to Spec, XP. In contrast, Preminger (2014) has argued that agreement must feed movement in order to explain certain dative intervention effects. A full discussion of the data is beyond the scope of this paper, but it is possible to illustrate the basic point with the following French examples that Preminger cites from McGinnis (1998):

- (66) a. *Il semble à Marie que Jean a du talent.* (French)
 It seems to Marie that Jean has of talent
 ‘It seems to Marie that Jean has talent.’
- b. **?Jean semble à Marie avoir du talent.* (French)
 Jean seems to Marie have.INF of talent
 ‘Jean seems to Marie to have talent.’

Assume that the presence of the dative *à Marie* in (66a) blocks agreement with *Jean*. Then, Preminger argues that the ungrammaticality of (66b) is due to the fact that *Jean* has raised to the specifier position of a phrase (Spec, TP) without agreeing with the head of that phrase (T). That is, the ungrammaticality of (66b) is explained by assuming that agreement must feed movement. By giving up on the idea that agreement feeds movement, it is necessary to find some other explanation for the ungrammaticality of (66b). One option is to follow Bruening (2014), who argues that dative intervention effects such as those shown in (66) can be explained without assuming that agreement feeds movement. According to Bruening’s account, the dative *à Marie* is an adjunct and the movement of *Jean* to Spec, TP in (66b) is blocked due to a prohibition against movement across adjunct phrases.

A related consequence of the bidirectional Agree proposal is that Agree must occur relatively late in the syntactic derivation. At the very least, Agree must occur after all movement has taken place. This proposal is not without precedent. As mentioned above, Baker (2008) acknowledges that his bidirectional Agree proposal requires Agree to occur relatively late. In particular, Baker (2008) proposes that Agree occurs at the end of each phase in the syntactic derivation. I see no barrier to adopting this proposal for Finnish, so long as it is assumed that movement triggered by features on a phase head precedes Agree. For example, assuming that C is a phase head, it is necessary that any movement to Spec, CP occurs before Agree in order to account for the data in (60) and (61).

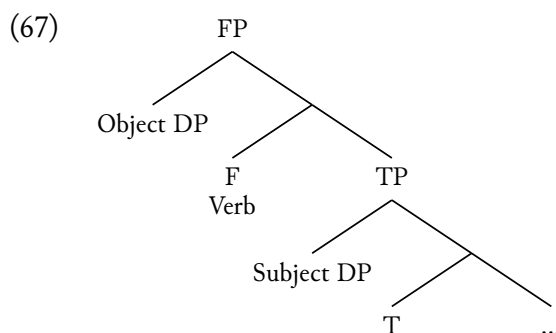
Several authors have argued for a more radical view, according to which agreement is an entirely post-syntactic phenomenon. Arguments to this effect rest upon claims that agreement is dependent upon other, usually morphological, processes that are taken to be

post-syntactic (Bobaljik 2008, Chung 2014, Sigurðsson 2006, 2009) and claims that ϕ -features valued through agreement are invisible at LF (Heim 2008). Landau (2016) has recently argued that agreement may be a post-syntactic phenomenon due to data on partial control in which semantic interpretation diverges from morphological ϕ -features. The proposal offered in §4.3 may appear to rule out a completely post-syntactic perspective on agreement, since hierarchical information is needed to determine c-command relationships. However, the bidirectional Agree analysis is technically compatible with a post-syntactic analysis of agreement, so long as hierarchical information is still available post-syntactically. The possibility of post-syntactic operations that nonetheless rely on hierarchical structure is familiar in Distributed Morphology (DM, Halle & Marantz 1993), where lowering is assumed to be an operation that takes place post-syntactically but makes reference to the hierarchical output of syntax (Embick & Noyer 2001).

As noted above, not all Finnish speakers accept sentences with FCA, and although FCA is attested in a number of unrelated languages, it is by no means a universal. The analysis offered in §4.3 would seem to predict otherwise. That is, this analysis faces an undergeneration problem, since it cannot predict the existence of languages that do not exhibit FCA. I first note that the undergeneration problem is not unique to my proposal. As far as I know, every contemporary account of FCA, including those discussed in §4.1 and §4.2, attempts to explain FCA in terms of general syntactic principles. None of these theories explains how to rule out FCA in languages in which it is not attested. Moreover, as discussed above, the standard definition of Agree (43) predicts the possibility of FCA. Thus, the undergeneration problem follows from standard assumptions of agreement that were not specifically tailored to account for FCA.

Second, I note that the theory offered in §4.3 only predicts FCA to be possible when a conjoined subject DP remains within the c-command domain of a ϕ -probe. If the subject DP raises to a position from which it c-commands the ϕ -probe, only full agreement is predicted. Thus, in a language such as English, which relatively strictly maintains S V order in non-interrogative clauses, the current proposal predicts that FCA will not be realized. Moreover, in cases where subject DPs do remain below T in English, such as existential *there* clauses, FCA is attested (Munn 1999, Sobin 2014).

Still, there are languages that allow VS word order in which FCA is not attested, including those dialects of Finnish that do not allow FCA. There are at least two options for ruling out FCA in VS clauses in such languages. The first option states that in VS clauses where FCA is not possible, the subject DP actually does occupy a structural position higher than the functional head that enters an Agree relationship with the subject. However, the verb has raised to a position even higher in the clause. This is essential Doron's (2000) proposal for ruling out FCA in VS clauses in Modern Hebrew. Consider (67).

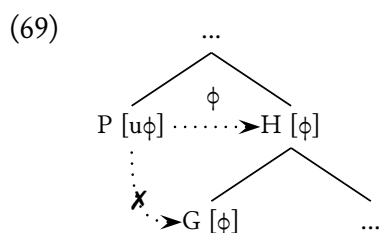


According to Doron, OVS clauses in Modern Hebrew have the structure shown in (67). T is the relevant ϕ -probe in this structure, and the subject DP c-commands T. On the proposal presented in §4.3, only full agreement is predicted to be possible, but since the verb has raised to a position above TP, the surface word order is VS. Extending this proposal to Finnish would amount to claiming that speakers who accept FCA and those who do not assume different clause structures for VS clauses.

Alternatively, it is possible to adopt a proposal mentioned in the discussion of late operations approaches to FCA. According to this proposal, the notion of locality that is relevant for Agree may be subject to parametric variation such that some languages make use of the definition of Agree given in (62), which others replace the locality condition for downward Agree in (d) with the following:

- (68) If P c-commands G, there is no node H such that P c-commands H, H asymmetrically c-commands G or *H dominates G*, and H has valued ϕ features.

Using the locality constraint in (68), the following type of agreement intervention would be possible:



This would be sufficient to block agreement with a first conjunct DP even when the probe c-commands the coordinate structure. I remain agnostic as to which of these two approaches, if either, is best suited for accounting for Finnish dialects in which FCA is not attested. However, adopting an approach such as that illustrated in (67) would require abandoning the assumptions about Finnish clause structure laid out in §3.

Despite these outstanding questions, an analysis of Finnish FCA based on a bidirectional version of Agree has greater empirical coverage than previous analyses of FCA. Given the strong similarities between Finnish FCA and FCA in other languages, the arguments presented here show that this analysis is a promising candidate for explanations of FCA cross-linguistically. Moreover, in so far as the bidirectional Agree analysis remains preferable to alternatives, the Finnish FCA data provide crucial insights into the basic workings of agreement.

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The Intonation of Topic and Comment in the Hungarian Declarative Sentence*

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This paper is primarily meant to be a descriptive overview of how intonation contributes to the realisation of simple declarative sentences in Hungarian. The first aim of the paper is to offer a description of those aspects of Hungarian intonation that may have grammatical and informational functions in Hungarian sentences. The second aim is to provide a notational system whereby the intonational facts of Hungarian declarative sentences can be transcribed. The third aim is to give a detailed analysis of the grammatically and informationally relevant intonational facts of simple Hungarian declarative sentences, concentrating on attitudinally neutral intonational solutions. We do this in three steps: first we examine the intonation of the Comment, and then the intonation of the Topic(s) in these sentences, and finally we suggest ways in which certain intonational rules we have established separately for the Comment and the Topic(s) can be conflated.

Keywords: *Hungarian, intonation, declarative sentence, topic, comment, focus*

1 Introduction

1.1 The main goal of this study

The paper is a descriptive overview of the intonation of simple Hungarian declarative sentences, formalised using the terms of the contour-based tradition of intonational studies. The declarative sentence has been chosen because it is the most basic grammatical sentence type: it is used for making statements, it offers an ideal opportunity for identifying the main structural positions within the sentence, and its intonation provides a background to which the intonations of other sentence types can be compared.

1.2 The syntactic framework

Within declaratives, we shall limit our attention to simple sentences, i.e. sentences which do not contain embedded clauses. The canonical Hungarian sentence contains one or more or nil *topic* constituents and an obligatory *comment* (É. Kiss 1987, 2002, Surányi et al. 2012).¹ The topics occupy structural positions before the comment, they are constituents in connection with which something is being stated or demanded or questioned in the comment (cf. Radford et al. 2009, 391). Also before the comment there may be *sentence*

* I am grateful to two anonymous reviewers and to the editors for their precious comments on an earlier version of this paper. The paper has been prepared as part of the project called “Comprehensive Grammar Resources: Hungarian”, presently in progress at the Research Institute for Linguistics of the Hungarian Academy of Sciences, and is planned to be complemented by a description of the grammatically/informationally relevant intonation of interrogative, imperative, exclamative, and optative sentences of Hungarian.

¹ In É. Kiss (2002) the term *comment* has been replaced by the term *predicate*, but we are not using the latter term here because of its ambiguity.

adverbials as well (É. Kiss 2002: 20–22). For instance, in (1) *a gyereket* ‘the child.ACC’ is topic (I), *szerencsére* ‘fortunately’ is a sentence adverbial (SAdv), and *az állatkertbe vitték el* ‘the zoo.ILL took.3PL away’ is comment (Com).^{2,3}

- (1) [_T *A gyereket*] [_{SAdv} *szerencsére*] [_{Com} *az állatkertbe vitték el*].
 the child.ACC fortunately the zoo.ILL took.3PL away
 ‘Fortunately it was to the zoo that they took the child.’

In addition to the structural positions before the comment, there are also structural positions in the comment. In example (1) the comment has a Focus position, occupied by *az állatkertbe* ‘the zoo.ILL’, a Verb position, occupied by *vitték* ‘took.3PL’, and a Postverbal position, occupied by *el* ‘away’.

Hungarian is a discourse-configurational language, in which “both topic/comment and focus/background divisions are reflected in surface syntax” (Surányi 2002a, 20). In (1) the constituent *az állatkertbe* is in Focus position, while the constituents in other structural positions before and after it form the background. Moreover, the content word in Focus position (*állatkertbe*) is accented and is immediately followed by the unaccented Verb (*vitték*). The verbal prefix (*el*), which would stand immediately before the Verb if there were no Focus position in the sentence, is in Postverbal position.

The structural positions are established on the basis of É. Kiss (2002), and will be discussed in Sections 3–5 below. In É. Kiss’s generative account of Hungarian syntax the major constituents of the Hungarian sentence, apart from the verb, are generated in the postverbal region of a flat structure, viz. the VP, and then move, or may move, to the various preverbal positions that are available at different levels, arranged in a hierarchical structure. However, in this paper we do not wish to discuss theoretical assumptions of this kind and do not commit ourselves to any particular theory. Instead, we will deliberately adopt a pre-theoretical (theory-neutral) approach, and present the structural positions with the major constituents filling them as they follow one another linearly on the surface.

In this paper our primary concern is the intonation of topics and comment constituents in declarative sentences. We leave the intonation of sentence adverbials for future research.

1.3 The intonational framework

Intonation in its narrowest sense is the superimposition of certain pitch patterns (i.e. speech melodies) on the segmental material (i.e. sound string) of sentences, when producing spoken sentences (i.e. utterances). Intonation performs a number of functions, among which a particularly well-known one is the *attitudinal function*, i.e. expressing the

² The acute accents on certain vowel letters in Hungarian orthography (see e.g. the *é* in *elvitték* and *szerencsére*, or the *á* in *állatkertbe*) represent phonemic vowel length and have nothing to do with the signalling of intonation or stress.

³ The grammatical glosses used in the examples of this paper are: ACC = ‘accusative’, ADE = ‘adessive’, ILL = ‘illative’, INE = ‘inessive’, INF = ‘infinitive’, INS = ‘instrumental’, PAST = ‘past tense’ (used when past tense is not obvious from the shape of the English gloss of the verb), PEF = ‘verbal prefix’ (used when the prefix is untranslatable into English), PL = ‘plural’ (used to indicate the plural number of an adjective), SUB = ‘sublative’, SUP = ‘superessive’, 1SG = ‘first person singular’, 1SG.POSS = ‘possessed by a first person singular possessor’, 2SG = ‘second person singular’, 3PL = ‘third person plural’, 3SG = ‘third person singular’, 3SG.POSS = ‘possessed by a third person singular possessor’.

speaker's emotional/social attitude(s) in particular speech situations. However, instead of the attitudinal function of intonation, in the present paper we concentrate on the *grammatical and informational functions* of intonation. These potentially include (a) revealing the syntactic structure and, through that, the cognitive meaning of the sentence, (b) signalling the grammatical type of the sentence, and (c) showing the division of the sentence into informationally new, given (old), or contrasted parts. These functions of intonation manifest themselves in the ability of intonation to disambiguate sentences that are identical segmentally but different grammatically and/or in information structure.

There are several important works on Hungarian intonation and also syntactic works containing precious intonational observations. Unfortunately, many of these works are only available in Hungarian and are inaccessible to an international readership. Those that have been published in English include Varga (1983, 2002, 2008), Kornai & Kálmán (1988), Kenesei & Vogel (1989, 1998), Rosenthal (1992), Gósy & Tekken (1994), Fónagy (1998), Grice et al. (2000), Olaszy (2002), É. Kiss (2002), Hunyadi (2002), Surányi (2002a), Szendrői (2003), Mycock (2010), Surányi et al. (2012), Gyuris & Mády (2013, 2014), Genzel et al. (2015), etc.

These works have different scopes and theoretical backgrounds. Although they have all influenced our views on Hungarian intonation, the intonational description in the present paper primarily relies on, and develops further, the contour-based approach to intonation advocated by Varga (2002). This follows the British tradition by treating the contours as wholes rather than as configurations of levels, and it uses graphic intonational symbols, based on the practice of British intonation studies (see e.g. Wells 2006). Nowadays, especially in purely phonological works on intonation, other ways of transcribing intonation, stemming from the autosegmental approach and manifesting themselves in different versions of ToBI (see Beckman et al. 2005), are also common. The reasons why we have chosen graphic symbols rather than ToBI are that (a) most of these graphic symbols are iconic, and so they are easier than ToBI to decode for non-phonologists, (b) although there have been efforts to approach Hungarian intonation in autosegmental and also in ToBI terms (see e.g. Kornai & Kálmán 1988, Grice et al. 2000, Varga 2002, 2008, 2010, Mády & Kleber 2010, Gyuris & Mády 2013), there are still a lot of open questions concerning various details and no generally accepted ToBI system is yet available for Hungarian.

1.4 The structure of this study

The paper consists of six sections. After the present introduction, Section 2 gives a selective outline of the intonation system of Hungarian, i.e. presents the inventory of, and transcription symbols for, the intonational features which are relevant grammatically and informationally in simple Hungarian declarative sentences. Section 3 deals with the basic syntactic structure of Hungarian declarative sentences in terms of the structural positions they contain. Section 4 is devoted to the intonation of comments, while Section 5 examines the intonation of topics within Hungarian declaratives. Section 6 is a brief summary and it conflates some rules that have been presented separately in Sections 4 and 5.

2 The system of Hungarian intonation

2.1 Basic concepts: intonation contours, stress, accent, tonetic accent marks

Intonation means superimposing certain pitch patterns on the segmental strings of sentences, and thereby producing utterances. However, the smallest units that are usually recognised as being directly relevant to the realisation of pitch patterns are not the segments (sounds), but the syllables, which are composed of the segments. The recurring pitch patterns that the syllables of utterances carry will be called *intonation contours*. They are meaningful and have characteristic shapes.⁴

Some of the syllables are *accented*. The accented syllables are stressed (i.e. they have extra intensity or some other, non-pitch-involving feature that gives them extra prominence) and, in addition, they are pitch-prominent (i.e. they are associated with a pitch-event, in the sense that they initiate an intonation contour). All other syllables are *unaccented*. Some of the unaccented syllables may be stressed: these have some extra prominence but are not associated with independently chosen pitch events. The rest of the unaccented syllables are unstressed. In sum, the syllables of Hungarian utterances are either accented or unaccented, and the unaccented syllables are either stressed or unstressed, cf. Varga (2002: 127–28).⁵

Word stress in Hungarian has a fixed position: it normally falls on the first syllable of a stressed word (apart from cases where a later syllable of the word receives a special contrastive stress).

From the point of view of intonation it is the accented syllables that play a crucial role. They are the significant points in intonation, and therefore they have to be shown in an intonational transcription. They will be indicated by *tonetic accent marks*, i.e. graphic intonation symbols which simultaneously signal both accent and intonation, and which will be put before the relevant syllables in the line of written text representing the segmental part of the utterance. Such symbols belong to our intonational transcription system, which makes separate pitch diagrams ultimately superfluous. Nevertheless, in this section the diagrammatic representations are also necessary: they serve to familiarise the reader with the correspondences between the graphic intonation symbols and the pitch diagrams. Therefore, intonation in this section is shown in two ways: by a schematic pitch diagram and by the intonationally transcribed text of the utterance, running parallel to the pitch diagram.

2.2 The Intonation Phrase and the intonation contours

The intonation contours appear as melodic constituents within certain phonological structures called *Intonation Phrases* (IPs). IPs are units of intonation, i.e. containers of connected intonational events, with a characteristic internal structure. The obligatory part of Hungarian IPs is the *Terminal Part*, which begins on the last (or only) accented syllable

⁴ In some languages (known as tone languages) pitch patterns are integral parts of *words* and so they can distinguish words that are segmentally identical. Those patterns of pitch variation are not intonation contours but *lexical tones*. Hungarian is not a tone language: it does not have lexical tones. It has intonation contours, which can distinguish utterances or parts of utterances.

⁵ For a discussion of stressed and accented syllables along similar lines, but in the context of English prosody, see Warren (2016: 7–8).

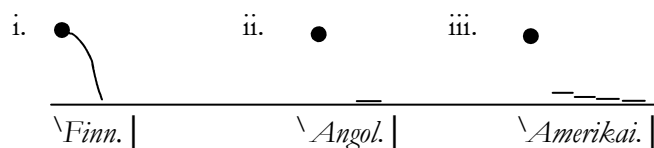
of the IP and carries a *terminal contour*. Terminal contours last till the end of the IP, indicated by the IP-boundary symbol: [|].

A terminal contour is a recurring, discrete, meaningful speech melody, which is able to appear on independent utterances and can (but need not) be followed by a pause. In this paper we shall recognise only those terminal contours that occur in declarative sentences in Hungarian. These are: (a) the *Full Fall*, symbol: [\backslash], (b) the *Fall-Rise*, symbol: [\backslash^{\vee}], (c) the *Rise*, symbol: [$^{\vee}$], (d) the *High Monotone*, symbol: [$\bar{_}$], and (e) the *Descent*, symbol: [\curvearrowright]. This list and the symbols are based on Varga (2002: 33–47), with the omission of some contours that are not necessary for the purposes of the present paper.

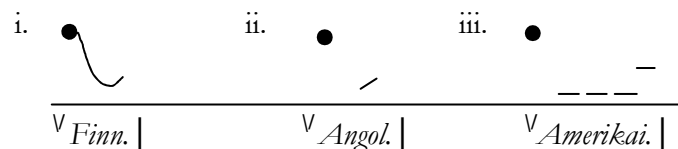
The phonetic contents of the terminal contours are displayed in the schematic pitch diagrams of (2), where the (i) one-syllable, (ii) two-syllable, and (iii) three-or-more-syllable phonetic variants (allo-contours) of the terminal contours are illustrated on the carrier phrases *finn* ‘Finnish’, *angol* ‘English’, and *amerikai* ‘American’, respectively.⁶ The diagrams contain filled dots for the accented syllables and short lines for the other syllables, arranged at different heights above a long horizontal line, which represents the bottom pitch of the speaker’s voice. Below this line we can see the written text of the utterance, provided with the tonetic accent marks. Each example in (2) is an IP consisting of a Terminal Part alone.

(2) *Terminal Contours (selected for the purposes of the present study)*

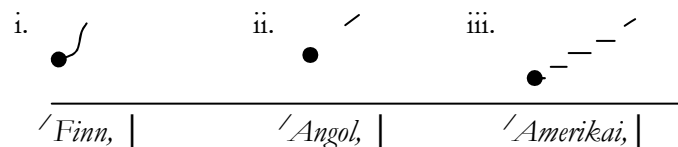
a. Full Fall:



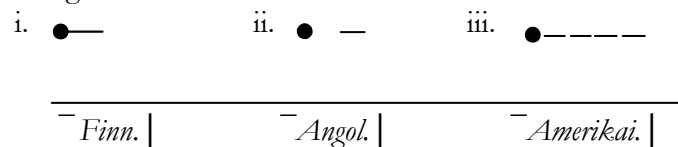
b. Fall-Rise:



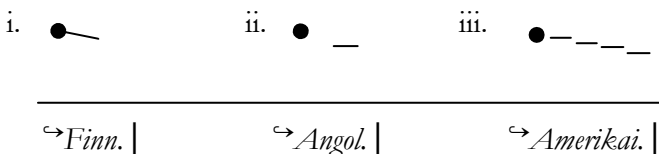
c. Rise:



d. High Monotone:



e. Descent:



⁶ The word *amerikai* consists of five syllables: a-me-ri-ka-i.

A common feature of the Full Fall and the Fall-Rise (2a, b) is that in their plurisyllabic variants the voice radically drops down between the first and the second syllables. This is why they can be called *front-falling contours*. The Full Fall ends on the bottom pitch of the speaker's normal voice range, whereas the Fall-Rise goes down but then moves up at the end. The starting point of the Full Fall can be at different heights, and in extreme cases it can be quite low, yielding a flattened Full Fall, but even this flattened variety starts with an accented syllable and ends at the bottom pitch. Since the flattened variety is either the result of automatic downdrift (see 2.3 below), or – when deliberately chosen – has only attitudinal significance, it will not have a separate transcription symbol from the Full Fall.

The Rise, the High Monotone and the Descent together can be called *sustained contours*. The Rise (2c) is the name either of a steadily rising contour, or of a contour which keeps level for a large part and then moves upwards at its end. In both cases it can be high or low. However, we shall not distinguish these varieties in our transcriptions. The High Monotone (2d) does not change in pitch, and it can be at high or mid level, but we shall ignore such differences. The Descent (2e) is a narrow-ranged, gradually sloping pitch movement which starts fairly high and lacks the big drop that occurs between the first two syllables of the Full Fall or Fall-Rise. It often reaches its peak (i.e. the highest-pitched point from where the descent actually begins) with some delay: it can have its peak at the end of the first syllable or at the beginning of the second syllable, rather than at the beginning of the first.

The Rise can be replaced by a High Monotone, and the High Monotone by a Descent, but not the other way round. These replacements, however, carry only attitudinal differences, and can be regarded as grammatically/informationally insignificant alternatives to the contour type which they replace, cf. Varga (2002: 36–38). These possibilities are summed up here as Sustained Contour Alternatives, shown in (3).

(3) *Sustained Contour Alternatives*

$$\begin{array}{ccccc} \text{Rise } [\text{'xxx}] & \Rightarrow & \text{High Monotone } [\text{¯xxx}] & \Rightarrow & \text{Descent } [\text{↘xxx}] \\ & & \text{opt} & & \text{opt} \end{array}$$

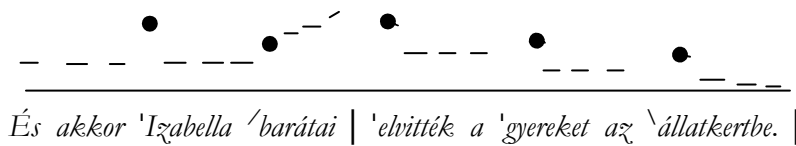
Note: These optional changes can be associated with attitudinal differences but are insignificant from a grammatical/informational point of view.

In (2) above we have seen examples of IPs that contain only the obligatory component of an IP, viz. the Terminal Part. However, an IP may contain pre-terminal parts as well. These are the Preparatory Part and the Scale. If there are several accents in the IP, the first accented syllable starts a *Scale*, which lasts till the Terminal Part. Since each accented syllable in the Scale starts a *scalar contour*, the scale carries one or more scalar contours. The Scale may be optionally preceded by a *Preparatory Part*, which is formed by the unaccented syllables before the first accented syllable of the IP. It carries some melody which we call the *preparatory contour*. The structure of IPs is summed up in (4), with the optional parts in parentheses:

(4) *Structure of the Hungarian Intonation Phrase*
(Preparatory Part) + (Scale) + Terminal Part⁷

The most frequent scalar contour is the *Half Fall*, symbol: [']. This is similar in shape to the Full Fall (see (2a) above), but it does not reach down to the bottom pitch of the speaker and does not end in a pause. In (5) below, which is an utterance consisting of two IPs, we can find three scalar Half Falls, one in the first IP (on the string *Izabella* 'Isabella'), and two in the second IP (on the strings *elvitte a* 'away.took.3PL the' and *gyereket az* 'child.ACC the'). Example (5) contains a preparatory contour as well (on the string *és akkor* 'and then'). The shape of a preparatory contour is similar to a sustained contour (i.e. it can be rising, level, descending) but it lacks the extra prominence on the first syllable of its carrier string. It is realised anywhere in the region between mid low and high. Its varieties may convey attitudinal information, but are insignificant syntactically, and so they will not be indicated in the transcriptions.

- (5) *És akkor Izabella barátai elvitte a gyereket az állatkertbe.*
and then Isabella friends.3SG.POSS away.took.3PL the child.ACC the
állatkertbe.
zoo.ILL
'And then Isabella's friends took the child to the zoo.'



In our intonational transcriptions the force of a tonetic accent mark lasts till the next tonetic accent mark, or – if there is no such mark – till the end of the IP.

A syllable that initiates one of the terminal contours presented in (2) above is by definition the last (rightmost) accented syllable of a Hungarian IP. This syllable is not necessarily physically stronger than the accented syllables that precede it in the Scale (cf. Fónagy 1998: 340). For instance, in the second IP of (5), 'elvitte a 'gyereket az \`állatkertbe, the accents may be physically equally strong, or the first accent (the one on *el-*) may be even stronger than the later ones.⁸

The end of an IP coincides with the end of a terminal contour. Physically, this is marked by an audible pause (or some phonetic phenomenon creating the impression of a pause) at the end of the terminal contour, and/or by a melodic break between the end of

⁷ This is the structure of *ordinary IPs* in Hungarian, developed for Hungarian by Varga (2002). It is analogous to the traditionally recognised structure of English IPs, divisible into optional Pre-head, optional Head and obligatory Nuclear Part, the latter consisting of obligatory Nucleus and optional Tail (see e.g. Tench 1996: 14). In addition to ordinary IPs, there exist *appended IPs*, too, in Hungarian (cf. Varga 2002: 48–50). Such IPs are exceptional: they may consist of nothing but an unaccented low level contour carried by utterance-final inorganic material such as vocatives, quoting clauses, etc. In this paper we are not dealing with appended IPs.

⁸ In an English IP, the last accented syllable is generally considered to be the strongest of all the accents within the IP, and the contour it initiates is called the *nuclear* contour. This is a difference between Hungarian and English IPs, but the Hungarian terminal contours can still be regarded as analogous to the English nuclear contours, with the qualification that they stand out due to their shape, and not due to their extra prominence.

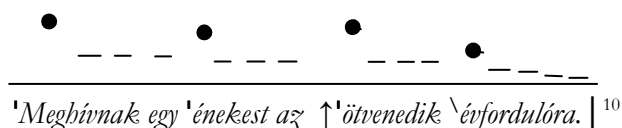
a terminal contour and what follows it (see e.g. the melodic separation between the low-pitched end of a falling terminal contour or the high-pitched end of a rising terminal contour, and the mid-pitched beginning of a preparatory contour immediately after it).

2.3 Relative peak heights, downdrift and upstep

If you go back to the pitch diagram of the second IP in (5), transcribed as 'elvitték a 'gyereket az \állatkertbe |, you will find that each intonation contour in the Scale and the Terminal Part is noticeably lower than the preceding contour. This gradual lowering of the contours within an IP can be called *downdrift* (also known as *declination*). It can occur between adjacent Half Falls or between a Half Fall and a Full Fall. We consider downdrift as a natural process and give it no special symbol in our intonational notation.

However, downdrift can be suspended. This means that the peak (i.e. the highest-pitched syllable) of a theoretically downdriftable contour is (almost) as high as, or even higher than, the peak of the preceding contour, instead of being noticeably lower. This avoidance of downdrift at a contour will be called *upstep*, the contour receiving upstep will be referred to as *upstepped contour*. Some instances of upstep can happen at grammatically/informationally significant points, when it is used to highlight a word or to separate a sentence constituent from a previous one. In our intonational transcriptions, such cases of upstep can be marked by putting the symbol [↑] before the tonetic accent mark of the upstepped contour. For instance, in (6), the contour beginning with the syllable *öt-* is upstepped, and upstepping in this position is a way of separating one postverbal constituent (*az ötvenedik évfordulóra* 'for the 50th anniversary') from the preceding one (*egy énekest* 'a singer.ACC'), cf. 4.1 below.

- (6) *Meghívna* *egy énekest* *az ötvenedik évfordulóra.*
 PREF.call.3PL a singer.ACC the fiftieth anniversary.SUB⁹
 'They are inviting a singer for the 50th anniversary.'



2.4 Summary of the intonational transcription symbols used in this paper

Before proceeding to the next section, let us survey the graphic symbols that we have introduced for transcribing the intonation of Hungarian declarative sentences.

- (7) *Summary of the Intonational Transcription Symbols*
- | | | |
|------------------|----------------------|--------------------|
| \ _{xxx} | <i>Full Fall</i> | (terminal contour) |
| ∨ _{xxx} | <i>Fall-Rise</i> | (terminal contour) |
| / _{xxx} | <i>Rise</i> | (terminal contour) |
| — _{xxx} | <i>High Monotone</i> | (terminal contour) |

⁹ The gloss PREF stands for any untranslatable Hungarian verbal prefix (e.g. *meg-*), see fn. 3.

¹⁰ Upstep is different from pitch reset at the beginning of a new IP because it follows a scalar contour and is not preceded by a pause. So the presence of upstep does not indicate the beginning of a new IP.

↘ _{xxx}	<i>Descent</i>	(terminal contour)
' _{xxx}	<i>Half Fall</i>	(scalar contour)
	<i>End of IP</i>	
↑	<i>Upstep</i>	

3 The basic syntax of Hungarian sentences

3.1 Structural positions

The comment is the obligatory part of the prototypical Hungarian sentence, which is preceded by optional structural positions for *Topic* (T) and/or *Sentence Adverbial* (SAdv) constituents. Sentence adverbials may stand before or after or between topics, but are external to the comment.

Within the comment of positive Hungarian sentences we distinguish the following structural positions: *Distributive* (Dist) position, *Positive Degree/Manner Adverb* (PDMA) position, *Focus* (F) position, *Verb Modifier* (VMod) position, *Verb* (V) position, and *Postverbal* (PostV) position. All of these positions are optional, apart from the V position, which is obligatory in a prototypical Hungarian sentence. The F and the VMod positions are immediately before the V position, but they mutually exclude each other: either or neither of them is present but they cannot both be present before the verb. If the F or the VMod position is present, the constituent in it is accented, and the verb in the V position is accentless.

All these positions are summed up in (8), where positions that are optional and repeatable are marked with the Kleene star: T*, Dist*, PostV*; positions that are optional and non-repeatable are in parentheses: (F), (PDMA), (VMod); and the V position, which is obligatory and non-repeatable, has neither a Kleene star nor parentheses.

(8) *Structural Positions in the Hungarian Sentence*¹¹

Sentence	
T*	Comment
	Dist* { (F) } V PostV* { (PDMA) (VMod) }

- Notes:*
1. Before the comment there may be SAdv* as well; these may occur before or after or between T constituents.
 2. Within the comment, F and VMod are mutually exclusive.

The structural positions presented here have been established on the basis of É. Kiss (2002), but – in contrast to É. Kiss (2002) – we consider them as positions following one another linearly in a flat structure.

¹¹ These are the structural positions in positive declarative sentences. In negative declaratives the preverbal part of the comment is partly different, see 4.3.

In this paper we use the general term *major constituent* for any word or word string that fills a structural position. Major constituents will be referred to by the name of the structural position they occupy, e.g. a major constituent filling a PostV position will be labelled as a PostV constituent. A structural position is only recognised in a particular sentence if it is filled. All the structural positions that have been mentioned so far will be illustrated in (9a) and (9b) below. First, however, we must clarify two senses of the term *focus*.

3.2 Broad-focus sentences versus narrow-focus sentences

The term *focus* is used in different senses in the literature. When it is simply used to refer to that part of the spoken sentence which conveys new information, it can be called *information focus* (É. Kiss 1998). This is opposed to the *background*, i.e. given (or presupposed) information. Information focus is typically signalled by prosodic means: the content words within the new part of the sentence are marked with accents, whereas those in the given part are unaccented.¹²

However, focushood can be marked not only prosodically but also structurally. In this case the term *focus* refers to a constituent that occupies a particular syntactically defined position, where it receives structural (and typically also prosodic) highlighting. In Hungarian this is the Focus position (F position). The F position must be followed by an unaccented verb, and so the Verb Modifier, if there is one, which otherwise precedes the Verb, occurs in Postverbal position (PostV position), see (9a) below (*küldött* ‘sent.3SG’ *fel* ‘up’). The major constituent in the F position “is more than merely non-presupposed information; it expresses exhaustive identification from among a set of alternatives” (É. Kiss (2002: 77). Therefore É. Kiss (1998) calls it *identificational focus*. However, not every Hungarian sentence has an F position and so not every Hungarian sentence has identificational focus. For instance, in (9b) there is no F position and the Verb Modifier precedes the Verb (*fel* ‘up’ *-küldött* ‘3SG’).

In sentences with F position, the new information is typically narrowed down to the constituent which is in the F position (i.e. information focus and identificational focus coincide), and the other major constituents are typically “given” (even though some of the postverbal ones may also be “new”). By contrast, in sentences with no F position there is no identificational focus and the new information (informational focus) is potentially co-extensive with the entire comment or the entire sentence (even though less typically it can be restricted to a postverbal constituent). Therefore, following Genzel et al. (2015), we shall refer to sentences with F position as *narrow-focus sentences*, see (9a), and sentences without F position as *broad-focus sentences*, see (9b).¹³

Here and in later examples the major constituents in F position will be bold-faced in the structural analyses.

¹² Information is given (a) if it is recoverable from the linguistic context, i.e. it has been mentioned in, or implied by, the previous discourse, or (b) if it is visible or known in the speech situation. Information is new when it is additional to that already supplied by the linguistic context or the situation.

¹³ For more on Hungarian focus, see also Kenesei & Vogel (1998), Hunyadi (2002), Szendrői (2003), Sneed (2004), etc.

- (9) a. *Narrow-focus Sentence:*
 [T *Izabella*] [SAdv *állítólag*] [Com [Dist *mindenkit*]] [F *a padlásszobába*]
 Isabella allegedly everybody.ACC the attic.ILL
 [V *küldött fel*] [PostV *udvariasan*].
 sent.3SG up politely
 ‘Allegedly it is to the attic that Isabella sent everybody up politely.’¹⁴
- b. *Broad-focus Sentence:*
 [T *Izabella*] [SAdv *állítólag*] [Com [Dist *mindenkit*]] [PDMA *udvariasan*]
 Isabella allegedly everybody.ACC politely
 [VMod *fel*] [V *-küldött a padlásszobába*].¹⁵
 up sent.3SG the attic.ILL
 ‘Allegedly Isabella sent everybody up to the attic politely.’

In the next two sections we shall deal with the intonation of the major constituents in the structural positions shown in (9a, b), with the exception of sentence adverbials. Sentence adverbials form a rather heterogeneous group, with no fixed position relative to the topics, and although they often have topic-like intonation, their intonational behaviour can be idiosyncratic. The examination of their intonation therefore is beyond the scope of the present study.¹⁶

4 The intonation of comments in simple Hungarian declarative sentences

4.1 General intonation rules for comments in Hungarian declaratives

Since the grammatical type of a sentence is largely revealed by the intonation of its comment (especially its terminal contour), we shall first deal with the intonation of comments in declarative sentences. For ease of presentation, the examples in this section will be topicless declaratives, i.e. declarative sentences consisting of a comment alone.¹⁷

As the examples in this section are coextensive with comments, the labelled brackets [Com . . .] will be omitted from the structural analyses. From now on we shall not be using pitch diagrams any more. Instead, we will be using the graphic intonational transcription symbols presented in Section 2.

¹⁴ Usually, the most appropriate English counterparts of Hungarian narrow-focus sentences are cleft constructions, e.g. *It is to the attic that Isabella sent everybody up.*

¹⁵ In (9b) there are hyphens after *fel* and before *küldött*. These hyphens indicate that – although the verbal prefix (*fel*) and the verb (*küldött*) are separated from each other in the structural analysis because they are in different structural positions – in Hungarian orthography they are written together as *felküldött*. In (9a) the prefix follows the verb, and so they are not written together and do not need the hyphens (*küldött fel*). In this paper we shall always use hyphens between a prefix in VMod position and an immediately following verb.

¹⁶ According to É. Kiss et al. (1998: 29), place and time adverbials before the comment can be interpreted both as sentence adverbials and as topics. In this paper we shall treat them as topics.

¹⁷ É. Kiss (2002: 14–20) distinguishes *real topicless sentences* like (i) [Com *Felkelt a nap*]. ‘Up rose the sun.’, where there is no topic, and *apparent topicless sentences* like (ii), [T *pro*] [Com *Behozták a kutyát*]. ‘(They) brought in the dog.’, where there is an invisible topic *pro*, whose properties are determined by the verbal inflection. However, from the point of view of intonation an invisible topic is no topic, and so we shall regard sentences like (ii) as topicless sentences, too.

When declarative sentences are used as statements and have attitudinally neutral intonation, their comments typically have a Full Fall as their terminal contour. In addition, all the content word constituents carrying new information within the comment normally begin with an accented syllable and have a Half Fall, apart from the Verb, which is accentless when preceded by a VMod or F constituent, cf. (10), where the accentless verb *vitték* ‘took.3PL’ is preceded by the accented prefix *el* ‘away’ in VMod position.

- (10) [VMod *El-*] [V *-vitték*] [PostV *a vendégeket*] [PostV *a borfesztiválra*].
 away took.3PL the guests.ACC the wine.festival.SUB
 ‘They took the guests to the wine festival.’
 ‘*Elvitték a 'vendégeket a \borfesztiválra.* |

The intonation of (10) is attitudinally neutral: it lacks any identifiable attitude other than the one inherently present in making an unemotional objective statement. However, the intonation of declaratives can have various kinds of attitudinal variants, of which here we mention only one: (11). Here the scalar contours are the same as in (10) but the terminal contour is a Fall-Rise.

- (11) ‘*Elvitték a 'vendégeket a ^Vborfesztiválra.* |

The meanings of (10) and (11) are cognitively identical, but they differ in the attitudes that their intonations convey. In (11) the intonation signals some kind of conflict between the sentence and the context, see Varga (2002: 36). It may express the speaker’s reservation (partial agreement, partial disagreement) over his interlocutor’s previous remark, which could be for instance that the people mentioned did not treat their guests nicely enough. Or it may prepare the way for a (potential) conflicting continuation, which begins with the word *de* ‘but’, as in *De az egy katasztrófa volt* ‘But that was a disaster.’

In the rest of this paper we shall concentrate on attitudinally neutral intonation. As we could see in connection with (10), we can set up the following default rule:

- (12) *Default Intonation Rule for Declarative Comments*

In the comment of a simple Hungarian declarative sentence the last accented syllable initiates a Full Fall and any accented syllable other than the last one initiates a Half Fall.

Since the Half Fall does not have an IP boundary at its end, a consequence of applying (12) is that the major constituents of the comment are not in separate IPs. For instance, the comments of (13a, b) will be realised in a single IP, although they consist of five major constituents each. In (13a) these constituents are: Dist (*mindenkit*), PDMA (*udvariasan*), VMod (*fel-*), V (*-küldött*), PostV (*a padlás-szobába*), and in (13b) they are: Dist (*mindenkit*), F (*a padlás-szobába*), V (*küldött*), PostV (*fel*), PostV (*udvariasan*).

- (13) a. [_{Dist} *Mindenkit*] [_{PDMA} *udvariasan*] [_{VMod} *fel-*] [_V *-küldött*]
 everybody.ACC politely up sent.3SG
 [_{PostV} *a padlászobába*].
 the attic.ILL
 ‘S/he sent everybody up to the attic politely.’
 ‘*Mindenkit* ‘*udvariasan* ‘*felküldött* *a* ‘*padlászobába*. |
- b. [_{Dist} *Mindenkit*] [_F *a padlászobába*] [_V *küldött*] [_{PostV} *fel*]
 everybody.ACC the attic.ILL sent.3SG up
 [_{PostV} *udvariasan*].
 politely.
 ‘It was to the attic that s/he sent everybody up politely.’
 ‘*Mindenkit* *a* ‘*padlászobába* *küldött* *fel* *udvariasan*. |

In some cases a certain degree of separation is created between one major constituent of the comment and the next one by establishing upstep [↑] on the first accent of the next one. Let us present the upstep rule for declarative comments.

(14) *Upstep Rule within Declarative Comments (Optional)*

If the comment of a simple Hungarian declarative sentence contains a string XY, where both X and Y are accented PostV constituents, and Y has more than one accent, then there is optional upstep on the first accented syllable of Y.

Melodic condition: The last accented syllable of X initiates a Half Fall, and the syllable to be upstepped in Y initiates a Half Fall or a Full Fall.

This possibility is illustrated by (15), in which *az ötvenedik évfordulóra* ‘for the 50th anniversary’ is a PostV constituent with more than one accent, following another PostV constituent *egy énekest* ‘a singer.ACC’.

- (15) [_{VMod} *Meg-*] [_V *-hívna*] [_{PostV} *egy énekest*] [_{PostV} *az ötvenedik évfordulóra*.]
 PREF call. 3PL a singer.ACC the fiftieth anniversary.SUB
 ‘They are inviting a singer for the 50th anniversary.’
 ‘*Meghívna* *egy* ‘*énekest* *az* (↑) ‘*ötvenedik* ‘*évfordulóra*. |¹⁸

Finally, in addition to the default intonation rule presented in (12), we need to recognise a special intonation rule for declaratives, (16), which can override (12).

(16) *Rising Rule for Declarative Comments (Optional)*

If the comment of a simple Hungarian declarative sentence contains a string XY, where X is a major constituent with more than one accent and Y is a major constituent with at least one accent, then the default Half Fall initiated by the last accented syllable of X can be replaced by a Rise.

This rule is illustrated in (17) and (18). In (17) X is a Dist constituent (*minden muzsikust*), in (18) it is a PostV constituent (*az ötvenedik évfordulóra*).

¹⁸ Round brackets around a symbol indicate optionality of the phenomenon represented by the symbol.

- (17) [_{Dist} Minden muzsikust] [_{VMod} fel-] [_V -küldtek] [_{PostV} a padlászobába].
 every musician.ACC up sent.3PL the attic.ILL
 ‘They sent every musician up to the attic.’
 ‘Minden ‘muzsikust ‘felküldtek a \padlászobába. |
 ‘Minden /muzsikust | ‘felküldtek a \padlászobába. |
- (18) [_{VMod} Meg-] [_V -hívna] [_{PostV} az ötvenedik évfordulóra] [_{PostV} egy énekest].
 PREF call. 3PL the fiftieth anniversary.SUB a singer.ACC
 ‘They are inviting a singer for the 50th anniversary.’
 ‘Meghívna az ‘ötvenedik ‘évfordulóra egy \énekest. |
 ‘Meghívna az ‘ötvenedik /évfordulóra | egy \énekest. |

4.2 The intonation of the comment in positive declarative sentences

4.2.1 Positions for verbs and verb modifiers

Now we are ready to discuss the intonation of the major structural positions of declarative comments in detail. The first comment constituent we deal with is the *Verb*. A prototypical broad-focus sentence can consist of an accented verb, see e.g. (19).

- (19) [_V Dolgozik].
 works
 ‘S/he is working.’
 \Dolgozik. |

The comment of a broad-focus sentence can have a special position immediately before the Verb: the VMod position, which is the default position for the *Verb Modifier*. Verb Modifiers can be, among others, (a) verbal prefixes, (b) determinerless common nouns, and (c) predicative adjectives, see (20). When the Verb Modifier is in VMod position, it is accented and the Verb is unaccented. When the Verb is a copulative verb in 3rd person (singular or plural), Present Tense, it appears in its zero form, see (20b.iv) and (20c.ii).

- (20) *Verb Modifiers*
- a. *Verbal prefixes:*
- | | |
|--|---|
| i. [_{VMod} Meg-] [_V -eszi].
PREF eats
‘S/he eats it.’
\Megeszi. | ii. [_{VMod} El-] [_V -megy].
away goes
‘S/he goes away.’
\Elmegy. |
|--|---|
- b. *Determinerless common nouns:*
- | | |
|--|--|
| i. [_{VMod} Autót] [_V vett].
car.ACC bought.3SG
‘S/he bought a car.’
\Autót vett. | ii. [_{VMod} Moziba] [_V megy].
cinema.ILL goes
‘S/he’s going to the cinema.’
\Moziba megy. |
| iii. [_{VMod} Katona] [_V vagy].
soldier are.2SG
‘You are a soldier.’
\Katona vagy. | iv. [_{VMod} Katona] [_V Ø].
soldier is
‘S/he is a soldier.’
\Katona. |

c. *Predicative adjectives:*

- i. $[_{VMod} \text{Boldogok}] [_V \text{voltak}]$. ii. $[_{VMod} \text{Boldogok}] [_V \emptyset]$.
 happy.PL were.3PL happy.PL are.3PL
 ‘They were happy.’ ‘They are happy.’
 Boldogok voltak. | *Boldogok.* |

One kind of Verb Modifier, viz. *verbal prefixes* which refer to direction (e.g. *be* ‘in’, *ki* ‘out’, *fel* ‘up’, *le* ‘down’, *össze* ‘together’, *szét* ‘apart’, etc.), can be involved in expressing aspectual differences (É. Kiss 2012: 63). When such a verbal prefix is in the VMod position, i.e. immediately before the Verb, it typically expresses perfective aspect: the activity has been completed, see (21).

- (21) $[_{VMod} \text{Fel-}] [_V \text{-mentek}] [_{PostV} \text{a lépcsőn}]$.
 up went.3PL the stairs.SUP
 ‘They went up the stairs.’
 Felmentek a lépcsőn. |

It can happen, however, that the directional verbal prefix is in PostV position, even though there is no F position, and so in principle there could exist a VMod position before the Verb to accommodate the prefix. If in this case the verbal prefix and all the other PostV constituents are accented, the sentence has a progressive interpretation: ‘at a certain point of time the activity described is/was in progress’, see (22).

- (22) $[_V \text{Mentek}] [_{PostV} \text{fel}] [_{PostV} \text{a lépcsőn}]$.
 went.3PL up the stairs.SUP
 ‘They were going up the stairs.’
 Mentek fel a lépcsőn. |

Alternatively, the verbal prefix and the other PostV constituents can be unaccented and then the sentence calls for an existential interpretation: ‘until a certain point of time the activity described has happened at least once’, see (23).

- (23) $[_V \text{Mentek}] [_{PostV} \text{fel}] [_{PostV} \text{a lépcsőn}]$.
 went.3PL up the stairs.SUP
 ‘It has happened at least once until now that they went up the stairs.’
 Mentek fel a lépcsőn. |

4.2.2 *The postverbal position*

Postverbal (PostV) constituents are in the PostV position. Normally these are accented if they convey new information (i.e. if they are information foci), and unaccented if they convey given information, but this basic correspondence between new information and accent on the one hand, and between given information and lack of accent on the other, can sometimes be overridden by other considerations. For instance in (22) and (23) above the accentuation of the PostV constituent is aspectually motivated.

In (24) there is one PostV constituent, in (25a, b) there are two. In (25a) we can see the work of the Upstep Rule (14), (25b) shows the effect of the Rising Rule (16). In these examples the PostV constituents convey new information and are consequently accented. If any of the PostV constituents convey given information, they carry no accent, but we do not show these possibilities.

- (24) [_V *Dolgozik*] [_{PostV} *a kertben*].
 works the garden.INE
 ‘S/he is working in the garden.’
 ‘*Dolgozik a \`kertben.* |
- (25) a. [_{VMod} *Meg-*] [_V *-hívna*] [_{PostV} *egy énekest*] [_{PostV} *aż ötvenedik évfordulóra*].
 PREF call.3PL a singer.ACC the fiftieth anniversary.SUB
 ‘They are inviting a singer to the 50th anniversary.’
 ‘*Meghívna egy \`énekest aż ↑\`ötvenedik \`évfordulóra.* |
- b. [_{VMod} *Meg-*] [_V *-hívna*] [_{PostV} *aż ötvenedik évfordulóra*] [_{PostV} *egy énekest*].
 PREF call.3PL the fiftieth anniversary.SUB a singer.ACC
 ‘They are inviting a singer to the 50th anniversary.’
 ‘*Meghívna aż \`ötvenedik \`évfordulóra | egy \`énekest.* |

4.2.3 The focus position

As an alternative to the VMod position, there can be an F position immediately before the Verb. This accommodates an F constituent, which is an identificational focus, and the sentence containing it is a narrow-focus sentence. Occasionally there can be more than one candidate for the F position but only one of them is actually able to appear there.

The F constituent typically conveys new information and “expresses exhaustive identification from among a set of alternatives” (É. Kiss 2002: 77). If this set of alternatives is an open set, then the F constituent has a simple identifying function, see the response to the bracketed question in (26a). But if the set of alternatives is closed, the F constituent is not only identifying but also contrastive, see the response to the question in (26b). Since intonationally the responses in (26a) and (26b) are identical, we can only decide which of them contains a contrastive focus if we know the contexts in which they are used.

- (26) a. (*Hol halt meg Dante?* ‘Where did Dante die?’)
 [_T *Dante*] [_{Com} [_F ***Ravennában***] [_V *halt*] [_{PostV} *meg*]].
 Dante Ravenna.INE died.3SG PREF
 ‘Dante died in Ravenna.’
 ‘*Dante \`Ravennában halt meg.* |
- b. (*Dante Firenzében vagy Ravennában halt meg?* ‘Did Dante die in Florence or Ravenna?’)
 [_T *Dante*] [_{Com} [_F ***Ravennában***] [_V *halt*] [_{PostV} *meg*]].
 Dante Ravenna.INE died.3SG PREF
 ‘Dante died in Ravenna.’
 ‘*Dante \`Ravennában halt meg.* |

Since the F position is an alternative to the VMod position, if there are both an F constituent and a Verb Modifier in the sentence, the former will be in F position, while the latter will appear in PostV position. This happens in (26a, b), where the prefix *meg*, which in broad-focus sentences occupies the VMod position immediately before the verb, is now a PostV constituent.

The identificational focus is accented. This accent is a kind of eliminative stress (see Kálmán & Nádasy 1994: 396), which causes obligatory deaccentuation of the Verb

(even if it conveys new information). Besides, all those PostV constituents that represent given information are normally unaccented, too, while those that represent new information keep their accent. The accent may also be preserved on PostV constituents even when they convey given information, but the speaker is using a special narrative, explanative, complaining style (Kálmán & Nádasy 1994: 462–463).

From now on, in the narrow-focus examples we shall first show the sentences with unaccented PostV constituents, and then with accented PostV constituents. The former variants are more typical than the latter, but the latter are also possible and in fact quite common.

Members of certain syntactico-semantic categories inherently act as narrow focus and tend to occupy the F position, unless it is occupied by another focussed constituent. The categories which inherently favour the F position in declarative sentences are: *csak-phrases*, e.g. *csak Izabella* ‘only Isabella’, *csak egyszer* ‘only once’, see (27); *negative existential quantifiers*, e.g. *kevés* ‘few’, *legfeljebb n* ‘at most n’, see (28); *negative adverbs of frequency, degree, manner*, e.g. *ritkán* ‘rarely’, *nehezen* ‘with difficulty’, *rosszul* ‘badly’, *hibásan* ‘wrongly’, see (29).^{19, 20}

- (27) [_F **Csak Izabella**] [_V *vette*] [_{PostV} *meg*] [_{PostV} *až* *újságot*].
 only Isabella bought.3SG PREF the newspaper.ACC
 ‘It was only Isabella who bought the newspaper.’
Csak \ *Izabella vette meg až újságot.* |
Csak ' *Izabella vette* (') *meg až* \ *újságot.* |

- (28) [_F **Kevés diák**] [_V *hozta*] [_{PostV} *be*] [_{PostV} *a könyvet*].
 few student brought.3SG in the book.ACC
 ‘Few students brought in the book.’
 \ *Kevés diák hozta be a könyvet.* |
 ' *Kevés diák hozta* (') *be a* \ *könyvet.* |

- (29) [_F **Nehezen**] [_V *adta*] [_{PostV} *el*] [_{PostV} *a házat*].
 with difficulty sold.3SG PREF the house.ACC
 ‘S/he sold the house with difficulty.’ = ‘S/he had difficulty in selling the house.’
 \ *Nehezen adta el a házat.* |
 ' *Nehezen adta* (') *el a* \ *házat.* |

4.2.4 The distributive position

The kind of structural position which occurs at the beginning of the comment is the optional and repeatable Distributive (Dist) position. This is primarily filled by *positive universal quantifiers*, e.g. *mindenki* ‘everybody’, *minden diák* ‘every student’, *mindegyik leány* ‘each girl’, *mindkét könyv* ‘both books’, *až összes pénz* ‘all the money’; phrases with *is* ‘also’, e.g. *Péter is* ‘Peter too’, and *még ... is* ‘even ...’, *még Péter is* ‘even Peter’, see (30)–(32). It can

¹⁹ See É. Kiss (2002: 89–93, 106). According to Surányi (2002a: 44–48) the second and third sets of words, viz. *negative existential quantifiers* and *negative adverbs of frequency, degree and manner*, should not be regarded as inherent foci because they occur postverbally after negated verbs, and so the term *default foci* is more appropriate for them. Truly inherent foci, like *csak-phrases*, do not occur after a negated verb.

²⁰ The F position is inherently favoured by *wh*-phrases, too, e.g. *ki* ‘who’, *mi* ‘what’, *hol* ‘where’, *melyik város* ‘which city’, but since these occur in interrogative sentences, we do not deal with them here.

also be filled by *positive universal frequency adverbs* such as *mindig* ‘always’; *állandóan* ‘constantly’, see (31) and (32). While (30) is a broad-focus sentence and so the prefix *meg* ‘PREF’ appears in VMod position immediately before the V, sentences (31) and (32) have an F constituent in them and so the prefix (*vissza* ‘back’ or *fel* ‘up’) is in PostV position. While in (30) there is one Dist constituent, in (31) and (32) there are two. A Dist constituent is normally accented, while the VMod+V combination, the V, and even the F+V combination immediately after the Dist constituent may be accentless when they convey given information, or when the speaker puts special emotional emphasis on the Dist constituent. These variants will not be shown.

- (30) $[[_{\text{Dist}} \text{Mindenkit}] [_{\text{VMod}} \text{meg-}] [_{\text{V}} \text{-hívtak}]]$.
 everybody.ACC PREF called.3PL
 ‘They invited everybody.’
 ‘Mindenkit \mehívtak. |
- (31) $[[_{\text{Dist}} \text{Péter is}] [_{\text{Dist}} \text{mindig}] [_{\text{F}} \text{csak egy könyvet}] [_{\text{V}} \text{hoz}] [_{\text{PostV}} \text{vissza}]]$.
 Peter also always only one book.ACC brings back
 ‘Peter, too, always brings only one book back.’
 ‘Péter is \mindig csak \egy könyvet hoz vissza. |
 ‘Péter is \mindig csak \egy könyvet hoz \vissza. |
- (32) $[[_{\text{Dist}} \text{Mindenkit}] [_{\text{Dist}} \text{állandóan}] [_{\text{F}} \text{a padlásszobába}] [_{\text{V}} \text{küldtek}] [_{\text{PostV}} \text{fel}]]$.
 everybody.ACC constantly the attic.ILL sent.3PL up
 ‘They sent everybody up to the attic constantly.’
 ‘Mindenkit \állandóan a \padlásszobába küldtek fel. |
 ‘Mindenkit \állandóan a \padlásszobába küldtek \fel. |

In addition, the Dist position can also be filled by *positive existential quantifiers*, e.g. *sok* ‘many’, *több mint n* ‘more than n’, *legalább n* ‘at least n’, and by *positive (but not universal) frequency adverbs* such as *gyakran* ‘often’, *sűrűn* ‘frequently’, *sokszor* ‘many times’, see (33a). As opposed to the previous groups of Dist constituents, these can take not only the Dist position, as shown in (33a), but also the F position, as shown in (33b).

- (33) a. $[[_{\text{Dist}} \text{Mindenkit}] [_{\text{Dist}} \text{gyakran}] [_{\text{VMod}} \text{meg-}] [_{\text{V}} \text{-hívtak}]]$.
 everybody.ACC often PREF called.3PL
 ‘They often invited everybody.’
 ‘Mindenkit \gyakran \mehívtak. |
- b. $[[_{\text{Dist}} \text{Mindenkit}] [_{\text{F}} \text{gyakran}] [_{\text{V}} \text{hívtak}] [_{\text{PostV}} \text{meg}]]$.
 everybody.ACC often called.3PL PREF
 ‘Everybody was invited often.’
 ‘Mindenkit \gyakran hívtak meg. |
 ‘Mindenkit \gyakran hívtak \meg. |

An accented Dist constituent occupies the Dist position by default and takes scope over the rest of the comment. However, it can also appear in a PostV position (i.e. as a PostV constituent), while still retaining its accent and its wide scope over the comment. This is known as *Stylistic Postposing* (cf. É. Kiss 2002: 121). So (34) and (35) have the same meaning: ‘It is true for all persons that they were invited?’

- (34) [_{Dist} *Mindenkit*] [_{VMod} *meg-*] [_V *-hívtak*].
 everybody.ACC PREF called.3PL
 ‘They invited everybody.’
 ‘*Mindenkit* \ *meghívtak*. |

- (35) [_{VMod} *Meg-*] [_V *-hívtak*] [_{PostV} *mindenkit*].
 PREF called.3PL everybody.ACC
 ‘They invited everybody.’
 ‘*Meghívtak* \ *mindenkit*. |

Similarly, when the sentence has an F constituent, the accented Dist constituent will have wide scope (i.e. scope over the F constituent) not only when it is in the Dist position, as in (36), but also when it is in a PostV position, as in (37). This is why (36) and (37) have identical meanings.

- (36) [_{Dist} *Mindig*] [_F *Izabellát*] [_V *hívják*] [_{PostV} *be*].
 always Isabella.ACC call. 3PL in
 ‘It is always Isabella whom they call in.’
 ‘*Mindig* \ *Izabellát hívják be*. |
 ‘*Mindig* ‘*Izabellát hívják* \ *be*. |

- (37) [_F *Izabellát*] [_V *hívják*] [_{PostV} *be*] [_{PostV} *mindig*].
 Isabella.ACC call.3PL in always
 ‘It is always Isabella whom they call in.’
 ‘*Izabellát hívják* (‘) *be* \ *mindig*. |

But if the Dist constituent in PostV position has no accent, it has narrow scope, i.e. its scope does not include the F-constituent, see (38). That is to say, (38) has a different meaning from (36) and (37).²¹

- (38) [_F *Izabellát*] [_V *hívják*] [_{PostV} *be*] [_{PostV} *mindig*].
 Isabella.ACC call.3PL in always
 ‘It is Isabella whom they always call in.’
 \ *Izabellát hívják be mindig*. |

4.2.5 The PDMA position

After the Dist position, the next structural position within the comment that we postulate when discussing Hungarian sentence intonation is the Positive Degree/Manner Adverb (or PDMA) position. This occurs after a Dist constituent (if there is one), and immediately before the VMod, or immediately before the Verb (if there is no VMod constituent), but not before an F constituent. This is the default position for positive degree adverbs and positive manner adverbs. *Positive (universal or non-universal) degree adverbs* are adverbs like *teljesen* ‘completely’, *egészen* ‘totally’, *nagyon* ‘very much’ (and other adverbs when used in a similar sense to *nagyon*, e.g. *rettenetesen* ‘terribly’, *borzasztóan* ‘horribly’, *bihetetlenül* ‘incredibly’, *jól* ‘well’ = ‘very much’, *állatira* ‘in an animal-like way’ = ‘very

²¹ For the difference between accented and unaccented universal quantifiers in PostV position, see Hunyadi (2002: 119).

much'). These typically occur in the PDMA position but never occur in F position, see (39a, b).

- (39) a. [_{Dist} *Mindig*] [_{PDMA} *nagyon*] [_{VMod} *el-*] [_V *-fárad*].
 always very much PREF gets tired
 'S/he always gets very tired.'
 '*Mindig* '*nagyon* \'*elfárad*. |
- b. * [_{Dist} *Mindig*] [_F ***nagyon***] [_V *fárad*] [_{PostV} *el*].
 always very much gets tired PREF
 'S/he always gets very tired.'
 * '*Mindig* \'*nagyon fárad el*. |
 * '*Mindig* '*nagyon fárad* \'*el*. |

Positive manner adverbs, e.g. *tökéletesen* 'perfectly', *udvariasan* 'politely', *jól* 'well' = 'in a satisfactory manner', *boldogan* 'happily', *gyorsan* 'rapidly', *könnyen* 'easily', *remekül* 'splendidly', etc. also typically occupy the PDMA position but can occur in F position, too, see (40a, b).

- (40) a. [_{Dist} *Mindig*] [_{PDMA} *gyorsan*] [_{VMod} *fel-*] [_V *-kel*].
 always rapidly up rises
 'S/he always gets up rapidly.'
 '*Mindig* '*gyorsan* \'*felkel*. |
- b. [_{Dist} *Mindig*] [_F ***gyorsan***] [_V *kel*] [_{PostV} *fel*].
 always happily rises up
 'It is always with happiness that s/he gets up.'
 '*Mindig* \'*boldogan kel fel*. |
 '*Mindig* '*boldogan kel* \'*fel*. |

A PDMA constituent is normally accented, while the VMod+V combination or the V immediately after the PDMA constituent may lose their accent if they convey given information or when the speaker wants to emphasise the PDMA constituent for emotional reasons. In (39a) and (40a) the varieties with unaccented parts after the PDMA constituent have not been shown.

4.3 The intonation of comments in negative declarative sentences

Sentences (or rather comments) can be made negative in different ways. Let us start our discussion with the negation of the verb. In Hungarian this is done by putting the negative particle *nem* 'not' into a *Negative* position (Neg) which is immediately before the verb. This position is an alternative to the VMod position. When there is a Neg position there is no VMod position, and so any VMod constituent will appear in a PostV position, see (41) and (42).

If there is no F constituent before the preverbal Neg particle, then the Neg particle is accented and the verb after it is unaccented (even when it conveys new information), while the PostV constituents are unaccented when they express given information, and

accented when they are new or when the special narrative style (mentioned in 4.2.3) is being used, see (41).²²

- (41) [_{Neg} *Nem*] [_V *olvasták*] [_{PostV} *el*] [_{PostV} *a levelet*].
 not read.PAST.3PL PREF the letter.ACC
 ‘They didn’t read the letter.’
 \ *Nem olvasták el a levelet.* |
 ‘*Nem olvasták* (‘) *el a* \ *levelet.* |

If the preverbal Neg particle is after an F constituent, the Neg particle will be unaccented, just like the verb after it, while the PostV constituents again may be accented or unaccented, see (42).

- (42) [_F *A levelet*] [_{Neg} *nem*] [_V *olvasták*] [_{PostV} *el*].
 the letter.ACC not read. PAST.3PL PREF
 ‘It was the letter that they didn’t read.’
A \ *levelet nem olvasták el.* |
A ‘*levelet nem olvasták* \ *el.* |

When it is the F constituent that is negated, the Neg position is before the F constituent. The negative particle *nem* is accented, and the F constituent immediately after it can be accented (when conveying new information) or unaccented (when conveying given information), cf. (43).

- (43) [_{Neg} *Nem*] [_F *a levelet*] [_V *olvasták*] [_{PostV} *el*].
 not the letter.ACC read. PAST.3PL PREF
 ‘It was not the letter that they read.’
 \ *Nem a levelet olvasták el.* |
 ‘*Nem a levelet olvasták* \ *el.* |
 ‘*Nem a* \ *levelet olvasták el.* |
 ‘*Nem a* ‘*levelet olvasták* \ *el.* |

The negative particle *nem* can also be immediately before a Dist constituent but in this case it is not regarded as being in a separate Neg position. According to É. Kiss (2002: 134-135), it is left-adjoined to the Dist constituent, if there is a separate F constituent, as in (44).

- (44) [_{Dist} *Nem mindenki*] [_F *a levelet*] [_V *olvasta*] [_{PostV} *el*].
 not everybody the letter.ACC read. PAST.3SG PREF
 ‘For not everybody was it the letter that he read.’
 \ *Nem mindenki a levelet olvasta el.* |
 ‘*Nem mindenki a* \ *levelet olvasta el.* |
 ‘*Nem mindenki a* ‘*levelet olvasta* \ *el.* |

²² The verb, too, can be accented after *nem*, if it is contrasted with another verb, or if the sentence is uttered in the special narrative, explanative, complaining style mentioned in 4.2.3, e.g. (*Nem állhatom őt,*) *mert* ‘*nem* \ *dolgozik.* = ‘(I can’t stand him) because he doesn’t work’. That the negative particle and the verb can each receive an accent in stylistically marked realizations is noted in Surányi (2002b:114–115) as an argument against taking the two to be merged in a single syntactic head.

If, however, there is no separate F constituent after the negated Dist constituent, then the negated Dist constituent itself will occupy the F position, causing the VMod to appear in PostV position, as in (45):

- (45) [_F **Nem mindenki**]_[V olvasta] [_{PostV el}] [_{PostV a levelet}].
 not everybody read.PAST.3SG PREF the letter.ACC
 ‘Not everybody read the letter.’
 \Nem mindenki olvasta el a levelet. |
 'Nem mindenki olvasta (')el a \levelet. |

Negative sentences can contain *se*-phrases, such as *senki* ‘nobody’, *semmi* ‘nothing’, *sehol* ‘nowhere’, *semmikor* ‘at no time’, *soha* ‘never’, *sehoggy* ‘in no way’, *semmilyen autó* ‘no car of any kind’, etc. These are analysed as Dist constituents, with the extra requirement that they should not be directly followed by a VMod constituent.

In a broad-focus sentence the *se*-phrase can immediately precede the pre-verbal verb-negating negative particle, see *senki* ‘nobody’ in (46). Alternatively, it can stand in PostV position after a negated verb, see *senki* in (47). The latter arrangement is a result of Stylistic Postposing.²³ The meanings of (46) and (47) are identical. The *se*-phrase is accented in both positions. In (46) all constituents following the initial *se*-phrase can be accentless.

- (46) [_{Dist} *Senki*] [_{Neg} *nem*]_[V olvasta] [_{PostV el}] [_{PostV a levelet}].
 nobody not read.PAST.3SG PREF the letter.ACC
 ‘Nobody read the letter.’
 'Senki (')nem olvasta (')el a \levelet. |
 \Senki nem olvasta el a levelet. |
- (47) [_{Neg} *Nem*]_[V olvasta] [_{PostV el}] [_{PostV a levelet}] [_{PostV senki}].
 not read.PAST.3SG PREF the letter.ACC nobody
 ‘Nobody read the letter.’
 'Nem olvasta (')el a (')levelet \senki. |

When an F constituent is negated by the negative particle, a *se*-phrase can be before the negative particle, as in (48). As an alternative, the *se*-phrase can be stylistically postposed to PostV position, as in (49). In the latter case the accented *se*-phrase preserves its wide scope over the F constituent. The *se*-phrase is accented in both positions. The meanings of (48) and (49) are identical.

- (48) [_{Dist} *Senki*] [_{Neg} *nem*]_[F a levelet] [_{V olvasta}] [_{PostV el}].
 nobody not the letter.ACC read.PAST.3SG PREF
 ‘It was true of nobody that it was the letter that they read.’
 'Senki (')nem a \levelet olvasta el. |
 'Senki (')nem a 'levelet olvasta \el. |

²³ Stylistic Postposing was explained in connection with examples (34) and (35) above.

- (49) [_{Neg} *Nem*] [_F *a levelet*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *senki*].
 not the letter.ACC read.PAST.3SG PREF nobody
 ‘It was true of nobody that it was the letter that they read.’
 ‘*Nem a (‘)levelet olvasta el \senki.* |

It can happen that the verb is negated after an F constituent. In this case the *se*-phrase must obtain a PostV position, it loses its accent, and has narrow scope, see (50):

- (50) [_F *A levelet*] [_{Neg} *nem*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *senki*].
 the letter.ACC not read.PAST.3SG PREF nobody
 ‘It was the letter that was not read by anybody.’
A \levelet nem olvasta el senki. |

Just like the particle *is* ‘also’ is adjoined to some types of Dist constituents (e.g. *Péter is* ‘Peter, too’), its negative counterpart *sem* ‘neither’ can be adjoined to Dist constituents in negative contexts, to produce *sem*-phrases. In a *sem*-phrase the particle *sem* is either adjoined to a noun phrase (e.g. *Péter sem* ‘neither Peter’, literally: ‘Peter neither’), or to a *se*-phrase (e.g. *senki sem*, literally: ‘nobody neither’). The particle *sem* is unaccented.

When the *sem*-phrase appears in a PostV position (i.e. when it is subjected to Stylistic Postposing), the negative particle *nem* is present before the verb, and at least the negative particle *nem* and the *sem*-phrase are accented, see (51). However, when the *sem*-phrase does not undergo Stylistic Postposing, the negative particle *nem* is missing, and only the *sem*-phrase is obligatorily accented, see (52). (51) means the same as (52).

- (51) [_{Neg} *Nem*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *a levelet*] [_{PostV} *Péter sem*].
 not read.PAST.3SG PREF the letter.ACC Peter neither
 ‘Peter didn’t read the letter, either.’ = ‘The letter was not read by Peter, either.’
 ‘*Nem olvasta (‘)el a (‘)levelet \Péter sem.* |

- (52) [_{Dist} *Péter sem*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *a levelet*].
 Peter neither read.PAST.3SG PREF the letter.ACC
 ‘Peter didn’t read the letter, either.’ = ‘The letter was not read by Peter, either.’
 ‘*\Péter sem olvasta el a levelet.* |
 ‘*Péter sem olvasta (‘)el a \levelet.* |

(53) and (54) exemplify the same regularity, but this time the *sem*-phrase is *senki sem*. In (53) this phrase is stylistically postposed and the verb is negated. In (54) the *sem*-phrase is not postposed and the verb is not negated. (53) and (54) have the same meaning.

- (53) [_{Neg} *Nem*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *a levelet*] [_{PostV} *senki sem*].
 not read.PAST.3SG PREF the letter.ACC nobody neither
 ‘Nobody read the letter.’ = ‘The letter was not read by anybody, either.’
 ‘*Nem olvasta (‘)el a (‘)levelet \senki sem.* |

- (54) [_{Dist} *Senki sem*] [_V *olvasta*] [_{PostV} *el*] [_{PostV} *a levelet*].
 nobody neither read.PAST.3SG PREF the letter.ACC
 ‘Nobody read the letter.’ = ‘The letter was not read by anybody, either.’
 ‘*\Senki sem olvasta el a levelet.* |
 ‘*Senki sem olvasta (‘)el a \levelet.* |

5 The intonation of topics in simple Hungarian declarative sentences

5.1 General intonation rules for topics in Hungarian declaratives

After examining the intonation of the major constituents in the comment, we shall now turn to the intonation of Topic (T) constituents in simple Hungarian declarative sentences. We shall first present the general intonational rules which can characterise any kind of topic, including non-contrastive (see 5.2) and contrastive topics (see 5.3), irrespective of whether the topic is directly followed by the comment or another topic.

The default rule for topic intonation, which can be used in any kind of Hungarian sentence (not only in declaratives), is (55).

- (55) *Default Intonation Rule for Declarative Topics*
Any accented syllable within any T constituent can take the Half Fall.

Since a Half Fall is scalar and does not have an IP-boundary at its end, the result of applying (55) is that a topic does not constitute a separate IP but forms an IP with the next constituent (i.e. another topic or the initial constituent of the comment). In this case some separation between a topic and the next constituent can still be achieved by establishing upstep on the first accent of the next constituent. This is the job of the post-topic upstep rule, given in (56).

- (56) *Post-Topic Upstep Rules for Declaratives (Optional)*
A: If a simple Hungarian declarative sentence contains a string XY, where X is an accented T constituent, and Y is a T constituent with more than one accent, then there is optional upstep on the first accented syllable of Y.
B: If a simple Hungarian declarative sentence contains a string XY, where X is an accented T constituent, and Y is (a) a Dist constituent, or (b) an F constituent, then there is optional upstep on the first (or, in the case of an F constituent, on the specially highlighted) accented syllable of Y.
Melodic condition: The last accented syllable of X initiates a Half Fall, and the syllable to be upstepped in Y initiates a Half Fall or a Full Fall.

In addition to (55) and (56), we need to recognise an optional rising rule for topics in declaratives, (57).

- (57) *Rising Rule for Declarative Topics (Optional)*
If, in a simple Hungarian declarative sentence, a T constituent has more than one accented syllable, then the default Half Fall initiated by the last accented syllable of this constituent can be replaced by a Rise.²⁴

²⁴ As has been pointed out in 2.2, the Rise can always be replaced by a High Monotone (and the High Monotone by a Descent), causing only an attitudinal change.

The results of applying rules (56) and (57) are illustrated in (58) and (59). In (58) the upsteppable post-topic constituent is a second topic, with more than one accent: *a Balaton hőmérséklete* ‘the temperature of Lake Balaton’, and so the post-topic upstep rule (56A) can be applied to it. In addition, the intonational solution in (58.ii) shows the effect of the rising rule (57). In (59a) the topic is followed by a Dist constituent *mindenkit* ‘everybody.ACC’, and in (59b) it is followed by an F constituent *a padlászobába* ‘to the attic’, and so the post-topic upstep rule (56B) can be applied in both (59a) and (59b).

- (58) [_T *Júniusban*] [_T *a Balaton hőmérséklete*] [_{Com} [_V *emelkedik*]].
 June.INE the Balaton temperature.3SG.POSS increases
 ‘In June the temperature of Lake Balaton increases.’
 i. *Júniusban a* (↑) *'Balaton 'hőmérséklete \emelkedik.* |
 ii. *Júniusban a* (↑) *'Balaton /hőmérséklete | \emelkedik.* |
- (59) a. [_T *Izabella*] [_{Com} [_{Dist} *mindenkit*] [_{PDMA} *udvariasan*] [_{VMod} *fel-*] [_V *-küldött*]]
 Isabella everybody.ACC politely up sent.3SG
 [_{PostV} *a padlászobába*]].
 the attic.ILL
 ‘Isabella sent everybody up to the attic politely.’
Izabella (↑) *'mindenkit 'udvariasan felküldött a \padlászobába.* |
 b. [_T *Izabella*] [_{Com} [_F *a padlászobába*] [_V *küldött*] [_{PostV} *fel*] [_{Dist} *mindenkit*]].
 Isabella the attic.ILL sent.3SG up everybody.ACC
 ‘It was to the attic that Isabella sent everybody up.’
Izabella a (↑) *\padlászobába küldött fel mindenkit.* |

When there are two or more monoaccentual T constituents next to one another, the speaker may optionally merge them into one big T constituent with more than one accent, and apply rule (57) to it. This possibility is illustrated in (60a.i.) and (60b.i.), whereas (60a.ii.) and (60b.ii.) show the default solution.

- (60) a. [_T *A gyerekek*] [_T *a szünetet*] [_{Com} [_F *a nagymamánál*] [_V *töltötték*]].
 the children the holiday.ACC the grandma.ADE spent.3PL
 ‘The children spent the holidays with Grandma.’
 i. *A 'gyerekek a /szünetet | a \nagymamánál töltötték.* |
 ii. *A 'gyerekek a 'szünetet a \nagymamánál töltötték.* |
 b. [_T *A szünetet*] [_T *a gyerekek*] [_{Com} [_F *a nagymamánál*] [_V *töltötték*]].
 the holiday.ACC the children the grandma.ADE spent.3PL
 ‘The children spent the holidays with Grandma.’
 i. *A 'szünetet a /gyerekek | a \nagymamánál töltötték.* |
 ii. *A 'szünetet a 'gyerekek a \nagymamánál töltötték.* |

- (64) (*Miért sír Tomi állandóan?* ‘Why is Tommy always crying?’)
 [_T *Egy kisgyerek*] [_{Com} *könnyen sír*].²⁶
 a small.child easily cries
 ‘A small child cries easily.’
 i. *Egy kisgyerek \könnyen sír.* |
 ii. *Egy /kisgyerek | \könnyen sír.* |
 iii. *Egy 'kisgyerek \könnyen sír.* |

The content words in accentless topics may retain some degree of stress, but their stressed syllables are not associated with significant pitch events (i.e. they are not accented) and mere stress is not indicated in our transcriptions.

Non-contrastive pronominal topics, like *ezt* and *én* in (65), normally carry given information (i.e. are NCG topics), and are accentless.

- (65) [_T *Ezt*] [_T *én*] [_{Com} *sobasem mondtam*].
 this.ACC I never said.1SG
 ‘This I never said.’
Ezt én \sobasem mondtam. |

5.2.3 Intonation of non-contrastive new (= NCN) topics in declarative sentences

Non-Contrastive New (= NCN) topics are topics which, though referring to individuals that are known or assumed by the speaker and hearer to exist, convey new information, because they are mentioned for the first time in a particular discourse and are not identified by the situation.

NCN topics require no special intonation rule, their intonational realisations will be provided by the general rules given in (55)–(57).

Let us consider (61b) again, which we repeat here for the reader’s convenience as (66). Let us furthermore suppose that it is the first sentence of a conversation, or that it is an answer to the question *Mi újság?* ‘What’s new?’, or that it is a sentence which has been introduced by *Találd ki, mi történt!* ‘Guess what’s happened.’ In these circumstances sentence (66) conveys new information all along, and its topic (*egy ismerősöm* ‘an acquaintance of mine’) is also new: it is an NCN topic. Rules (56A, B) are inapplicable, because what follows the topic is not another topic with more than one accent, and neither is it a Dist constituent or an F constituent. But Rule (57) is also inapplicable because the T constituent here has only one accent. So only the default intonation rule (55) is available.

- (66) [_T *Egy ismerősöm*] [_{Com} *kivándorolt*].
 an acquaintance.1SG.POSS emigrated.3SG
 ‘An acquaintance of mine has emigrated.’
Egy 'ismerősöm \kivándorolt. |

In another example, (67), when it is uttered in similar circumstances to (66), the NCN topic (*Ferdinánd egyik fia* ‘one of Ferdinand’s sons’) has more than one accent. The example marked (i) displays the effect of rule (57), while that marked (ii) has the default intonation.

²⁶ In (64) the phrase *egy kisgyerek* ‘a small child’ has not been uttered in the previous discourse, it still counts as given information in this situation because little Tommy is known to be a small child.

- (67) [_T *Ferdinánd egyik fia*] [_{Com} *kivándorolt*].
 Ferdinand one son.3SG.POSS emigrated.3SG
 ‘One of Ferdinand’s sons has emigrated.’
 i. 'Ferdinánd (')együk 'fia | \kivándorolt. |
 ii. 'Ferdinánd (')együk 'fia \kivándorolt. |

5.3 The intonation of contrastive topics in Hungarian declaratives

A contrastive topic is contrasted with the corresponding topic (and the following comment is contrasted with the corresponding comment) of a parallel sentence, which need not be explicitly present. It is irrelevant whether a contrastive topic is given or new in the discourse. The special intonation rule that can affect contrastive topics is (68).

- (68) *Special Intonation Rule for Contrastive Topics in Declaratives*
 In a simple Hungarian declarative sentence, a contrastive topic can have a Rise on its last accent, regardless of whether it has one or more than one accented syllable.

Noun phrases or postpositional phrases, which – as we have seen in 5.2.1 – can be non-contrastive topics, often occur as contrastive topics, see (69) and (70). In these the bracketed sentences provide the contexts, and the unbracketed sentences have the contrastive topics *Monika* ‘Monica’ and *Monika barátja* ‘Monica’s friend’, respectively. Examples marked (i) show the effect of rule (68), those marked (ii) are the default solutions.

- (69) (*Izabella utálja a káposztát.*) De [_T *Monika*] [_{Com} *szereti*].
 Isabella hates the cabbage.ACC but Monica loves
 ‘(Isabella hates cabbage.) But Monica loves it.’
 i. (*Izabella utálja a káposztát.*) De 'Monika | \szereti. |
 ii. (*Izabella utálja a káposztát.*) De 'Monika \szereti. |
- (70) (*Izabella utálja a káposztát.*) De [_T *Monika barátja*] [_{Com} *szereti*].
 Isabella hates the cabbage.ACC but Monica friend.3SG.POSS loves
 ‘(Isabella hates cabbage.) But Monica’s friend loves it.’
 i. (*Izabella utálja a káposztát.*) De 'Monika 'barátja | \szereti. |
 ii. (*Izabella utálja a káposztát.*) De 'Monika 'barátja \szereti. |

In addition, contrastive topics can also be non-specific phrases containing determinerless common nouns (71), predicative adjectives (72), adverbs (e.g. verbal prefixes) (73), and even quantifiers (74), cf. É. Kiss, et al. (1998: 24–25), É. Kiss (2002: 22–25).²⁷ Again, examples marked (i) show the effect of Rule (68), while those marked (ii) show the default solutions.

²⁷ Further works on Hungarian contrastive topics include Gyuris & Mády (2014).

- (71) [_T *Ceruzával*]_[Com tudok rajzolni]. (*Szénnel nem*)
 pencil.INS can.1SG draw.INF charcoal.INS not
 ‘With a pencil, I can draw. (With charcoal, I cannot.)’
 i. /*Ceruzával* | *tudok rajzolni*. | (*Szénnel nem*)
 ii. '*Ceruzával* *tudok rajzolni*. | (*Szénnel nem*)
- (72) [_T *Gyönyörű*]_[Com nem vagyok]. (*De gazdag igen*)
 beautiful not am but rich yes
 ‘Beautiful, I am not. (But rich, I am.)’
 i. /*Gyönyörű* | *nem vagyok*. | (*De gazdag igen*)
 ii. '*Gyönyörű* *nem vagyok*. | (*De gazdag igen*)
- (73) [_T *Fel*]_[Com taxival megyek]. (*Le gyalog*.)
 up taxi.INS go.1SG down on.foot
 ‘Up, I go by taxi. (Down, I go on foot.)’
 i. /*Fel* | *taxival megyek*. | (*Le gyalog*)
 ii. '*Fel* *taxival megyek*. | (*Le gyalog*)
- (74) [_T *Mindenkit*]_[Com nem hívtam meg]. (*De a nyelvészeket igen*)
 everybody.ACC not called.1SG PREF but the linguists.ACC yes
 ‘Everybody, I did not invite. (But the linguists, I did.)’
 i. /*Mindenkit* | *nem hívtam meg*. | (*De a nyelvészeket igen*)
 ii. '*Mindenkit* *nem hívtam meg*. | (*De a nyelvészeket igen*)

When personal pronouns are used as contrastive topics, (i) they can be accentless, or (ii) they can receive accent and have a rising terminal contour, or (iii) they can receive accent and have a Half Fall (the default solution), see (75).

- (75) (*Isabella utálja a káposztát*.) *De* [_T *mi*]_[Com szeretjük].
 Isabella hates the cabbage.ACC but we love.1PL
 ‘(Isabella hates cabbage.) But we love it.’
 i. (*Isabella utálja a káposztát*.) *De* *mi* *szeretjük*. |
 ii. (*Isabella utálja a káposztát*.) *De* /*mi* | *szeretjük*. |
 iii. (*Isabella utálja a káposztát*.) *De* '*mi* *szeretjük*. |

As a summary of Section 5, we can say that in a declarative sentence, i.e. in a sentence whose comment ends in a Full Fall, all the accents in all the topic constituents can initiate a Half Fall. In addition, accented topics in such a sentence can take a Rise in cases recapitulated in (76).

(76) *Topics with a Rise in Declarative Sentences (Summary)*

If a simple Hungarian declarative sentence contains a string XY, where X is a T constituent and Y is either another T constituent or a comment constituent, then X can have a rising terminal contour on its last accent

- (a) if X is contrastive, regardless of whether X has one or more than one accented syllable,
 (b) if X conveys non-contrastive given information, regardless of whether X has one or more than one accented syllable,

- (c) if X conveys non-contrastive new information and contains more than one accent

6 Conclusion

In this paper we first described the essential concepts and features of the intonation of simple declarative sentences in Hungarian. We concentrated on those aspects of intonation that are grammatically and informationally significant and treated attitudinal intonation only sparingly. We also offered graphic symbols whereby the intonational facts of Hungarian declarative sentences can be transcribed and which we have actually used in the rest of the paper to show the intonation of example sentences.

We presented the Topic–Comment dichotomy of the Hungarian sentence, and distinguished narrow-focus sentences (sentences with an F position) and broad-focus sentences (sentences with no F position).

Then we offered a detailed description of the intonational peculiarities of comments in positive and negative simple Hungarian declarative sentences. First we set up some general intonational rules, such as the Default Intonation Rule for Declarative Comments (12), the Upstep Rule within Declarative Comments (14), and the Rising Rule for Declarative Comments (16). Then we went on to discuss the intonational features of each of the structural positions within the comment.

After this, a detailed analysis of topic intonation in simple Hungarian declarative sentences followed. This began with establishing the Default Intonation Rule for Declarative Topics (55), the Post-Topic Upstep Rules for Declaratives (56A, B), and the Rising Rule for Declarative Topics (57), and continued with a discussion of the intonation of non-contrastive given (NCG), non-contrastive new (NCN), and contrastive topics.

Certain rules that have been suggested separately for comments and topics can now be conflated. We propose that Rules (12) and (55) be combined into (77):

- (77) *Default Intonation Rule for Hungarian Declarative Sentences*
 In a simple Hungarian declarative sentence the last accented syllable of the comment initiates a Full Fall, and all other accented syllables in the comment and in the topic(s) can initiate a Half Fall.

Similarly, Rules (14) and (56) can be conflated into (78):

- (78) *Combined Upstep Rules for Hungarian Declarative Sentences (Optional)*
A: If a simple Hungarian declarative sentence contains a string XY, where both X and Y are accented T constituents or accented PostV constituents, and Y has more than one accent, then there is optional upstep on the first accented syllable of Y.
B: If a simple Hungarian declarative sentence contains a string XY, where X is an accented T constituent and Y is (a) a Dist constituent, or (b) an F constituent, then there is optional upstep on the first (or in the case of Y being an F constituent, on the specially highlighted) accented syllable of Y.
Melodic condition: The last accented syllable of X initiates a Half Fall, and the syllable to be upstepped in Y initiates a Half Fall or a Full Fall.

Finally, Rules (16) and (57) can be combined into (79):

(79) *Rising Rule for Hungarian Declarative Sentences (Optional)*

If a simple Hungarian declarative sentence contains a string XY, where X is a constituent with more than one accented syllable, and Y is some accented part of the sentence, then the last accented syllable of X can initiate a Rise (instead of the default Half Fall).

The intonational solutions generated by our rules are well-formed but they do not cover many of the attitudinal variations. At the same time, some statements in this paper are valid not only for declarative sentences but also for some other sentence types, which are not discussed here. For instance, there is remarkable similarity between the intonation of declaratives, and the intonation of imperatives and ordinary *wh*-interrogatives. However, there are also sentence types whose intonation differs strongly from that of declaratives, the most conspicuous example being the intonation of ordinary yes-no interrogatives. Many aspects of non-declarative intonation have been examined in Hungarian linguistics and some analyses are available in English, too (e.g. Varga 1983, 2002, Gósy & Tekken 1994, Fónagy 1998, Grice et al. 2000, Olaszy 2002, Mycock 2010, Gyuris & Mády 2013), but a detailed review and discussion of the intonation of non-declarative sentence types is left for future work.

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