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Preface

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Christer Platzack

editor

Address

Working Papers in Scandinavian Syntax

Christer Platzack. ed.

Center of Language and Literature

Box 201

SE-221 00 Lund

Sweden

Verb Raising and Referential Null Subjects in Övdalian

Henrik Rosenkvist

Abstract

Within the Scandinavian languages, there is a notable variation regarding verb agreement. Holmberg & Platzack (1995) suggested that this basic feature is linked to both verb raising and the presence of a handful of syntactic phenomena, such as stylistic fronting, oblique subjects, transitive expletives etc. In agreement-rich languages such as Icelandic and Faroese, the finite verb thus raises to I (i.e., T) in embedded clauses, and transitive expletives, for example, also occur in these languages. In Swedish and Danish, two languages without verb agreement, neither verb raising nor the relevant syntactic constructions are possible. In subsequent works, addressing dialect syntax as well as variation within the standard languages (Julien 2007, Bentzen 2009, Wiklund et al 2009, Heycock et al 2010, 2011 etc), it has been shown that the correlation between agreement, verb raising and for instance oblique subjects is not as straightforward as was proposed by Holmberg & Platzack (1995) and others.

In this paper, I argue that null referential subjects in Övdalian is a syntactic phenomenon that requires both distinct verb agreement and verb raising, and this circumstance in turn indicates that these linguistic features are related to each other, possibly through the setting of a parameter. Thereby the gist of the analyses presented by Holmberg & Platzack (1995) is supported.

1. Introduction¹

This paper addresses the question how "rich" agreement,² verb raising and other syntactic phenomena correlate in the Scandinavian languages, with a particular focus on verb raising and null subjects in Övdalian. In a very influential work, Holmberg & Platzack (1995) proposed that the verb morphology in Icelandic, Faroese and Övdalian infer the presence of a number of syntactic constructions in these languages (such as verb raising, expletive null subjects, transitive expletives etc.). In Swedish, Danish and Norwegian, on the other hand, verbs do

¹ Piotr Garbacz and Christer Platzack has given me valuable comments on a previous version of this paper – thanks! Remaining errors are of course my own.

² Following Holmberg (2010), I do not venture to suggest any specific definition of "rich" or "strong" agreement; such a definition is furthermore not crucial for the argumentation in this paper.

not inflect for person and number and accordingly the specific syntactic constructions are impossible in these languages. The underlying cause for these differences was assumed to be a parameter associated with I (i.e., T). The generalizations made by Holmberg & Platzack (1995) have subsequently been seriously challenged, from empirical as well as theoretical perspectives, but in this paper I claim that there is one specific syntactic phenomenon in Scandinavian which without exceptions is linked to verb raising in embedded clauses: null referential subjects in Övdalian.

In section 2, a background to the research context is provided, whereupon referential null subjects in Övdalian are briefly introduced in section 3. The high-NegP, which causes difficulties in observing verb raising in Övdalian, is discussed in section 4. The following section 5 shows that there is a way to solve this problem, and the paper is concluded in section 6.

2. Background

In the wake of seminal works such as Falk (1993), Holmberg & Platzack (1995) and Vikner (1995), the relation between the position of the finite verb and a handful of other syntactic phenomena has been an intensively explored field of research within Scandinavian syntax. Specific syntactic constructions, such as null expletive subjects, transitive expletives and stylistic fronting, were in these works assumed to be strongly linked to verb raising in embedded clauses, which in turn was caused by "strong" or "rich" verb morphology (v. Angantýsson 2011 for an overview of this research). However, while these conjectures initially seemed to hold relatively well for the Scandinavian standard languages, it has been shown that the dialects vary considerably in this respect. During the last few years, there has been a growing interest in Scandinavian dialect syntax, and the ongoing research points to the conclusion that the syntax of the dialects do not comply with strong generalizations regarding agreement, word order in

embedded clauses and other phenomena. There is also considerable word order variation within the standard languages when one looks at different types of embedded clauses, different types of clause adverbials, and different types of subjects (cf. for instance Julien 2007, Wiklund et al 2009, Bentzen 2009, Heycock et al 2010, 2011 etc.). The current research thus indicates that there is no straightforward connection between verb raising, verb morphology and the syntactic constructions that were mentioned above, *contra* for instance Holmberg & Platzack (1995). In turn, this might indicate that there are no underlying macro-parameters in syntax which, when turned on or off, simultaneously influence several on the linguistic surface apparently unrelated parts of the syntax (cf. Newmeyer 2004, Haspelmath 2008).

Acknowledging the problems with the hypotheses presented in for instance Holmberg & Platzack (1995), Holmberg (2010) incorporates recent theoretical developments and empirical findings in a new version of a parameter-based approach to the differences between Scandinavian languages due to "richness" of inflection, arguing that Holmberg & Platzack (1995) actually were on the right track:

What I will argue is that we were basically right, descriptively, in that most (though not all) of these differences are due to a parameter to do with [sic] the features of I. Later empirical findings and theoretical developments do not justify abandonment of that theory, only a refinement of it. The conclusion is that there are 'deep parameters', and furthermore, I will argue that this is perfectly consistent with minimalist theorizing. (Holmberg 2010:3)

Holmberg (2010:13) suggests that there are six syntactic features that are directly related to agreement differences in the Scandinavian languages. However, it is shown by Garbacz (2011) that when Holmberg's predictions are tested in northern Dalecarlia, an area where several agreement-rich vernaculars/languages are spoken (one of them is Övdalian), the predictions are

not borne out. Garbacz shows that there are no null expletives, no null impersonal subjects, no right-dislocated heavy subjects, no oblique subjects and no stylistic fronting in this region (2011:117). Interestingly, in some places transitive expletives do occur, but, contrary to what would be expected, this construction is possible also in the only variety which lacks "rich" agreement, i.e. the vernacular of Venjan, while it is missing in Övdalian. It can thus be concluded that in spite of Holmberg's recent revision of the parameter-related rich agreement hypothesis (2010), new data from Dalecarlia present additional problems which cannot be ignored.

In this paper I will nevertheless argue that there is at least one Scandinavian syntactic phenomenon that without any exception is intertwined with "rich" verb morphology and verb raising in embedded clauses: referential null subjects in Övdalian (cf. Rosenkvist 1994, 2009, 2010, Garbacz 2010). This implies that in this language, verb raising yields particular syntactic effects (cf. the discussion about verb movement in the minimalist program in Roberts 2010). Among the Scandinavian languages, Övdalian and the adjacent Våmhus-variety are unique, since referential null subjects do not occur anywhere else, and for this reason it is only possible to attest and test this correlation in Älvdalen and Våmhus. In the following section, I present briefly null subjects in Övdalian.

3. Null *wið* ('we') and *ið* ('you' plural) in Övdalian³

In Övdalian, the pronouns corresponding to *we* and *you* (plural) are in general omitted, just as in well-known null subject languages such as Spanish or Turkish. Examples of the phenomenon in Övdalian are given in (1) and (2); omitted pronouns are in bold in the English translations.

³ In Rosenkvist (2010), Övdalian null subjects are discussed in more detail. For an introduction to Övdalian, see Garbacz (2010) or Garbacz & Johannessen (in progress).

- (1) a. Byddjum i Övdalim.
live.1PL in Älvdalen
 ‘**We** live in Älvdalen.’
- b. Ulið fãrå nu .
shall.2PL leave now
 ‘**You** ought to leave now.’
- (2) a. Witið at byddjum i Övdalim.
know.2PL that live.1PL in Älvdalen
 ‘**You** know that **we** live in Älvdalen.’
- b. Mienum ulið fãrå nu .
think.1PL shall.2PL leave now
 ‘**We** think that **you** ought to leave now.’

No other pronouns are regularly omitted – not even impersonal or expletive pronouns.

As shown in (1) and (2), *wið* and *ið* are in general omitted, in main clauses as well as (all types of) embedded clauses. The omission of *wið* and *ið* correlates with the finite verb agreement; the verb forms for 1pl and 2pl are distinct, i.e., these forms may unambiguously serve as a basis for reconstruction of the missing subject – see table 1, where Övdalian, Icelandic and Faroese finite verb agreement and personal pronouns are shown. The Övdalian form for 3pl is furthermore almost always identical either with the infinitival form (as illustrated in table 1) or with the form for singular – in non-final position the ending *-a* is deleted due to apocope, a prominent feature of spoken Övdalian which also is rendered in writing.

Table 1. Verb agreement and personal pronouns in Övdalian, Icelandic and Faroese.

		Övdalian	Icelandic	Faroese
infinitive 'to bite'		baita	bíta	bíta
sg.	1.	ig bait	ég bít	eg bíti
	2.	du bait	þú bítur	tú bítur
	3.	an bait	hann bítur	hann bítur
pl.	1.	(wið) baitum	við bítum	vit bíta
	2.	(ið) baitið	þið bítið	tit bíta
	3.	dier baita	þeir bíta	teir bíta

Table 1 also shows that there are at least three distinct forms in the the Icelandic verb agreement paradigm, but null referential subjects are nevertheless not possible in Icelandic.

The agreement patterns that are illustrated in table 1 constitute the fundament for dividing the Scandinavian languages in Mainland Scandinavian (Swedish and other non-agreeing languages) and Insular Scandinavian (Icelandic, Faroese and Övdalian), as suggested by Holmberg & Platzack (1995) as well as by Holmberg (2010) – although Holmberg (2010) considers Icelandic to be the only Insular Scandinavian language.

4. High negations and obscure verb positions

One of the most significant differences between the Mainland Scandinavian languages and the Insular Scandinavian languages is that in the former, finite verbs occur to the right of clause adverbials (such as the negation) in embedded clauses, while the reverse order is default in e.g. Icelandic (see Heycock et al 2010 for a detailed study of embedded word order in contemporary Faroese and Angantýsson 2011 for details about Icelandic). These differences are illustrated in (3).

- (3) a. Detta är brevet som jag inte har läst. (Swedish)
this is letter-def. that I not have read
 'This is the letter that I haven't read'
- b. Þetta er bréfið sem ég hefur ekki lesið. (Icelandic)
this is letter-def. that I have not read
 'This is the letter that I haven't read'

The difference between Icelandic and Swedish has been attributed to verb raising in the embedded clause. The verb moves from a lower position (ν P) to a higher position (TP) in Icelandic, across the negation, whereas the verb remains in ν P in Swedish. It is thus generally assumed that the negation occupies a fixed position between the lower ν P and the higher TP – indeed, the immobility of the negation is a prerequisite for establishing the contrast in (3).⁴ However, in standard Swedish it is possible to place the negation (*inte*) directly adjacent to the subordinator in virtually any embedded clause, as illustrated in (4).

- (4) a. Jag vet att inte tomten finns.
I know that not Santa exists
 'I know that Santa Clause doesn't exist'
- b. Detta är brevet som inte jag har läst.
this is letter-def. that not I have read
 'This is the letter that I haven't read'

⁴ The idea that verbs occupy different positions in different languages and that clause adverbials reveal their position goes back to Emonds (1976) and Pollock (1989).

- c. Vi åker till havet om inte det regnar.
we go to sea-def. if not it rains
 'We are going to the sea, if it isn't raining'

Since the negation occurs between the subordinator and the subject in the sentences in (4), it is in principle impossible to tell whether the finite verb remains in vP or if it has raised to TP .

As for Övdalian, Levander (1909:123) points out that “The word *not* cannot as in Swedish occur between the subject and the finite verb in embedded clauses; if it is not situated in the beginning of the clause, it must be put after the verb” [my translation]. In the beginning of the 20th century, the Övdalian negation thus occurred either after the finite verb in embedded clauses (as in the Icelandic example in 3 b) or directly after the subordinator, in the high-NegP (Garbacz 2010). However, in a small study of Övdalian word order by Rosenkvist (1994), no less than 80% of the negations in embedded clauses occurred in the high-NegP. No other adverbials were found in this position. Some examples are provided in (5).

- (5) a. ...fast int eð ir finwedreð olltiett.
although not it is fine-weather always
 'although the weather isn't always fine'
- b. ...um int du kumb.
if not you come
 'if you're not coming'
- c. ...um int eð war iðer fil
if not it was your.2PL fault
 'if it wasn't your fault'

The survey made by Rosenkvist (1994) thus indicated that the default option is to place the negation in high-NegP in contemporary Övdalian. In the longest Övdalian text ever published by a native speaker of Övdalian, Larsson (1985), this placement of the negation is also very frequent, and in the detailed study of Övdalian word order by Garbacz (2010), it is clear that the speakers prefer to place the negation in the high-NegP in embedded clauses. The judgements of the sentences in (6) are taken from Garbacz (2010:228); the acceptability scale goes from 1 to 5, with 5 as the highest grade.

- (6) a. Eð ir bar i iss-jär buðn so int Marit andler jätå. (mean score: 4,66)
it is only in this-here shop-def. that not Marit buys food-def.
 ‘It is only in this shop that Marit doesn’t buy food’
- b. Eð ir bar i iss-jär buðn so Marit int andler jätå. (mean score: 3,83)

While both of the sentences in (6) are accepted, (6 a), with the negation in high-NegP, receives a higher score and must therefore be seen as the unmarked alternative (cf. also Garbacz 2010:132, 139).

The possibility to place the negation in high-NegP in Övdalian obscures verb raising. Furthermore, this circumstance becomes particularly irksome when there is a referential null subject in the embedded clause, since both of the salient overt constituents, the finite verb and the negation, may occur in different positions. The possible analyses of the sentence in (7), which is quoted from Rosenkvist (1994), are presented in table 2.⁵

⁵ Garbacz (2010:113) claims that there are two possible analyses of sentences such as (7), but Rosenkvist (1994:22) shows that there are in fact three, as illustrated in table 2.

- (7) ...um int windið brott qn.
if not throw.2PL away her
 'if **you** don't throw it away'

Table 2. Three possible analyses of embedded clauses with negation and null subject.

	CP	High-NegP	TP	NegP	vP
analysis 1	um	int	windið		brott qn
analysis 2	um	int			windið brott qn
analysis 3	um			int	windið brott qn

The analytical alternatives in table 2 are unique for Övdalian (and the Våmhus-variety), since these languages are the only Scandinavian language varieties in which null referential subjects occur. For this reason, negations and adverbials in high-NegP are irrelevant in studies of verb raising in other Scandinavian languages and dialects – the subject in SpecTP will always reveal the position of the negation or the adverbial (see for instance Heycock et al 2011, where high-NegP is not an issue).

In order to investigate whether there is a correlation between verb raising and referential null subjects in Övdalian, it is clear that embedded clauses with a negation do not constitute an operational testing ground. To get a clear view of the position of the finite verb, especially in combination with a null subject, an adverbial which cannot appear in high-NegP is necessary. Garbacz (2010:113, fn. 123) reports that "I have not yet found an adverbial of this kind", but in the following section I demonstrate that there are such adverbials in Övdalian, and that differences between speakers (acceptance of null subjects with the verb (seemingly) in vP or not) should be attributed not to syntactic variation, but to lexical variation.

5. Non-high adverbs and speaker-related lexical differences

In order to test the hypothesis that referential null subjects in Övdalian only are possible in an embedded clause if the verb has raised from *vP* to *TP*, as suggested by Rosenkvist (1994), it is thus necessary to find an Övdalian adverbial that always remain in the middle field and that accordingly never can appear in the high-NegP. When consulting Övdalian speakers, it appears that there are such adverbs, but that there is some variation between the informants as to which adverbs are possible in high-NegP.⁶ All informants accept the negation (*inte*), a majority accept *aldri* ('never') (or the older variant *older*) whereas very few accept other adverbials, such as *fel* (a highly polysemic adverb), *sakta* ('actually'), *naug* ('probably'), *kringgt* ('often') etc.

Also Garbacz (2010) has investigated the possibility to place adverbs in the high-NegP, *inter alia*. He tested the adverbs *inte* ('not'), *sakta* ('actually'), *aldri* ('never'), *kringgt* ('often') and *milumað* ('sometimes') in high-NegP in relative clauses – one of the test sentences is quoted in (8; Garbacz 2010:125).

(8) Eð ir iend buotję so aldri ig har lesið.

it is only book-def. that never I have read

'It is the only book that I have never read'

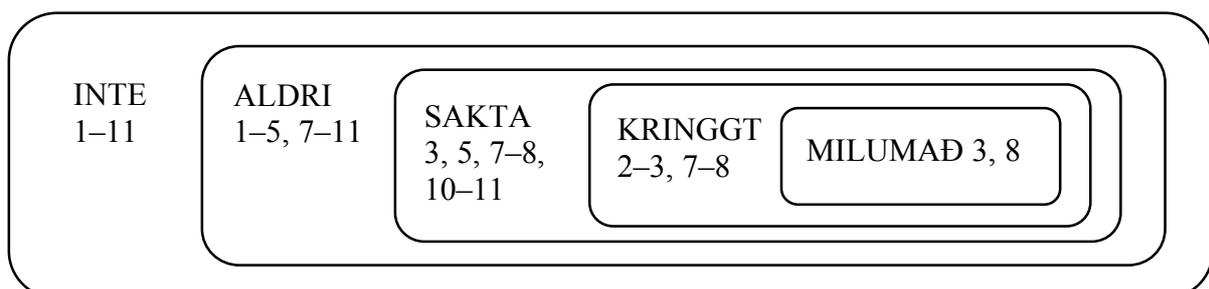
Although Garbacz reports that he has not found any adverbs that cannot appear in high-NegP (see the quote above), another result is presented in his table 6.4 (2010:123). According to this table, the adverbs *kringgt* ('often') and *milumað* ('sometimes') can never appear between the subordinator and a pronominal subject in an embedded clause, and neither can they appear in this position with

⁶ During the last years, I have had regular sessions with a handful of Övdalians in Lund, but I have also on several occasions done interviews on site, in Älvdalen. The regular contacts with my informants have led to the emergence of a elicitation methodology along the lines of Henry (2005).

a DP-subject, if there is an auxiliary in the embedded clause (2010:124). However, this statement is an interpretation of the data compiled in the informant studies; the complete set of informant data provided by Garbacz in the appendix (2010:225–227) gives a slightly different picture. There are 12 informants in the study, and it appears that there is an acceptability hierarchy among them. According to my own results, all Övdalians accept *inte* ('not') in high-NegP, but one of Garbacz's informants (informant 12) considers that to be ungrammatical. The second best adverbial in Garbacz's study is *aldri* ('never'), and then *sakta* ('actually'), *kringgt* ('often') and *milumað* ('sometimes') follow.

In figure 1, the different adverbials are shown in combination with the informants (1–12) that accepted them. The figure illustrates that Garbacz's informants actually can be ranked according to their acceptability scores; all informants that accept *milumað* in high-NegP also accept all other adverbials; all informants that accept *kringgt* also accept *sakta*, *aldri* and *inte* etc. It is thus possible to see the informants that accept for instance *kringgt* in high-NegP as a subset of a group of informants that accept *inte*, *aldri*, *sakta* and *kringgt*. In other words, it seems to be the case that the informants have different lexical categorizations of these adverbials. One informant (informant 12) has no high-NegP-adverbials at all (and for this reason he/she is absent from figure 1), one informant have one single high-NegP-adverbial, *inte* (informant 6) and so forth. There is only one exception to this pattern – informant 2 accepts *kringgt* but not *sakta*.

Figure 1. Acceptability hierarchy in high-NegP in Övdalian.



The field work made by Garbacz (2010) as well as my own studies show that there is individual variation among Övdalian informants as for which adverbials that are possible in high-NegP, and that there is an implicational acceptability hierarchy (as illustrated in figure 1) which separates the speakers from each other.⁷

Now, recall the hypothesis (dubbed "Rosenkvist's generalization" by Garbacz 2010:113) that null subjects require verb raising in Övdalian, and the fact that adverbials may occur in a pre-verbal high-NegP. The informants' grammaticality judgements in Garbacz (2010) infer that informants 3 and 8 (see figure 1) would find a sentence such as (9) to be grammatical, whereas informant 6 and 12 would consider it to be ungrammatical – given that the generalization is correct! Informants 3 and 8 would put *kringgt* in high-NegP and raise the verb to TP, but informant 6 and 12 would not be able to put *kringgt* in high-NegP and therefore be forced to assume that the verb remains in *vP*, which would make (9) ungrammatical.

(9) Ittað-jär ir ię buok so kringgt wilum leså.

this-here is a book that often will. 1PL read

'This is a book that **we** will read often'

expected scores for (9): informant 3+8: OK

informant 6+12: *

The possible correlation between adverbials in high-NegP, verb raising and referential null subjects is not tested in Garbacz (2010), but the informants that have been consulted by me comply completely with these conjectures. All of my

⁷ It is not clear to me if or how this pattern ties in with cartographic approaches to adverbial hierarchies, such as Cinque (1999) and subsequent works.

informants accept *inte* in high-NegP (10 a) and they also accept a referential null subject in an embedded clause with *inte* preceding the verb (10 b).

(10) a. Ittað-jär ir ię buok so int ig wil leså.

this-here is a book that not I will read

'This is a book that I will not read'

b. Ittað-jär ir ię buok so int wilum leså.

this-here is a book that not will. IPL read

'This is a book that we will not read'

Most informants also accept *aldri* ('never') in the same positions as *inte* in (10 a) and (10 b), but reject all other adverbials, whereas one informant, who is not from Älvdalen but from the neighbouring village of Våmhus, accepts all tested adverbials in both positions. Crucially, I have not encountered any informant who accepts a specific pre-verbal adverbial in an embedded clause with a null subject (as in 10 b) and at the same time rejects sentences with the very same adverbial in high-NegP (as in 10 a). My interpretation of the informants' responses is that they have slightly different lexical categorizations; some informants have only one high-NegP-adverbial (*inte* 'not'), but most informants have two such adverbials: *inte* and *aldri* ('never'). One of my informants and two out of the informants (3 and 8) in Garbacz's study (Garbacz 2010) consider all adverbials to belong to the high-NegP-class.⁸ My conclusion is that a positive judgement of a sentence such as (11) by an Övdalian informant cannot be considered to be a counter-argument against the generalization under discussion,

⁸ These informants are from Åsen, Loka and Våmhus, respectively, three villages which are not particularly close to each other. The liberal attitude towards putting anything in high-NegP is thus not a geographically determined feature.

unless it can be shown that this informant also rejects sentences with the same adverbial in high-NegP with an overt subject in an embedded clause.

(11) Ittað-jär ir ię buok so int/aldri/sakt/kringgt/milumað wilum leså.

this-here is a book that not/never/actually/often/sometimes will. 1PL read

'This is a book that **we** will not/never/actually/often/sometimes read'

The attested acceptability correlation between sentences such as (10 a) and (10 b) underlines that while the Övdalian informants differ in their lexical categorizations, they all consistently apply one and the same syntactic principle: a referential null subject is only possible if the verb has raised to TP. In other words: there is no syntactic variation. The generalization that was proposed by Rosenkvist (1994) is thus corroborated. It can also be concluded that two out of the three possible analyses that are illustrated in table 2 are untenable. Only analysis 1 can be maintained.

6. Concluding discussion

This paper starts out with the observation that the correlation between word order in embedded clauses and "strong" or "rich" agreement morphology on the finite verb, as formulated by for instance Falk (1993), Holmberg & Platzack (1995) and Vikner (1995), is not as straightforward as was originally supposed. In Icelandic, a language with both person and number agreement (see table 1), it has been shown that the word order in embedded clauses varies (see Angantýsson 2011), while verb raising seems to be possible in some cases in Faroese, a language with relatively poor agreement (see Heycock et al 2011). The relation between verb agreement and verb raising is accordingly more complex than previously thought, and when also embedded V2, stylistic fronting, different types of subject, different types of adverbials and different

types of embedded clauses (see Julien 2007, Wiklund et al 2009, Bentzen 2009, Garbacz 2010 etc.) are included in the equation, the picture that emerges is almost indecipherable. Paying heed to these problems, Holmberg (2010) suggests a theoretical revision that captures the empirical facts while also retaining the idea that there is an agreement-related parameter which is the underlying cause of several syntactic differences between Insular and Mainland Scandinavian. However, not even the modernized version of the hypothesis can explain the data presented by Garbacz (2011).

In this paper, I have argued that there is one Scandinavian syntactic construction that nevertheless requires robust verb raising: null referential subjects in Övdalian. It is argued that the apparent exceptions to this generalization are misleading, since the informants differ in their lexical categorizations. Some of them may for instance put all adverbials in the high-NegP, thereby creating a word order which seems to be a case of null subject with the verb in *v*P. But since these informants also accept all adverbials in high-NegP in embedded clauses with a pronounced subject, I conclude that all informants follow the same syntactic principle: referential null subjects require verb raising.

The notion of a syntactic parameter, the settings of which influence several aspects of the syntax simultaneously, has been criticized by Newmeyer (2004) and Haspelmath (2008), among others. Again, Övdalian null subjects constitute an interesting example of how verb agreement seems to play a decisive role for syntax. The forms for 1pl and 2pl are distinct (see table 1), and it is only these forms that license null referential subjects. In this particular case, the agreement seems to be sufficiently rich for this syntactic option, although the other constructions that are predicted to occur by Holmberg (2010) are absent from Övdalian. Broadening the view and including other non-standard Germanic languages in the discussion, such as for instance Bavarian and Frisian (see Rosenkvist 2009), we find that distinct verb agreement is a prerequisite for

referential null subjects in all modern Germanic language varieties in which referential null subjects are attested. This correlation offers a new possibility of restoring the link between verb agreement and a specific syntactic phenomenon within Germanic, which possibly is connected with a parameter-setting.

Verb raising is furthermore a form of head movement. Chomsky (2001:37f) claimed that head movement is not a part of narrow syntax, motivating this both with theory-internal technical difficulties and the observation that head movement rarely (if ever) affects the interpretation of the clause, i.e. the LF-interface (see the comprehensive discussion in Roberts 2010: chapters 1 and 4). Accordingly, head movement, including verb raising, is assumed to be a PF-phenomenon – see Platzack (2010) for a recent version of this idea. I have shown that verb raising is a necessary condition for referential null subjects in Övdalian; if verb raising is interpreted as a pure PF-phenomenon, it follows that also referential null subjects should be a PF-phenomenon – we do not expect PF-conditions for LF-syntax. In recent theorizing about referential null subjects (see the articles in Biberaur et al 2010 and Sigurðsson 2011), referential null subjects are on the contrary analyzed as a part of core syntax, relating the possibility of null subjects to pronominal features in T. The data that I have presented in this paper can accordingly be seen as an argument for the hypothesis that verb movement is not (always) just a PF-feature.

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Henrik Rosenkvist
Centre for Languages and Literature, Lund University
Henrik.Rosenkvist@nordlund.lu.se

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 Henrik Rosenkvist, Lund University



Overt non-referential subjects and subject-verb agreement in Middle Norwegian¹

Kari Kinn, University of Oslo

Abstract

This paper is a contribution to the long-standing debate on the relationship between subject-verb-agreement and the need for overt non-referential subjects. On the basis of new Middle Norwegian data I argue that the loss of subject-verb agreement (i.e. Agr in I° (Holmberg and Platzack, 1995)/unvalued number and person features in T (Holmberg, 2010a)) cannot have been the direct cause of the rise of overt non-referential subjects. Further I argue that the approach proposed by Faarlund (forthcoming), in which the loss of non-referential null subjects is analyzed as a lexical change, overall gives a better account of the development in Norwegian. Within this approach, changes in the agreement system are not considered a direct cause of the development of overt non-referential subjects. However, they may possibly have played a pragmatic and indirect role.

1. Introduction

Modern Norwegian requires a subject in finite sentences, and when the predicate does not assign an external theta-role, the non-referential pronouns *det* or *der* may be used to satisfy this condition.² The need for a subject can be ascribed to a strong Nominative Case feature in finite T that needs to be checked by a DP in Spec-TP – this is the formal task of the subject, and in Modern Norwegian, the subject needs to be overt, regardless of its referential properties.³

¹ This paper is based on my MA thesis (Kinn, 2010). I want to thank Jan Terje Faarlund, Piotr Garbacz, Christer Platzack, the audience at Grammar in Focus 2011 and anonymous reviewers from DIGS XIII for helpful comments.

² In many dialects, only *det* is used, but some allow *der* in existential constructions, impersonal passive constructions and to a limited extent also in weather constructions (NRG:681).

³ In Minimalist literature the need for a subject is commonly ascribed to an EPP feature, not a Case feature, but the Case analysis has some advantages – for one thing it is economical. Cf. Kinn (2010:40–52) for a discussion.

In Old Norse (ca.700/800–1350) overt subjects were not obligatory. Non-referential subjects were always null, while referential subjects could be null when they had a general, generic reference or the reference was recoverable from a preceding clause (Faarlund, 2004:220–223). Null objects were also possible, a fact that I will briefly return to in section 5, but the main focus of this paper is non-referential subjects.

In the other Mainland Scandinavian languages, non-referential subjects have apparently undergone a development similar to that in Norwegian, and the rise of overt non-referential subjects in Scandinavian has been under debate. But until now the discussion has mainly been taking Swedish data into account (see core works by Falk (1993a) and Håkansson (2008)), while little attention has been devoted to the previous stages of the other Mainland Scandinavian languages. In this paper I will investigate new Middle Norwegian data, and discuss two hypotheses of the rise of overt non-referential subjects. The first one is the well-known approach represented by e.g. Holmberg and Platzack (1995) and Holmberg (2010a), where the existence of non-referential null subjects has a very close connection to the presence of overt subject-verb agreement. The second hypothesis is proposed by Faarlund (forthcoming), and takes the properties of the inaudible pronoun *pro* as its point of departure.

The syntax of Middle Norwegian (ca. 1350–1550/1600) is an understudied field, compared to both earlier and later language stages. Potentially, it is of great theoretical relevance to test hypotheses against this kind of data, but also from an empirical point of view, it is important to investigate the language of this period.

The paper will be organized as follows: In section 2 I will give an overview of non-referential null subjects in Old Norse. Section 3 contains a presentation of (some versions of) the hypothesis of a relationship between subject-verb-agreement and obligatory overt subjects. In section 4 I discuss data from Middle Norwegian and argue that they do not support the approach presented in section 3. In section 5 I discuss Faarlund's (forthcoming) proposal, and argue that it is a more fruitful one, although some questions still need to be sorted out. Section 6 concludes the paper.

2. Non-referential null subjects in Old Norse

Basically there are two types of non-referential subjects, quasi-arguments and expletives, and in Old Norse both types were realized as null subjects. The Nominative Case feature of finite T needs to be checked also in constructions with null subjects, and I will assume that the inaudible pronoun *pro* performed this task in Old Norse. The notion of *pro* has been under much debate (cf. e.g. Biberauer (2010) for a recent account), but I will not enter into this discussion here. However, the results of investigations that presuppose *pro*, may indirectly contribute in this respect, especially those that take the properties of *pro* as their point of departure, like in the approach outlined in section 5. If a hypothesis building on the properties of *pro* is able to account for data synchronically and diachronically, it may be taken as an argument in favor of postulating the silent pronoun.

In the next subsections we will see examples of quasi-argumental and expletive null subjects, i.e. quasi-argumental and expletive *pro*, in Old Norse.

2.1. Quasi-argumental null subjects

Quasi-arguments differ from expletives in having a status as syntactic arguments, although they have no (specific) reference. One indication of this is that quasi-arguments, as opposed to expletives, seem to be able to control PRO. The examples below (from Modern Norwegian) illustrate the difference:

- (1) a. Det_i regnet i dagevis uten å PRO_i stoppe
 It_i rained in for-days without to PRO_i stop
 ‘It rained for days without stopping’
- b. ? Det_i ble knust mange ruter uten å PRO_i bli betalt erstatning
 It_i became smashed many windows without to PRO_i become payed
 compensation
 ‘Many windows were smashed, but no compensation was payed’

1a, in which *det* is a quasi-argument, is a grammatical sentence, whereas 1b, in which *det* is an expletive, is at least questionable.

Predicates licensing quasi-arguments typically refer to “various kinds of abstract or concrete processes independent of anybody’s interference or intention, such as the lapse of time, change of seasons, the weather, natural events, etc.” (Faarlund, 2004:217). 2a-c are Old Norse examples of this.

- (2) a. Þá er *pro* myrkt var orðit, leituðu þeir sér til náttstaðar [...] (Gylf 57.4)
 Then as *pro* dark was become, looked they themselves to night-place
 ‘When it had become dark, they looked for a room for the night’
- b. En at morni þegar *pro* dagaði, stendr Þórr upp ok þeir félagar [...] (Gylf 65.17)
 And at morning soon *pro* dawned, stood Þórr up and the(y) companions
 ‘And in the morning, as soon as the day was dawning, Þórr and his companions got up’
- c. En at miðri nátt þá heyrir Þórr at Skrýmir hrýtr ok sefr fast svá at *pro* dunar í skóginum. (Gylf 59.1)
 And at middle night then hears Þórr that Skrýmir snores and sleeps fast so that *pro* roars in forest
 ‘And in the middle of the night Þórr hears that Skrýmir snores and sleeps fast, so that a roaring sound filled the forest’

Quasi-argumental *pro* also occurs in sentences where it is possible to interpret the null subject as having a general, vague reference (Falk, 1993a:229). In the example below, *pro* may refer to a general state or situation:

- (3) ”Ekki er þat mín ætlan,” segir hann, ” at *pro* svá sé.” (Gunnl 191. 29)
 Not is that my opinion says he that *pro* so be
 ‘”In my opinion it is not so”, he says’

2.2. Expletive null subjects

Expletive *pro* occurred in sentences where the predicate did not assign any external theta-role, not even a quasi-theta-role. The examples in (4) below have no external arguments, but one or two internal ones.

- (4) a. ”Ok mun *pro* þik kala ef ek sit svá lengi ok útarliga sem ek em vanr.” (Gylf 69.4–5)
 And will *pro* you.ACC make-freeze if I sit so long and far-out as I am used-to
 ‘You will be cold if I stay as long and as far out as I am used to’
- b. Skorti *pro* þá eigi góðan fagnað, mat ok drykk. (Gylf 65.19)
 Lacked *pro* then not good.ACC welcome.ACC, food.ACC and drink.ACC
 ‘The welcome was warm, there was no lack of food and drink’
- c. Ok er *pro* þeim gaf byr, létu þeir í haf [...] (Gunnl 205.1–2)
 And as *pro* them.DAT gave fair-wind.ACC ran they in sea
 ‘And when they had fair wind, they ran off to sea’

In passive constructions, internal accusative arguments were raised to the subject position, whereas internal dative or genitive arguments kept their status as objects. In such sentences *pro* occupied the subject position:

- (5) [...] ok eigi er *pro* þess getit at æsirnir bæði þá heila hittask. (Gylf 59.25)
 and not is *pro* that.GEN said that gods asked then well meet
 ‘And it is not said that the gods wished him welcome back’

3. The relation between lack of subject-verb agreement and overt non-referential subjects

3.1. The rise of overt non-referential subjects as a consequence of loss of agreement

The idea of a connection between morphological subject-verb agreement in person and number and the possibility of having null subjects, is old and well known, both from traditional and generative grammar (see e.g. Falk and Torp (1900:2) and Taraldsen (1980:5)). As for the Scandinavian languages, Holmberg and Platzack (1995), to which I will return shortly, is one of the most influential works on syntactic effects of subject-verb-agreement, cf. also Platzack (1987), Platzack and Holmberg (1989), Holmberg and Platzack (1991) and Holmberg (2010a). In these works, the connection is formulated as a parameter – *pro* is licit only in languages with subject-verb agreement. There are obvious empirical arguments against the claim that the connection is direct and universal – languages like Chinese, Korean and Japanese have no subject-verb agreement, but still have non-referential null subjects (Huang, 1984). Languages which have subject-verb agreement, but at the same time overt non-referential subjects (like Middle Norwegian, as we shall see in the following sections) also pose a problem to approaches like Holmberg's and Platzack's (1995). The account does not provide an explanation why overt subjects would be necessary in this type of language, as *pro* should be licit. Nevertheless, the hypothesis has been said to hold, and counterexamples have been explained among other things with reference to independent factors masking the correlation (see e.g. Roberts and Holmberg, 2010:19). According to Roberts and Holmberg (2010:19), parameter effects like the connection between subject-verb agreement and null subjects will often be visible only in closely related languages. Middle Norwegian is therefore a good testing ground – it is closely related both to its previous stage, Old Norse, and to the later one, Modern Norwegian, both of which have been used as arguments in favor of the connection between subject-verb agreement and null subjects.

In Holmberg and Platzack (1995) it is stated that the difference between Icelandic, that has non-referential null subjects, and the Mainland Scandinavian languages, that require overt non-referential subjects, is caused by presence vs. absence of Agreement (Agr) in I°, which is reflected in the presence or absence

of person and number inflection on the verb. The diachronic development in the Mainland Scandinavian languages, from only having non-referential null subjects to not allowing them, is explained in the same way – the Mainland Scandinavian languages have lost the Agr feature, and therefore require overt subjects (Holmberg and Platzack, 1995:121–123). A newer formalization is the one found in Holmberg (2010a). According to Holmberg (2010a:20), the difference between Icelandic and the Mainland Scandinavian languages (and hence, Old Norse and Modern Norwegian, I presume) is that Icelandic has unvalued number and person features in T, while neither is found in Mainland Scandinavian. According to Falk’s (1993b, 1993a) works on the diachronic development of non-referential subjects in Swedish, expletive *pro* is licensed only when I° is a governor, and in V2 languages I° is turned into a governor by subject-verb agreement (Falk, 1993a:145). Quasi-arguments, however, could be lexicalized as overt non-referential subjects already before the loss of governing I°, due to their “dual status” as non-referential, but argumental elements (Falk, 1993a:236).

The analyses cited above are formalized differently, but basically they all predict that overt non-referential subjects should not appear before the loss of subject-verb-agreement (note that the prediction only applies to expletives in Falk’s case). If the loss of unvalued person and number features in T/Agr in I°/governing I°, which is reflected in the loss of morphological subject-verb-agreement, caused the rise of overt non-referential subjects, there is no reason why the non-referential subjects would occur before this.

The formulation of the prediction has one obvious problem, considering the fact that all subject-verb agreement was not lost at the same time in the history of Norwegian: It is unclear how rich the agreement has to be to be syntactically relevant. This question will be briefly discussed in the next subsection (see also Dahl and Koptjevskaja-Tamm (2010)).

3.2. Agreement in person and number vs. agreement in number only

It is well known that the verb inflection during the Middle Norwegian period was reduced from marking both person and number to marking number only (Mørck, 2004:427), and as we shall see, this is reflected in a significant part of the investigated data. It is not self-evident that it is interesting to discuss the

hypothesis of a connection between overt non-referential subjects and loss of subject-verb agreement in light of data containing agreement in number only. However, for different reasons it seems relevant to include this kind of data in the investigation.

First of all, Holmberg and Platzack (1995:121–123) are only operating with two stages in the history of Scandinavian, one stage with Agr and one stage without it. There is no intermediate stage, and the most obvious interpretation seems to be that the stage with Agr lasts until both types of subject-verb agreement are gone. Later versions of the hypothesis are not more explicit on how much agreement is necessary to trigger syntactic effects, a fact which Holmberg (2010b:87–88) is aware of. According to him, investigations of what he calls “intermediate dialects” are “crucially important”, and Middle Norwegian could be considered such a dialect. Of course, an option could be to operate with a more explicit definition of agreement, like Rohrbacher’s, which states that the agreement is only syntactically relevant if “in at least one number of one tense, the person features [1ST] and [2ND] are distinctively marked” (Rohrbacher, 1999:130). But practically, this would be extremely difficult, as it would require a large number of Middle Norwegian texts containing subjects with a very specific combination of features.

In addition to this, data with agreement in number are interesting because Falk (1993b:156) states that agreement in number was a sufficient condition for expletive null subjects in Early Modern Swedish: “[...] this weak agreement is however strong enough to identify I as a governor, that is I that may license *pro*”. If we take this survey as a point of departure, it is not to be expected that overt, expletive subjects co-occur with the reduced subject-verb agreement that is found in many Middle Norwegian texts.

In the next section we will investigate the Middle Norwegian data.

4. Overt non-referential subjects in Middle Norwegian

The data set serving as basis for this investigation mainly consists of charters, dating from the period 1450–1536 (cf. Kinn (2010) for a complete list of investigated texts). Due to lack of systematic studies, there is no consensus about when overt non-referential subjects became a part of Norwegian grammar. Mørck (2004:433–434) seems to be of the opinion that the rise of overt non-

referential subjects happened after the Middle Norwegian period, but in my data the first appearances are found somewhat earlier, in the 1450s. In the next section we shall see how overt non-referential subjects co-occur with person and/or number inflection on verbs.

4.1. Co-occurrence of overt non-referential subjects and subject-verb-agreement

In Modern Norwegian a unified singular form of the verbs has survived, while the person distinctions and all the plural forms are gone. Presence of person distinctions or plural forms in a text therefore indicates that the grammar has subject-verb agreement. However, I will assume that there are some constructions in which the inflectional morphology may be absent, although the grammar has the syntactic properties that would normally cause subject-verb-agreement (i.e. unvalued phi-features in T/Agr in I°/governing I°). The constructions in question are a) sentences with a post-verbal subject consisting of two or more conjuncts, b) relative clauses where the subject has been relativized, c) constructions with plural forms of the quantifier *allr* and d) constructions where the subject is a farm name in the plural form. In these syntactic surroundings morphological marking of subject-verb agreement is known to be unstable already at the Old Norse stage (Indrebø, 1924), although agreement was still the main rule. I will assume that lack of overt agreement in the syntactic surroundings mentioned above may be caused by a limited reanalysis concerning the relevant constructions only, not by a more general change in the grammar. In other words, I will not necessarily interpret absence of agreement morphology in the aforementioned constructions as evidence that subject-verb agreement is lost.⁴

A crucial methodological question is, of course, whether the subject-verb-agreement found in the texts really reflects agreement in the I-language. Alternatively, it could be ascribed to conventions in the written language, a view that has been maintained by Seip (1955:321). In that case, the instances of

⁴ Ottosson (2003) also leaves most of these constructions out of his survey of subject-verb agreement in Middle Norwegian, basically for the same reasons that I have mentioned. (Ottosson does not explicitly mention farm names with plural form.)

agreement are hardly relevant to the questions posed in this paper. However, Ottosson (2003) has made a thorough investigation of the subject-verb agreement in a data set that is partly overlapping with my data, concluding that the agreement must have been a part of the spoken language (and hence the I-language, I will presume) (Ottosson, 2003:173–174). Ottosson’s basic argument is that the morphological marking is very consistent (when the constructions in which agreement could be absent already in Old Norse, are excluded). My data set leaves me with the same impression – although the texts exhibit slightly different degrees of richness in their agreement systems, there is mostly consistence within each text. I will therefore assume that the subject-verb-agreement reflects properties of the I-language.⁵

Very few texts, if any, have instances of subjects in all person and number categories, so it is impossible to give a complete description of their agreement systems. It is particularly difficult to find evidence for person distinctions, or lack of this, in the singular, but many texts contain subjects in both 1. pl. and 3. pl.. In the remaining part of this section, I will focus on this distinction, in addition to the more basic distinction between singular and plural forms.

While some texts consequently distinguish between the 1. pl. and 3. pl., others have partial syncretism between these forms, meaning that the suffixes are sometimes different, and sometimes not.⁶ In some texts the old 3. pl. forms have expanded to the 1. pl., so that the verbs exhibit agreement in number only. In a few texts it is very hard to tell whether there is agreement or not, due to lack

⁵ Within the framework of Holmberg and Platzack (1995) there is a theoretical possibility that morphological subject-verb agreement may be present in the I-language, but without syntactic effects. This is called *non-nominal Agr*, and according to Holmberg and Platzack (1995:49–53) it is found in a language like French, which has subject-verb agreement, but also overt non-referential subjects. One could argue that Norwegian has gone through a similar stage. However, I will not take this option into consideration. Holmberg and Platzack do not mention it in connection with the Scandinavian languages, and besides, the concept of non-nominal Agr makes the hypothesis of a connection between null subjects and subject-verb agreement very hard to falsify.

⁶ I have not studied this variation in detail, but one possible explanation is that different verbs have different suffixes. Piotr Garbacz points out that another possible source of variation may be the position of the subject – if a 1. pl. subject is preverbal, the verb has a 1. pl. suffix, if it is postverbal, there is syncretism with 3. pl. This kind of system is found in the vernacular of Orsa, spoken in a part of Dalarna in Sweden (Garbacz, in progress).

of plural subjects. However, when the sources where the agreement system remains unclear are excluded, it is relatively most frequent for overt non-referential subjects to occur in texts with distinct suffixes in the 1. pl. and 3. pl. or partial syncretism between these forms (cf. the tables in the appendix for a complete overview).

Below I have listed some instances of non-referential subjects occurring in texts with subject-verb-agreement. The examples in (6) are taken from texts with distinct suffixes in the 1. pl. and 3. pl.:

- (6) a. waare *thet* swa at honom tektis koma heim til honom a Skierffeim i Wardaale sitia ther i hwse nær honom tha wilde han hielpæ honom medher aaker oc eingh [...] (DN X.217 (1457))
 was it.Q.ARG so that him pleased come home to him at Skierffeim in Wardaal sit there in house near him then would he help him with field and meadow
 ‘If it was so that it would please him to come home to him at Skierffeim in Wardaal, and stay there in the house with him, then he would help him with fields and meadows’
- b. [...]*ok er tat* sua wordit sem gud fyrbiode at fynempder biscop Matteus hefwer gripit eder takit Holastad [...] ta skulin j tilhielpa [...] (DN V.821 (1459))
 and is it.Q.ARG so become as God forbid that aforementioned bishop Matteus has fetched or taken Holastad then should you to-help
 ‘And if it should be, God forbid, that the aforementioned bishop Matteus fetches or takes Holastad, then you should help’

The non-referential pronouns in 6a-b are quasi-argumental, and according to Falk overt quasi-arguments are compatible with a grammar with agreement due to their “dual status”: Although they have no reference, they are still syntactic arguments (Falk, 1993b:162–163). However, the examples in 7a and 7c below, which are taken from texts with partial syncretism between the 1. pl. and 3. pl., indicate that also overt expletive subjects in impersonal passive constructions could co-occur with subject-verb agreement. According to Falk (1993b), a

grammar with agreement should not license overt, non-referential subjects of this kind. (In the next section I argue why *det/der* should be interpreted as subjects, and not as e.g. pragmatic construction markers or locative adverbials.)

- (7) a. tha var *ther* betalet vti i sylskol saa god som iiii kørslag (DN VI.618 (1493))
 then was there.EXPL payed in one silver-bowl so good as four
 kyrlag (the value of one cow)
 ‘Then a price of one silver bowl to the value of four *kyrlag* was payed’
- b. ær *thet* oc xxxj aar sidhen ath kœupeth war giorth (DN VI.723 (1534))
 is it.Q.ARG also 34 years since that purchase-the was done
 ‘It has also been 34 years since the purchase was made’
- c. tha var *thet* saa giorth thera i mellom ath the ii fornempde mamata
 boll skulde [...] blyffvæ vnder fornempde Torffyn. (DN X.286 (1499))
 then was it so done they.GEN in between that the two
 aforementioned *månedsmatsbol* (part of farm) should [...] stay
 under aforementioned Torffyn
 ‘Then it was arranged between them that the two aforementioned
 månedsmatsbol should belong to Torffyn.’
- d. soghom vy oc hœrdom ther vppo ath *ther* kom fram en man som saa
 heth Villiam Olaffson (DN VI.618 (1493))
 saw.1PL we and heard.1PL ther upon that there.EXPL came forward a
 man that so was-called Villiam Olaffson
 ‘There we saw and heard that a man called Villian Olaffson came
 forward.’

From the examples in (7) we see that overt non-referential subjects appear in a number of different constructions: 7a and c are, as previously mentioned,

impersonal passive constructions, whereas 7d is an existential construction. 7b has a quasi-argumental *det*.

The following examples are taken from texts with full syncretism in the 1. and 3. pl.:

- (8) a. Oc segss at *ther* skal ware ethers nadhis samthyckæ oc fullæ burdh (DN VI.611 (1491))
 And is-said that there.EXPL shall be your Grace's approval and consent
 'And it is said that we shall have your Grace's approval and consent'
- b. [...] om *thet* bliffuer feide eller orloff emellum høgborne første her Christiann [...] oc the Tyske hennsse steder [...] (DN II.1071 (1522))
 if it.EXPL becomes quarrel or war between high-born first lord Christiann and the German Hanseatic towns
 'if there should be quarrel or war between the high-born king Christiann and the German Hanseatic towns'
- c. samstvndis stodh han och tiil ath *thet* var helmings del mellum hans fadher och Torgvnde. (DN VIII.427 (1490))
 at-the-same-time stood he also to that it.EXPL was half.GEN part between his father and Torgvnde
 'At the same time he also admitted that his father and Torgvnde should each have one half'

The examples in (8) are all existential constructions.

4.2. Do the non-referential pronouns function as subjects?

So far I have been treating all the relevant instances of *det/der* as subjects. However, there is a possibility that they may have had other functions, and in that case they are not necessarily incompatible with a grammar with agreement. In this subsection I will discuss three such alternative functions: locative

adverbials, pragmatic construction markers and non-referential topics. I will argue that it is preferable to analyze *det/der* as subjects.

4.2.1. *Der* as a locative adverbial

In Old Norse the adverb *þar* ‘there’ functioning as a locative adverbial could occupy roughly the same positions as the expletive subjects *det/der* in Modern Norwegian. In Middle Norwegian, it is therefore not always perfectly clear whether *der* is a locative adverbial or an expletive. However, there are certain semantic criteria that can be applied. If *der* refers back to a previously identified locative element, either in the linguistic or in the extra-linguistic context, it should be analyzed as a locative adverbial. But there are no obviously suitable referents of this kind in the Middle Norwegian examples included in this paper, and I therefore analyze *der* as a subject.

4.2.2. *Det/der* with pragmatic or stylistic function

Falk (1993b) notes that non-referential pronouns and subject-verb agreement co-occur in Old Swedish and Early Modern Swedish, but still maintains that there is a direct connection between the loss of agreement and the rise of overt non-referential subjects. As was briefly mentioned above, quasi-arguments are compatible with a grammar with subject-verb-agreement in Falk’s analysis because of their so-called “dual status” – they have no reference, but they are still syntactic arguments (Falk, 1993b:163). The choice between a quasi-argumental null subject and an overt, quasi-argumental *det* is determined by “factors outside grammar, such as pragmatic or stylistic factors” (Falk, 1993b:162). Falk does not state more specifically what factors are relevant, but if we adopt her analysis, the occurrence of overt quasi-arguments before the loss of agreement is not problematic.⁷ The expletives, however, are still not accounted for.

⁷ In the Middle Norwegian data, it might be relevant that most of the early instances of overt quasi-arguments are found in constructions where *så* ‘in such a way’ is the predicate and a right dislocated clause functions as an apposition to *så* (cf. Kinn (2010:72–76)). But the strong representation of these constructions may also be due to the fact that the quasi-

Falk (1993b) interprets overt, expletive pronouns before the loss of agreement as pragmatic construction markers, more precisely as markers of the existential construction.⁸ Her analysis is based on two empirical observations: First of all, expletive *det* before the loss of agreement appears “almost exclusively” in existential constructions (Falk, 1993b:164). “Almost exclusively” means that out of 18 examples of expletive *det*, 16 are found in existential constructions, and only 2 in other constructions, and these 2 are late examples. Second, expletive *det* seems to be restricted to certain positions: It mainly appears in Spec-CP of main clauses, and sometimes in Spec-TP of embedded clauses, but never in Spec-TP of main clauses. The restrictions on the position of *det* is taken to indicate that expletive *det* before the loss of agreement is not a syntactic subject (Falk, 1993b:164).

However, this account does not seem to hold when confronted with Middle Norwegian data. In Middle Norwegian, overt non-referential pronouns co-occur with agreement not only as quasi-arguments and in existential constructions, but also in passive constructions, as is evident from the examples below (repetitions of 7a and 7c):

- (9) a. tha var *ther* betalet vti i sylskol saa god som iiii kørslag (DN VI.618
 (1493))
 then was there.EXPL payed in one silver-bowl so good as four
kyrlag (the value of one cow)
 ‘Then a price of one silver bowl to the value of four *kyrlag* was
 payed’

arguments can be interpreted as having a vague reference. I will briefly return to this in section 5.

⁸ Falk does not explicitly state why there would be a need to mark out the existential construction like this. The most obvious reason is perhaps that it could be due to information structure: The expletive *det* signals that new information will be introduced at the end of the sentence. (Cf. e.g. Lambrecht (1994:177–181) for a discussion of the information structure of existentials).

- b. tha var *thet* saa giorth thera i mellom ath the ii fornempde mamata
 boll skulde [...] blyffvæ vnder fornempde Torffyn. (DN
 X.286 (1499))
 then was it.EXPL so done they.GEN in between that the two
 aforementioned *månedsmatsbol* (part of farm) should [...] stay
 under aforementioned Torffyn
 ‘Then it was arranged between them that the two aforementioned
månedsmatsbol should belong to Torffyn.’

Admittedly, quasi-arguments and existentials do constitute a majority, but it would be misleading to say that overt non-referential subjects are found “almost exclusively” in these constructions, like in Falk’s survey. Besides, they are not particularly late examples, as opposed to the counterexamples in Falk’s investigation.

Also, the restrictions on the position of the expletive do not apply in Middle Norwegian. *Det/der* is found not only in Spec-CP of main clauses and Spec-TP of embedded clauses, but also in Spec-TP of main clauses. This is evident from both of the examples in (9) above, where *tha* occupies Spec-CP and *ther/thet* is in Spec-TP.

The distribution of overt expletives suggests that they were not pragmatic markers for the existential construction before the loss of agreement. But it does not automatically exclude the possibility that overt non-referential pronouns may have had other pragmatic functions before they became obligatory subjects. However, in the Middle Norwegian data, it is hard to identify such a function – as we have seen, the non-referential pronouns appear in several constructions, and both in the preverbal and post-verbal position.

4.2.3. *Det/der* as non-referential topics

Another possibility that should be mentioned, is that non-referential *det/der* may have been non-referential topics before they became subjects. By non-referential topics I mean non-referential pronouns that have the function of filling the preverbal position in V2 languages, and hence are licit in Spec-CP only, which may be referred to as the topic position. Icelandic, German and Yiddish are languages with non-referential pronouns of this kind (Vikner, 1995:69), and

Faarlund (1990:192) has suggested that Norwegian (as well as the other Scandinavian languages, English and French) has gone through a similar stage.

If the non-referential pronouns before the loss of agreement are to be analyzed as non-referential topics and not subjects, they should only occur in Spec-CP, not in Spec-TP. But as we have seen already, expletive pronouns do appear in Spec-TP of main clauses. The examples in (9) are repeated in (10):

- (10) a. *tha var thet saa giorth thera i mellom ath the ii fornempde
mamata boll skulde [...] blyffvæ vnder fornempde
Torffyn. (DN X.286 (1499))*
then was it.EXPL so done they.GEN in between that the two
aforementioned *månedsratsbol* (part of farm) should [...]
stay under aforementioned Torffyn
‘Then it was arranged between them that the two
aforementioned *månedsratsbol* should belong to Torffyn.’
- b. *tha var ther betalet vti i sylskol saa god som iiii kørlag (DN VI.618
(1493))*
then was there.EXPL payed in one silver-bowl so good as four
kyrlag (the value of one cow)
‘Then a price of one silver bowl to the value of four *kyrlag* was
payed’

Also overt quasi-arguments are found in Spec-TP of main clauses:

- (11) a. *waare thet swa at honom tektis koma heim til honom [...] tha wilde
han hielpæ honom [...] (DN X.217 (1457))*
was it.Q.ARG so that him.DAT pleased come home to then would he
help him
‘If it was so that it would please him to come home to then he
would help him’
- b. *ær thet oc xxxj aar sidhen ath køupeth war giorth (DN VI.723
(1534))*
is it.Q.ARG also 34 years since that purchase-the was done

‘It has also been 34 years since the purchase was made’

11a (an abbreviated version of 6a) is a conditional construction with the verb in the first position and *thet* in Spec-TP. 11b (a repetition of 7b) is a declarative clause, also with the verb in the first position and *thet* in Spec-TP. Relatively, Spec-TP is the most frequent position in main clauses for non-referential pronouns in the charters – there are no clear examples of a non-referential pronoun in Spec-CP.

As for embedded clauses, there are Middle Norwegian examples of non-referential pronouns in the position directly after the complementizer, like in 8c, repeated in (12) below:

- (12) samstvn̄dis stodh han och tiil ath *thet* var helmings del mellom hans fadher och Torgvnde. (DN VIII.427 (1490))
 at-the-same-time stood he also to that it.EXPL was half.GEN part between his father and Torgvnde
 ‘At the same time he also admitted that his father and Torgvnde should each have one half’

The position after the complementizer may be analyzed as the specifier of a recursive CP (cf. Vikner (1995:67)), or as one of the specifiers in a split CP domain (cf. e.g. Wiklund et al., 2007). Isolated, non-referential pronouns following the complementizer in embedded clauses could therefore possibly be interpreted as non-referential topics. But considering that they exist side by side with unambiguous examples with the expletive in Spec-TP of main clauses, it seems more reasonable to analyze them as subjects. Recall that Spec-CP is a possible position for both non-referential subjects and non-referential topics, whereas Spec-TP is impossible for non-referential topics.

4.3. Conclusions

In this section we have seen that both quasi-argumental and expletive pronouns co-occur with subject-verb agreement in Middle Norwegian. Some texts only distinguish between singular and plural forms, while others also have distinct suffixes in the 1. and 3. pl.. That subject-verb-agreement is still a part of the

grammar in the 15th and the beginning of the 16th century, is in line with the findings of Ottosson (2003). I have argued that the non-referential pronouns are neither locative adverbials, pragmatic construction markers nor non-referential topics, but syntactic subjects.

If it is right, as the Middle Norwegian data suggest, that overt non-referential subjects appear before the loss of subject-verb agreement, the loss of agreement cannot be a direct cause, as is explicitly suggested by Holmberg and Platzack (1995) and, for expletive subjects, Falk (1993a, 1993b). Also Håkansson (2008:224), in his work on Swedish, remains skeptical to the direct connection between loss of agreement and rise of overt non-referential subjects. He suggests that the development of obligatory overt subjects (referential ones, but eventually also non-referential ones) may instead be related to the change from basic OV to VO word order in Swedish, which implicates obligatory movement of the subject to Spec-IP (Håkansson, 2008:195–217, 225). However, this approach is not necessarily applicable to Norwegian. Håkansson (2008:211) presupposes, with reference to Delsing (1999), that Swedish was a pure (“renodlad”) OV language until the early 14th century. But investigations of Norwegian data indicate that VO was the basic and most common word order already at the Old Norse stage (Faarlund, 2004:160), which began no later than the 9th century, hundreds of years before the rise of overt non-referential subjects. This time span seems too long for the change from OV to VO to be a direct cause. Therefore, in the next section I will discuss a more recent proposal made by Faarlund (forthcoming).

5. Loss of *pro* as a lexical change

Faarlund’s (forthcoming) proposal takes *pro*’s status as a lexical pronoun as its point of departure – *pro* has the same syntactic and referential properties as ordinary pronouns, but lacks phonological content. The loss of non-referential null subjects (and also referential ones) is not analyzed as the result of a parametric change, but as a lexical change that has grammatical consequences. When *pro* was no longer available in the lexicon, an audible pronoun had to take over the formal tasks that *pro* could perform at the earlier language stage, like checking the Case feature in T. *Det/der* were therefore reanalyzed as non-referential subjects by children acquiring Norwegian.

In Old Norse, both *þat* and *þar* were frequently used in contexts resembling those where the non-referential subjects are used in Modern Norwegian. *Þar* was, as mentioned in 4.2.1, a locative adverb, while *þat* could be found in the relevant positions both as a referential pronoun and as a determiner. In the E-language, constructions with *þat* as a determiner to a right dislocated embedded clause could be particularly similar to a modern expletive construction. In these constructions, *þat* and the dislocated clause often constituted a discontinuous DP, with *þat* in Spec-TP or Spec-CP. In (13) below the determiner *þat* occupies Spec-CP:

- (13) En *þat* er at segja frá Hermóði at hann reið níu nætr dökkva dala ok djúpa
 [...] (Gylf 73.29–30)
 And that is to say about Hermóði that he rode nine nights dim valleys and
 deep
 “And what one can say about Hermóð, is that he rode nine nights through
 dim and deep valleys”

It seems likely that the distribution of *þat* and *þar*, as well as their having a deictic and not always very specific reference as adverbs and pronouns (and no reference at all as determiners), made them good candidates for reanalysis.

A more crucial question is, of course, what triggered the loss of *pro*. The loss of *pro* can be understood as a kind of reduction, in the sense that children during language acquisition fail to recognize a part of the input data, and therefore create an I-language without it. According to Faarlund (2008:234), children will generally rather leave something out of their analysis of the input data than add something for which there is no solid evidence. In Faarlund (forthcoming) the argument goes that it takes especially robust input data for *pro* to be recognizable, as it has no phonological content. In other words, verbs with an empty subject position must occur regularly, so that the children can infer the existence of an inaudible pronoun that does the formal tasks of the subject. If the frequency of *pro* drops below a certain level, the input data may no longer be robust enough for *pro* to be recognized, and hence *pro* is left out. Faarlund (forthcoming) suggests that the decline of subject-verb agreement in Mainland Scandinavian may have played a role in this process, but in a much more pragmatic and indirect way than in the works of Holmberg and Platzack (1995),

Holmberg (2010a) and Falk (1993b, 1993a): As distinctions were lost in the verbal morphology, overt pronouns may have been preferred to *pro*, not out of syntactic necessity, but for purely communicative reasons.

In Norwegian, this may initially have concerned referential *pro* only, as overt non-referential pronouns did not exist at the earliest stage. It could be that the development started with a drop in the frequency of referential *pro*, which later made children fail to recognize not only referential, but also non-referential *pro* as an option. A problem with this suggestion, however, is that there are, as I showed in section 4, Middle Norwegian examples of overt non-referential pronouns in texts where the decline of the verbal morphology has not come very far. These texts exhibit distinct verbal suffixes in the 1. and 3. pl.. One could argue that the speakers at this point probably had lost the person distinctions in the singular (cf. Ottosson, 2003:173), although it cannot be observed in the relevant sources, and that the loss of these person distinctions was sufficient to cause a decrease in the use of *pro*. But the appearance of overt non-referential subjects at the stage where much of the agreement inflection is still intact, may also be taken as an indication that the decline of verbal morphology cannot have caused the decreasing use of the silent pronoun. In that case, the question of what made *pro*'s frequency sink below the critical point, remains open, and it must be a task for further research to investigate this. This is an unclear point in the lexical approach to the loss of *pro* – however, the analysis also has important advantages.

As previously mentioned, the loss of *pro* can be linked to the way children analyze the linguistic input data, as described by Faarlund (2008). Although Faarlund (2008) only discusses language change, it seems reasonable to characterize children's tendency to leave things out rather than add things as a “[principle] of data analysis that might be used in language acquisition and other domains” (Chomsky, 2005:6). If this is correct, it is a factor not specific to the language faculty, or a so-called *third factor* (Chomsky, 2005:6). Invoking third factors has the theoretical advantage of relating the explanation of a linguistic phenomenon to a domain outside the language itself (cf. Faarlund, 1987) – third factor arguments are in principle independent arguments.

On the empirical side, the analysis of the loss of non-referential null subjects as a lexical change is not dependent on a direct, syntactic relation with the loss of subject-verb-agreement, although Faarlund suggests a more

pragmatic link. Hence the co-occurrence of expletive pronouns and subject-verb agreement does not have to be a grave problem. Another advantage of the approach is that it provides a simple and explicit way of linking the loss of non-referential null subjects to the loss of referential null subjects, and also to the loss of null objects. As was briefly mentioned in the introduction, referential null subjects and null objects were possible (but not obligatory) in Old Norse, but have disappeared at the modern language stage.⁹ Consider the examples below, with ungrammatical Modern Norwegian correspondences:

- (14) a. Nú sá æsirnir hvar hann fór. Fara *pro* enn upp til forsins ok skipta liðinu í tvá staði [...]. (Gylf 77.16–17)
 Now saw gods-the where he went. Go *pro* again up to waterfall-the and split group-the in two parts
 ‘Now the gods saw where he went. They went once again up to the waterfall and split up into two groups’
- b. Nå så æsene hvor han dro. **Pro* drar igjen opp til fossen og deler flokken i to deler
 Now saw gods-the where he went. *Pro* go again up to waterfall-the and split group-the in two parts
- (15) a. þa skal *pro* þat barn til kirkíu fœra. (Gul 44.5)
 then shall *pro* that child to church lead
 ‘Then one shall take that child to a church’
- b. * Da skal *pro* fœre det barnet til kirke.
 Then shall *pro* lead that child to church
- (16) a. syn hanum gripina, en hann man æigi vilia *pro* af þer taka (Oleg)
 show him valuables-the, and he shall not want *pro* from you take

⁹ If two coordinated clauses have the same subject, it may remain unexpressed in the second clause even in Modern Norwegian. This should be analysed as VP-coordination, not as *pro*. Also, as is well known, unexpressed subjects in Spec-CP are possible, but they are pragmatically marked – these constructions may be considered elliptic, and they do not presuppose the existence of *pro*.

‘Show him the valuables, and he shall not want to take them from you’

- b. * Vis ham verdisakene, og han skal ikke ville ta *pro* fra deg
 Show him valuables-the, and he shall not want take *pro* from you

- (17) a. þetta sværð haitir bæsengr. hann kuaz nu mindu træystazt at bera
pro (Oleg)
 this sword is-called Bæsengr. he said.REFL now would dare.REFL to
 wear *pro*
 ‘This sword is called Bæsengr. He said that he would dare wear it
 now’

- b. Dette sverdet heter Bæsengr. * Han sa nå at han ville tørre å bære
pro.
 This sword is-called Bæsengr. He said now that he would dare to
 wear *pro*

In (14) *pro* is a referential subject pronoun, with *æsirnir* as its antecedent. In (15) *pro* has a generic, general reference, ‘one’. In (16) it is the object of *taka*, and in (17) it is the object of *bera*.¹⁰ Whereas referential subject *pro*, like non-referential *pro*, checks a Nominative Case feature in T, I will assume that *pro* in object positions checks an Accusative or other oblique Case feature. With the lexical approach to loss of null elements, we have a simple and economical account of the loss of referential null subjects and null objects like in (14)–(17) in addition to the loss of non-referential null subjects: *Pro* has been lost not only

¹⁰ Åfarli and Creider (1987) note that some Norwegian speakers allow the object of the second of two coordinated VPs to be unexpressed. This construction underlies a “strict parallelism constraint” (Åfarli and Creider, 1987:340). Åfarli and Creider tentatively propose to analyse the null objects as *pro*, but there are other options. As Åfarli and Creider (1987:342) suggest, the second verb may in some cases be interpreted as intransitive. It is also possible to consider the constructions elliptic. As is evident from examples (18) and (19), Old Norse null objects are not restricted to coordinated VPs, and the VPs do not need to be parallel in the sense of Åfarli and Creider. It therefore seems more obvious to analyse Old Norse null objects as *pro*.

as a non-referential subject pronoun, but also as a referential subject pronoun and as an object pronoun – in other words, in the Norwegian lexicon it seems to be gone altogether.

According to Faarlund (forthcoming) a language may lose only some types of *pro*, or it may lose *pro* with different properties at different times. For example, Latin had both subject and object *pro* (in other words *pro* with different Case features), whereas the descendant languages Italian and French have had different developments: Italian allows null subjects, but only to a very limited extent null objects (cf. Rizzi, 1986 for a discussion of null objects in Italian), while French allows neither. There has, to my knowledge, been done no systematic research on the chronology of the loss of subject vs. object and referential vs. non-referential *pro* in Norwegian. However, one tendency in the Middle Norwegian data, which is also known from Swedish (Falk, 1993a:235), is that the earliest examples of overt non-referential pronouns are (predominantly) quasi-arguments (Kinn, 2010:115). Within the lexical approach to the loss of null subjects, this can be captured by a statement that quasi-argumental *pro* disappears before expletive *pro*. A closer inspection of the Middle Norwegian data reveals that all the earliest examples of overt quasi-arguments are of the type briefly mentioned in 2.1, where the subject may be interpreted as having a vague, general reference to a state or situation (Kinn, 2010:120). The earliest example, 6a, is repeated below as (18); *thet* may be understood as ‘the situation’ or ‘things’:¹¹

- (18) waare *thet* swa at honom tektis koma heim til honom a Skierffheim i Wardaale sitia ther i hwse nær honom tha wilde han hielpæ honom medher aaker oc eingh [...] (DN X.217 (1457))
 was it.Q.ARG so that him.DAT pleased come home to him at Skierffheim in Wardaal sit there in house near him then would he help him with field and meadow

¹¹ Note that (18) contains an expletive null subject: The predicate *tektis* in the embedded clause “at honom tektis koma heim til honom” only takes oblique arguments, and there is no overt *det*. This may indicate that the grammar is at a stage where expletive null subjects are allowed, but not quasi-argumental ones.

‘If it was so that it would please him to come home to him at Skierffeim in Wardaal, and stay there in the house with him, then he would help him with fields and meadows.’

It is tempting to suggest that the ambiguity of quasi-arguments of this type may have promoted their overt expression. Recall that while non-referential subjects were obligatory null in Old Norse, referential subjects could only be null under certain conditions. If examples like (18) were interpreted as having a vague reference, *pro* seems to be a less obvious choice here than in constructions with expletives or quasi-arguments without this referential ambiguity. But more research is needed to give a more detailed and certain account of how and why this happened.

To sum up, the lexical approach to the loss of non-referential null subjects has some important advantages: It does not presuppose a direct connection with the loss of subject-verb-agreement, and it is capable of providing a simple and economical account of the loss of referential null-subjects and null objects in addition to non-referential null subjects. But as it stands, it seems somewhat unclear what initially caused *pro*'s frequency to sink to the point where it was no longer acquired. Still, the idea does not face empirical problems as serious as the approach discussed in section 4, and it may be well worth further investigations.

6. Conclusion

This paper has discussed two approaches to the development of non-referential subjects in Norwegian. The first one considers the loss of subject-verb agreement (or more precisely the loss of Agr in I° (Holmberg and Platzack, 1995)/unvalued phi-features in T (Holmberg, 2010a)) to be the direct cause of the rise of overt non-referential subjects. I have argued that this cannot have been the case, basically because overt quasi-argumental and expletive subjects both appear before the loss of subject-verb-agreement. In the second proposal discussed, the rise of overt non-referential null subjects was described as a result of a lexical change, namely the loss of the silent pronoun *pro* (Faarlund, forthcoming). This idea does not face the kind of empirical problems that the first one does, and it provides a simple account of the loss of other null elements. The question of what initiated the lexical change is not unproblematic,

though, but in the light of Middle Norwegian data, the approach seems to be the most fruitful one, and it could constitute an interesting point of departure for further research.

7. Appendix – overview of subject-verb agreement in the investigated texts

The tables below provide an overview of subject-verb agreement in the Middle Norwegian charters containing non-referential subjects, as well as a classification of the non-referential subjects as either quasi-argumental or expletive. Cf. Kinn (2010) for a more thorough discussion of each text and debatable instances.

Table 1: Texts with agreement in the pl., distinct suffixes in the 1. and 3. pl.

Text	Type(s) of overt non-referential subjects
DN X.217 (1457)	Quasi-argumental
DN V.821 (1459)	Quasi-argumental
DN VII.488 (1481)	Expletive
DN II.1021 (1504)	Quasi-argumental

The texts listed in table 1 above have subject-verb agreement and distinguish between the 1. pl. and 3. pl.. DN V.821 (1459) also has one instance of agreement in the 2. pl.. DN VII.488 (1481) contains one example of a plural form with a singular subject, but the agreement is otherwise consistent.

Table 2: Texts with agreement in the pl., partial syncretism in the 1. and 3. pl.

Text	Type(s) of overt non-referential subjects
DN II.846 (1462)	Quasi-argumental
DN VI.723 (1534)	Quasi-argumental
DN X.286 (1499)	Expletive
DN VI.618 (1493)	Expletive
DN II.1087 (1528)	Expletive

The texts listed in table 2 above have a subject-verb agreement system where the verbal suffixes in the 1. pl. and 3. pl. are sometimes distinct and sometimes not. DN II.1087 (1528) has one instance of agreement marking in the 2. pl. (imperative), and also one instance of lack of agreement in the 3. pl., but the agreement is otherwise consistent.

Table 3: Texts with agreement in the pl., full syncretism in the 1. and 3. pl.

Text	Type(s) of overt non-referential subjects
DN VI.611 (1491)	Expletive
DN II.1071 (1522)	Quasi-argumental, expletive
DN VIII.427 (1490)	Expletive
DN VI.610 (1490)	Quasi-argumental

The texts in table 3 above have subject-verb agreement with the same suffix in the 1. and 3. pl..

Table 4: Texts with agreement in the pl., all pl. subjects are 3. pl.

Text	Type(s) of overt non-referential subjects
DN VIII.645 (1531)	Expletive
DN XI.708 (1562)	Expletive

The texts listed in table 4 above only contain pl. subjects in the 3. pl., and it is therefore impossible to give a more detailed characterization of their agreement system.

Table 5: Texts where the status of agreement is uncertain

Text	Type(s) of overt non-referential subjects
DN II.820 (1457)	Expletive
DN IV.998 (1484)	Quasi-argumental
DN X.633 (1531)	Quasi-argumental
DN IX.596 (1527)	Expletive

It is hard to give a good description of the agreement system in the texts in table 5. In DN IV.998 (1484) and DN X.633 (1531) a few examples of pl. agreement are found, but each text also has one instance of a pl. form with a sing. subject. In DN IX.596 (1527) and DN II.820 (1457) the instances of pl. subjects are very few.

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Verb Movement as Tense Operator Movement*

Mayumi Hosono

Leiden University/Potsdam University

m.hosono@umail.leidenuniv.nl

Abstract

I propose a way of deriving verb movement in the Narrow Syntactic component. First, I propose that [T] in T introduces a variable, T_{Var} , whereas [Fin] in C introduces a tense operator, T_{Op} , which specifies the value of a tense variable as present, past, etc. Second, I propose, in analogous to the derivation of *wh*-subjects proposed by Chomsky (2008), i) that [T] raises v^* -V, the latter remerges to the root of TP, and the occurrences of the raised verb make a variable verb chain, on one hand, and ii) that [Fin] raises v^* -V, and the latter directly remerges to the root of CP and functions as the tense operator that ranges over the variable verb chain, on the other. I argue that the proposal here accounts for the exceptional status of verb movement. With the proposal here I provide accounts not only for traditional issues but also for the Head Movement Constraint (Travis 1984), movement of focused non-finite/finite verbs, and clitic climbing.

1. Introduction

A finite verb can appear in different positions among different languages. The finite verb *kisses* follows an adverb *always* in English (1a). The finite verb *embrasse* moves and precedes the adverb *toujours* in French (1b). The finite

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verb *kysser* moves not only across the adverb *alltid* but also across a subject *Jon* in Swedish (1c). These facts indicate that the finite verb is located in the v*P domain in English, in the TP domain in French, and in the CP domain in Swedish.

- (1) a. John (*kisses) always (^{OK}kisses) Mary. (Eng.)
- b. Jean (^{OK}embrasse) toujours (*embrasse) Marie. (Fre.)
 Jean kisses always kisses Marie
 ‘Jean always kisses Marie.’
- c. Marit (^{OK}kysser) Jon (*kysser) alltid (*kysser). (Swe.)
 Marit kisses Jon kisses always kisses
 ‘Marit, Jon always kisses her.’

Verb movement stands in an exceptional status among movement phenomena and has several problems on both theoretical and empirical sides, which I discuss in the next section.¹

In this paper I propose a way of deriving verb movement in Narrow Syntax. First, I propose i) that [T] in T introduces a variable, T_{Var} , whereas [Fin] in C introduces a tense operator, T_{Op} , which specifies the value of a tense variable as present, past, etc. Second, I propose, in analogous to the derivation of *wh*-subjects proposed by Chomsky (2008), i) that [T] raises v*-V, the latter remerges to the root of TP, and the occurrences of the raised verb make a variable verb chain, on one hand, and ii) that [Fin] raises v*-V, the latter directly remerges to the root of CP, and the raised verb functions as the tense operator that ranges over the variable verb chain, on the other. With this proposal I provide accounts not only traditional issues but also for the Head Movement

¹ For a traditional account of head movement in the GB theory, see Baker’s (1988) *Government Transparency Corollary*.

Constraint, movement of focused non-finite/finite verbs, and clitic climbing.

This paper is organized as follows. In section 2 I introduce and discuss the problems with verb movement. In section 3 I propose a way of deriving verb movement in the Narrow Syntactic component, and formulates verb movement as tense operator movement. In section 4 I provide accounts for the exceptional status of verb movement and the issues related to head movement in turn. In section 5 I briefly conclude this paper, suggesting that movement phenomena are classified into either operator movement, including verb movement and A'-bar movement, or non-operator movement represented by A-movement.

In this paper I assume that readers are familiar with the theoretical background on the phase-cartographic theory (Chomsky 2000, 2001, 2004, 2008, Rizzi 1997, Cinque 1999). Concerning the interface between syntax and morphophonology, I adopt Distributed Morphology (Halle and Marantz 1993) and assume that phonological feature assignment is done strictly in the phonological component PHON.

2. The problems with verb movement

Verb movement is said to be exceptional among movement phenomena. In much literature it is assumed that a verb is adjoined to the functional head(s) (2), whereas a phrase merges to the root (3).²

(2) a. Have you *have* been able to do it?

b. [_{CP} have+T+C [_{TP} ... have+T [_{VP} ... have ...]]]

² I omit the details other than the derivation of the relevant sentential elements.

(3) a. A SWEATER, I gave a sweater to John (, not a SHIRT).

b. [_{CP} a sweater C [_{TP} ... [_{v*P} ... a sweater ...]]]

Due to this property of adjunction, a raised verb does not c-command its copy. And verb movement is countercyclic: it does not extend a tree, and violates the Extension Condition (Chomsky 1995). Furthermore, on the assumption that the occurrences of a raised category produce a chain, the chain made by verb movement is not uniform. As illustrated in (4), one more feature is added to the next higher occurrence of a verb in turn. The occurrences in the verb chain are not identical to each other (cf. Chomsky 2001:38).

(4) a. [_{TP} ...embrace+v*+T ... [_{v*P} ... embrace+v* [_{VP} embrace ...]]] (=1b)

b. <embrace+v*+T, embrace+v*, embrace> (i.e. <V+v*+T, V+v*, V>)

There are several problems with verb movement. First, V-T movement partly correlates with the presence of rich morphological inflection, whereas V-C movement does not show such a correlation. A finite verb moves to T in, e.g. the Romance languages like French that have a comparatively rich inflectional system, whereas it does not move in languages like English that have only a poor inflectional system (Emonds 1978, Pollock 1989, Belletti 1990, Roberts 1993, Chomsky 1995). Most of the V2 languages (excluding German and Icelandic), on the other hand, do not have as rich an inflectional system as the Romance languages. The Mainland Scandinavian languages like Swedish,

for instance, have only one form for all persons in present and past tenses.

Second, no difference in meaning arises no matter in which position a verb appears: the interpretation of a verb does not differ among languages, whether the finite verb follows an adverb as in English (1a), moves across the adverb as in French (1b), or moves even across a subject as in Swedish (1c).³ This property is problematic in the current phase system. According to Chomsky (2001), syntactic movement occurs only when a semantic difference is reflected on the interface. The phrase *a sweater* in (3), for instance, moves to sentence-initial position to receive the focal interpretation that it could not receive in the original position. Hence, Chomsky (2001:37-38) claims that verb movement is an operation in PHON.

An argument against verb movement as a PHON operation comes from Scandinavian Object Shift (Holmberg 1986), in which a weak object pronoun (and also a full NP in Icelandic) can move across a sentential adverb like negation only when verb movement occurs (*Holmberg's Generalization* HG, Holmberg 1986): e.g. (Swe.) *jag kysste henne inte* (I kissed her not 'I didn't kiss her' VS *jag har inte sett den* (I have not seen it 'I haven't seen it'). Holmberg (1999) convincingly argues that objects can move only after VP is vacated (not only by verb movement but also by the movement of any other constituent(s) inside VP). This indicates that verb movement must precede the movement of

³ See, e.g. Truckenbrodt (2006), for an argument that verb movement yields a semantic effect. To argue that verb movement can change the meaning of a sentence is one thing; to provide an account for the difference in the surface positions of a verb between languages is another. Assume, following Truckenbrodt, that the feature [Epist(emology)], due to the presence of which the utterance by a speaker can be the common knowledge between the speaker and the addressee, is involved in v(*)-to-C movement in declarative sentences. We would have to say that the utterance by a speaker can be the common knowledge in the V2 languages, whereas the utterance cannot be the common knowledge in the Romance languages and languages like English. As long as the interpretation of a verb does not differ among languages as illustrated in (1a-c), the verb must be located in the same structural position in all languages, as I argue below.

objects. Chomsky (2001) argues that a weak object pronoun moves to [Spec,v*P], following V-v* movement, and that it moves across negation in PHON. However, Holmberg's data in fact show that the categories vacating from VP must move into the CP domain before object movement occurs due to the V2 property. The main verb *visar* cannot be spelled out in any other positions than C (5).⁴ These data show that it is insufficient to argue that a verb has only to vacate v*P earlier than an object pronoun. That is, it must be argued that a verb should move to C before an object pronoun moves, thus, verb movement (to C) must obligatorily take place in Narrow Syntax.^{5,6}

- (5) a. Henne (^{OK}visar) jag (*visar) den helst inte (*visar). (Swe.)
 her show I show it rather not show
 'I'd rather not show it to HER.'
 (Holmberg 1999:17,(43b))
- b. [_{CP} henne visar [_{TP} jag (*visar) [_{v*P} den [_{v*P} helst [_{v*P} inte [_{v*P} (*visar) [_{VP} visar henne den]]]]]]]]]

Third, verb movement is subject to more a strict locality condition than phrasal movement (the *Head Movement Constraint* HMC, Travis 1984). Only the highest Aux(iliary) can move in *yes-no* questions (6a-b), whereas either a direct object (7a) or an indirect object (7b) can move due to focus movement of phrases.

⁴ I focus on verb movement, since an indirect object moves, through [Spec,v*P], to [Spec,CP] in Narrow Syntax.

⁵ Matushansky (2006:100) points out that if V-v* movement occurs in PHON, it is impossible for *embrasse* in V (4a) to move to v* after the complement of v*, VP, is spelled out on the assumption of the *Phase Impenetrability Condition* PIC (Chomsky 2001). But Chomsky (2001) in fact assumes that V-v* movement occurs in Narrow Syntax.

⁶ See, e.g. Hornstein (2001) and Nunes (2004) for the account of verb movement in NS in terms of sideward movement. See Koopman and Szabolcsi (2000) for the way of deriving verb movement by remnant VP movement. See Fanselow (2009) for the proposal to assume that a raised verbal head reprojects.

- (6) a. Have you ~~have~~ been able to do it? (=2a)
- b. *Been you have ~~been~~ able to do it?
- (7) a. A SWEATER, I gave a sweater to John (, not a SHIRT). (=3a)
- b. To JOHN I gave a sweater to John (, not to BILL).

It is assumed in the current framework that the computation of human language proceeds in a uniform way in Narrow Syntax and the semantic component SEM (the *Uniformity Principle*, Chomsky 2001). This assumption is ensured by the cartographic system (Rizzi 1997, Cinque 1999), in which the position where a category is located in Narrow Syntax corresponds to, and must correspond to, the interpretation that the category receives in SEM in all languages. Thus, a category that is located in, e.g. [Spec,FocP], in Narrow Syntax is, and must be, interpreted as focus in SEM in all languages, and vice versa. In this phase-cartographic system a category is interpreted in the moved position, being raised by (the [Edge] feature of) a feature in a functional head. It is not necessary to assume any uninterpretable features as the trigger of movement. A feature in a functional head can freely choose a category that it ‘wants to’ raise. Thus, the local nature of verb movement is problematic, since a feature in a functional head could freely seek and raise either one of the verbal heads as in phrasal movement, contrary to fact.

Fourth and finally, languages differ in the positions in which a verb appears. On the assumption of the uniformity of Narrow Syntax and SEM the

verbs in (1a-c) should move to the same structural position, plausibly to the highest position, as long as the interpretation does not differ between them. The surface difference should be attributed to which position, the position in the v*P domain in English (8a), that in the TP domain in French (8b), or that in the CP domain in Swedish (8c), is spelled out in PHON (cf. Groat and O’Neil 1996).⁷

- (8) a. [CP kisses [TP ... kisses [v*P ... kisses [VP kisses ...]]]] (=1a)
 b. [CP embrasse [TP ... embrasse [v*P ... embrasse [VP embrasse ...]]]] (=1b)
 c. [CP ... kysser [TP ... kysser [v*P ... kysser [VP kysser ...]]]] (=1c)

3. Verb movement as tense operator movement

According to the traditional literature on tense logic, tense is like an operator that ranges over a whole sentence (e.g. Quine 1960, Montague 1973). But at the same time it is like a variable with the anaphoric properties similar to pronouns taken into account (e.g. Partee 1973). Regarding the movement of *wh*-subjects, Chomsky (2008) proposes, against the traditional assumption of cyclic movement, that the feature [Agree] inherited from C to T and the [Edge] feature in C raise a *wh*-subject to [Spec,TP] and [Spec,CP] respectively in a parallel manner.⁸ Since the occurrence of the *wh*-subject in [Spec,CP] does not make a chain with that in [Spec,TP], the problem of a non-uniform chain with a mixed nature of A’-A does not arise.

On the basis of the literature summarized, I firstly propose i) that the feature [T] in T introduces a variable, T_{Var} , whereas the Fin(iteness) feature in C,

⁷ Platzack (2010) proposes that syntactic structures are built in Narrow Syntax without moving a verb and the verb is freely spelled out in a position inside a verbal projection by the rules in PHON. See his paper for the details.

⁸ The movement of *wh*-objects, on the other hand, is assumed to be a cyclic movement from [Spec,v*P] to [Spec,CP].

[Fin] (cf. Holmberg and Platzack 1995), introduces a tense operator, T_{Op} , which specifies the value of a tense variable as present, past, etc. Second, I propose that the derivation of verb movement proceeds in Narrow Syntax in the way analogous to the derivation of *wh*-subjects proposed by Chomsky (2008).⁹ Assume i) that [T] in T raises v^*-V ,¹⁰ the latter remerges to the root of TP (cf. Matushansky 2006),¹¹ and the occurrences of the raised verb make a variable verb chain, on one hand, and ii) that [Fin] in C raises v^*-V , and the latter directly remerges to the root of CP and functions as the tense operator that ranges over the variable verb chain, on the other. Specifically in (9), after T merges to v^*P , [T], which introduces T_{Var} , raises the v^*-V *kisses*₃. The latter remerges to the root of TP. The two occurrences of *kisses* make a variable verb chain (i.e. (*kisses*₂,*kisses*₃)_{<var>}). After C merges to TP, [Fin], which introduces T_{Op} , raises the v^*-V *kisses*₃. The latter remerges to the root of CP directly. The raised verb *kisses*₁ functions as the tense operator that ranges over the variable verb chain and specifies its value as present PRES. In languages like English the verb in the v^*P domain, i.e. *kisses*₃, is spelled out in PHON.¹² With the proposal here I argue that verb movement is formulated as tense operator movement.¹³ An operator must move in Narrow Syntax to range over variables. Thus, verb

⁹ Hereafter, I concentrate on the way of deriving verb movement from the $v(*)P$ domain to the TP and CP domains, assuming that a verb has already moved from V into the $v(*)P$ domain in Narrow Syntax. See Matushansky (2006) and Branigan (2011) for the derivation of $V-v^*$ in Narrow Syntax. I omit all the details of the derivation of the sentential elements other than verbs except when I notate.

¹⁰ Strictly speaking, it is the Edge/EPP feature of a feature in a functional head that actually raises a category. For convenience' sake, I simply say that a functional feature, e.g. [T], [Fin], etc., raises a category.

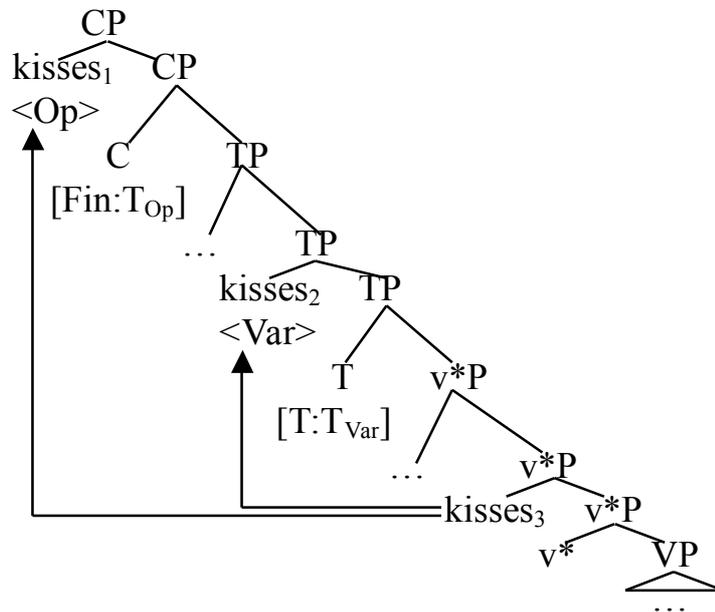
¹¹ Matushansky assumes that a head moves to [Spec,XP]. In the current bare phrase structure system in which a syntactic derivation proceeds with Merge, it does not make sense to say, e.g., that a category moves 'to the Spec' of a functional head. I assume that a verbal head moves and simply merges to the root.

¹² I turn to the issue of spelled-out positions of a verb in the next section.

¹³ See, e.g. Stechow (2004) for an argument that a verb functions as a quantificational operator.

movement as tense operator movement must occur in Narrow Syntax.^{14,15}

(9) a.



- b. (kisses₂,kisses₃)_{<Var>} – variable verb chain
 kisses_{1<Op>} – tense operator that specifies the value of the verb chain as PRES

¹⁴ The way of deriving verb movement proposed here is briefly suggested by Roberts (2010:202-203). But he does not theoretically deepen this possibility. He proposes that a defective goal is incorporated into a probe head, which he argues applies to both verb movement and clitic climbing. See his book for the details.

¹⁵ Anders Holmberg (p.c.) suggests that a built structure might have two tense operators, one in [Fin] and the other in a finite verb. In the current system a category is interpreted in the moved position. In the same way as in, e.g. *wh*-movement in which a *wh*-phrase must move to the operator position in Narrow Syntax to function as a *wh*-operator, a verb must move in Narrow Syntax to function as a tense operator. He also suggests the possibility that a verb could be related to [Fin] by the Agree relation without movement. For a support of his argument he gives the case of concord in which the tense value of a verb in a main clause percolates to a verb in an embedded clause: e.g. *he said that he would/*will go to cinema today*. There is no reason, however, to assume any uninterpretable features, thus the Agree operation, for the relation between a verb and tense/finiteness.

4. Accounts of the issues related to head movement

4.1. Traditional issues

I discuss the issues related to head movement and provide accounts for them in turn. The movement operation proposed above is not that of adjunction. Thus, a raised head does c-command its occurrence in the lower position. The movement operation does not violate the Extension Condition (Chomsky 1995). The variable verb chain in (9), i.e. $\langle \text{kisses}_2, \text{kisses}_3 \rangle$, is uniform since it consists of the occurrence of a verb that merges to TP kisses_2 and the one that merges to $v^*P \text{kisses}_3$.

The surface position of a finite verb can differ among different languages. T is not only the locus of [T] but also that of [Agree] (which is inherited from C; cf. Chomsky 2008). Thus, v^*-V tends to be spelled out in the TP domain in, e.g. the Romance languages, which show a correlation between the presence of verb movement and that of rich tense-agreement morphological inflection. The v^*-V raised by [Fin] does not make a chain with that raised by [T]. Thus, the presence of verb movement is not associated with the richness of morphological inflection in the languages in which v^*-V tends to be spelled out in the CP domain, e.g. in the Germanic languages that have finiteness but do not have as rich an agreement system as the Romance languages. It is predicted that v^*-V tends to be spelled out in the $v(^*)P$ domain in the languages that neither have a rich agreement system nor always reflect finiteness on the verb. This is attested by languages with a relatively poor agreement system like English, in which finiteness can be expressed on a dummy verb, i.e. by *do*-support, with v^*-V appearing in an infinitival form.

A functional head *c-selects* the lower head just below it.¹⁶ C-selection is

¹⁶ C-selection is claimed to be the trigger of verb movement in the literature that advocate

formulated by Grimshaw (2000) as the *extended projection*: in the configuration [CP C [TP T [VP V]]] the verbal features of V spread up to TP and CP, and the heads V, T, C and their projections VP, TP, CP all share verbal features, which accounts for the locality between the adjacent heads. Whereas c-selection is accounted for in a ‘bottom-up’ manner in the literature referred to, it is desirably accounted for in a ‘top-down’ manner here. Namely, the value of a tense variable introduced by [T] is specified by the tense operator introduced by [Fin], i.e. only under the C-T configuration. The value of a verbal root is determined in the way that the tense value specified by the tense operator is shared by the occurrences in a variable verb chain. Thus, the c-selection property is derived not from the projection of verbal features to higher heads but from the transmission of the tense value specified by the tense operator introduced by [Fin] to lower heads.

4.2. The Head Movement Constraint

Verb movement is subject to more a strict locality condition than phrasal movement, i.e. the HMC (Travis 1984). The case in which the highest finite Aux moves is grammatical (10a). The case in which the second non-finite Aux moves is ungrammatical (10b). Note that the case in which the second Aux that has a finite form moves is also ungrammatical (10c). These data show that finiteness must occur on the highest Aux, that is, the highest Aux must be raised by the features in phasal heads in turn. This is problematic as we saw in section 2: a phasal head could freely seek a verb, contrary to fact.

- (10) a. Have you ~~have~~ been able to do it? (=6a)

verb movement as a Narrow Syntactic operation (e.g. Svenonius 1994, Julien 2000, Matushansky 2006).

- b. *Been you have ~~been~~ able to do it? (=6b)
- c. *Was you have ~~was~~ able to do it?

Why must the highest Aux have finiteness? We see below that one more meaning is added when an Aux increases. Namely, a finite main verb *arrested* expresses an event meaning that someone catches up with another and also carries the meaning of the past tense PAST (11a). A finite Aux *was* adds the meaning of passive PASS and also carries PAST, and a non-finite past participle Part *arrested* expresses the event (11b). The finite Aux *has* adds the meaning of perfect PERF, the non-finite Aux *been* carries PASS, and the non-finite Part *arrested* expresses the event (11c). The finite Aux *will* adds the meaning of future FUT, the non-finite Aux *have* carries PERF, the non-finite Aux *been* carries PASS, and the non-finite Part *arrested* expresses the event (11d).¹⁷

- (11) a. (The police) arrested John. – event(arrest)+PAST
- b. John was arrested (by the police). – event(arrest)+PAST+PASS(be)
- c. John has been arrested (...). – event(arrest)+PASS(be)+PERF(have)
- d. John will have been arrested (...)
– event(arrest)+PASS(be)+PERF(have)+FUT(will)

That only a finite verb among several verbal heads is raised to a higher position is generally observed in serial verb construction (12), in which only the finite Aux *had* that adds the PERF meaning is raised to a higher position.¹⁸

¹⁷ See Giorgi and Pianesi (1997) for a detailed discussion of tense and aspect and their morphological realization in the European languages.

¹⁸ (12) illustrates the case of *excorporation* (Roberts 1991). The standard claim on

- (12) Gisteren had ik [[[mijn vriendin op-bellen] willen] had] [had willen bellen]].
 (Dut.)
 yesterday had I my girlfriend up-call want had had want call
 ‘Yesterday I wanted to call my girlfriend up.’
 (Roberts 1991:212,(5b))

A sentence is ungrammatical when a lower Aux/Part carries finiteness, regardless of whether verb movement occurs or not: e.g. (11c’) **John have-INF was-PAST arrested-PART*. Thus, the HMC is derived from the general constraint that the highest Aux must have finiteness to add a new meaning to an existing structure. A further question why this is so is answered by the proposal here that the verb raised by [Fin] functions as a tense operator. The tense operator associates an event that a verb expresses with our real world by specifying a tense value. Thus, only the verb that is raised by [Fin] and functions as the tense operator can add a new meaning to the event structure that has already been built.

4.3. Movement of focused non-finite verbs

A prediction from the proposal here is that the movement of a verb that does not have a tense specification and cannot function as a tense operator is caused by a feature other than [Fin]. This is in general attested by the movement of a Part to sentence-initial position observed in various languages. *Verb-Topicalization* in

excorporation is that verbal heads, both a finite form (*had*) and non-finite forms (*willen* and *bellen*), compose a head complex (*[had willen bellen]*). The finite form moves out of the complex to a higher position. This case is said to be exceptional in that the structure in which a word contains a trace is in general not allowed (Baker 1988). A main argument for verb clustering is that no constituent can intervene between any two verbal heads (Haider 2003). Note that the Aux is phonologically weak in the unmarked case. The reason why the Aux cannot be separated from the other verbal heads might be attributed to such phonological factors, which I leave for future research.

Swedish (Holmberg 1999) produces a focal effect on the raised Part *kysst* (13), which indicates that this movement is caused by [Foc] in C.

- (13) Kysst har jag henne inte (bara hållit henne i handen). (Swe.)
 kissed have I her not only held her by the hand
 ‘I didn’t KISS her (, but only held her in the arm).’
 (Holmberg 1999:7,(11a))

A Part can be raised to sentence-initial position also in languages such as Breton, Serbo-Croatian, etc. (*Long Verb Movement*, Borsley et al. 1996) (14a). Breton has SVO as the unmarked order, unlike the other Celtic languages that have the unmarked VSO order (Ternes 1992).¹⁹ Changing the word order yields a focal effect on the sentence-initial element (Ternes 1992, Press 1986). Though the verb-first order is ungrammatical in the unmarked case, it can be grammatical when the Part raised to sentence-initial position is focused (Press 1986). These statements indicate that the movement of a Part is triggered by [Foc]. This is attested by the fact that the raised Part cannot cooccur with a *wh*-/focused phrase (14b), since a sentence can have one and only one focus (Lambrecht 1994).^{20,21}

¹⁹ In Breton finite verbs except the copula cannot come to sentence-initial position (i), unlike in the other Celtic languages (ii).

- i) *Lenn Anna al levr. (Bre.)
 read Anna the book
 ‘Anna reads the book.’
 (Borsley et al. 1996:62,(37))
- ii) Gwelodd Rhiannon ddraig. (Wel.)
 see-3sg-PAST Rhiannon dragon
 ‘Rhiannon saw a dragon.’
 (Borsley et al. 2007:33,(1))

²⁰ If the movement of a non-finite verb is triggered by [Foc], it is predicted that the Part movement is subject to the island constraints, i.e. the constraints on the Complex NP island, the Subject island, and the Adjunct island. This prediction is attested. See Roberts (2010).

²¹ As is predicted, a raised finite verb can cooccur with a *wh*-/focused phrase in the Celtic languages other than Breton.

- i) Beth glywaist ti wedyn? (Wel.)

- (14) a. Lennet en deus Yann al levr. (Bre.)
 read 3sg-MASC has Yann the book
 ‘Yann has read the book.’
 (Borsley et al. 1996:53,(1))
- b. Al levr (*lennet) en deus (^{OK}lennet) Tom.
 the book read 3sg-MASC has read Tom
 ‘Tom has read the BOOK.’
 (Borsley et al. 1996:60,(28a-b))

The derivation of, e.g. (13) proceeds as in (15).²² I assume that both [Foc] and [Fin] lie in C. After T is merged to vP, [T], which introduces T_{Var} , raises the Aux har_3 .²³ The latter remerges to the root of TP. The two occurrences of har make a variable verb chain (i.e. $(har_2, har_3)_{<Var>}$). After C merges to TP, [Fin], which introduces T_{Op} , raises har_3 . The latter remerges to the root of CP directly. The raised verb har_1 functions as the tense operator that ranges over the variable verb chain and specifies its value as PERF. On the other hand, [Foc] raises the focused v*-V Part $kysst_2$.²⁴ The latter remerges to the root of CP, to the position higher than the Aux. The two occurrences of $kysst$ make a focus operator-variable chain (i.e. $(kysst_1, kysst_2)_{<Foc>}$).²⁵ The highest occurrences har_1 and $kysst_1$ are spelled out in PHON.

what hear-2sg-PAST you afterwards
 ‘What did you hear afterwards.’
 (Borsley et al. 2007:106,(5))

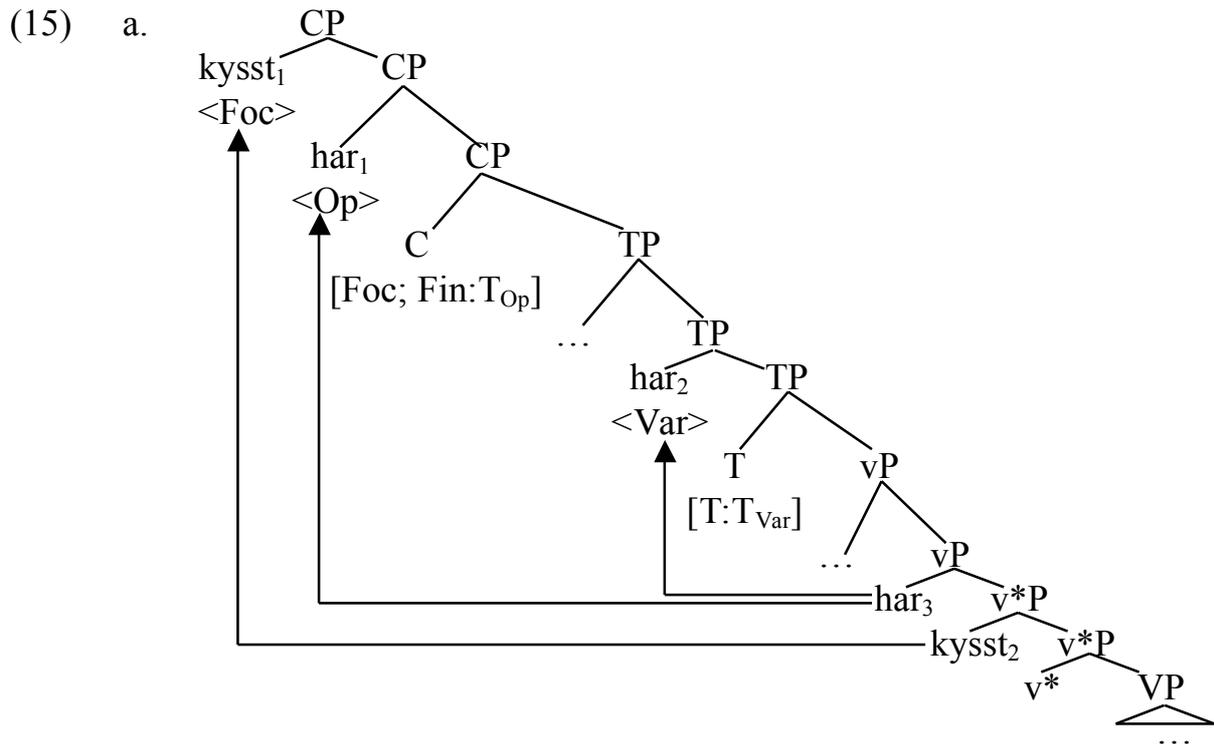
These facts show that whereas (non-finite) verbs are raised by [Foc] in Breton, verbs in the other Celtic languages are raised by [Fin], which indicates that Breton is in fact not a VSO language, whereas the other Celtic languages are ‘true’ VSO languages.

²² I assume here that the Aux is base-generated as a v head that takes a v(*)P as its complement.

²³ According to Holmberg (1999), an Aux follows a sentential adverb like negation in embedded clauses in Mainland Scandinavian, which indicates that an Aux, and a Part too, are base-generated in the positions lower than negation. I tentatively assume here that a subject is base-generated in [Spec,vP] and negation is adjoined to vP, the position higher than a subject.

²⁴ Chomsky (2001) assumes PartP. I simply assume here that a Part is raised by v* and remerges to the root of v*P. The derivation does not violate the PIC, since v is not a phase head.

²⁵ See Kiss (1998) for an argument that a focused constituent functions as a focus operator.



- b. $(har_2, har_3)_{\langle Var \rangle}$ – variable verb chain
 $har_1_{\langle Op \rangle}$ – tense operator that specifies the value of the verb chain as PERF
 $(kysst_1, kysst_2)_{\langle Foc \rangle}$ – focus operator-variable chain

4.4. Movement of focused finite verbs

In addition to the cases in which a non-finite verb is focused, we find the cases in which a finite verb is focused. A focused finite verb appears in the CP domain in languages like Icelandic (16).²⁶

- (16) Ég KEYPTI hana ekki. (Ice.)
 I bought her not
 'I didn't BUY it.'

The situation in, e.g. Vata, is somewhat complicated. A verb is inflected

²⁶ Christer Platzack (p.c.) suggests that the situation is the same in Swedish. This so-called *verum-focus* appears to be found in all Scandinavian languages.

for either perfect or imperfect and follows a subject in a normal declarative sentence (17a). When a focal effect is produced on a verb, one inflected for imperfect is duplicated and appears in more than one position (17b). A verb inflected for perfect, however, cannot be duplicated. Instead, a non-finite form is duplicated, and a tense particle is attached to one of the duplicated forms. One form appears in sentence-initial position, and the other appears either in the TP domain (17c) or in the v*P domain (17d). The verb that appears in the TP domain is adjacent to the tense particle but the verb that appears in the v*P domain is separated from it. Significantly, the tense particle cannot occur with the verb in sentence-initial position (17e).

- (17) a. *ń li sáká.* (Vat.)
 I eat-PERF rice
 ‘I ate rice.’
 (Koopman 1984:28,(27c))
- b. *le à le sa ka.*
 eat-IMPERF we eat-IMPERF rice
 ‘We are really EATING rice./We are EATING rice.’
 (Koopman 1984:38,(50a))
- c. *li à li-dā zué sáká.*
 eat we eat-PAST yesterday rice
 ‘We ATE rice yesterday.’
 (Koopman 1984:38,(51a))
- d. *li Ó dā sáká li.*
 eat she/he PAST-AUX rice eat
 ‘She/he has EATEN rice.’
 (Koopman 1984:38,(50b))
- e. *li (*wa) wá li-wá zué.*
 eat(-PAST) they eat-PAST yesterday
 ‘They ATE yesterday.’
 (Koopman 1984:156,(8c))

Also in Brazilian Sign Language BSL duplication of a main verb produces a focal effect on the verb (18a). Nunes (2004) states that duplication of a main verb is not allowed when agreement inflection (represented by alphabet indices) appears on the verb (18b).²⁷

- (18) a. I LOSE Book LOSE. (BSL)
 ‘I LOST the book.’
 (Nunes 2004:57,(115c))
- b. John (*_aLOOK_b) Mary _aLOOK_b.
 ‘John LOOKED AT Mary.’
 (Nunes 2004:58,(119c))

In general agreement morphology is not prevented from appearing in the CP domain, as illustrated by the case of complementizer agreement (19). All of these data show that when a verb with a finite form is raised by both [Foc] and [Fin] in C, tense-agreement morphology may not always be able to occur on the verb in the CP domain.^{28,29,30}

²⁷ The actual situation in BSL is complicated, since a focused phrase in general appears in sentence-final position (Nunes 2004). A verb appears in a sentence-medial position in the unmarked case. Thus, it might be the case that agreement inflection cannot appear in the sentence-final, highest position. According to Nunes, however, the focus construction like (18) is derived by remnant movement: first, a focused verb moves out of TP and adjoins to the Foc head, and second, the rest of the sentence moves to [Spec,FocP]. This indicates that the sentence-final focused verb is located in the position lower than the one in which the sentence-medial doubled verb is located. I do not go into the details of this issue.

²⁸ In the case of complementizer agreement C does not have [Foc]. It possibly has [Force] (Rizzi 1997, Branigan 2011), which links argument structure with discourse structure.

²⁹ An interesting data comes from Swedish. A finite form *såg* can move to sentence-initial position, with a dummy verb *göra* ‘do’ inflected too:

- i) Såg gjorde han på henne (men han sa ingenting) (Swe.)
 looked did he at her but he said nothing
 ‘Looked at her he did, but he said nothing.’
 (Holmberg 1999:12,(34a))

- (19) a. Kpeinzen *dan-k* (ik) morgen goan. (West Fle.)
 I-think that-I (I) tomorrow go
 ‘I think that I’ll go tomorrow.’
- b. Kpeinzen *da-j* (gie) morgen goat.
 I-think that-you (you) tomorrow go
 ‘I think that you’ll go tomorrow.’
 (Carstens 2003,(1a-b))

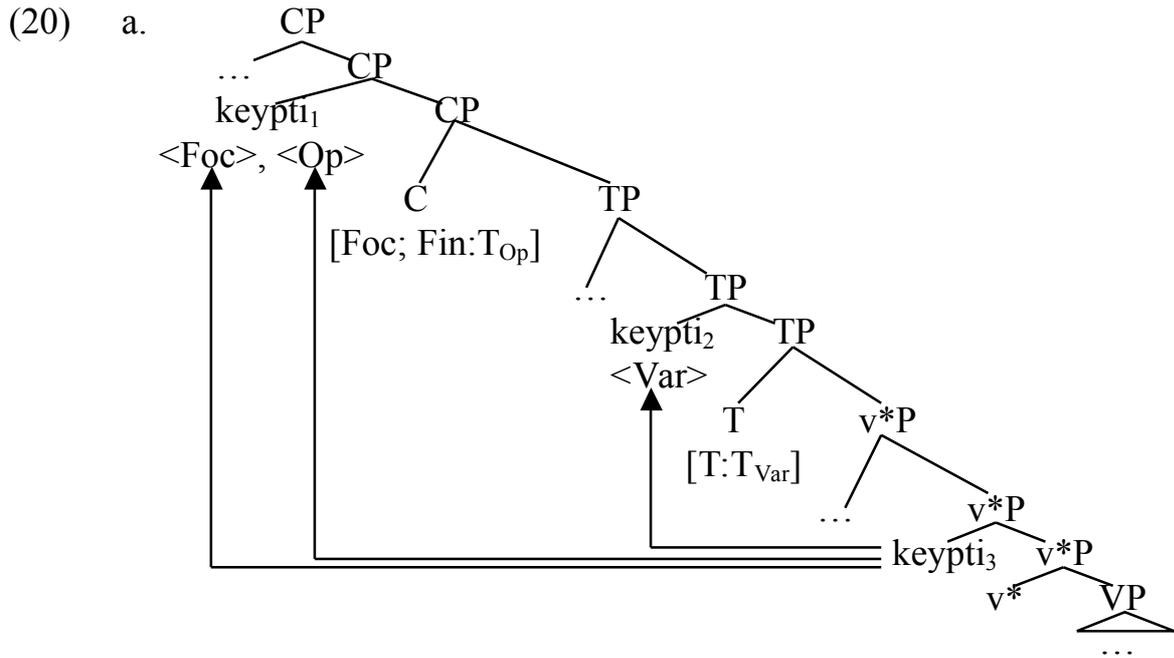
The derivation of (16) proceeds as in (20). After T, which introduces T_{Var} , is merged to v*P, the v*-V *keypti*₃ moves and remerges to the root of TP. The two occurrences of *keypti* make a variable verb chain (i.e. (*keypti*₂,*keypti*₃)_{<Var>}). After C merges to TP, both [Fin], which introduces T_{Op} , and [Foc] raise the v*-V *keypti*₃. The latter remerges to the root of CP directly. The raised verb *keypti*₁ functions as the tense operator that ranges over the variable verb chain and specifies its value as PAST, on one hand. It makes a focus operator-variable chain with its occurrence (i.e. (*keypti*₁,*keypti*₃)_{<Foc>}), on the other. The highest occurrence *keypti*₁ is spelled out in PHON.^{31,32}

The semantic effect of this construction is contrastive topic of the verb (phrase). I leave this issue for future research.

³⁰ See Miyagawa (2010) for an argument that a discourse-related feature lies in C and it is realized by the Agree relation in some languages and by the topic/focus relation in others. See also Corbett (2006) for the data of Lavukaleve, a Papuan language, in which agreement morphology functions as a focus marker.

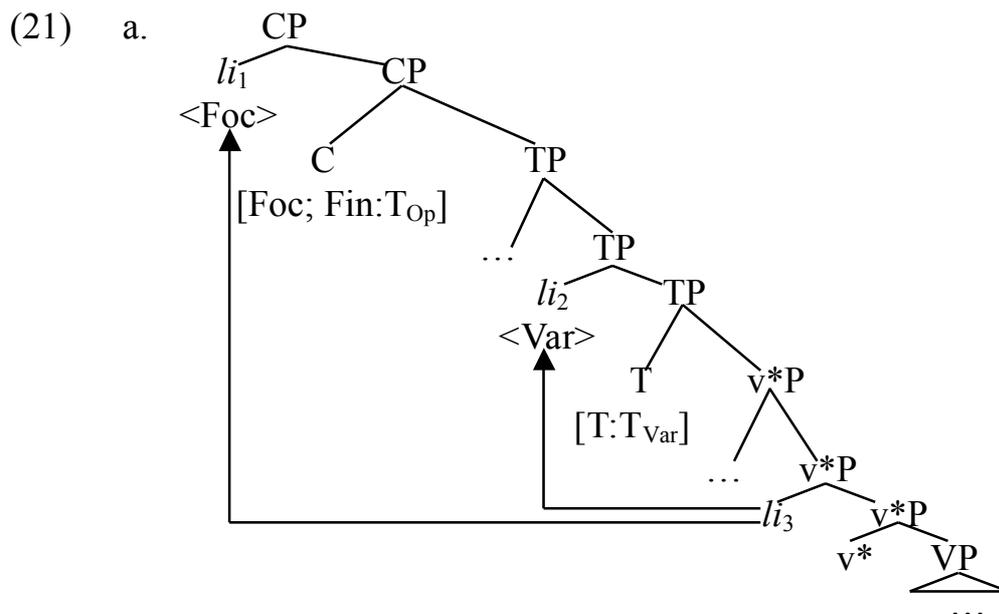
³¹ In languages like English (e.g. *I ATE the apple*) the verb in the v*P domain is spelled out in PHON.

³² Nothing in the phase system prevents the way of derivation proposed here in which more than one head feature raises a same sentential element, unlike the derivational way in which a head feature raises more than one sentential element: the latter could yield the intervention effect (Chomsky 2001). Note also that the way of derivation proposed here cannot be carried out in the cartographic system, where it is assumed that one head can have only one feature that can raise a sentential element. The assumption here that one head can have more than one feature is preferable to the one assumed in the cartographic system, with taken into account the V2 languages in which more than one interpretation, topic, focus, etc, is produced in sentence-initial position.



- b. $(keypri_2, keypti_3)_{<Var>}$ – variable verb chain
 $keypti_1_{<Op>}$ – tense operator that specifies the value of the verb chain as PAST
 $(keypti_1, keypti_3)_{<Foc>}$ – focus operator-variable chain

In the case like Vata in which tense-agreement morphology cannot appear on the verb in the CP domain, I assume that T_{Op} introduced by [Fin] itself functions as a tense operator that ranges over a variable verb chain, with [Fin] not raising v^*-V . Specifically, the derivations of (17c-d) proceed as in (21). After T is merged to v^*P , [T], which introduces T_{Var} , raises the v^*-V li_3 . The latter remerges to the root of TP. The two occurrences of li make a variable verb chain (i.e. $(li_2, li_3)_{<Var>}$). After C merges to TP, [Fin] introduces T_{Op} . The latter itself functions as the tense operator that ranges over the variable verb chain and specifies its value as PAST. [Foc], on the other hand, raises the v^*-V li_3 . The latter remerges to the root of CP directly. The raised verb li_1 makes a focus operator-variable chain with its occurrence (i.e. $(li_1, li_3)_{<Foc>}$). The highest occurrence li_1 is spelled out in the focus operator-variable chain. Since [Fin] does not raise v^*-V , one of the occurrences in the variable verb chain, either the one in the TP domain (17b) or the one in the v^*P domain (17c), is spelled out in PHON.



- b. $(li_2, li_3)_{<Var>}$ – variable verb chain
 T_{Op} – tense operator that specifies the value of the verb chain as PAST
 $(li_1, li_3)_{<Foc>}$ – focus operator-variable chain

4.5. Clitic climbing

Finally, I refer to the way of deriving clitic climbing (Kayne 1989b), which has long been discussed together with verb movement under the theory of head movement: a clitic behaves as if it were a head regarding its movement, though it is interpreted as an argument of a verb. Below, the clitic *lo* is attached to either a lexical verb *fare* that takes it as a complement (22a) or T (22b). According to Chomsky (1995:249; see also Kayne 1989b), the clitic is generated in a complement position as a maximal projection; it moves to a functional head as a head.³³

- (22) a. Gianni vuole farlo. (Ita.)
 Gianni wants to-do-it
 ‘Gianni wants to do it.’

³³ According to the base-generation hypothesis (e.g. Borer 1984, Suñer 1988), the clitic is assumed to be an agreement morpheme that is generated under a functional head. Sportiche (1999) proposes an eclectic analysis between the movement hypothesis and the base-generation hypothesis and assumes a Clitic Phrase. For an argument against him, see Matushansky (2006).

- b. Gianni lo vuole fare.
Gianni it wants to-do
'Gianni wants to do it.'

Following Everett (2000) and Roberts (2010), I assume that the clitic is a collection of ϕ -features that has a head status. The most plausible probe candidates that raise clitics are $[u-\phi]$ inherited from v^* to V (cf. Chomsky 2008) and [Agree] inherited from C to T, with the agreement-like properties of the clitics taken into account. I illustrate the derivations of the finite verb *vuole* and the clitic *lo* in (23).³⁴ After C merges to (the lower) TP, [Agree] is inherited from C to T. The clitic in situ lo_4 moves and remerges to the root of (the lower) TP.³⁵ After V (= *vuole*) and v^* merge in turn, $[u-\phi]$ is inherited from (the upper) v^* to (the upper) V. The clitic lo_3 moves and remerges to the root of (the upper) VP. After T and C merge in turn, [Agree] is inherited from C to T. The clitic lo_2 moves and remerges to the root of (the upper) TP. All the occurrences of *lo* make a clitic chain (i.e. $(lo_1, lo_2, lo_3, lo_4)_{[\phi]}$). On the other hand, (the upper) T introduces T_{Var} . $Vuole_3$, which has already been raised from V to v^* , moves and remerges to the root of (the upper) TP.³⁶ The two occurrences of *vuole* make a variable verb chain (i.e. $(vuole_2, vuole_3)_{\langle Var \rangle}$). [Fin] in C introduces T_{Op} and raises the v^* -V $vuole_3$. The latter remerges to the root of (the upper) CP directly. The raised verb $vuole_1$ functions as the tense operator that ranges over the variable verb chain and specifies its value as PRES. The occurrence of the verb

³⁴ Much literature (e.g. Roberts 1991) assume that the clitic moves through all intermediate functional head positions. The way of derivation will be complicated if we also take the Part agreement into account (Kayne 1989a):

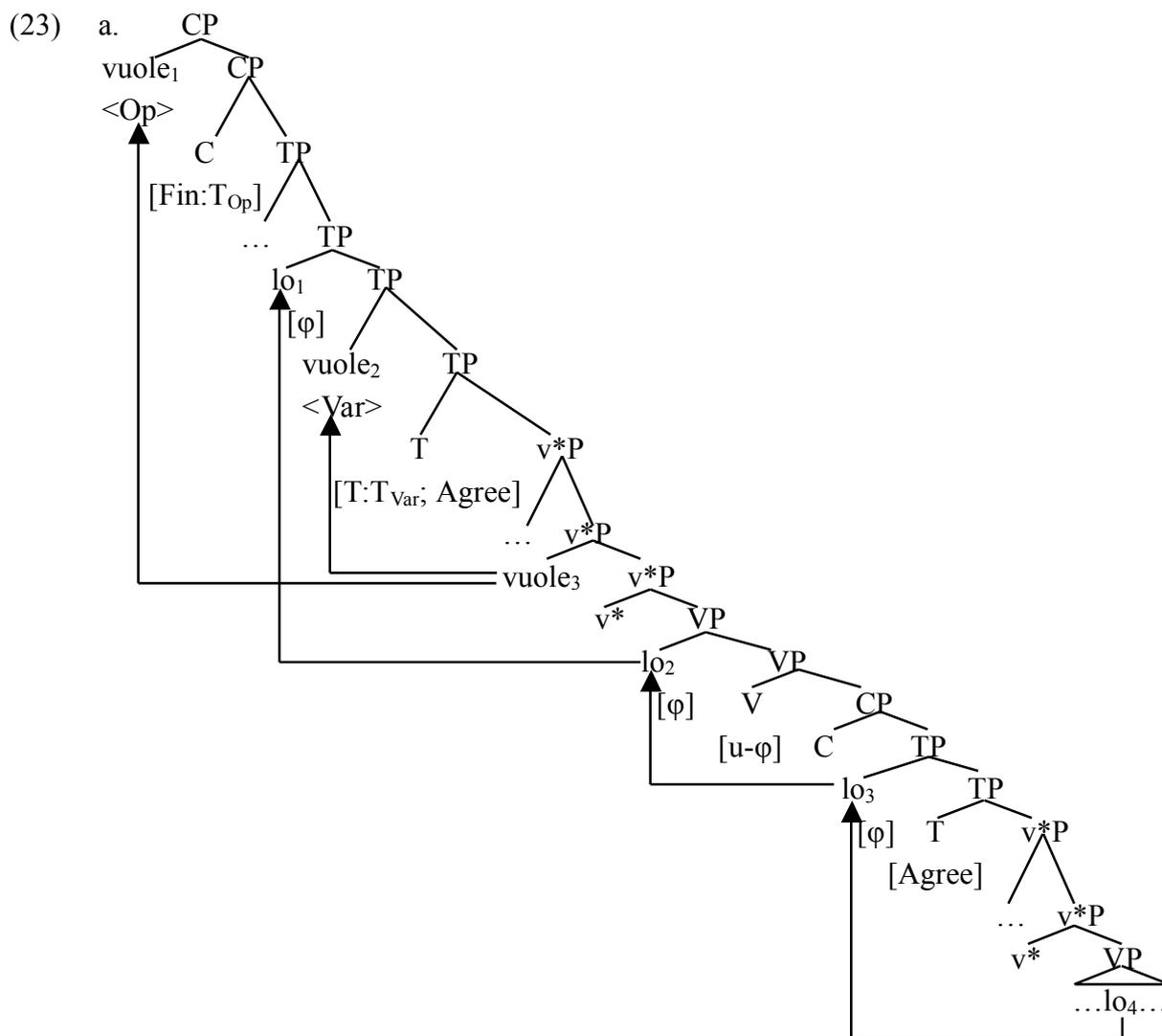
- i) Paul les a repeintes.
Paul them have-3sg-PAST repaint-FEM-3pl
'Paul has repainted them (e.g. les chaises (the chairs-FEM.pl)).'
(Kayne 1989a:85,(2))

I omit the details here.

³⁵ Following Chomsky (2008), (the lower) v^* would inherit its $[u-\phi]$ to V, and the clitic lo_4 would firstly remerge to the root of (the lower) VP. I omit the details for convenience sake.

³⁶ A verb remerges to the position lower than the one which a clitic moves to, i.e. remerges nearer to T than a clitic, possibly due to the morphological requirement on the verb in PHON.

in (the upper) TP *vuole₂* and the highest occurrence of the clitic *lo₁* are spelled out in PHON. Note that *lo₁* raised by [Agree] does not function as an operator unlike the highest occurrence of a verb raised by [Fin] *vuole₁*. This accounts for the difference between verb movement and clitic climbing, thus the particular status of the latter: the clitic is raised as a head, but the highest occurrence does not function as an operator due to its argument status, unlike a verb.³⁷



³⁷ Another issue on head movement is *incorporation* (Baker 1988). According to Lambrecht and Polinsky (1997), the incorporation construction is sentence-focus that contains only new information, whereas the non-incorporation construction is predicate-focus that has a topic-comment structure. Their argument indicates that the incorporation construction does affect the change in the meaning of a sentence. I leave the formalization of the feature that causes incorporation for future research.

- b. $(lo_1, lo_2, lo_3, lo_4)_{[\varphi]}$ – clitic chain
 $(vuole_2, vuole_3)_{\langle Var \rangle}$ – variable verb chain
 $vuole_1_{\langle Op \rangle}$ – tense operator that specifies the value of the verb chain as PRES

5. Conclusion

In this paper I have proposed a way of deriving verb movement in Narrow Syntax. I proposed that [T] in T introduces a variable, T_{Var} , whereas [Fin] in C introduces a tense operator, T_{Op} , which specifies the value of a tense variable as present, past, etc. I also proposed, in analogous to the derivation of *wh*-subjects proposed by Chomsky (2008), i) that [T] raises v^*-V , the latter remerges to the root of TP, and the occurrences of the raised verb make a variable verb chain, on one hand, and ii) that [Fin] raises v^*-V , and the latter directly remerges to the root of CP and functions as the tense operator that ranges over the variable verb chain, on the other. With this proposal I provided accounts not only for traditional issues but also for the Head Movement Constraint, movement of focused non-finite/finite verbs, and clitic climbing.

As I claimed in section 3, verb movement, which is formulated as tense operator movement, must occur in Narrow Syntax for a verbal head to range over a variable verb chain as an operator in the raised position. On the assumption of bare phrase structure, movement is carried out in the way that a category, whether it is a phrase or a head, moves and simply merges to the root. No uninterpretable features are involved in the relationship between [T] and a verb on one hand, and between [Fin] and a verb on the other. [T] and [Fin] simply raise a verb, as the [Edge] feature (Chomsky 2008) does for, e.g. *wh*-movement. Thus, verb movement is quite analogous to A'-bar movement, in which an operator chain is always made by a raised category and its

occurrence(s). The proposal and arguments here indicate that all kinds of movement are classified into either operator movement in which no uninterpretable features are involved, including both verb movement and A'-bar movement, or non-operator movement in which uninterpretable features are involved in the relationship between a probe head and its goal, which is represented by A-movement.³⁸ This conclusion supports the argument by Chomsky (2008:150): the distinction between A- and A'- is made not by the structural position to which a category moves, but by the way of deriving that position.

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³⁸ The mixed status of clitic climbing is accounted for in section 4.5.

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Icelandic Verbal Agreement and Pronoun-Antecedent Relations¹

Jim Wood² & Einar Freyr Sigurðsson³

Abstract

The relation between a non-reflexive pronoun and its antecedent is often thought to be outside of syntax proper; restrictions on interpretation or economy of expression, in this view, derive Condition B effects, preventing a pronoun from being too close to its antecedent. Recent research on imposters—1st/2nd person use of 3rd person DPs—shows that the morphosyntactic properties of pronouns are more complex than previously thought, and suggests that pronouns do have a syntactic relation with their antecedent, even if the nature of that relation is not clear. Focusing on Icelandic, we argue that this line of thinking is on the right track, on the basis of a constraining effect of finite verb agreement on the φ -features of a pronoun in an subordinate clause. We propose that pronoun-antecedent relations are mediated by one or more silent functional heads, which act as probes and match φ -features on the pronoun with those of (some subpart of) its antecedent.

1 Introduction

Collins and Postal (2012), building on work originating in Collins et al. (2008), study a class of cases they refer to as ‘person imposters’, or simply ‘imposters’, which are defined as in (1):

- (1) An imposter is a notionally X person DP that is grammatically Y person, $X \neq Y$.

This is illustrated with the Icelandic example, in which a father is talking to his son or daughter, and refers to himself as *pabbi* ‘Daddy’.

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²New York University

³University of Iceland

- (2) Svona svona, elskan, pabbi er hér.
 there there dear Daddy is.1/3SG here
 ‘There there, dear, Daddy is here.’

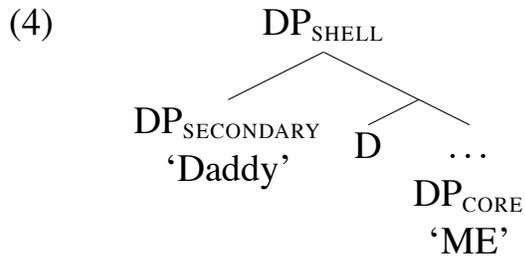
This is an example of a 1st person imposter. The DP *pabbi* ‘Daddy’ is notionally 1st person (referring to the speaker), but grammatically 3rd person. (3) is an example of a 2nd person imposter which has come into use in the colloquial language. Here, the speaker is referring to his addressee using a 3rd person DP *kallinn* ‘the guy’ instead of the 2nd person pronoun *þú* ‘you’.

- (3) Hvað segir kallinn?
 what says.2/3SG guy.the
 ‘How are you?’

As we will show below, *kallinn* ‘the guy’ can also be a 1st person imposter. In this paper, we will mostly focus on 1st person imposters.

Collins and Postal (2012) show that the syntactic behavior of imposters presents some interesting puzzles for our understanding of personhood and pronoun-antecedent relations. As discussed further below, phenomena involving imposters strongly suggest a linguistic, most likely syntactic relation between a pronoun and its antecedent. In this paper we will address a number of issues relating to Icelandic imposters, with a focus on the effect of finite verb agreement on pronoun-antecedent relations. We will propose that the relationship between a pronoun and its antecedent is mediated by an intermediate functional head.

Before continuing, some terminological discussion is in order. Collins and Postal (2012) argue that imposter DPs are structurally complex, and contain a null pronoun corresponding to the intended referent. For example, a 1st person imposter would have a null 1st person pronoun. The visible DP is referred to as the ‘secondary DP’, and the null pronoun is referred to as the ‘notional core’. These two DPs are argued to be embedded within a third DP, which is called the ‘shell DP’. This is illustrated below.



The idea of the shell DP is that imposters are similar in structure to appositives, which involve two DPs in a predicative relation which distribute like one (complex) DP. We will assume in what follows that imposters do have complex structure, but will remain uncommitted as to the exact nature of that structure.⁴

2 Some imposters in Icelandic

There are numerous examples of and types of imposters in modern Icelandic. In this study, we will for the most part limit ourselves to only a few. However, before turning to a more detailed look at agreement and pronominal/reflexive antecedence, we first give a cursory overview of a variety of imposters in the language.

One type of 1st person imposter involves a proper name or kinship relation, such as *mamma* ‘Mommy’, *pabbi* ‘Daddy’, *Jón* ‘John’ or *Jón frændi* ‘Uncle John’.⁵

- (5) En pabbi er löngu búinn að segja þér það.
 but Daddy is.1/3SG long finished to tell you that
 ‘But Daddy already told you that a long time ago.’

⁴For example, if pronouns are not syntactically atomic entities, but are rather built by various relations in the syntax, then this might affect the question of what the nature and location of 1st person features is within an imposter DP.

⁵For imposter interpretations of *pabbi* ‘Daddy’, Gunnar Hrafn Hrafnbjargarson (p.c.) prefers an extra pronoun, known as a ‘proprial article’, as in (i). See Wood (2009) for further discussion.

- (i) En hann pabbi er löngu búinn að segja þér það.
 but he Daddy is.1/3SG long finished to tell you that.
 ‘But Daddy already told you that a long time ago.’

In this paper, we will discuss the imposter *pabbi* ‘Daddy’ in some detail, since its equivalent across languages has been studied in the past few years possibly more than any other type of imposter; this makes it useful for cross-linguistic comparison.

A second type of imposter, which we will also focus on here, is *undirritaður* ‘(the) undersigned (sg)’.⁶

- (6) Undirritaður hafði ætlað að hætta í stjórnmálum.
undersigned.M.SG had.1/3SG inteded to stop in politics
‘The undersigned had planned to quit politics.’

An analogous expression has been described in a number of languages, such as English, Bellinzonese, and Italian, and in the latter two exhibits a number of properties which distinguish it from other imposters. In Icelandic, this turns out to be the case as well. It has a number of other properties which make it an interesting imposter as well. First, like its English and Romance counterparts, it is formally an adjectival participle. Second, unlike English and Romance, it shows no overt sign of definiteness marking. Not only is there no article or determiner of any kind; adjectival participles in Icelandic are morphologically distinguished based on whether the noun they modify is definite. This will be discussed further below. Third, it can also be marked for number, and some differences between the behavior *undirritaður* ‘undersigned (sg)’ and *undirritaðir* ‘undersigned (pl)’ will be discussed below.

A third type of imposter is compositional and complex, and turns out to be rather common in parliament speeches. Icelandic has a kind of demonstrative, *sá* ‘the one’, which does not necessarily require a head noun, but does require either a relative clause or some other kind of modifier. In the present case, we find a relative clause which refers to the speaker, such as *sá sem hér talar* ‘the one who is

⁶As discussed below, this imposter changes inflects for gender and number depending on the person it refers to. When discussing the form in general, we will use the masculine singular form and in general, we will write ‘(sg)’ or ‘(pl)’ depending on whether it is singular or plural. All citations in conjoined phrases (e.g. *undirritaður og Jón*) are singular.

talking here’ or *sá sem hér stendur* ‘the one who is standing here’. The following is an attested example from a parliament discussion.

- (7) Þrír þingmenn úr þingflokki Vinstri hreyfingarinnar – græns
 three MPs from party Left movement – green
 framboðs, hv. þm. Kolbrún Halldórsdóttir, hv. þm.
 candidate, honorable MP Kolbrún Halldórsdóttir, honorable MP
 Þuríður Backman og [**sá sem hér stendur**], **höfum** lagt fram
 Þuríður Backman and the one who here stands.3SG have.1PL laid forth
 þáltill. sem hljómar á þessa lund, með leyfi forseta.
 resolution which sounds on this way, with permission president
 ‘Three MPs from the Left-Green Movement, the honorable MP Kolbrún
 Halldórsdóttir, the honorable MP Þuríður Backman, and the one who
 stands here, have submitted a parliamentary resolution which sounds
 like this – with the permission of the president.’

This example is an imposter *par excellence*. Notice that the verb inside the relative clause is 3rd person singular, showing that the relative head has the features or properties of a 3rd person DP. However, the overall DP refers to the speaker, and despite being 3rd singular, it is conjoined with another 3rd person DP and controls 1st person agreement on the main clause verb.

A fourth type of imposter appears to have arisen rather recently, and is common in very informal speech among certain speakers, especially younger ones. The first is *kallinn*, sometimes spelled *kjellinn* (reflecting pronunciation; IPA = [katl̥ɪn] and [kjetl̥ɪn], respectively). It is formally a noun with a definite suffix.⁷ The second is *gamli* ‘old’, also spelled *gjemli*. It is formally a ‘weak’ adjective, marked as though it were modifying a definite noun. The examples below come from Google searches and Icelandic television.⁸

⁷The standard way of writing this is *karlinn*, though this is not how it is usually written. *Karlinn* means ‘the man / the old man’, which is pronounced either [kartl̥ɪn], or the same way as *kallinn* (IPA = [katl̥ɪn]). To our knowledge, *karlinn*, when written this way or pronounced [kartl̥ɪn], never has the imposter reading.

⁸The example in (8c) is spelled with <jé> rather than <je>. This diacritic is basically redundant, since in Icelandic <é> and <je> both correspond to IPA [jɛ].

- (8) a. en **kjellinn** ætlar samt að passa sig að vera ekkert
but guy.the intends.2/3SG still to look.after REFL to be not
of mikið í þessu
too much in this
'But I am still going to be careful not to be too involved in this.'
- b. Fullt af monní á leiðinni. Og allir í vasann hjá **kjellinum**.
full of money on way.the and all in pocket.the by guy.the.DAT
'Lots of money on the way. And all of it into my pocket.'
- (Næturvaktin, Ep. 10, 1:03)
- c. Nóg að gera hjá **gjémla**.
enough to do by old.DAT
'I've got plenty to do.'

A fifth type of imposter, *yðar einlægur*, is analogous to English *yours truly*, in form and meaning. It is similar in that like *yours truly*, it can be used to end a letter. The following example comes from a Google search.

- (9) **Yðar einlægur** hefur undanfarnar vikur verið að velta fyrir
yours truly has.2/3SG past.few weeks been to roll before
sér...
REFL.3
'Yours truly has for the past few weeks been wondering...'

It is different from English in that the form of the possessive pronoun, *yðar*, is an archaic honorific form (similar to German *Sie* 'you') and not normally used in colloquial speech except in certain fixed expressions. Note that this form also occurs in certain fixed camouflage forms, such as *yðar hágöfgi* 'your majesty' and *yðar hátign* 'your highness'.⁹ Another camouflage construction, *þinn (lata) rass* 'your (lazy) ass', uses the modern pronoun *þinn* 'your'.

- (10) Mættu klukkan 9, ef þú getur dregið **þinn lata rass** fram úr rúminu.
meet clock 9, if you can drag your lazy ass out of bed.the

⁹A camouflage construction is distinct from an imposter in that the referent of the whole DP is overtly expressed. For example, *yðar hágöfgi* 'your majesty' is used to refer to the addressee (i.e. it is 2nd person), and *yðar* is a 2nd person pronoun. In contrast, *yðar einlægur* 'yours truly' is used to refer to the speaker, so the 2nd person pronoun *yðar* is not the referent of the whole DP.

‘Meet at 9 o’clock, if you can drag your lazy ass out of bed.’

Certain relational expressions such as *þinn auðmjúki þjónn* ‘your humble servant’ also have (1st person, non-camouflage) imposter uses.

- (11) **Þinn auðmjúki þjónn** bíður tilskipanar þinnar.
 your humble servant awaits.2/3SG command your
 ‘Your humble servant awaits your command.’

Like English and other languages, imposters can also be formed with demonstratives such as *þessi* ‘this’ plus a noun naming some kind of role or job title, as in *þessi fréttamaður* ‘this reporter’. The following is an example taken from Google of an imposter use of *þessi bloggari* ‘this blogger’.¹⁰

- (12) Hann fer tvímælalaust á lista yfir bestu tónleika sem **þessi bloggari**
 it.M goes undoubtedly on list over best concerts that this blogger
 hefur farið á.
 has.2/3SG gone to
 ‘It undoubtedly goes on the list of the best concerts that this blogger has ever gone to.’

It is unclear whether plural imposters with demonstratives of this sort can be formed. Speakers seem to vary in whether they accept imposter uses of *þessir fréttamenn* ‘these reporters’, in English as well as in Icelandic. We will not pursue this issue here. A further, similar case involves nouns like ‘author’. Translations for ‘the present authors’ (*núverandi/viðstaddir höfundar*) do not have imposter readings in Icelandic. However, imposters of the sort *höfundar þessarar greinar* ‘(the) authors of this article’ (with genitive case on ‘this article’) are possible. An

¹⁰Strikingly, a singular demonstrative can occur without a noun and form an imposter. In the following example in (i), reportedly heard by Júlía Hermannsdóttir (p.c.), a father is speaking to his infant child:

- (i) Kannski að **þessi** geti hjálpað þér.
 Maybe that this can.1/3.SG.SBJV help you
 ‘Maybe this one (=I) can help you.’

example from the web is presented in (13).

- (13) Í rúm tvö ár hafa **höfundar þessarar greinar** verið
 for around two years have.3PL authors this.GEN article.GEN been
 í hópi þeirra fjölmörgu sem nota samskiptavefinn Facebook.
 in group those many who use networking.site Facebook
 ‘For a little more than two years, the authors of this article have been
 among the many who use the networking site Facebook.’

Before concluding this section, we thought it would be appropriate to mention the existence of a construction which seems to be a type of camouflage construction, characteristic of children’s speech. This form is illustrated below in (14) with an example from an online discussion of it.

- (14) Þinns má vera Barbie ef minns má vera Action Man.
 ÞINNS may.1/3SG be Barbie if MINNS may.1/3SG be Action Man.
 ‘You can be Barbie if I can be Action Man.’

Here, we have the expressions *minns* and *þinns*, apparently constructed from masculine, singular, nominative possessive pronouns in the first and second person (*minn/þinn*) respectively, and an *-s* that resembles the genitive *-s*. Outside of this usage, however, *minns* and *þinns* are not well-formed expressions in Icelandic.¹¹ This seems to be related to imposters and/or camouflage constructions in the sense that it is equally possible to use the ordinary 1st and 2nd person pronouns in these cases.¹² This expression has the flavor of child language which is used in informal speech. It is not used exclusively by children, but when a speaker uses it, s/he relies on the other speaker knowing that it comes from child language.

¹¹Hlíf Árnadóttir points out to us that the feminine form *míns* seems to exist in this use as well. Unlike *minns*, this morphological form does exist independently as the genitive forms of the masculine and neuter possessive pronouns. Presumably, in this use, it is structurally parallel to *minns*, being built on the nominative feminine form *mín* (*mín+-s*), its morphological relation to the masculine and neuter genitive forms being somewhat coincidental.

¹²The imposter-like use of this construction can be illustrated also from a blog post titled *Minns á Google* ‘Minns on Google’. The first line of the post says *Það að gúggla sjálfan sig er göfug íþrótt og góð skemmtan* ‘To google yourself is a noble activity and good fun.’ It is thus clear that the author is using *minns* to refer to himself.

There are a number of potentially interesting properties of this construction, including the fact that they control 3rd person agreement and apparently only occur in the 1st and 2nd person. However, when conjoined, with another 3rd person DP, they can control 1st person agreement, as in the following example found on Google:

- (15) Minns og lögfræðingurinn tilvonandi **erum búnir** að vera
 MINNS and lawyer.the future are.1PL finished.M.PL to be
 húkktt á á þessum geggjaða leik.
 hooked on on this crazy game
 ‘Me and my future lawyer have been hooked on this awesome game.’
- (16) Minns og Búbbó **erum komnar** í hóp sorglegra bloggara,
 MINNS and Búbbó are.1PL come.F.PL in group sad bloggers.GEN
höngum hér heima, **rífumst** í druslum og **bloggum** um þá!
 hang.1PL here at.home fight.1PL in sluts and blog.1PL about them
 ‘Me and Búbbó have joined the group of sad bloggers, hanging around
 here at home, picking on sluts and blogging about them!’

Note moreover that *minns* can control number and gender agreement on verbal participles, as shown in (15) with *búnir* ‘finished’ and (16) with *komnar* ‘come’. This happens even in the singular, where finite verb agreement is 3rd person.

- (17) En vildi bara láta vita að minns er **komin** heim.
 but wanted just let know that MINNS is.1/3SG come.SG.F home
 ‘But just wanted to let it be known that I have come home.’

There also seem to exist 1st and 2nd person plural forms, *okkas* and *ykkas*, respectively, apparently built on the stem of the genitive/possessive forms of the pronouns (*okka-r/ykka-r*) plus *-s*. These forms are less common, however, and not all speakers have heard of them. Examples of *okkas* ‘we’ can be found with 3rd person agreement in the singular and plural, as well as 1st person plural agreement. We have not conducted a full study of the agreement possibilities with these forms, but such a study would seem to be a worthwhile topic for future research.

In the following section, we discuss previous work on imposters, in Icelandic

and other languages. Then, we focus on the agreement and pronominal/reflexive antecedence properties of the following imposters: *undirritaður* ‘undersigned (sg)’, *undirritaðir* ‘undersigned (pl)’, *undirritaður og X* ‘the undersigned and X’, *pabbi* ‘Daddy’, and *mamma og pabbi* ‘Mommy and Daddy’. We will discuss some other imposters along the way, and then turn to a closer look at some specific properties of *undirritaður* ‘undersigned (sg)’.

3 Previous work

Previous work on imposters has addressed a number of issues cross-linguistically, including some preliminary work on verbal agreement. Wood (2009) studies the interaction of Icelandic imposters with an optional pronoun (known as the ‘proprial article’) that occurs with certain DPs in the language (see Sigurðsson 2006). This study also includes a first probe into Icelandic verbal agreement with imposters, which is pursued in more detail here. Vázquez Rojas (2007) studies a formally indefinite imposter in Mexican Spanish, which, when alone, agrees in the 3rd person with the verb, but when in coordinate phrases (CoPs), can trigger 1st person plural agreement. Das (2011) discusses imposters in Bengali, a language which is apparently quite strict in that 1st and 2nd person pronouns generally cannot take imposter antecedents. She proposes that this is related to the rich verbal agreement exhibited by Bengali, and provides some preliminary comparison with English, Italian and Albanian. While we will show that the strictest form of Das’s proposal cannot be maintained, we think that her intuition is on the right track and is worth refining. We will show that verbal agreement does indeed play a surprisingly important role in pronominal antecedence relations in Icelandic. However, we will also show that the relevant facts are more complicated than her proposal would suggest. First, different imposters behave differently with respect to verbal agreement in Icelandic. Second, agreement effects can be shown, on the basis of syncretism and ECM contexts, to be only partially morphological. Third, in ad-

dition to agreement, a number of other properties are involved, including whether the pronoun is subject or object and whether the mood of the clause is subjunctive or indicative. For reflexives, the type of reflexive (inherent, natural or disjoint) is apparently relevant in some cases as well.

Our primary goal in this paper is to refine our understanding of the role of verbal agreement in pronoun/reflexive-antecedent relations. Icelandic verbal agreement is particularly interesting because it is clearly quite ‘rich’. Many verbal paradigms have a distinct form for each person/number slot. Others have syncretism in the singular between 2nd and 3rd person or 1st and 3rd person.¹³

(18)	<i>sjá</i> ‘see’ (present ind.)		<i>hafa</i> ‘have’ (present ind.)		<i>vera</i> ‘be’ (present ind.)			
	SG	PL	SG	PL	SG	PL		
1st	sé	sjáum	1st	hef	höfum	1st	er	erum
2nd	sérð	sjáið	2nd	hefur	hafið	2nd	ert	eruð
3rd	sér	sjá	3rd	hefur	hafa	3rd	er	eru

Despite having rich agreement morphology, Icelandic is not a referential *pro*-drop language (see Sigurðsson and Egerland 2009 and Sigurðsson 2010 for recent discussion). This property of Icelandic constrains the space of plausible analyses for the effects seen in this paper.

However, in order to study the effect of imposters on verbal agreement, a number of other issues must be addressed along the way. Work on imposters in the past few years has revealed several cross-linguistic tendencies, despite (often very fine-grained) differences among individual languages, dialects, and idiolects. Many of these tendencies are also evident in Icelandic. First, an imposter coordinated with a 3rd person DP is more likely to show 1st person effects than a non-coordinated plural imposter, which in turn is more likely to show 1st person effects than a singular imposter. By ‘more likely’ here, we are referring both to intraspeaker comparative judgments across constructions, as well as to variation across languages. Second, imposters corresponding to participial forms such as ‘the undersigned’ tend to be more likely to show 1st person effects than imposters

¹³ 1st and 3rd person are syncretic in the past tense and subjunctive.

like ‘Daddy’. This has been shown most clearly in Cattaneo (2007, 2009) for Bellinzonese (*al sotuscrit*), a Northern Italian Dialect, and similar facts have been demonstrated in Servidio (2010) for Italian (*il sottoscritto*), in Soare (2010) for Romanian (*subsemnatul*), in Kallulli (2010) for Albanian (*i nënshkruari*), and will be evident below in the Icelandic data on *undirritaður* as well.

4 Verbal agreement

In general, we will see that verbal agreement with imposters in Icelandic exhibits the following cross-linguistic tendency: plural and coordinated imposters are ‘more 1st person’ than singular imposters, and among singular imposters, ‘the undersigned’ is ‘more 1st person’ than ‘Daddy’ or ‘this reporter’. To illustrate these points, consider first that singular imposters basically do not allow 1st person agreement.

- (19) a. (Hann) pabbi { hefur / *hef } sagt þér það.
 (he) Daddy { has.3SG / *1SG } told you that
 ‘Daddy has told you that.’
- b. Undirritaður { hefur / *hef } ákveðið að hætta.
 undersigned.M.SG { has.3SG / *1SG } decided to quit
 ‘The undersigned (sg) has decided to quit.’

By comparison, 1st person agreement on the plural *undirritaðir* ‘the undersigned (pl)’, while not perfect, is much better than on the singular *undirritaður* ‘the undersigned (sg)’.

- (20) a. Undirritaður { hefur / *hef } ákveðið að hætta.
 undersigned.M.SG { has.3SG / *1SG } decided to quit
 ‘The undersigned (sg) has decided to quit.’
- b. Undirritaðir { hafa / ?höfum } haldið þessu fram.
 undersigned.M.PL { have.3PL / ?1PL } held this forth
 ‘The undersigned (pl) have claimed this.’

While the second author and several other speakers we have consulted find a difference between *undirritaður* ‘undersigned (sg)’ and *undirritaðir* ‘undersigned (pl)’, as indicated in (20) above, we should note that we do find attested examples of *undirritaður* ‘undersigned (sg)’ with 1st person agreement on the web, such as the following:¹⁴

- (21) a. Undirritaður **hef** kynnt **mér** skilmála fyrir
undersigned.M.SG have.1SG familiarized myself conditions for
Dælulykil Atlantsolíu.
discount.key Atlantsolía
‘The undersigned (sg) has familiarized myself with the conditions
for the Atlantsolía discount key.’
- b. Undirritaður **hef** verið ráðgjafi fjölda fyrirtækja
undersigned.M.SG have.1SG been consultant many companies
og fjárfesta.
and investors
‘The undersigned (sg) has been a consultant of many companies and
investors.’

In (22), we provide some attested examples of *undirritaðir/undirritaðar* ‘undersigned (pl.m/f)’ taking 1st person plural agreement.¹⁵

- (22) a. Undirritaðir **erum** að vinna að lokaritgerð til B.S gráðu
undersigned.M.PL are.1PL to work to final.thesis for B.S. degree
í íþróttافرæðum.
in athletic.studies
‘The undersigned (pl) are working on their final thesis for a B.S.
degree in athletic studies.’

¹⁴(21a) was retrieved from <https://secure.fib.is/daelulykill.php> on 9/21/2011. Notice that the reflexive in (21a) 1st person, consistent with the generalizations discussed below. (21b) was retrieved from <http://blog.eyjan.is/larahanna/2008/07/20/peningar-um-peninga-fra-peningum-til-hvers-2/#comment-15029> on 9/21/2011.

¹⁵(22a) was retrieved from <http://skemman.is/stream/get/1946/745/1956/2/Fylgiskjal.pdf> on 9/14/2011; (22b) from <http://idjur.blogcentral.is/blog/2010/10/11/ferdin-2010/> on 9/21/2011.

- b. Undirritaðar **ætllum** að taka það að **okkur** að versla í undersigned.F.PL intend.1PL to take it to ourselves to shop in sameiginlega máltíð fyrir laugardagskvöldið og kaupa smá joint meal for Saturday.evening and buy little snack og nammi. snack and candy
 ‘The undersigned (pl) plan on taking it upon ourselves to shop together for Saturday evening’s meal and buy some snacks and candy.’

Despite the fact that both are attested, we will continue to take seriously the native speaker judgments indicating that there is a difference, leaving open the possibility that some speakers might freely accept both variants. Note that we have found no examples of imposter *pabbi* ‘Daddy’ with first person singular agreement, which, if non-accidental, would further illustrate the point shown below that ‘undersigned’ shows 1st person effects more commonly/easily than ‘Daddy’.

When we turn to coordinated DPs (CoPs), we find that certain imposters trigger 1st person agreement more easily than others. When *undirritaður* ‘undersigned (sg)’ is coordinated, either 1st or 3rd person agreement is possible. When *pabbi* ‘Daddy’ is coordinated, 1st person agreement is much less acceptable.

- (23) a. Undirritaður og Jón {hafa / höfum } haldið þessu undersigned.M.SG and John {have.3PL / 1PL } held this fram. forth
 ‘The undersigned and John have claimed this.’
- b. Mamma og pabbi {hafa / ??höfum } sagt þér þetta áður. Mamma og pabbi {have.3PL / ??1PL } told you this before
 ‘Mommy and Daddy told you this before.’

Not all speakers would agree with these judgments exactly. However, in each case—for speakers who get a contrast at all—1st person is clearly better in the coordinated case than in the singular case, which is completely out. As far as we know, no speakers have the opposite judgment, preferring agreement in the singular case over the coordinated case.

Agreement with CoPs containing a 2nd person pronoun show interesting variation cross-linguistically. In Icelandic, as originally discussed in Wood (2009), such agreement is always either 3rd person (for the majority of speakers) or 1st person (for fewer speakers), but never 2nd person, as far as we know.

- (24) a. * Þú og pabbi **ætlið** að fara saman í vinnuna í dag
 you and Daddy **intend.2PL** to go together to work today
- b. % Þú og pabbi **ætla** að fara saman í vinnuna í dag
 you and Daddy **intend.3PL** to go together to work today
- c. % Þú og pabbi **ætlum** að fara saman í vinnuna í dag
 You and Daddy **intend.1PL** to go together to work today
 ‘You and Daddy are going to work together today.’

Even for speakers who accept (24b) rather than (24c), the effect of even the ‘least 1st person’ imposter *pabbi* ‘Daddy’ is evident the ungrammaticality of 2nd person agreement, which is what is found on the non-imposter reading. Given that verbal agreement is a syntactic process, this fact alone suggests that the interpretation of a 3rd person DP as 1st person has its roots in a syntactic process. When 1st and 2nd person imposters are coordinated, some speakers accept 1st person agreement, while most prefer 3rd person.

- (25) Pabbi og uppáhalds sonur hans { %ætlum / ætla } að fara saman
 Daddy and favorite son his { %intend.1PL / 3PL } to go together
 í vinnuna í dag.
 to work today
 ‘Daddy and his favorite son are going to work together today.’

5 Reflexive antecedence

As has long been known, Icelandic has a rather complicated reflexive system (Sigurjónsdóttir 1992). In the typology of Reuland’s (2011) monograph, Icelandic is described as having the most complex system (a ‘four-way’ system), and is arguably even more complex than Reuland (2011) indicates. We will see below that

reflexive/antecedence forms are sometimes sensitive to the type of reflexive construction. We are not in a position to offer an account as to why this is, but include it for now as a control on the data. More research would be required to understand exactly what the facts are with respect to a more sophisticated set of properties of reflexive predicates. For now, we will focus our preliminary discussion on three types of reflexives: inherent reflexives, natural reflexives, and naturally disjoint reflexives. Inherent reflexives include *skemmta sér* ‘enjoy oneself/have fun’ and *skammast sín* ‘be/feel ashamed of oneself’. They have the property that they can only take a reflexive object (not a non-reflexive object), and a simplex reflexive at that (i.e. without ‘self’).¹⁶ The simplex reflexive can be accusative (*sig*), dative (*sér*) or genitive (*sín*). Natural reflexives include *auglýsa* ‘advertise’ and *raka* ‘shave’; these verbs ordinarily take a simplex reflexive, but can take a non-reflexive DP object, and do allow a complex ‘self’ reflexive, if used with contrastive focus. Naturally disjoint reflexives such as *elska* ‘love’ do not normally allow a simplex reflexive, but rather require a complex ‘self’ reflexive. This is summarized below.

(26)

	Simplex	‘Self’	Disjoint obj.	Examples
Naturally disjoint	No	Yes	Yes	<i>elska</i> ‘love’
Natural reflexives	Yes	Focus	Yes	<i>auglýsa</i> ‘advertise’ <i>raka</i> ‘shave’
Inherent reflexives	Yes	No	No	<i>skemmta</i> ‘enjoy’, <i>skammast</i> ‘ashame’

This does not do full justice to the complexity of the reflexive system in Icelandic and the areas of grammar where it is relevant, but it is sufficient for present purposes. See Reuland (2011) for recent theoretical discussion and Árnadóttir et al. (2011) for a number of further subtypes of reflexive constructions.

As we will see in the examples below, verbal agreement plays a role in the acceptability of reflexive antecedence. This is perhaps a welcome and unsurprising result, given that a number of theories in recent years have proposed that the dependency between a reflexive and its antecedent is mediated by an agreement

¹⁶As discussed by Árnadóttir et al. (2011), *skemmta* also has a non-reflexive use meaning ‘entertain’, but the readings are distinct enough for present purposes.

(or Agree) relation involving the verb, directly or indirectly (Reuland 2006, 2011; Heim 2008; Hicks 2009; Kratzer 2009). To illustrate with a clear case, when *undirritaður* ‘undersigned (sg)’ is conjoined and takes 1st person agreement, only a 1st person reflexive is possible. When the same CoP takes 3rd person agreement, only a 3rd person reflexive is possible.¹⁷

- (27) a. Undirritaður_i og Jón_j skammast { *okkar_{i+j} / sín_{i+j} }
undersigned.M.SG and John shame.3PL { *ourselves / themselves }
fyrir ummælin.
for comments.the
‘The undersigned and John feel ashamed for their comments.’
- b. Undirritaður_i og Jón_j skömmumst { okkar_{i+j} / *sín_{i+j} }
undersigned.M.SG and John shame.1PL { ourselves / *themselves }
fyrir ummælin.
for comments.the
‘The undersigned and John feel ashamed for their comments.’

When the coordinated imposter is in an ECM subject position, and thus triggers no agreement, either is possible, though the 1st person reflexive is a bit odd in some cases.

- (28) a. Þeir töldu undirritaðan_i og Jón_j skammast
they believed undersigned.M.SG.ACC and John shame
{ ?okkar_{i+j} / sín_{i+j} } fyrir ummælin.
{ ?ourselves / themselves } for comments.the
‘They believed the undersigned and John to feel ashamed for our
comments.’
- b. Þeir sáu undirritaðan_i og Jón_j auglýsa
they saw undersigned.M.SG.ACC and John advertise
{ (?)okkur_{i+j} / sig_{i+j} } í sjónvarpinu.
{ (?)ourselves / themselves } in television.the
‘They saw the undersigned and John advertise themselves on TV.’

¹⁷In this and the following sections, subscripts will be used to indicate intended reference, with no commitment to any theoretical status of indices in grammar. Note also that in all of the following examples, ‘undersigned’ or ‘Daddy’ will be understood to be the speaker.

- c. Peir töldu undirritaðan_i og Jón_j elska sjálfa
 they believe undersigned.M.SG.ACC and John love self
 {?okkur_{i+j} / sig_{i+j}} meira en allt annað.
 {?our / their} more than everything else
 ‘They believed the undersigned and John to love themselves more
 than anything else.’

Since singular imposters do not easily take 1st person agreement, it might be expected independently of anything else that 1st person anaphors are not possible in finite contexts. This is so, even when the verb in question is morphologically syncretic for 1st and 3rd person, as in the examples below.¹⁸

- (29) a. Undirritaður_i skammast {*mín_i / sín_i} fyrir
 undersigned.M.SG shame.1/2/3SG {*myself / himself} for
 ummælin.
 comments.the
 ‘The undersigned (sg) feels ashamed due to his comments.’
- b. Pabbi_i skemmti {*mér_i / sér_i} vel í gær.
 Daddy enjoyed.1/3SG {*myself / himself} well yesterday
 ‘Daddy enjoyed himself yesterday.’

However, the asymmetry between singular and plural imposters goes further than this. Recall that when agreement is controlled for with an ECM predicate, the plural cases allow both 1st and 3rd person reflexives, though the latter are preferable. Even when agreement is controlled for with an ECM predicate, where there is never any overt agreement, there is a clear contrast between the plural cases in (28) and the singular ones shown in (30) and (31) below.

- (30) a. Peir töldu undirritaðan_i skammast {*mín_i /
 they believed undersigned.M.SG.ACC shame {*myself /
 sín_i} fyrir ummælin.
 himself} for comments.the
 ‘They believed the undersigned (sg) to feel ashamed for his comments.’

¹⁸As indicated, *skammast* ‘shame’ is in fact syncretic for all persons in the singular, though it does make person distinctions in the plural.

- b. Þeir sáu undirritaðan_i auglýsa {??mig_i / sig_i }
 they saw undersigned.M.SG.ACC advertise {??myself / himself }
 í sjónvarpinu.
 in television.the
 ‘They saw the undersigned (sg) advertise himself on TV.’
- c. Þeir töldu undirritaðan_i elska sjálfan {*mig_i / sig_i }
 they believed undersigned.M.SG.ACC love self {*my / his }
 meira en allt annað.
 more than everything else
 ‘They believed the undersigned (sg) to love himself more than anything else.’
- (31) a. Þeir sáu pabba_i skemmta {*mér_i / sér_i } vel í gær.
 they saw Daddy enjoy {*myself / himself } well yesterday
 ‘They saw Daddy enjoying himself yesterday.’
- b. Þeir sáu pabba_i raka {*mig_i / sig_i } í gær.
 they saw Daddy shave {*myself / himself } yesterday
 ‘They saw Daddy shaving himself yesterday.’
- c. Þeir töldu pabba_i elska sjálfan {*mig_i / sig_i } meira en
 they believed Daddy love self {*my / him } more than
 allt annað.
 everything else
 ‘They believed Daddy to love himself more than anything else.’

Just as morphological syncretism on the finite verb does not help singular imposters antecede 1st person reflexives, putting a singular imposter in a non-agreeing ECM subject position does not help either. This singular/plural asymmetry cannot, then, be attributed directly to the independent asymmetry with morphological agreement. When imposter *pabbi* ‘Daddy’ is coordinated, the effect is somewhere in between these two cases—while inherent reflexives exclude a 1st person anaphor, for natural reflexives and naturally disjoint predicates, 1st person is not as bad as the singular case, but worse than coordinated *undirritaður*.

- (32) a. Peir sáu mömmu_i og pabba_j skemmta { *okkur_{i+j} / sér_{i+j} }
 they saw Mommy and Daddy enjoy { *ourselves / themselves }
 vel í gær.
 well yesterday
 ‘They saw Mommy and Daddy enjoy themselves yesterday.’
- b. Lögreglan sá mömmu_i og pabba_j raka { ??okkur_{i+j}/sig_{i+j} }
 police.the saw Mommy and Daddy shave { ??ourselves/themselves }
 á ströndinni í gær.
 on beach.the yesterday
 ‘The police saw Mommy and Daddy shaving themselves on the beach yesterday.’
- c. Peir töldu mömmu_i og pabba_j elska sjálf { ??okkur_{i+j} / sig_{i+j} }
 they believed Mommy and Daddy love self { ??our / their }
 meira en allt annað.
 more than everything else
 ‘They believed Mommy and Daddy to love themselves more than anything else.’

Again, the difference between (31b-c) on the one hand and (32b-c) on the other cannot be attributed to morphological agreement.

Undirritaðir ‘the undersigned (pl)’ is slightly worse with a 1st person reflexive than *undirritaður og Jón* ‘the undersigned and John’, but not as bad as *mamma og pabbi* ‘Mommy and Daddy’.

- (33) a. Peir töldu undirritaða_{i+j} skammast { ?okkar_{i+j} /
 they believed undersigned.M.PL.ACC shame { ?ourselves /
 sín_{i+j} } fyrir ummælin.
 themselves } for comments.the
 ‘They believed the undersigned (pl) to feel ashamed of ourselves for our comments.’
- b. Peir sáu undirritaða_{i+j} auglýsa { ?okkur_{i+j} /
 they saw undersigned.M.PL.ACC advertize { ?ourselves /
 sig_{i+j} } í sjónvarpinu.
 themselves } in television.the
 ‘They saw the undersigned (pl) advertize ourselves on TV.’

- c. Peir töldu undirritað_{*a_{i+j}*} elska sjálfa {??okkur_{*i+j*} /
 they believed undersigned.M.PL.ACC love self {??our /
 sig_{*i+j*} } meira en allt annað.
 their } more than everything else
 ‘They believed the undersigned (pl) to love ourselves more than
 anything else.’

The data discussed so far are summarized in the table below.

(34) Reflexive predicates

	1st inherent	1st natural	1st disjoint
Daddy	*	*	*
Undersigned	*	??	*
Mommy and Daddy	*	??	??
Undersigned (plural)	?	?	??
Undersigned and John	?	(?)	?

Here, we see that plurals with 1st person reflexives are generally better than singulars with 1st person reflexives. We also see some effects of the type of reflexives. Natural reflexives are slightly better than the others in the 1st person, and inherent reflexives are slightly better in the 1st person than disjoint reflexives are.

Given the above, it might be suggested that *mamma og pabbi* ‘Mommy and Daddy’ does not show an asymmetry with respect to singular *pabbi* ‘Daddy’ and *undirritaður* ‘the undersigned (sg)’, since the reported difference between them is so slight (‘??’ versus ‘*’). However, turning to more complex constructions reveals a much stronger asymmetry between singular *pabbi* ‘Daddy’ and coordinated *mamma og pabbi* ‘Mommy and Daddy’. Like in English, a preposed purpose clause improves the 1st person reflexive in the plural even more, to the point where 3rd person is actually quite odd, as illustrated in (35a).¹⁹ Note, however, that 1st

¹⁹Control into purpose clauses can in general improve the 1st person reflexive with a plural imposter, and is better than control into a complement clause.

person is still quite bad here, as illustrated in (35b).²⁰

- (35) a. Til þess að læra að raka {okkur_{i+j} / *sig_{i+j}} betur, sagði
for it to learn to shave {ourselves / *themselves} better, told
Jón frændi mömmu_i og pabba_j að fara á námskeið.
John Uncle Mommy and Daddy to go to class
'In order to learn to shave better, Uncle John told Mommy and
Daddy to take a class.'
- b. Til þess að læra að raka {??mig_i / sig_i} betur, sagði
for it to learn to shave {??myself / himself} better, told
mamma pabba_i að fara á námskeið.
Mommy Daddy to go to class
'In order to learn to shave better, Mommy told Daddy to take a
class.'

Thus, even with the imposter use of *pabbi* 'Daddy', the coordinated case is 'more 1st person' than the singular case. We thus see the following hierarchy of '1st person-ness':

-
- (i) Þeir létu mömmu_i og pabba_j byggja sérstakt herbergi til að raka {?okkur_{i+j} /
they made Mommy and Daddy build special room for to shave {?ourselves /
sig_{i+j}} í.
themselves} in
'They made Mommy and Daddy build a special room to shave in.'
- (ii) Þeir telja mömmu_i og pabba_j vonast til að raka {*okkur_{i+j} / sig_{i+j}}
they believe Mommy and Daddy hope for to shave {*ourselves / themselves}
einhvern tímann.
some time
'They believe Mommy and Daddy to hope to shave someday.'

²⁰Note that we find homogeneity effects as well, so that there can be a 1st person reflexive in the preposed clause and a 3rd person reflexive in the lower clause.

- (i) Til þess að læra að raka {okkur_{i+j} / *sig_{i+j}} betur, sagði Jón frændi mömmu_i
for it to learn to shave {ourselves / *themselves} better told John Uncle Mommy
og pabba_j að hvíla sig_{i+j} áður en námskeiðið byrjar.
and Daddy to relax themselves before class.the begins
'In order to learn to shave better, Uncle John told Mommy and Daddy to relax before the
class begins.'

Since this effect seems to be the same as in English, we do not discuss it further here.

- (36) Coordinated undersigned > plural undersigned > coordinated ‘Daddy’
> singular undersigned > singular ‘Daddy’

This combines the tendencies that CoPs are more 1st person than plurals, which are more 1st person than singulars, as well as that ‘the undersigned’ is more 1st person than ‘Daddy’.

What we have shown in this section is that different imposters react differently to different reflexive types—even when overt morphology is controlled for by using non-finite contexts. However, this does not mean that a syntactic Agree relation is not responsible. Most theories within the Minimalist Program assume there is an Agree relation between a light verb and a direct object, and this dependency is not necessarily reflected in overt morphology on verb. Nevertheless, Kratzer (2009) has shown that morphological syncretism of verbal agreement forms makes a difference in reflexive binding in German. We find that in Icelandic, this does not make a difference for reflexives taking imposter antecedents, as seen most clearly in the singular cases. We also saw a number of constraints that cannot be attributed directly to verbal agreement, such as the difference between singulars from plurals in terms of the availability of an imposter-antecedent of a 1st person reflexive. Still, we see here that overt agreement morphology does make a difference in constraining reflexive-antecedent relations. When agreement is unambiguously 1st person, the reflexive must be 1st person. When agreement is 3rd person, the reflexive must be 3rd person.²¹

6 Pronominal antecedence

6.1 Direct objects

Many theories of reflexive antecedence might welcome the result that verbal agreement can make a difference in constraining the forms of reflexives, and that this can be ameliorated to some extent when agreement is controlled for. Most of them

²¹The effect is weaker when agreement is 3rd person, however.

would probably be hard pressed to find an explanation for the strong singular/plural asymmetry, let alone the differences between different imposters. Still, number is an important category in the verbal domain; it has been proposed that events are inherently plural, for example, and number certainly plays a role in reciprocal constructions. So let's suppose that the reflexive facts above could be understood in terms of theories relating to constraints on agreement, given a vP-internal dependency between the verb and its object. What is surprising, on this view, is that just as verbal agreement seems to make a difference in the acceptability of 1st person reflexives with imposter antecedents, so too does it make a difference with 1st person pronouns with imposter antecedents. To present a clear case, we illustrate with the 'most 1st person' imposter, coordinated 'undersigned'.²²

- (37) a. Undirritaður_i og Jón_j hafa áður sagt að yfirvöld
undersigned.M.SG and John have.3PL before said that authorities
vilji bara móðga {okkur_{i+j} / ?þá_{i+j} }.
want.SBJV just insult {us / ?them }
'The undersigned and John have said before that the authorities just
want to insult us.'
- b. Undirritaður_i og Jón_j höfum áður sagt að yfirvöld
undersigned.M.SG and John have.1PL before said that authorities
vilji bara móðga {okkur_{i+j} / *þá_{i+j} }.
want.SBJV just insult {us / *them }
'The undersigned and John have said before that the authorities just
want to insult us.'

Here, the 3rd person pronoun is not perfect in either case. But whereas it is only slightly odd when the antecedent controls 3rd person agreement, it is much worse or completely out when the antecedent controls 1st person agreement. Note that the mood of the complement clause makes no difference in this case, as shown in the following examples which are indicative rather than subjunctive.

²²In the following examples, some verbs glossed as subjunctive are morphologically syncretic with indicative forms (e.g. 1st/2nd plural forms); the glosses are based on syntactic distribution, and are in many cases morphologically distinct.

- (38) a. Undirritaður_i og Jón_j uppgötvuðu í fyrra að undersigned.M.SG and John discovered.1PL last year that stjórnin vill reka {okkur_{i+j} / ?þá_{i+j}}. management wants.IND fire {us / ?them }
 ‘The undersigned and John discovered last year that management wants to fire us.’
- b. Undirritaður_i og Jón_j uppgötvuðum í fyrra að undersigned.M.SG and John discovered.1PL last year that stjórnin vill reka {okkur_{i+j} / *þá_{i+j}}. management wants.IND fire {us / *them }
 ‘The undersigned and John discovered last year that management wants to fire us.’

The same effect obtains when plural ‘undersigned’ takes 1st person agreement and antecedes a pronoun in the complement clause; the pronoun must be 1st person, and 3rd person is unacceptable. The mood of the complement clause makes no difference here either.

- (39) a. Undirritaðir_{i+j} höfum áður sagt að yfirvöld vilji undersigned.M.PL have.1PL before said that authorities want.SBJV bara móðga {okkur_{i+j} / *þá_{i+j}}. just insult {us / *them }
 ‘The undersigned (pl) have said before that the authorities just want to insult us.’
- b. Undirritaðir_{i+j} uppgötvuðum í fyrra að stjórnin undersigned.M.PL discovered.1PL last year that management vill reka {okkur_{i+j} / *þá_{i+j}}. wants.IND fire {us / *them }
 ‘The undersigned (pl) discovered last year that management wants to fire us.’

When plural ‘undersigned’ takes 3rd person agreement and antecedes a pronoun in a complement clause, the 1st person pronoun is generally preferred and the 3rd person pronoun is at least dispreferred, in some cases odd. The contrast is a bit

stronger in the indicative than in the subjunctive.²³

- (40) a. Undirritaðir_{i+j} hafa áður sagt að yfirvöld vilji undersigned.M.PL have.3PL before said that authorities want.SBJV bara móðga {okkur_{i+j} / (?)þá_{i+j} }. just insult {us / (?)them } ‘The undersigned (pl) have said before that the authorities just want to insult us.’
- b. Undirritaðir_{i+j} uppgötvuðu í fyrra að stjórnin vill reka {okkur_{i+j} / ?þá_{i+j} }. undersigned.M.PL discovered.3PL last year that management wants.IND fire {us / ?them } ‘The undersigned (pl) discovered last year that management wants to fire us.’

With the imposter *mamma og pabbi* ‘Mommy and Daddy’, the situation is reversed. The same contrast is evident, but here in the subjunctive rather than the indicative.

- (41) a. Mamma_i og pabbi_j hafa aldrei sagt að þú megir Mommy and Daddy have.3PL never said that you may.SBJV trufla {okkur_{i+j} / ?þau_{i+j} }. disturb {us / ?them } ‘Mommy and Daddy never said that you were allowed to disturb us.’
- b. Mamma_i og pabbi_j uppgötvuðu í morgun að skrímslið Mommy and Daddy discovered.3PL this morning that monster.the ætlar að borða {okkur_{i+j} / þau_{i+j} }. intends.IND to eat {us / them } ‘Mommy and Daddy discovered this morning that the monster is planning to eat us.’

²³Like the classes of reflexives discussed in the previous section, we will not attempt in this paper an explanation of the effect of mood on antecedence relations, but rather include this data to control for a potentially relevant grammatical property of the sentences we are looking at. Note that the morphological expression of mood makes a difference in the acceptability of long-distance reflexives for many (but not all) speakers (Sigurðsson 1986).

The mood of the complement clause seems to make a difference in the singular as well. When the embedded clause is subjunctive, ‘the undersigned’ preferably antecedes a 1st person object pronoun, more so than ‘Daddy’.

- (42) a. Undirritaður_i hefur áður sagt að þeir vilji bara undersigned.M.SG has.2/3SG before said that they want.SBJV just móðga { mig_i / (?)hann_i }.
insult { me / (?)him }
‘The undersigned (sg) has said before that they just want to insult me.’
- b. Pabbi_i hefur aldrei sagt að þú megir trufla { mig_i / Daddy has.2/3SG never said that you may.SBJV disturb { me / hann_i }.
him }
‘Daddy never said that you were allowed to disturb him.’

When the embedded clause is indicative, 3rd person is preferred for both.

- (43) a. Undirritaður_i uppgötvaði í fyrra að þeir vilja undersigned.M.SG discovered.1/3SG last year that they want.IND reka { ?mig_i / hann_i }.
fire { ?me / him }
‘The undersigned discovered last year that they want to fire me.’
- b. Pabbi_i uppgötvaði í morgun að skrímslið Daddy discovered.1/3SG this morning that monster.the ætlar að borða { (?)mig_i / hann_i }.
intends.IND to eat { (?)me / him }
‘Daddy discovered this morning that the monster plans to eat me.’

These results are summarized in the table below.

(44) Object pronouns

	Indicative		Subjunctive	
	1st obj	3rd obj	1st obj	3rd obj
Daddy (3rd agr)	(?)	✓	✓	✓
Undersigned (3rd agr)	?	✓	✓	(?)
Mommy and Daddy (3rd agr)	✓	✓	✓	?
Undersigned (plural) (3rd agr)	✓	?	✓	(?)
Undersigned and John (3rd agr)	✓	?	✓	?
Undersigned (plural) (1st agr)	✓	*	✓	*
Undersigned and John (1st agr)	✓	*	✓	*

What we see here is that whenever the agreement triggered in the superordinate clause is 1st person, the DP triggering that agreement cannot antecede a 3rd person object pronoun. We also see a difference between singular and plural. For example, while *undirritaður* ‘undersigned (sg)’ makes a slightly odd antecedent of a 1st person pronoun, 3rd person being preferred, plural and coordinated ‘undersigned’, even with 3rd person agreement, preferably antecede a 1st person pronoun.

6.2 Subjects

Subject pronouns show a paradigm similar to object pronouns in some respects, but distinct in others. If the verbal agreement is 3rd person, either a 1st or 3rd person subject pronoun is possible.

- (45) a. Undirritaður_i og Jón_j hafa áður sagt að {við_{i+j}
undersigned.M.SG and John have.3PL before said that {we
munum / þeir_{i+j} muni } ekki styðja skattahækkanir.
will.SBJV / they will.SBJV } not support tax.hikes
‘The undersigned and John have said before that we will not support
tax hikes.’
- b. Undirritaður_i og Jón_j uppgötvuðu í fyrra að {við_{i+j}
undersigned.M.SG and John discovered.3PL last year that {we
erum / þeir_{i+j} eru } með krabbamein.
are.IND / they are.IND } with cancer

‘The undersigned and John discovered last year that we have cancer.’

If the verbal agreement is 1st person, however, the 3rd person pronoun is unacceptable.

- (46) a. Undirritaður_i og Jón_j höfum áður sagt að { við_{i+j} undersigned.M.SG and John have.1PL before said that { we munum / *þeir_{i+j} muni } ekki styðja skattahækkunir. will.SBJV / *they will.SBJV } not support tax.hikes
‘The undersigned and John have said before that we will not support tax hikes.’
- b. Undirritaður_i og Jón_j uppgötvuðum í fyrra að { við_{i+j} undersigned.M.SG and John discovered.1PL last year that { we erum / *þeir_{i+j} eru } með krabbamein. are.IND / *they are.IND } with cancer
‘The undersigned and John discovered last year that we have cancer.’

With *undirritaðir* ‘undersigned (pl)’ and 3rd person agreement, either a 1st or a 3rd person pronoun is possible.

- (47) a. Undirritaðir_{i+j} hafa áður sagt að { við_{i+j} munum / undersigned.M.PL have.3PL before said that { we will.SBJV / þeir_{i+j} muni } ekki styðja skattahækkunir. they will.SBJV } not support tax.hikes
‘The undersigned have said before that we/they will not support tax hikes.’
- b. Undirritaðir_{i+j} uppgötvuðu í fyrra að { við_{i+j} erum / undersigned.M.PL discovered.3PL last year that { we are.IND / þeir_{i+j} eru } með krabbamein. they are.IND } with cancer
‘The undersigned (pl) discovered last year that we have cancer.’

When *undirritaðir* ‘undersigned (pl)’ occurs with 1st person agreement, the 3rd person pronoun is unacceptable, and only a 1st person pronoun can take *undirritaðir*

as an antecedent.

- (48) a. Undirritaðir_{i+j} höfum áður sagt að {við_{i+j} munum / undersigned.M.PL have.1PL before said that {we will.SBJV / *þeir_{i+j} muni} ekki styðja skattahækkunir. *they will.SBJV} not support tax.hikes
‘The undersigned (pl) have said before that we/they will not support tax hikes.’
- b. Undirritaðir_{i+j} uppgötvuðum í fyrra að {við_{i+j} erum / undersigned.M.PL discovered.1PL last year that {we are.IND / *þeir_{i+j} eru } með krabbamein. *they are.IND } with cancer
‘The undersigned (pl) discovered last year that we have cancer.’

Coordinated *mamma og pabbi* ‘Mommy and Daddy’ behaves differently. To the extent that there is a contrast, it is the 1st person pronoun that is a bit marked. The 3rd person pronoun is preferred. Notice that this cannot be tied to verbal agreement in these cases, since *undirritaðir* ‘the undersigned (pl)’ in the example above and *mamma og pabbi* ‘Mommy and Daddy’ in the example below are controlling 3rd person plural agreement.

- (49) a. Mamma_i og pabbi_j hafa aldrei sagt að {(?)við_{i+j} Mommy and Daddy have.3PL never said that {(?)we ætlum / þau_{i+j} ætli } að kaupa nammi handa þér. intend.SBJV / they intend.SBJV } to buy candy for you
‘Mommy and Daddy never said that we planned on buying candy for you.’
- b. Mamma_i og pabbi_j uppgötvuðu í morgun að {(?)við_{i+j} Mommy and Daddy discovered.3PL this morning that {(?)we þurfum / þau_{i+j} þurfa } ekki að vinna í dag. need.IND / they need.IND } not to work today
‘Mommy and Daddy discovered this morning that we don’t have to work today.’

Turning to singular imposters, there is again a contrast between ‘undersigned’ and ‘Daddy’. For embedded subject pronouns, both prefer 3rd person.

However, the 1st person pronoun is considerably better for ‘the undersigned’ than for ‘Daddy’.

- (50) a. Undirritaður_i hefur áður sagt að {?ég_i / hann_i }
undersigned.M.SG has.2/3SG before said that {?I / he }
muni ekki styðja skattahækkunir.
will.SBJV not support tax.hikes
‘The undersigned (sg) has said before that he will not support tax
hikes.’
- b. Pabbi_i hefur aldrei sagt að {??ég_i / hann_i } ætli að
Daddy has.2/3SG never said that {??I / he } intends.SBJV to
kaupa nammi handa þér.
buy candy for you
‘Daddy never said that he was going to buy candy for you.’

There is no apparent difference depending on the mood of the embedded clause.

- (51) a. Undirritaður_i uppgötvaði í fyrra að {?ég_i / hann_i }
undersigned.M.SG discovered.1/3SG last year that {?I / he }
er með krabbamein.
be.1/3SG.IND with cancer
‘The undersigned (sg) discovered last year that he has cancer.’
- b. Pabbi_i uppgötvaði í morgun að {??ég_i / hann_i }
Daddy discovered.1/3SG this morning that {??I / he }
þarf ekki að vinna í dag.
need.1/3SG.IND not to work today
‘Daddy discovered this morning that he doesn’t need to work today.’

We summarize the results in the table below, and repeat the object-pronoun table for convenience.

(52) Subject pronouns

	Indicative		Subjunctive	
	1st sub	3rd sub	1st sub	3rd sub
Daddy (3rd agr)	??	✓	??	✓
Undersigned (3rd agr)	?	✓	?	✓
Mommy and Daddy (3rd agr)	(?)	✓	(?)	✓
Undersigned (plural) (3rd agr)	✓	✓	✓	✓
Undersigned and John (3rd agr)	✓	✓	✓	✓
Undersigned (plural) (1st agr)	✓	*	✓	*
Undersigned and John (1st agr)	✓	*	✓	*

(53) Object pronouns

	Indicative		Subjunctive	
	1st obj	3rd obj	1st obj	3rd obj
Daddy (3rd agr)	(?)	✓	✓	✓
Undersigned (3rd agr)	?	✓	✓	(?)
Mommy and Daddy (3rd agr)	✓	✓	✓	?
Undersigned (plural) (3rd agr)	✓	?	✓	(?)
Undersigned and John (3rd agr)	✓	?	✓	?
Undersigned (plural) (1st agr)	✓	*	✓	*
Undersigned and John (1st agr)	✓	*	✓	*

Several tendencies can be gleaned from these results. We see that 3rd person pronouns are bad with antecedents controlling 1st person agreement, irrespective of the subject/object distinction, and irrespective of mood. 1st person pronouns are better as objects than subjects, and better with plurals than with singulars. 1st person is (slightly) better in the subjunctive than in the indicative. 3rd person is a bit worse on objects than on subjects, and on plural ‘undersigned’. 3rd person is a bit worse in the subjunctive than in the indicative. We are not in a position to account for all of these facts, and it is in fact not clear how robust they are. We state them here to facilitate cross-linguistic comparison and as a stepping stone to future work. What we will discuss below is the relationship between pronouns and their antecedents more generally, the singular/plural asymmetry, and the behavior of ‘undersigned’.

7 Pronoun-antecedent relations and agreement

In the early stages of the minimalist program, there was an attempt to relegate phenomena associated with Binding Theory (BT) to the LF interface. The idea was that there are interpretive restrictions on different kinds of DPs. The binding conditions proposed in Chomsky (1995:211), for example, were the following:

- (54) (For a DP α in local domain D...)
- A. If α is an anaphor, interpret it as coreferential with a c-commanding phrase in D.
 - B. If α is a pronominal, interpret it as disjoint from every c-commanding phrase in D.
 - C. If α is an r-expression, interpret it as disjoint from every c-commanding phrase.

Imposter phenomena pose very serious challenges to this kind of binding theory. For one thing, this Condition B will clearly not suffice to rule out a sentence such as (55).

- (55) ?* Undirritaður_i og Jón_j höfum áður sagt [_{CP} að þeir_{i+j}
undersigned.M.SG and John have.1PL before said that they
muni ekki styðja skattahækkunir].
will.SBJV not support tax.hikes
'The undersigned and John have said before that we will not support tax
hikes.'

Here the embedded 3rd person pronoun *þeir* 'they' could easily refer to the same individuals as those referred to by *undirritaður og Jón* 'undersigned and John'; it need only be interpreted as disjoint from every c-commanding phrase in the local domain, which in this case is the embedded CP (bracketed above). Neither the interpretation of the matrix imposter nor the verbal agreement would be expected to have an effect.

There are many other problems with this kind of binding theory, as emphasized in Collins and Postal (2012). This has led to a number of proposals attempt-

ing to derive BT phenomena from properties of the syntactic derivation (Kayne 2002; Zwart 2002; Reuland 2006, 2011; Boeckx et al. 2007; Hicks 2008, 2009). Among these (and other) theories, some assume a syntactic relation between a non-reflexive pronoun and its antecedent, and others do not. Collins and Postal (2012) argue that a primitive relation ‘antecede’ encodes referential dependencies among linguistic objects, and that this relation will hold between a pronoun and its antecedent. Kayne (2002) has proposed that movement underlies this dependency, such that the antecedent will form a constituent with the pronoun and move subsequently out of that constituent. Sigurðsson (2010, 2011) has argued that pronouns undergo matching relations with functional heads in the left-periphery, and that in subordinate cases, these functional heads relate to the antecedent. Note that in all of these accounts, the ‘antecedent’ of a pronoun is necessarily not always pronounced. At the very least, ‘context linkers’ in the left periphery of an utterance (or alternatively, unpronounced antecedent DPs) will be present to antecede ‘discourse free’ pronouns and pronouns used deictically.

Imposter phenomena strongly suggest that pronouns do enter into syntactic dependencies with antecedents, either directly or indirectly. This has been argued extensively in Collins and Postal (2012), so we will not repeat all the arguments here. We will, however, briefly present one argument in favor of this conclusion relating to verbal agreement, the phenomenon of interest here. Consider the view that pronouns refer freely, perhaps constrained by φ -features which add presuppositions that the referent meets some criterion (such as being female/feminine, for a pronoun like *she*). Such a view would have to be constrained so as to keep an ordinary 3rd person pronoun from including the speaker in situations such as the following.

- (56) María: Hvað gerðist? ‘What happened?’
 Bjartur_i: Jón sagði að þeir_{{*i+j}/{k+l}} væru heimskir.
 John said that they were stupid
 ‘John said that they were stupid.’

As indicated with the indices, the speaker, Bjartur, cannot in this dialogue be understood as a member of the set of individuals referred to by the pronoun *þeir* ‘they’. With a minor modification to the matrix clause, however, this is possible:

- (57) María: Hvað gerðist? ‘What happened?’
 Bjartur_i: Jón sagði undirrituðum_{i+j} að þeir_{{i+j}/{k+l}} væru
 John said undersigned.PL.DAT that they were
 heimskir.
 stupid
 ‘John told the undersigned (pl) that they were stupid.’

The presence of an imposter antecedent, then, makes it possible for a 3rd person pronoun to include the speaker. If pronouns were interpreted basically freely, this dependency on an antecedent would be a mystery. For the sake of argument, we might constrain the denotation of pronouns by invoking ‘definite descriptions’. We might say that a 3rd person pronoun can include the speaker if it can independently refer to some description of an individual which happens to be the speaker. The appearance of *undirritaðir* ‘undersigned (pl)’ might then make such a description salient enough that the pronoun can pick out this description, which happens to point to the speaker.

However, recall the effect of agreement on the embedded pronoun. Simplifying greatly, we have the following schema:

- (58) a. Imposter ... Agr-3 [pronoun-1/3]
 b. Imposter ... Agr-1 [pronoun-1/*3]

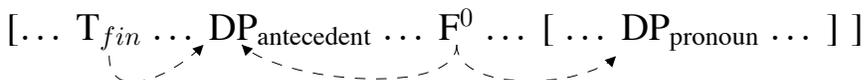
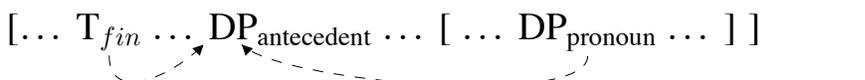
Concentrating on the 3rd person pronoun, consider the contrast in (59), repeated from above.

- (59) a. Undirritaðir_{i+j} **hafa** áður sagt að þeir_{i+j} muni ekki undersigned.M.PL have.3PL before said that they will not styðja skattahækkanir. support tax.hikes
‘The undersigned (pl) have said before that they will not support tax hikes.’
- b. * Undirritaðir_{i+j} **höfum** áður sagt að þeir_{i+j} muni ekki undersigned.M.PL have.1PL before said that they will not styðja skattahækkanir. support tax.hikes
‘The undersigned (pl) have said before that they will not support tax hikes.’

According to the account under consideration, the pronoun in (59a) can include the speaker because the matrix clause makes available/salient a description that the pronoun can refer to, and that description happens to pick out the speaker. However, (59b) clearly makes such a description available as well. We would be forced to say that a 3rd person pronoun can include the speaker iff the linguistic element making the appropriate description available is 3rd person, has 3rd person φ -features, shows 3rd person behavior, etc. But note that invoking ‘person’ features is a linguistic notion, not a referential notion. That is, in saving the idea that pronouns have no linguistic relation with their antecedent, we are forced to invoke linguistic properties of that very antecedent. This moves away from the very intuition of the assumption that pronouns refer freely, modulo the presuppositions induced by the φ -features that they are comprised of. It asserts a relation between a linguistic element, the pronoun, and another linguistic element, the antecedent, and constrains the former with reference to linguistic properties of the latter. It would be far beyond the scope of the present article to argue against every imaginable form of the assumption that pronouns do not have a syntactic relation with their antecedent. However, the basic form of the argument should be clear—the linguistic properties of pronouns seem to depend on the linguistic properties of their antecedents, and this is expected if there is a syntactic relation between the

two.

We would like to propose that the relation between a pronoun embedded in a finite complement clause and its antecedent is not direct, but rather mediated by a functional head. This functional head is in turn matched by the antecedent. The antecedent, if in a finite clause, matches the appropriate functional structure and triggers agreement. We will argue that the effect of verbal agreement is better understood if an intermediate functional head is involved, as in (60a), than if a pronoun enters into a relation with the antecedent DP directly, as in (60b).

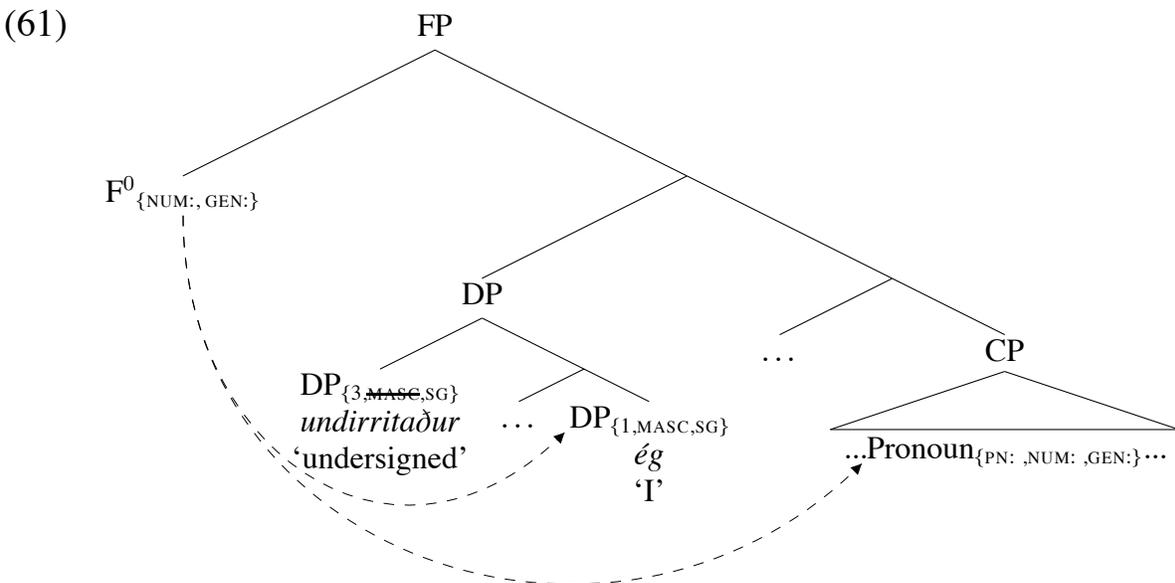
- (60) a. $[\dots T_{fin} \dots DP_{antecedent} \dots F^0 \dots [\dots DP_{pronoun} \dots]]$

- b. $[\dots T_{fin} \dots DP_{antecedent} \dots [\dots DP_{pronoun} \dots]]$


In addition to having the empirical advantages outlined below, the proposal in (60a) has the advantage that it has the potential to reconcile the position that pronouns take antecedents syntactically with the hypothesis that Transfer of syntactic structure to the interfaces takes place in chunks known as phases (Chomsky 2001, 2007, 2008; Marantz 2007). As a pronoun gets further from its antecedent structurally, more intermediate F^0 s would be involved in mediating a relation between a pronoun and its antecedent. One possibility is that such heads are present in the left-periphery of phases (e.g. vP and CP). We will not, however, be able to flesh out the details of this here.

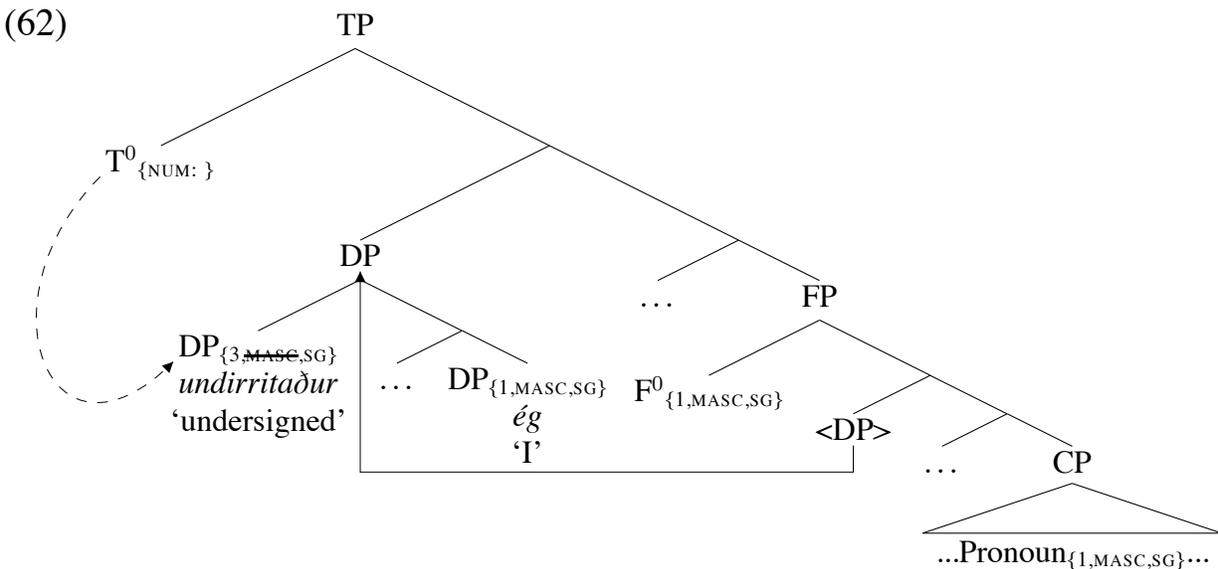
An intermediate functional head F^0 would be employed as follows. F^0 enters into an Agree relation with both the imposter and the embedded pronoun. Different imposters have different structural properties which make their 1st person features more or less visible. When F^0 and the imposter Agree, whatever features allow F^0 to be a probe will interact with the structure of the imposter to determine whether F^0 can get 1st person features. If it can, the embedded pronoun will match those 1st person features. The imposter then enters into an Agree relation with, say, finite T^0 . When T^0 and the imposter Agree, whatever features allow T^0 to be a probe will interact with the structure of the imposter to determine whether T^0 can get 1st

person features. Since T^0 and F^0 are distinct heads, they can be sensitive to distinct properties of the imposter; F^0 might be able to pick up 1st person features (yielding a 1st person pronoun) while T^0 cannot. The asymmetry above can be accounted for if F^0 is, informally speaking, a ‘better’ 1st person probe than T^0 ; whenever T^0 is able to find a 1st person feature in an imposter DP, so will F^0 , but not vice-versa.

To illustrate with a concrete example, suppose that F^0 probes for gender and number and T^0 probes for number. Now suppose that we assume a condition on φ -Agree that when a φ bundle enters into a successful Agree relation with another φ bundle, they share their entire φ -feature set, not just the features that were involved in establishing the Agree relation (Béjar 2003; see also Myler 2011). Now, suppose that in the complex DP leading to *undirritaður* ‘undersigned (sg)’, the gender feature is inactive; this is independently plausible given that the gender of *undirritaður* ‘undersigned (sg)’ is determined by the notional core, so that a female speaker would be able to use the feminine form *undirrituð*. If *undirritaður* ‘undersigned (sg)’ gets its gender feature through valuation, then it would be expected to be inactive the way unvalued features normally are upon valuation. Given these assumptions consider the following structure:



F⁰ probes and enters into an Agree relation with both the imposter DP and the pronoun embedded in CP.²⁴ Since the gender feature on *undirritaður* ‘undersigned (sg)’ is inactive, it agrees with the 1st person pronoun and picks up its entire φ bundle. These features are simultaneously shared with the pronoun.²⁵ When the DP moves and Agrees with T⁰, the latter probes only for a number feature. It then Agrees with *undirritaður* ‘undersigned (sg)’ and picks up 3rd person features of the latter.



This account is in need of immediate refinement, but before turning to that, consider what work the F⁰ head does. By invoking two separate probes, their features can be relativized such that the same imposter DP can share different sets of features with different functional heads. However, it can still capture the asymmetry

²⁴In this structure, we show F⁰ c-commanding the antecedent DP, but this is not strictly necessary. In the system of Řezáč (2003), for example, F⁰ could be lower than the antecedent, Agree with the embedded pronoun, and then probe upward to Agree with the antecedent. On upward probing, see also Baker and Willie (2010) and references therein.

²⁵There are a number of technical alternatives to the account presented here, and differences among them will ultimately make a difference. To remain consistent, it would be more accurate to assume that neither the silent core pronoun nor the pronoun embedded in CP have valued φ features at the point in the derivation described above. Rather, the Agree relation would lead to a sharing a φ index, along the lines of Pesetsky and Torrego (2007), and both pronouns would have their features filled in when valued by Agreeing with 1st person features elsewhere, such as in the left periphery as in Sigurðsson (2010, 2011). Spelling this out would complicate the discussion needlessly, however.

above. In order to get 1st person agreement on T^0 , T^0 's number feature would have to be able to successfully Agree with the pronominal core. As long as F^0 has a number feature as well, F^0 will be able to pick up 1st person features whenever T^0 will be able to. But since T^0 lacks a gender feature, it will not necessarily be able to do what F^0 does.

As mentioned above, there are a few aspects of the account as presented above that are in need of refinement. First, within the imposter DP itself, if the gender feature on the secondary DP is inactive, reasoning that it has to be valued by the notional core DP, then the number feature would also be inactive. If nothing more were said, the above account would allow T^0 to probe the notional core as well and Agree in 1st person.

However, suppose that this is exactly what happens in the plural cases, leading to 1st person plural agreement. Then the question is why this does not happen as easily with singulars.²⁶ In fact, there are a number of phenomena cross-linguistically to suggest that plural features control agreement in a much more aggressive way than singular features do (Den Dikken 2001; Nevins 2011; Myler 2011). Nevins (2011) has recently proposed that 'singular' is actually the absence of a privative [PLURAL] feature rather than the presence of a [SG] feature or a [–PLURAL] feature (though see Harbour (2011) for a different theory based on other facts). What is important here is that regardless of the correct theory of number features themselves, number agreement seems to involve plurals only, or at least in a much more robust way. From this perspective, singular agreement is a kind of 'default' agreement.

Returning to the account above, the number feature of T^0 would not be able to Agree in number with a singular core. However, a plural core would be able to trigger agreement on T^0 , and pass on the full φ -feature set, leading to 1st person plural agreement. This accounts for the contrast between *undirritaður* 'un-

²⁶Recall that we do find attested cases of *undirritaður* 'undersigned (sg)', though native speakers tend to judge them as worse than the plural cases.

dersigned (sg)’ and *undirritaðir* ‘undersigned (pl)’ with 1st person agreement, repeated in (63) from (20) above.

- (63) a. Undirritaður { hefur / *hef } ákveðið að hætta.
undersigned.M.SG { has.3SG / *1SG } decided to quit
‘The undersigned (sg) has decided to quit.’
- b. Undirritaðir { hafa / ?höfum } haldið þessu fram.
undersigned.M.PL { have.3PL / ?1PL } held this forth
‘The undersigned (pl) have claimed this.’

This account predicts that if a language has imposters whose gender features are valued by the notional core, like *undirritaður*, and also has finite verbs which agree in gender as well as person, such imposters should trigger verbal person agreement as well, perhaps more aggressively with certain gender values than others. We do not know at the present time if this prediction is borne out.²⁷

Another question involves person features, which we have left out of the probes above for illustrative purposes. The presence and values of person features within complex DPs no doubt plays a role in the variation we see across different imposter types. At least T^0 (or the related functional complex in the T-domain) probes for person features, and possibly F^0 does as well. We have assumed that the secondary DP has 3rd person features, and that to access the 1st person features of the notional core, the outside probe has to be able to skip the intervening secondary DP (and/or the shell DP), for example by probing for gender features which are inactive on the secondary DP. However, most imposters do show some 3rd person behavior, such as the ability to control 3rd person agreement or antecede 3rd person pronouns. The positioning and role of person features on different kinds of imposters might play a role in constraining this.

By relativizing different features to probes, we have an account of why 1st person agreement in the matrix clauses forces a 1st person pronoun in the embedded clause, but 3rd person agreement does not necessarily force a 3rd person

²⁷Thanks to Christer Platzack for raising this question.

pronoun. We also have the beginnings of an understanding for why plurals are ‘more 1st person’ than singulars. We do not yet have an account for several other asymmetries, such as the mild effects of subjunctive versus indicative mood and the subject/object pronoun asymmetry. The cross-linguistic facts are not very well understood here either, so we hope that future research will provide a clearer picture and allow for an understanding of how these areas interact with pronominal antecedence in a more robust way. For now, we hope to have shown that the relation between a pronoun and its antecedent is better understood as being mediated by a functional head than a direct dependency. But certainly, there is some syntactic relationship between a pronoun and its antecedent, or else the effect of agreement in the superordinate clause would seem to be a complete mystery.

8 Undersigned

The present analysis also has the potential to explain why ‘undersigned’ behaves differently from other imposters. The idea was already broached above, where we suggested that the ability of the probe F^0 to agree with the notional core derived from the fact that the gender feature on *undirritaður* ‘undersigned (sg)’ comes from the notional core. For such elements, the feature valuation assigning gender (and number) would make those features inactive, allowing outside probes to Agree with the notional core past the secondary DP. Given this, the difficulty of an outside probe agreeing with the notional core in an imposter such as *pabbi* ‘Daddy’ stems from the fact that the secondary DP—*pabbi*—has inherent gender features. Here, we offer the following tentative hypothesis:

- (64) The more features of a secondary DP that are valued by the notional core, the more likely the person features of the notional core are to be visible to outside probes.

An example which seems to support this comes from the formally indefinite Mexican Spanish imposter *un servidor* ‘a servant’, discussed by Vázquez Rojas (2007).

(65a) and (65b) show that the notional core determines the choice between *un servidor* ‘a servant (masculine)’ and *una servidora* ‘a servant (feminine)’. (65a) shows that *un(a) servidor(a)* can antecede a 1st person pronoun. In (65b), where *un servidor* is not a subject and does not control agreement, it can antecede a 1st person reflexive in the infinitive. In (65c), *un servidor* is the subject and controls 3rd person singular agreement, much like *undirritaður* ‘undersigned (sg)’ (and singular imposters in general). In (65d), *una servidora* is coordinated with another DP and the resulting CoP triggers 1st person plural agreement, much like *undirritaður og Jón* ‘undersigned and John’.

(65) Mexican Spanish

- a. Es una pena que **una servidora**, por razones ajenas a **mi** voluntad,
is a shame that a servant.F for reasons alien to my will,
no pueda asistir.
not can attend.INF
‘It is a shame that a servant, for reasons beyond my will, cannot attend.’
- b. Es la especialidad de **un servidor**, testificar por **mi mismo** en
is the specialty of a servant.M testify.INF for my self in
qué condiciones están esos lugares.
which conditions are those places
‘It is the specialty of a servant, to testify for myself in which conditions those places are.’
- c. **Un servidor** está intentando engañarse a **sí mismo**.
a servant be.3S trying fool.INF.REFL ACC him self.
‘A servant is trying to fool himself.’
- d. El miércoles, **Fernando y una servidora acompañamos**
the Wednesday, Fernando and a servant.F accompanied.1PL
a mi padre al hospital.
ACC my father to.the hospital
‘On Wednesday, Fernando and a servant accompanied my father to the hospital.’

These facts are only suggestive, and further research is required to know what the full range of agreement/antecedence possibilities are for this imposter. (Vázquez Ro-

jas (2007) was not specifically focusing on agreement.) However, the facts known so far are intriguing—an imposter which shares with *undirritaður* ‘undersigned (sg)’ the property that gender is determined by the core behaves like it in several respects: agreement seems to matter for reflexive antecedence, and coordination allows 1st person verb agreement.

Undirritaður ‘undersigned (sg)’ and *un(a) servidor(a)* ‘a servant’, however, share another property: both are formally indefinite. Despite this, both can be shown to distribute like definites.²⁸ In Icelandic, indefinite participles are allowed in a low position in various expletive constructions, as exemplified in (66a). *Undirritaður* ‘undersigned (sg)’ is not possible in this position, as shown in (66b).

- (66) a. Pað hafði víst verið vopnaður lögreglumaður í
EXPL had apparently been armed.M.SG policeman in
húsinu.
house.the
‘There had apparently been an armed policeman in the house.’
- b. * Pað hafði verið undirritaður í húsinu.
EXPL had been undersigned.M.SG in house.the

It is possible, however, that the indefinite form of *undirritaður* is misleading. It does strongly suggest that there is not an understood definite head noun such as *maðurinn* ‘the man.DEF’. If so, we would expect the weak form, *undirritaði* rather than *undirritaður*, as in *undirritaði maðurinn* ‘the undersigned man’. However, given the rarity of indefinite imposters cross-linguistically, and the definite behavior of *undirritaður* ‘undersigned (sg)’, it would be odd to suppose that the head noun is indefinite, as in *undirritaður maður* ‘an undersigned man’. However, another possibility exists. In Icelandic, the strong form of participles shows up not only in the attributive position of indefinite nouns, but also in the predicative position, as illustrated for *undirritaður* ‘undersigned (sg)’ in the following example:

²⁸See Vázquez Rojas (2007) for illustration of this claim for Mexican Spanish.

- (67) Pannig á neytandinn rétt á að hætta við samninginn innan tíu
 thus has consumer.the right on to stop with contract.the within ten
 daga frá því hann er undirritaður.
 days from that it.M is undersigned.M.SG
 ‘Thus, the consumer has the right to terminate the contract within ten
 days from when it is undersigned.’

Thus, one possibility is that *undirritaður* ‘undersigned (sg)’ in its imposter use is a reduced relative clause. Then, it can be collapsed with the complex imposters seen earlier in (7), partially repeated here.

- (68) ...Puríður Backman og [sá sem hér stendur], höfum lagt
 ...Puríður Backman and [the.one who here stands.3SG] have.1PL put
 fram ...
 forth ...

In sum, the present approach has the potential to understand the different behavior of different imposters on the basis of their grammatical properties. We have several working hypotheses, and not enough cross-linguistic data to tease them apart fully. One possibility is that imposters with gender, number, or other features controlled by the notional core rather than by inherent specification are more likely to show 1st person effects. Another possibility is that formally indefinite, or perhaps predicative, imposters are more likely to show 1st person effects.²⁹ A third possibility is that imposters built on relative clauses are more likely to show 1st person effects than imposters built on other structures (such as appositives, as proposed in Collins and Postal (2012)). The present approach would make sense of the first possibility more straightforwardly than the other two, but more cross-linguistic and analytical work needs to be done before it can be determined whether this is on the right track.

²⁹One might object that crosslinguistically, ‘undersigned’ actually is definite, accompanied by the definite article. However, if ‘undersigned’ really is the predicate of a reduced relative clause, the article would plausibly be related to the relative clause rather ‘undersigned’ itself. There are many cases like this; consider English *He made (*the) headway* versus *The headway he made*. Note that Icelandic uses a special demonstrative *sá* for these kinds of functions.

9 Conclusion

In this paper, we have shown that verbal agreement can have a constraining effect on pronoun-antecedent relations. This is unexpected from the perspective of theories which take pronouns to be basically freely interpreted (modulo Condition B, however formulated), but is understandable if there is a syntactic relation between a pronoun and its antecedent. However, we have also shown, in at least two ways, that agreement is not the only constraining factor. First, while 1st person agreement controlled by an DP prevents that DP from anteceding a 3rd person pronoun, 3rd person agreement controlled by an DP does not necessarily prevent that DP from anteceding a 1st person pronoun. The ability to antecede a 1st person pronoun, then, cannot be *contingent* on agreement. Second, when agreement is controlled for with contexts where the antecedent DP is not in a position that controls agreement, such as in the embedded subject position of ECM constructions, there are still constraints on antecedence. So while agreement is a factor in pronoun-antecedent relations, it is not the only factor.

We have proposed that this can be understood if pronoun-antecedent relations are mediated by a silent functional head. This also has the potential to shed light on why the 1st person features of certain imposters are more accessible than others, assuming that probes can be relativized to different features. This idea is not entirely novel. An intermediary has been proposed in other accounts assuming a syntactic relation between a pronoun and its antecedent. Kayne (2002), who argues that the syntactic relation in question is a movement relation, argues that there must be an intermediate movement between the base generated position of the antecedent and its landing site.³⁰ In H. Sigurðsson's work (e.g. 2010; 2011), pronouns match various intermediate functional heads, which in turn match context linkers (topic features, etc.) and/or antecedent DPs. We take the agreement

³⁰This accounts for Condition B, if such a position is not available in very local contexts. The structure associated with the *self* morpheme of English reflexives is argued to provide such an intermediate landing site.

facts to be further evidence in favor of one or more silent, intermediate positions mediating between a pronoun and its antecedent.

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On non-copula *Tough* Constructions in Swedish

Eva Klingvall, Lund University

Abstract

This paper investigates two types of *Tough Construction* in Swedish: *artikeln är lätt att läsa* ('the paper is easy to read') and *artikeln går lätt att läsa* ('the paper goes easily to read'). The paper argues that the first type is a copula construction with the adjective functioning as the *tough*-predicate while the second is a non-copula construction where the verb *gå* is the head of the predicate. Although the two types of TC are often used to mean the same thing, it can be shown that the copula one is a disposition ascription, while the verbal one describes actual events.

1 Introduction

A group of adjectives in English, including members such as *easy*, *difficult*, *hard*, *simple* and *tough*, can be characterized by the fact that they take infinitival clauses as complements and act as predicates in so-called *Tough Constructions* (TCs):¹

- (1) a. That pullover is easy to wash.
- b. The paper is hard to read.

In Swedish, TCs come in two variants, one of which looks exactly like the English TCs in (1a)–(1b), and one of which appears with the verb *gå* ('go') instead of *vara* ('be') and an adverb instead of an adjective² (the latter type will henceforth be referred to as a *go*-TC):

¹ Certain nouns can also function as predicates in TCs. Lasnik and Fiengo (1974) give the following non-exhaustive list: *bitch*, *breeze*, *pleasure*, *delight*, *joy*, *gas*, *pain in the ass/neck*. TCs with nominal *tough*-predicates will not be discussed in this paper.

² Morphological differences between adjectives and adverbs in Swedish are discussed in section 2.1.

- (2) a. Böckerna är lätta att läsa.
 books-DEF are easy to read
 ‘The books are easy to read.’
- b. Böckerna går lätt att läsa.
 books-DEF go easily to read
 ‘The books are easy to read.’

The sentences in (2a)–(2b) are very close in meaning: both ascribe a property to the entity in the grammatical subject position, saying of some books that they are ‘an easy read’, i.e. that they have the property of being easy with respect to reading (them).

The intuition seems to be that the structures in (2a)–(2b) are parallel in the sense that *lätta/lätt* combines with the infinitival clause to make up a property. In syntactic terms, this can be understood as a head-complement relation. In the following, however, I will show that the two types of TC are quite different structurally: the adjectival TC is a copula construction, while the adverbial TC is not. More specifically, while the adjective is the head of the *tough*-predicate, it is not the adverb but the verb that is the head of the predicate in the non-copula case (see also Lyngfelt, 2009). The structures are given in (3)–(4), below. In the TC, then, the AP is predicated over the subject (via *a*, an instantiation of the general null predicational head *Pred*, see Bowers 1993), while in the *go*-TC, it is the content of the VP that is predicated over the subject:

(3) $[_{TP} DP_i \textit{vara} [_{aP} t_i a [_{AP} A CP]]]$ (TC)

(4) $[_{TP} DP g\ddot{a}_i [_{VP} AdvP t_i CP]]$ (*go*-TC)

Evidence for this structural difference between the constructions will be drawn from small clause formation, constituent movement, and the (in)ability to omit the adjective and adverb. Furthermore, TCs and *go*-TCs are subject to different restrictions on, for instance, their embedded verbs and the adverb and adjective. These differences fall out neatly from the analysis proposed here. Finally, although TCs and *go*-TCs in many contexts have the same meaning, there are situations in which their meanings can be teased apart. This is

what we expect if *gå*, unlike *vara*, is not merely a copula verb but a functional verb with some semantic content.

Swedish will thus be argued to have both adjectival and verbal *tough*-predicates, giving rise to TCs and *go*-TCs, respectively. Although verbal *tough*-predicates are not discussed much in the literature, there are a few exceptions: Pesetsky (1987) proposes that Experiencer verbs such as *annoy*, *worry*, *frighten*, *please*, *amaze* are *tough*-predicates, (5a), and Dalrymple and King (2000) classify time phrases such as *take six months*, (5b), as another type:

- (5) a. Those stories pleased me to listen to.
 b. This book takes six months to read.

In Swedish, some (but not all) Experiencer verbs behave like *tough*-predicates and time phrases like the one in (5b) are clearly of this type. TIME-TCs refer to accomplishments and more precisely to the time it takes to do something. With regard to that, they thus differ from *go*-TCs and adjectival TCs which both state how easily (or not) something can be done. While TIME-TCs have verbal predicates, they behave like adjectival TCs in certain other respects (Klingvall, 2011). In the present paper, however, I focus on the differences between adjectival TCs and *go*-TCs, leaving TIME-TCs as well as those with Experiencer verbs for future research.

The paper is organized in the following way: Section 2 presents the data to be accounted for in the analysis. I begin by showing that *go*-TCs behave as expected of TCs and should therefore be analyzed as such. I then turn to the semantic and syntactic differences between the constructions. Section 3 presents the analysis. Here I show how the properties described in section 2 follow from the structures proposed for the two types of TC. In short, the standard TC will be shown to be a copula construction, with the adjective acting as *tough*-predicate, while the *go*-TC will be argued not to be a copula construction, but to have a verbal *tough*-predicate. Section 4 offers some remarks on the interpretation of the constructions, and section 5 gives concluding remarks.

2 Similarities and differences

TCs and *go*-TCs behave in the same way in many respects. Like their English counterparts, for instance, both types have alternative versions where the subject is either expletive or clausal:

- (6) a. Det är lätt att läsa böckerna.
it is easy to read books-DEF
'It is easy to read the books.'
- b. Det går lätt att läsa böckerna.
it goes easily to read books-DEF
'It is easy to read the books.'
- c. Att läsa böckerna är lätt.
to read books-DEF is easy
'To read the books is easy.'
- d. Att läsa böckerna går lätt.
to read books-DEF goes easily
'To read the books is easy.'

Furthermore, both types have an implicit Experiencer argument that can be overtly expressed via a *för*-phrase ('for'-phrase):

- (7) a. Artikeln är lätt för vem som helst att läsa.
paper-DEF is easy for anyone to read
'The paper is easy for anyone to read.'
- b. Artikeln går lätt för mig att läsa.
paper-DEF goes easily for me to read
'The paper is easy for me to read.'

TCs and *go*-TCs also behave the same with respect to *wh*-movement, long distance dependencies and parasitic gaps, as will be shown in section 3.3. Crucially, neither of the types can be reduced to a raising construction.

Although TCs and *go*-TCs are very similar in meaning and surface form, the constructions also differ in some interesting respects. As will be shown below, *go*-TCs are subject to a number of restrictions not applying to TCs. In the next two sections, I discuss what adjectives and adverbs are found in

the constructions, and what embedded verbs they allow. In sections 2.3–2.5, I turn to syntactic differences.

2.1 Adjectives and adverbs

Before looking at what particular types of adjectives and adverbs can appear in the two constructions, I give a brief introduction to the morphological differences between adjectives and adverbs in Swedish.

Adjectives in Swedish agree morphologically with the noun they modify or predicate over, showing a gender distinction in the singular (common or neuter), and appearing with a designated marker for plural:³

- (8) a. Flickan är lång.
girl-DEF is tall-COMMON
'The girl is tall.'
- b. Barnet är långt.
child-DEF is tall-NEUTER
'The child is tall.'
- c. Flickorna/Barnen är långa.
girl-PL.DEF/child-PL.DEF are tall-PL
'The girls/children are tall.'

Adverbs, on the other hand, have an invariable form ending in *-t*:

- (9) a. Flickan sprang långt.
girl-DEF ran long
'The girl ran a long way.'
- b. Barnet sprang långt.
child-DEF ran long
'The child ran a long way.'
- c. Flickorna/Barnen sprang långt.
girls-PL.DEF/child-PL.DEF ran long
'The girls/children ran a long way.'

³Gender and number on the adjective are not glossed elsewhere in the paper.

When the adjective appears in the neuter singular form, it is morphologically indistinguishable from the corresponding adverb, as seen in (9b)–(9c). The morphological distinction between adjectives and adverbs is also obscured for some adjectives whose stem ends in *-t*, such as *lätt* ('easy'). These adjectives have the same form for both genders in the singular, and this form is moreover identical to the corresponding adverb:

- (10) a. en lätt bok/ett lätt problem
 an easy book-DEF/an easy problem
 'an easy book/an easy problem.'
- b. Snö smälter lätt i varmt väder.
 snow melts easily in warm weather
 'Snow melts easily in warm weather.'

For TCs and *go*-TCs, thus, a morphological difference between the adjective and adverb is found with plural subjects, (11a)–(11b), and (except for *lätt*) with singular subjects in the common gender, (11c)–(11d):

- (11) a. Böckerna är lätta att läsa.
 books-DEF are easy to read
 'The books read slowly.'
- b. Böckerna går lätt att läsa.
 books-DEF go slowly to read
 'The books read slowly.'
- c. Boken är trög att läsa.
 book-DEF is slow to read
 'The book is slow to read.'
- d. Boken går trögt att läsa.
 book-DEF goes slowly to read
 'The book reads slowly.'

Not all adjectives and adverbs can appear in these constructions. In the case of TCs, the adjective is subject to a thematic restriction. More precisely, adjectives that assign a thematic role to their subject and consequently cannot appear with an expletive subject do not count as *tough*-adjectives (see Lasnik

and Fiengo, 1974). *Lätt* ('easy') but not *vacker* ('beautiful') is thus a TC-adjective:

- (12) a. Boken är lätt att läsa.
book-DEF is easy to read
'The book is easy to read.'
- b. Det är lätt att läsa boken.
it is easy to read book-DEF
'It is easy to read the book.'
- c. Musiken är vacker att lyssna på.
music-DEF is beautiful to listen to
'The music is beautiful to listen to.'
- d. *Det är vackert att lyssna på musiken.
it is beautiful to listen to music-DEF

This issue does not arise for *go*-TCs. That is to say, there are no constructions that look like *go*-TCs but which cannot alternate with an expletive subject. The pattern in (12c)–(12d) is thus not found with *adverb+gå*. *Go*-TCs are restricted in another way, however. The permissible adverbs are restricted to one semantic class:

- (13) Boken går lätt/tungt/trögt/enkelt/snabbt/långsamt/
book-DEF goes easily/heavily/slowly/simple/fast/slowly/
bra/dåligt att läsa.
well/badly to read
'The book is easy/heavy/slow/simple/fast/slow/easy/difficult to read.'

The adverbs in (13) all refer to how easy (or not) it is to do something with the entity in the subject position. These adverbs correspond to a group of adjectives referred to as *expense-type* modifiers (see Foldvik, 1989; Kim, 1995). Such modifiers describe "how much time, money or effort an event requires from someone who is participating in the event as an agent" (Kim, 1995, 273). Notably, even adverbs such as *well* and *badly* get this interpretation, as can be seen in the translation in (13). With the exception of *snabbt* ('fast') and *långsamt* ('slowly'), all the adverbs in (13) have corresponding adjectival

forms appearing in TCs.^{4,5}

- (14) Boken är lätt/tung/trög/enkel/bra/dålig att läsa.
 book-DEF is easy/heavy/slow/easy/good/bad to read
 ‘The book is easy/heavy/slow/easy/good/bad to read.’

Adjectival TCs are however more liberal than *go*-TCs in allowing not only expense-type predicates, but also, for instance, *psych*-type predicates. The latter describe “a psychological state that a fact or an event causes an individual to experience” (Kim, 1995, 274) (see also Foldvik, 1989):⁶

- (15) Boken är rolig/sorglig/trist/intressant/långtråkig/ stimulerande
 book-DEF is fun/sad/boring/interesting/boring/ stimulating
 att läsa.
 to read
 ‘The book is fun/sad/boring/interesting/stimulating to read.’

- (16) * Boken går roligt/sorgligt/trist/intressant/långtråkigt/
 book-DEF goes funnily/sadly/boringly/interestingly/boringly/
 stimulerande att läsa.
 stimulatingly to read

While both expense- and psych-type predicates relate to an implied Agent, only the psych-ones explicitly say that the Agent is affected by the action. In section 3, I return to the question of why *go*-TCs only allow expense-type predicates.

⁴The adjectives *snabb* and *långsam* cannot appear with expletive subjects and therefore do not count as TC adjectives, see section 2.1 above.

⁵The adjectives *lätt*, *svår*, *snabb*, *trög*, *tung* are found also in constructions with *complex dispositional adjectives*, CDAs (see Klingvall, 2008, To appear):

- (1) Boken är lätt-/svår-/snabb-/trög-/tungläst.
 book is easy/difficult/fast/slow/heavy.read-PPTC
 The book is easy/difficult/fast/slow/heavy to read.’

Interestingly, CDAs are similar to *go*-TC in being restricted to having only these particular adjectives in their left-hand position. With regard to their meaning, constructions with CDAs are furthermore similar to both TCs and *go*-TCs, as can be seen in the translation above.

⁶Psych-type adjectives correspond closely to the Experiencer verbs discussed by Pesetsky (1987). As mentioned in section 1, some but not all Experiencer verbs are *tough*-predicates in Swedish.

2.2 The embedded verb and its arguments

Both TCs and *go*-TCs are formed productively. Since the subject is an underlying object, however, only verbs that take objects can appear in the constructions. TCs and *go*-TCs can thus embed a verb like *springa* ('run') only if it co-occurs with an underlying object in the matrix subject position (and not on its unergative use):

- (17) a. *Per är lätt att springa.
Per is easy to run
- b. *Per går lätt att springa.
Per goes easily to run
- c. Den rundan är lätt att springa.
that track-DEF is easy to run
'That track is easy to run.'
- d. Den rundan går lätt att springa.
that track-DEF goes easily to run
'That track is easy to run.'

The presence of an internal object in the subject position is a necessary but not sufficient criterion. In addition to an internal argument, the embedded verbs must also have an external argument, syntactically realized as PRO. Unaccusative verbs, therefore, do not appear in these constructions, unlike their causative counterparts:

- (18) a. Båten är lätt att sänka/*sjunka.
boat-DEF is easy to sink-CAUS/sink-INCH
'The boat is easy to sink.'
- b. Båten går lätt att sänka/*sjunka.
boat-DEF goes easily to sink-CAUS/sink-INCH
'The boat is easy to sink.'

As illustrated, both TCs and *go*-TCs thus select infinitival clauses with transitive verbs. *Go*-TCs, however, have a further requirement: the embedded verb must have an external argument that is specifically an Agent. Verbs with Experiencer subjects, such as *störa sig på* ('get annoyed at') in (19), and *falla*

för ('fall for') in (20), and verbs with Recipient subjects, such as *ta emot* ('receive') in (21), are thus infelicitous:

- (19) a. Per är lätt PRO_{Exp} att störa sig på.
 Per is easy to annoy REFL on
 'Per is easy to get annoyed at.'
- b. ?? Per går lätt PRO_{Exp} att störa sig på.
 Per goes easily to annoy REFL on
 'Per is easy to get annoyed at.'
- (20) a. Den frestelsen är lätt PRO_{Exp} att falla för.
 that temptation-DEF is easy to fall for
 'That temptation is easy to give in to.'
- b. ?? Den frestelsen går lätt PRO_{Exp} att falla för.
 that temptation-DEF goes easily to fall for
 'That temptation is easy to give in to.'
- (21) a. Den gåvan är lätt PRO_{Rec} att ta emot.
 that gift-DEF is easy to receive
 'That gift is easy to receive.'
- b. ?? Den gåvan går lätt PRO_{Rec} att ta emot.
 that gift-DEF goes easily to receive
 'That gift is easy to receive.'

The sentences in (19b), (20b) and (21b) are well-formed only to the extent that the verbs in the infinitival clauses can get an agentive interpretation, i.e. with PRO interpreted as an Agent. No such coercion is necessary in the TC.

2.3 Small clauses

Intuitively, both TCs and *go*-TCs express properties that consist of the adjective or adverb in combination with the infinitival clause. This is syntactically transparent in the TC but not in the *go*-TC. That is, in the TC the adjective can be shown to take the infinitival clause as its syntactic complement and the underlying object as its subject. The subject-predicate relation is here analyzed as mediated via the adjectival functional head, *a*, an instantiation of the

general phonologically null Pred head, proposed by Bowers (1993) (see also Adger and Ramchand, 2003):

- (22) a. Jag anser de böckerna (vara) tröga att läsa.
I consider those books-DEF (be) slow to read
'I consider those books (be) slow to read.'
- b. [_{aP} de böckerna Pred [_{AP} tröga [_{CP} att läsa]]]

As indicated in (22a), the small clause may also optionally contain the infinitival form of *vara* ('be').⁷

In contrast to the TC-adjective, the adverb in the *go*-TC does not form a small clause predicate with the infinitival clause. The sentence seems to improve with an infinitival form of *gå*, but some speakers still find it ill-formed:

- (23) a. *Jag anser de böckerna trögt att läsa.
I consider those books-DEF slowly to read
- b. ??Jag anser de böckerna gå trögt att läsa.
I consider those books-DEF go slowly to read
'I consider those books slow to read.'
- c. * [_{aP} de böckerna Pred [_{AdvP} trögt [_{CP} att läsa]]]

The adjective in the TC and the adverb in the *go*-TC, then, have different status in the constructions.

2.4 Question-formation

TCs and *go*-TCs also differ in what strings they allow to move to the sentence initial position in questions. In both TCs and *go*-TCs, the adjective or adverb can move on its own to this position:

- (24) a. Hur tröga är de böckerna att läsa?
how slow are those books-DEF to read
'How slow to read are those books?'
- b. (?) Hur trögt går de böckerna att läsa?
how slowly go those books-DEF to read
'How slow to read are those books?'

⁷Alternatively, *vara* is always present but need not be pronounced.

As indicated, movement of the adverb in (24b) is not felt to be as good as movement of the adjective in (24a), but the sentence is still grammatical.

If the infinitival CP is moved along with the adjective or adverb, a clear difference in well-formedness between TCs and *go*-TCs can be discerned:

- (25) a. Hur tröga att läsa är de böckerna?
 how slow to read are those books-DEF
 ‘How slow to read are those books?’
- b. ?? Hur trögt att läsa går de böckerna?
 how slowly to read go those books-DEF

Also these data point to a structural difference between the two constructions. While the adjective and adverb can move on their own in both of them, only the TC allows for the infinitival clause to move along with it. Once again, therefore, the adjective and the infinitival clause behave like a constituent, while the adverb and the infinitival clause do not.

2.5 Optionality of the adverb

TCs and *go*-TCs differ syntactically in yet another respect. In the *go*-TC, the adverb can be omitted, while that is impossible in the TC. Without an adverb, the *go*-TC either gets a modal reading, expressing that it is possible to do something, or gets the standard scalar reading, in which case it is understood to include a null adverb expressing ease:

- (26) a. Boken går att läsa.
 book-DEF goes to read
 ‘The book is possible to read/can be read.’ or
 ‘The book reads easily.’
- b. * Boken är att läsa.
 book-DEF is to read

In section 4, I discuss the two readings of the adverb-less *go*-TC in more detail. The possibility of leaving out the adverb is an indication that *gå* is the actual *tough*-predicate in *go*-TCs, and that it thus has a radically different status from *vara* in TCs.

2.6 Summary

Although both TCs and *go*-TCs are formed productively, *go*-TCs are subject to a number of restrictions not applying to TCs. While TCs allow for a wide range of adjectives, *go*-TCs are limited to adverbs referring to ease (or lack thereof). Furthermore, although both constructions require their infinitival clause to be transitive, i.e. take both an internal and an external argument, only the *go*-TC has the requirement that the external argument be specifically an Agent. From a syntactic point of view, the constructions differ in whether the adjective/adverb forms a constituent with the infinitival clause. Evidence from small clause formation, movement and adverb omission shows that the TC-adjective is in constituency with the infinitival clause, while the *go*-TC-adverb apparently is not.

3 Analysis

Recall the initial observation made in the paper, namely that both TCs and *go*-TCs are constructions that ascribe a property to an underlying object appearing in the grammatical subject position. What is stated in these constructions is typically how easy or difficult it is (for an Agent) to do something involving the underlying object. The adjective and adverb must therefore stand in some particular relation to the infinitival clause. As seen in the previous sections, this is syntactically transparent in the TC where the adjective and infinitival clause behave like a constituent. In the *go*-TC, in contrast, the adverb does not form a syntactic constituent with the infinitival clause. The question therefore arises: if the adverb does not select the infinitival clause as its complement, how is the intuitive relation between them established? In the following, I will argue that the adverb is licensed by *gâ* and that *gâ* selects the infinitival clause. The adverb, *gâ* and the infinitival clause are all part of the semantic predicate that is predicated over the subject. The adverb therefore relates to the infinitival clause, but in a different way from the adjective. This means that there is a crucial syntactic difference between *vara* in TCs and *gâ* in *go*-TCs. Section 3.1 discusses the status of *vara* as a background to the analysis

of *gå* in section 3.2.

3.1 *Vara*

Vara is a semantically vacuous verb: a copula. Unlike, other verbs, *vara* neither contributes any meaning nor introduces any arguments of its own. In the semantics, it is instead the complement of *vara* that functions as the predicate and determines the properties of the resulting sentence (see e.g. Heim and Kratzer, 1998). A stage-level complement of *vara*, such as *glad* ('happy'), gives rise to an all-over stage-level interpretation of the sentence, and is therefore well-formed with an adverbial referring to a specific point in time, as seen in (27a). An individual-level complement, such as *intelligent* ('intelligent'), on the other hand, gives rise to an individual-level interpretation and is not well-formed with an adverbial referring to a specific point in time, (27b):

- (27) a. Johanna är glad (just nu).
 Johanna is happy (right now)
 'Johanna is happy (right now).'
- b. Johanna är intelligent (*just nu).
 Johanna is intelligent (right now)
 'Johanna is intelligent.'

The subjects in these sentences get their thematic role from the adjectival predicates rather than from *vara*. That this is the case can be seen in contexts like ECM constructions, where *vara* is absent. Although *vara* is absent, the arguments still have the same thematic role, indicating that it is not *vara* but the adjective that assigns it:

- (28) a. Jag såg Johanna/henne glad igår.
 I saw Johanna/her happy yesterday
 'I saw Johanna/her happy yesterday.'
- b. Jag anser Johanna/henne intelligent.
 I consider Johanna/her intelligent
 'I consider Johanna/her intelligent.'

Syntactically, the adjective is therefore likely to combine with its subject before the verb comes into the picture:

- (29) $[_{aP} \text{ DP a } [_{AP} \text{ A } \dots]]$

Unlike a number of functional verbs, *vara* does not have any thematic arguments and in this sense contrasts with, for instance, *bli* ('become'). *Bli* implies a change of state whose Cause(r) argument can sometimes be spelled out in an *av*-phrase ('by'-phrase):

- (30) a. Per blev glad av beskedet.
Per became happy by news-DEF
'The news made Per happy.'
- b. Per var glad (??av beskedet).
Per was happy (by news-DEF)

Since *vara* does not contribute any meaning and disappears under ECM verbs, it will be analyzed as a functional verb in the higher region of the clause.⁸

As shown in section 2.3, the TC predicate behaves like any other small clause under an ECM verb:

- (31) a. Böckerna är tröga att läsa.
books-DEF are slow to read
'The books read slowly.'
- b. Jag anser böckerna tröga att läsa.
I consider books-DEF slow to read
'I consider the books slow to read.'

In the case of TCs, thus, the subject combines with the adjective-infinitival clause complex before *vara* is merged.

⁸In line with Hicks (2009), I place *vara* in T in the trees in this paper. Given the well-formedness of sentences like (1), *vara* is probably situated lower than T. (The same applies to English *be*.) In the present context, however, the important thing is that *vara* appears higher than *gå*.

- (1) Böckerna har varit tröga att läsa.
books-DEF have been slow to read

3.2 *Gå*

In section 2.3 above, we saw that *gå* differs from *vara* in that it can't be omitted under an ECM-verb:

- (32) a. Böckerna går trögt att läsa.
 books-DEF go slowly to read
 'The books read slowly.'
- b. *Jag anser böckerna trögt att läsa.
 I consider books-DEF slowly to read

These examples show that the adverb and the infinitival clause do not form a small clause predicate. I take this as evidence that *gå* is unlike *vara* in not being a copula verb.

Gå appears in a number of different structures and can be either a lexical or a functional verb. As a lexical verb, it is a verb of motion with an Agent subject and, typically, a complement in the form of a PP (location or direction) or a DP (a type of cognate object):

- (33) a. Anna gick till affären.
 Anna went to shop-DEF
 'Anna went to the shop.'
- b. Anna gick en promenad.
 Anna went a walk
 'Anna took a walk.'

Gå can also be a functional verb taking an abstract PP as complement (see Ekberg, 1989):

- (34) a. Anna gick till anfall.
 Anna went to attack
 'Anna made an attack.'
- b. Mannen gick i exil.
 man-DEF went in exile
 'The man went into exile.'

On this functional use, which I will refer to as the light-verb use, the verb does not mean 'walk' in the literal sense. Although the motion semantics is

no longer concrete, it is retained in some bleached form. In examples like the ones in (34a)–(34b), the verb still implies dynamicity. Ekberg argues that the verb is specified as [+intention] and can only combine with complements specified in the same way.

As we know, *gå* can also appear with an infinitival complement. The infinitival clause can, but need not, be preceded by an adverb, as illustrated in the following *go*-TC and its adverb-less counterpart:

- (35) a. Boken går lätt att läsa.
 book-DEF goes easily to read
 ‘The book reads easily.’
- b. Boken går att läsa.
 book-DEF goes to read
 ‘The book can be read.’

Recall from section 2.5 that two readings can arise in the absence of an adverb: either the sentence says that it is possible, as opposed to *not* possible, to read the book, or the sentence is interpreted as including a null version of *lätt* and thus have the standard reading. In the former case, *gå* has a modal (epistemic) reading. I leave the modal use of the verb aside for the moment but will return to it briefly in section 4. *Gå* in (35a) differs from the light-verb use in (34a)–(34b) above in not appearing with an Agent subject, but instead with an underlying object. Therefore, if the verb in the *go*-TC comes with the feature specification [+intention], this meaning component is not associated with the subject, but, if anything, with an implicit argument, similarly to the passive. Despite the differences regarding their subjects, light-verb *gå* and *gå* in *go*-TCs are similar in their requirements on the complement: both combine only with agentive complements, as discussed above and in section 2.2.⁹ The same thing holds in another construction with *gå* that resembles the *go*-TC in

⁹A possible analysis of light-verb constructions like the ones in (34a)–(34b) is that *gå* is a control verb selecting a small clause complement consisting of the PP and a PRO subject. A piece of evidence in favour of an analysis involving control, rather than raising, is the fact that light-verb *gå* cannot take an expletive subject. This could be taken to mean that *gå* assigns a thematic role to its subject. See section 3.4 for control properties of *go*-TCs.

meaning, but takes a nominalized verb as complement instead of an infinitival clause:

- (36) Hur går det med uppsatsskrivandet/ skrivandet (av
 how goes it with paper.write-ANDE.DEF/ write-ANDE.DEF (of
 uppsatsen)?
 paper-DEF)
 ‘How’s the paper writing?’

As in *go*-TCs, verbs with Theme subjects, e.g. *falla* (‘fall’) and *ramla* (‘stumble’), and Experiencer subjects, e.g. *ogilla* (‘unlike’) and *tycka om* (‘like’), are odd in these constructions. They are either ill-formed altogether or get a coerced agentive reading:

- (37) a. * Hur går det med fallandet/ramlandet?
 how goes it with fall-/stumble-ANDE.DEF
- b. * Hur går det med ogillandet/omtyckandet (av den nya
 how goes it with unlike-/like-ANDE.DEF (of the new
 strukturen)?
 structure-DEF)

In *go*-TCs and nominal constructions like the ones above, *gå* is similar to the light-verb in being a dynamic verb implying an Agent at some level but not retaining its lexical motion semantics. This is the reason, I will argue, that *gå* in *go*-TCs only allows for certain types of modifier. Recall from section 2.1 that *go*-TCs are restricted to expense-type adverbs, while TCs, in addition, allow for psych-type adjectives:

- (38) a. Boken är lätt/rolig att läsa.
 book-DEF is easy/fun to read
 ‘The book is easy/fun to read.’
- b. Boken går lätt/*roligt att läsa.
 book-DEF goes easily/funnily to read
 ‘The book reads easily.’

(38a) says of some book that it is easy or fun with respect to reading it. As seen in (38b), the *go*-TC, in contrast, can only state that the book is easy to

read, not that it is fun to read. Notably, this is not because *roligt* ('funnily') cannot co-occur with *gå*:

- (39) Pelle går roligt.
 Pelle walks funnily
 'Pelle walks in a funny way.'

Roligt in (39) is a manner adverb. The manner is of the type that it gives rise to a psychological experience in some individual. Since this adverb specifies manner, it can only modify concrete processes, i.e. it needs to be linked to verbs with lexical content. While the lexical verb *gå* can therefore be modified by *roligt*, the functional verb *gå*, lacking lexical content, cannot. Expense-type adverbs, in contrast, do not state a manner in the same way and can therefore modify also verbs that lack lexical content, such as functional *gå*.

Since *gå* is a functional verb, but not a copula, we can assume that it is not merged directly in T (see footnote 8), but as a sister of the infinitival clause. I propose that the adverb is licensed by the verb:

- (40) [_{VP} [_{AdvP} lätt] går [_{CP} att läsa de böckerna]]

If the adverb is not the head selecting the infinitival clause, but the specifier of V, we have an explanation for the movement restrictions at work in *go*-TCs. Recall from section 2.4, that the adverb cannot move together with the infinitival clause to the clause initial position. The corresponding movement operation in the TC is fine:

- (41) a. * Hur trögt att läsa går de böckerna?
 how slowly to read go those books-DEF
 b. Hur tröga att läsa är de böckerna?
 how slow to read are those books-DEF
 'How slowly do those books read?'

Following Abney (1987), I assume that *hur* ('how') heads a Degree phrase, DegP, that takes a scalar expression, such as an AdvP or AP as complement. Deg comes with an uninterpretable [WH] feature which is checked by the

interpretable counterpart in C. In the TC, movement of the DegP means movement of the entire AP including its CP complement:¹⁰

- (42) $[_{CP} [_{DegP} \text{hur} [_{AP} \text{tröga} [_{CP} \text{att läsa } t_j]]]_k \text{är}_i [_{TP} \text{de böckerna}_j t_i t_k]]$

In the *go*-TC, on the other hand, movement of the DegP does not involve pied-piping of the infinitival clause since Deg only has the AdvP in its scope, (43a). In the sentence in (41a), DegP and CP must therefore have moved separately to two different specifiers of C, (43b). Judging from the ill-formedness of the sentence, this is not allowed.

- (43) a. $[_{CP} [_{DegP} \text{hur} [_{AdvP} \text{trögt}]]]_k \text{går}_i [_{TP} \text{de böckerna}_j t_i [_{VP} t_k t_j [_{CP} \text{att läsa } t_j]]]]$
 b. * $[_{CP} [_{DegP} \text{hur} [_{AdvP} \text{trögt}]]]_k [_{CP} \text{att läsa } t_j]_l \text{går}_i [_{TP} \text{de böckerna}_j t_i [_{VP} t_k t_l]]]]$

So far, I have argued that the adverb in the *go*-TC is licensed by *gå*, sitting in its specifier position, and is therefore semantically restricted and does not form a constituent with the infinitival clause without the verb. As shown in section 2.2, *go*-TCs are restricted in yet another way: they require an agentive embedded verb. This property is unexpected since it suggests that *gå* can actually see the verb inside the infinitival clause. A question that arises is therefore what size the complement of *gå* has and, more specifically, if the infinitival clauses in TCs and *go*-TCs are different. Since the clause in both cases contains the infinitive marker *att* ('to'), it must be at least a TP. In fact,

¹⁰In cases where the adjective in the TC moves to Spec,CP without the infinitival clause, one can either assume prior extraposition of the infinitival clause (right-branch adjunction), (1b), or movement of the infinitival clause to some projection above DegP (Spec,XP in (1c) below). In both cases, this would be followed by remnant movement of the DegP to Spec,CP, in the spirit of Kayne (1994).

- (1) a. Hur tröga är de böckerna att läsa?
 how slow are those books-DEF to read
 b. $[_{CP} [_{DegP} \text{hur} [_{AP} \text{tröga}]]]_k \text{är}_i [_{TP} \text{de böckerna}_j t_i t_k]][_{CP} \text{att läsa } t_j]]$
 c. $[_{CP} [_{DegP} \text{hur} [_{AP} \text{tröga}]]]_k \text{är}_i [_{TP} \text{de böckerna}_j t_i [_{XP} [_{CP} \text{att läsa } t_j] X t_k]]$

I leave open the question of how the structure in (1a) should be analyzed.

as will be shown in the next section, there are good reasons to assume that the infinitival clause is a full CP in TCs and *go*-TCs alike.

3.3 The embedded clause

In this section I show that both TCs and *go*-TCs include embedded clauses that are full CPs. The argumentation is somewhat indirect, relating to the classic issue of how TCs come to have grammatical subjects that are interpreted as the underlying objects of the embedded verbs. This section also shows that *go*-TCs are really a type of TC although they have a verbal predicate. Their verbal predicate is thus not merely of the raising type.

Hicks (2009) argues for an analysis of TCs that combines A and A'-movement of the underlying object to the grammatical subject position. I account for this analysis in section 3.5. The analysis builds on insights from Lasnik and Fiengo (1974) and Chomsky (1977). Arguing against analyses in which the subject of the TC is simply A-moved, i.e. raised, from the embedded object position (see Rosenbaum, 1967; Postal, 1974), Chomsky (1977) shows that TCs involve A'-movement of a WH-operator to the embedded Spec,CP.¹¹ Evidence for the presence of such an operator in TCs in English comes from the unavailability of *wh*-movement in TCs, (44a) degraded long-distance dependencies with intervening elements in Spec,CP, (44b)–(44c), and parasitic gaps, (44d)–(44e) (see Hicks, 2009, 541–542):

- (44) a. * What sonatas is this violin easy to play on?
 b. A guy like John is hard [to imagine [any woman believing [she could marry]]].
 c. ?? A guy like John is hard [to imagine [any woman wondering [why she would agree to marry]]].

¹¹In Chomsky (1977) the surface subject is merged in situ, raising the issue of how it comes to have the same thematic role as the object (in the embedded Spec,CP) (see critical comments in Hicks, 2009). Chomsky (1981) addresses this issue and proposes, following Nanni (1978), that the adjective+CP is reanalyzed so that the thematic role of the operator can be transmitted to the surface subject. For details and criticism, see Hicks (2009, 543).

- d. (?) Lloyd Webber musicals_{*i*} are easy [Op_{*i*} to condemn *t_i* [without even watching *e_i*]].
- e. * Lloyd Webber musicals_{*i*} are likely [to be condemned *t_i* [without anyone even watching *e_i*]].

In Swedish, extraction out of WH-clauses is not banned (see e.g. Engdahl, 1982; Christensen, 1982). The fact that TCs can at all involve dependencies across arguments, (45), however, suggests that they involve A'-movement rather than A-movement. Furthermore, as in English, parasitic gaps are licensed in TCs but not in A-movement contexts such as passives. This difference between TCs and raising constructions can be explained if the former but not the latter contain an operator in Spec,CP that can bind the gaps (Chomsky, 1982).

- (45) a. Den här boken är lätt [att övertala Anna [att lura Pelle
this book-DEF is easy to persuade Anna to trick Pelle
[att läsa *t*]].
to read
'This book is easy to persuade Anna to trick Pelle into reading.'
- b. Den här boken går lätt [att övertala Anna [att lura
this book-DEF goes easily to persuade Anna to trick
Pelle [att läsa *t*]].
Pelle to read
'This book is easy to persuade Anna to trick Pelle into reading.'
- (46) a. Boken är lätt [Op_{*i*} att kritisera *t_i* [utan att ha läst
book-DEF is easy [Op-i to criticize *t_i* [without to have read
e_i]].
e_i]]
'The book is easy to criticize without reading.'
- b. Boken går lätt [Op_{*i*} att kritisera *t_i* [utan att ha
book-DEF goes easily [Op-i to criticize *t_i* [without to have
läst *e_i*]].
read *e_i*]]
'The book is easy to criticize without reading.'

- c. * Boken_i kan [kritiseras/bli kritiserad t_i
 book_i-DEF can criticize-PASS/become criticize-PPTC t_i
 [utan att ha läst e_i]
 [without to have read e_i]]

As seen in these examples, TCs and *go*-TCs show the same pattern. This is further evidence that the *go*-TC is really a type of TC. In both cases, the embedded clause is thus a CP hosting an operator in the Spec,CP position. The contrast between the constructions as regards their restrictions on the embedded verb cannot, then, be related to a difference in size of the complement clause.

3.4 The implicit argument

The situation in *go*-TCs with regard to the embedded verb is reminiscent of control environments, i.e. environments where a matrix subject controls an embedded subject. In some cases, the control verb imposes restrictions, not only on what type of CP it takes as complement (see Landau, 2001), but also on what type of verb it allows to appear inside the CP. The controlled subject for matrix verbs like *manage* and *agree*, for instance, can have the role of Agent but not Experiencer. The verb *want*, on the other hand, does not impose any restrictions and its embedded subject can be an Agent as well as an Experiencer:

- (47) a. I managed PRO_{Ag} to read the book.
 b. * I managed PRO_{Exp} to like ice-cream.
 c. I agreed PRO_{Ag} to read the book.
 d. * I agreed PRO_{Exp} to like ice-cream.
 e. I wanted PRO_{Ag} to read the book.
 f. I wanted PRO_{Exp} to like ice-cream.

A number of control verbs in Swedish show the same pattern. *Komma ihåg* ('remember'), *lova* ('promise') and *undvika* ('avoid'), for instance, can only control Agent subjects:

- (48) a. Jag kom ihåg PRO_{Ag} att köpa morötter.
I remembered to buy carrots
'I remembered to buy carrots.'
- b. *Jag kom ihåg PRO_{Exp} att tycka om morötter.
I remembered to like carrots
- c. Jag lovar PRO_{Ag} att köpa morötter.
I promise to buy carrots
'I promise to buy carrots.'
- d. *Jag lovar PRO_{Exp} att tycka om morötter.
I promise to like carrots
- e. Jag undviker PRO_{Ag} att köpa morötter.
I avoid to buy carrots
'I avoid buying carrots.'
- f. *Jag undviker PRO_{Exp} att tycka om morötter.
I avoid to like carrots

In TCs and *go*-TCs, PRO in the embedded clause is controlled by the implicit argument in the matrix clause. In both constructions, the implicit argument alternates with an argument spelled out in a *för*-phrase ('for'-phrase):

- (49) a. Boken är lätt för vem som helst_i PRO_i att läsa.
book-DEF is easy for anyone to read
'The book is easy to read for anyone.'
- b. Boken går lätt för mig_i PRO_i att läsa.
book-DEF goes easily for me to read
'The book is easy for me to read.'

As we have seen, *go*-TCs, but not TCs, require their controlled subject (i.e. embedded PRO) to be specifically an Agent. The *go*-TC, thus, does not allow an embedded Experiencer subject, in contrast to the TC (the controlling PRO argument is not included in the following trees, cf (49a)–(49b), above):

- (50) a. Per är lätt PRO_{Exp} att störa sig på.
Per is easy to annoy REFL on
'Per is easy to get annoyed at.'

- b. ?? Per går lätt PRO_{Exp} att störa sig på.
 Per goes easily to annoy REFL on
 ‘Per is easy to get annoyed at.’

If TCs and *go*-TCs differ in this respect, the reason might lie in the control relation between the implicit argument in the matrix clause and the embedded PRO. That would mean that the controlling arguments should be different in the two cases. This in turn raises the question as to how these arguments are licensed. In the case of the TC, the implicit argument is licensed by the adjective, while in the *go*-TC, it is licensed by the verb. Adjectives differ from verbs in a crucial respect: verbs but not adjectives have an Event feature (or select for an Event argument) (see e.g. discussions in Rothstein, 1999; Basilico, 2003). The implicit argument licensed by the verb is therefore interpreted as an event participant, unlike the one of the adjective.

Although the implicit argument in both constructions is interpreted as a type of ‘Experiencer of a property’, this argument is at the same time, necessarily, interpreted as an Agent in the *go*-TC. The argument is an Agent by virtue of the event specification in the verb with respect to which it is interpreted. That there is a difference between TCs and *go*-TC as regards their Experiencer arguments can be seen when the constructions spell out these roles in overt *för*-phrases. In TCs, generic arguments are preferred over specific, non-generic, ones, while *go*-TCs are fine with specific arguments but ill-formed with generic ones:¹²

- (51) a. Brödet är lätt för vem som helst att baka.
 bread-DEF is easy for anyone to bake
 ‘The bread is easy for anyone to bake.’
- b. Brödet är lätt (?för Olle) att baka.
 bread-DEF is easy (for Olle) to bake
 ‘The bread is easy for Olle to bake.’
- c. Brödet går lätt (??för vem som helst) att baka.
 bread-DEF goes easily (for anyone) to bake

¹²There is speaker variation as regards this, however. Although dispreferred by many speakers, generic Experiencers are fine in *go*-TCs for some speakers.

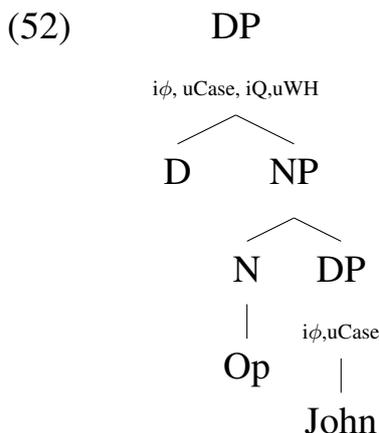
‘The bread is easy for anyone to bake.’

- d. Brödet går lätt för Olle att baka.
bread-DEF goes easily for Olle to bake
‘The bread is easy for Olle to bake.’

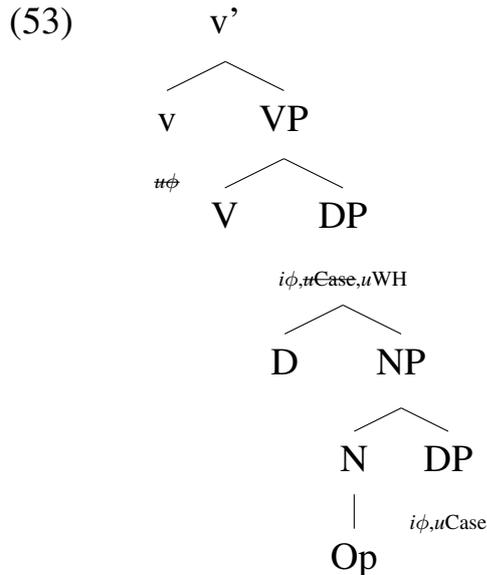
Generic arguments are ill-formed in *go*-TCs precisely because they cannot be linked to events in the way required. Conversely, specific arguments are infelicitous in TCs because they restrict the otherwise universal properties to specific individuals. I discuss this issue further in section 4.

3.5 Structures

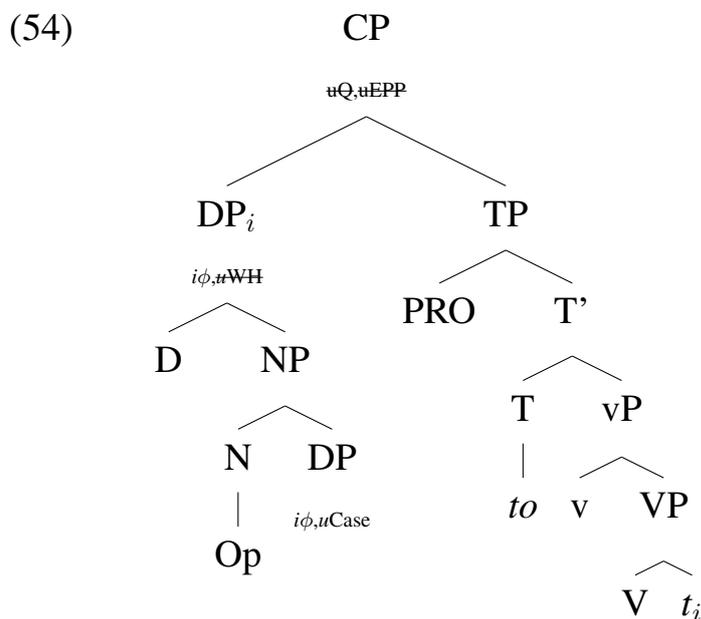
Let’s now turn to the syntactic derivation of TCs and *go*-TCs in more detail. As said in section 3.3, one of the challenging issues for analyses of TCs is how the subject of the matrix clause can be interpreted as the object of the embedded verb. Chomsky (1977) argues that the object is a WH-operator moving into Spec,CP. This analysis still raises the question of how the operator is related to the surface subject. Hicks (2009) proposes that the solution lies in the structure of the object: it is a complex DP consisting of both the operator and the referential DP (2009, 547):



Both the higher and lower DP have interpretable ϕ -features and uninterpretable Case features. In addition, the higher DP has an uninterpretable WH-feature, and an interpretable Q-feature. When the complex DP is merged as a complement of the verb, the Case feature on the higher DP node is checked by v . The Case feature of the lower DP, however, remains unchecked:



Having an uninterpretable WH-feature, the higher DP is still active after Agree with *v* and can therefore function as a goal when C scans the domain for an interpretable Q-feature. After Agree between C and DP has taken place, the DP moves to the specifier of C (via an extra Spec,vP, not indicated in the structure, see Hicks (2009, 548)):



Up to this point, the derivation of TCs and *go*-TCs proceeds in the same way. Once CP is formed, however, they diverge.

In the TC, the CP is selected by the adjective, A. The adjective licenses an Experiencer *för*-phrase in its specifier position (Hicks, 2009, 550). AP, in turn, is selected by the functional adjectival head *a* and A moves into the

head position of *aP*. In Swedish, the adjective agrees morphologically with the underlying object only when the object moves across the adjective to the subject position (otherwise the adjective gets default agreement/agrees with the expletive):

- (55) a. Böckerna är lätta att läsa.
books-DEF are easy-PL to read

‘The books are easy to read.’

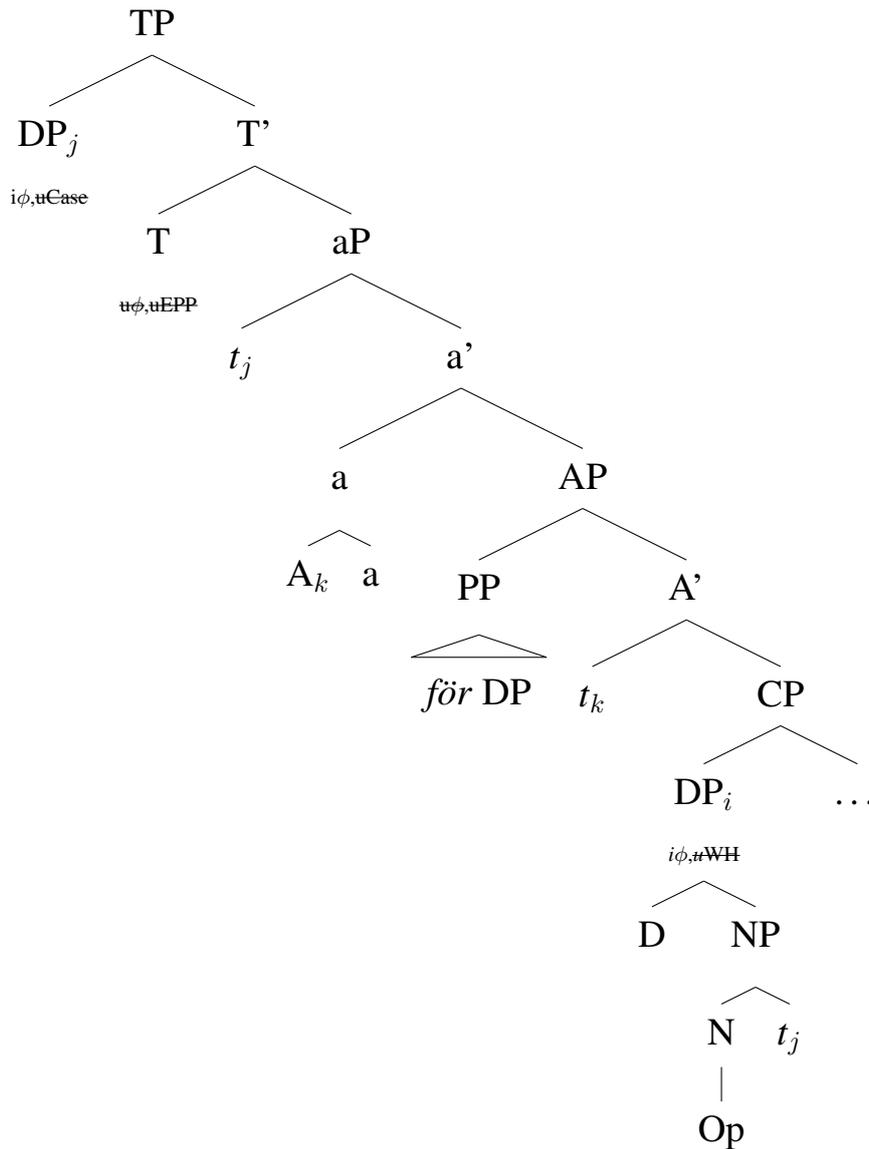
- b. Det är lätt att läsa böckerna.
it is easy to read books-DEF

‘It’s easy to read the books.’

Since the adjective agrees morphologically with the underlying object DP only when this DP appears in the subject position, i.e. has moved across *aP*, I take *a* to be associated with an EPP feature. When *a*’s ϕ -features are checked against the DP, the DP also moves to Spec,*aP* to satisfy EPP.¹³ Crucially, however, the DP does not get case from *a*, and is therefore still available as a goal for T:

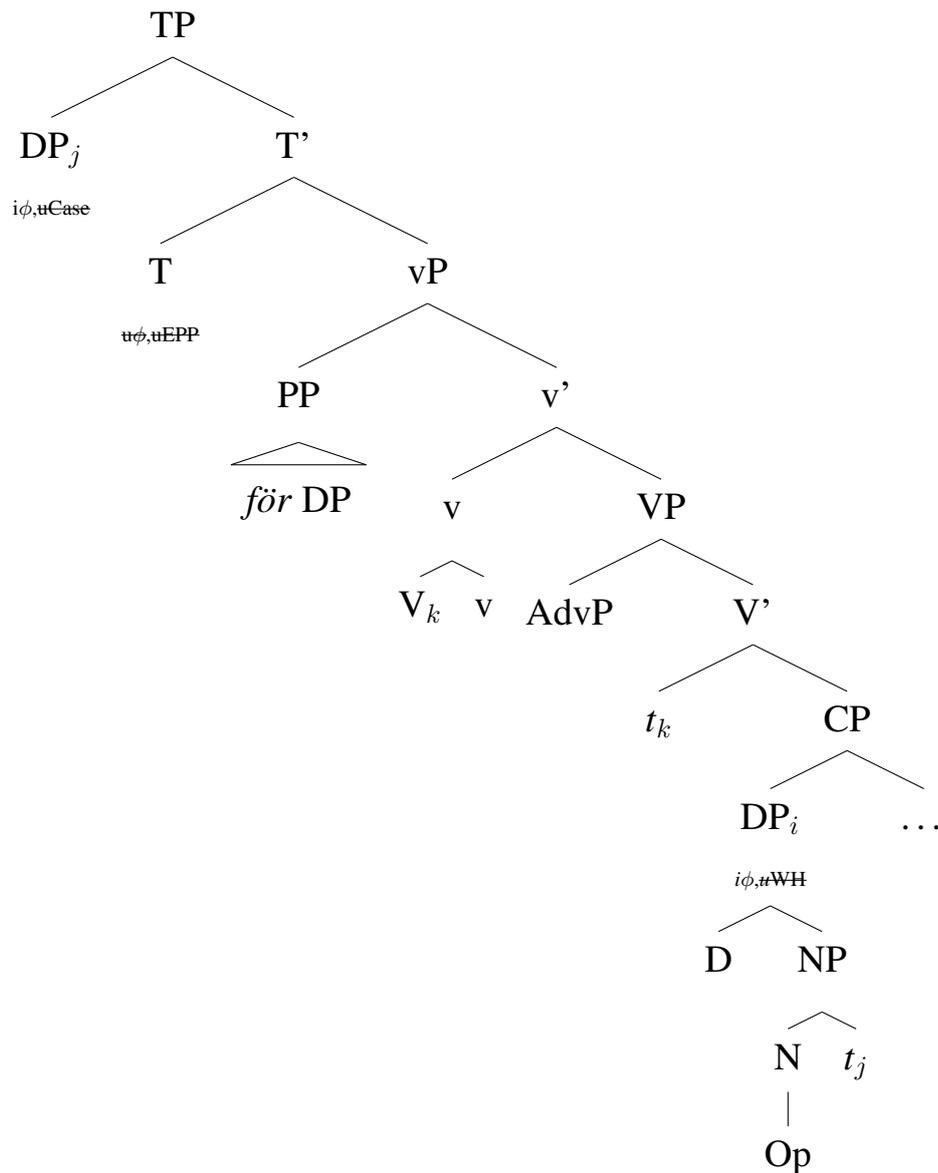
¹³ The *för*-phrase does not intervene, although it appears higher than the DP because it is inactive, having its Case feature checked locally by P.

(56) Derivation of the TC



In the *go*-TC, on the other hand, the infinitival clause is selected by V. The adverb is merged in V's specifier position. VP is then selected by v in the specifier of which the agentive Experiencer *för*-phrase is licensed. This argument thus appears in the standard external argument position. V then moves into the head position of vP . As in the TC, vP is selected by T. T probes the structure and finds the highest DP,¹⁴ which checks its features and moves into Spec,TP (possibly, the DP moves via an extra specifier of v , not indicated in the structure):

¹⁴The *för*-phrase does not intervene. See footnote 13.

(57) Derivation of the *go*-TC

Since Swedish is a V2 language, the verb moves further up to C and the subject moves to its specifier, in both TCs and *go*-TCs.

4 On the interpretation

Although TCs and *go*-TCs in many cases appear to have the same meaning, there are contexts in which their meanings can be teased apart. Consider the following sentences again:

- (58) a. Artikeln är lätt att läsa.
paper-DEF is easy to read
'The paper is easy to read.'
- b. Artikeln går lätt att läsa.
paper-DEF goes easily to read
'The paper reads easily.'

The sentences in (58) describe the paper as being an easy read. For many speakers, however, the nature of this property is interpreted as different in the two sentences. The following applies to those who recognize such a difference.¹⁵ The TC expresses a property that is derived from the subject alone, i.e. a disposition (see among others Brennan, 1993; Greenberg, 2003). Dispositions are (in the ideal case) not dependent on external factors related to specific situations. The property stated in the *go*-TC, in contrast, holds of a particular situation. In other words, then, the *go*-TC names a property that is instantiated in an actual event, while that is not the case in the TC. This can be shown in two ways. Firstly, as mentioned in section 3.4 above, TCs and *go*-TCs differ in what type of Experiencer arguments they license in their *för*-phrase. TCs are fine with generic arguments but not with specific ones as they clash with the dispositions referred to. *Go*-TCs, on the other hand, are infelicitous with generic arguments, but well-formed with specific ones:

- (59) a. Det brödet är lätt att baka för vem som helst/[?]Pelle.
that bread-DEF is easy to bake for anyone/Pelle
'That bread is easy to bake for anyone/Pelle.'
- b. Det brödet går lätt att baka för ^{??}vem som helst/Pelle.
that bread-DEF goes easily to bake for anyone/Pelle
'That bread is easy to bake for anyone/Pelle.'

Generic Experiencers are not well-formed in *go*-TCs because they abstract away from the actual events (specific situations) that these constructions are linked to. Conversely, specific arguments are infelicitous in TCs because, as mentioned above, it is in the nature of dispositions that they hold universally.

¹⁵For those who do not get a semantic difference between TCs and *go*-TCs, the syntactic differences still apply, of course.

In other words, they are not linked to events and, therefore, do not vary across events or individuals, at least in the ideal case. With specific arguments, TCs thus become less disposition-like.

Secondly, if a *go*-TC is combined with a clause denying the existence of any events where the property is instantiated, the resulting sentence is a contradiction. The TC, in contrast, can be combined with such a clause without a contradictory result:

- (60) a. Boken är lätt att läsa men ännu har ingen gjort det.
 book-DEF is easy to read but yet has nobody done it
 ‘The book is easy to read but nobody has read it so far.’
- b. #Boken går lätt att läsa men ännu har ingen gjort det.
 book-DEF goes easily to read but yet has nobody done it
 ‘The book is easy to read but nobody has read it so far.’

The TC in the first part of the sentence in (60a) can be uttered by someone who has not read the book but still knows enough about it to give the judgement that it is an easy read. The person might know that the book includes pictures, has short chapters, has an easy language, etc, and can, based on that knowledge, conclude that the books is an easy read. The second part of the sentence does therefore not conflict with the first part. The *go*-TC in the first part of (60b), on the other hand, cannot felicitously be uttered by someone who has not read the book (or has knowledge about the book based on someone else’s reading it). The *go*-TC thus needs to be based on an actual reading experience, i.e. an actual event. To sum up, *go*-TCs describe a behaviour of their subject in an actual event, while TCs are not based on events but on inherent properties of the subject.

Interestingly, as regards event implication, *go*-TCs that do not include an overt adverb are more like TCs than standard *go*-TCs, on one of their readings.

- (61) Artikeln går att läsa men ännu har ingen gjort det.
 paper-DEF goes to read but yet has nobody done it
 ‘The paper can be read but nobody has done it so far.’

The first part of the sentence in (61) can have two readings: either it says that it is possible to read the book (as stated in the translation) or it says the book

is easy to read, in which case it includes a phonologically null instance of *lätt*. The former reading is modal and is well-formed with a continuation denying the existence of any reading events involving the paper, as can be seen in (61). The second reading, on which *lätt* is understood to be present, on the other hand, cannot be followed by a clause with this meaning, precisely as in (60b) above. Unlike the non-modal (i.e. the usual) reading, the modal reading is not based on events and is a true disposition ascription.¹⁶ Since modal *gå* differs quite radically from *gå* in *go*-TCs in lacking an event feature, I conclude that they are different verbs, i.e. occupy the head position of different functional projections. Notably, the non-modal meaning indeed arises only in the presence of an adverb—whether overtly expressed or not. This points to a close relation between *gå* and the adverb, as argued for in this paper.

To conclude then, TCs are dispositional sentences: they do not in themselves imply the existence of an event. Of course, it can often still be assumed that the observation reported in the TC is actually based on an event (because that would be the most likely way to know about the property). But, as stated, this meaning is not part of the sentence itself. In *go*-TCs, in contrast, the properties talked about must be instantiated in events. In this sense, they are in fact not true dispositionals. Since functional *gå* is so bleached in its meaning, however, it might (sloppily) sometimes be used almost like a copula verb, and thereby give rise to a reading that is near-identical to the one in the TC. TCs and *go*-TCs can therefore often be used interchangeably.

5 Concluding remarks

A general division of labour between adjectives and adverbs is one where the former modify, or predicate over, individuals while the latter modify events. In the context of TC, however, this clear division of labour at first seems to be blurred. As has been shown in this paper, there are two types of TC in Swedish: the standard adjectival one as well as a verbal one. The latter,

¹⁶*Able*-adjectives are canonical examples of dispositions with this modal meaning. See Dahl (1975) for discussion.

which has been referred to as a *go*-TC, features the verb *gå* followed by an adverb, instead of *vara* and an adjective. The adverbs appearing in *go*-TCs have corresponding adjectival forms appearing in TCs. The adverb and adjective moreover seem to have the same function with respect to the infinitival clause in the constructions.

On closer inspection, however, it turns out the adverb in the *go*-TC differs syntactically from the adjective in the TC in not taking the infinitival clause as complement. In the *go*-TC, it is instead the verb *gå* that selects the infinitival clause and licenses the adverb. The adjective and adverb, then, have quite different syntactic status in the constructions. Furthermore, the verb in the *go*-TC is not simply a raising predicate. Instead, it shows all the relevant properties of a *tough*-predicate. That is, *go*-TCs can be shown to involve A'-movement of an operator from the embedded object position, to Spec,CP, precisely like adjectival TCs.

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Swedish exclamatives are subordinate

David Petersson

Lund University

Abstract

In Swedish, there are three basic kinds of exclamatives: *wh-*, *som-* and *att-* exclamatives. Superficially, these clauses display mixed properties with regard to the traditional division into main clauses and subordinate clauses. They have a word order which is typical for subordinate clauses and *som-* and *att-* exclamatives are obligatorily introduced by complementizers. On the other hand, they seem to be independent in the sense that they are grammatical without an overtly realized matrix. Due to the fact that they do not need an overt matrix, they have often been categorized as main clauses. In my view, however, Swedish exclamatives are in fact subordinate. In this paper, I argue that they are embedded under overt or covert non-verbal matrices, which consist of interjections or factive adjectives. The subordination analysis that I propose can account for both the typical subordinate clause structure and for the fact that the propositional content of a Swedish exclamative is presupposed.

1. Introduction

This paper is concerned with the distinction between main clauses and subordinate clauses in Swedish. It has long been observed that there is a structural asymmetry between main clauses and subordinate clauses in the Germanic V2-languages. This asymmetry is commonly accounted for in terms of V-to-C movement. Since den Besten (1983), it has been relatively widely accepted that what separates main clauses from subordinate clauses in these languages are the properties of the C-domain. It is commonly assumed that main clauses in the Germanic V2-languages

are characterized by V-to-C movement, as opposed to subordinate clauses, where C° is occupied by a complementizer which prevents the finite verb from moving there.

In recent years, however, this generalization has been questioned in connection with the intense debate about so called embedded V2-clauses (see, for instance Bentzen et al. (2007), Julien (2007) and Petersson (2009)). Embedded V2-clauses challenge the traditional main clause/subordinate clause dichotomy because they look like subordinate main clause structures. In this paper, I turn to exclamatives, a less discussed group of constructions that pose a problem to the dichotomy in question from the opposite direction. Contrary to the so called embedded V2-clauses, these constructions consist of clauses that look like independent subordinate clause structures, meaning that they are grammatical without an overt matrix.

The paper focuses on three kinds of clauses: *Wh*-exclamatives, exemplified in (1), *som*-exclamatives, exemplified in (2), and *att*-exclamatives, exemplified in (3).

(1) Vilken stor katt du (har) köpt!

Which big cat you (have) bought

'What a big cat you have bought!'

(2) Som ni (har) grisat ner!

SOM you (have) made.a.mess PART.

'What a mess you've made!'

(3) Att du inte köpt bilen!

that you not bought car.the

'Oh, why haven't you bought the car!'

These three construction types constitute the basic kinds of exclamatives in

Swedish. Some additional, though marginal, construction types are sometimes assumed to belong to the class of exclamatives in Swedish. For my purposes, however, it suffices to focus on the three kinds exemplified in (1)–(3), which all display mixed properties with regards to the traditional main/subordinate clause dichotomy. For a detailed inventory of Swedish (and Scandinavian) exclamatives, including other possible instances, see Delsing (2010) and Teleman et al. (1999).

Whether or not exclamatives constitute a separate clause type, on a par with declaratives, questions and imperatives has been a matter of intense debate. Some researchers argue that they do (see eg. Delsing (2010) or Zanuttini and Portner (2003)), whereas others argue that they do not (see eg. Rosengren (1994) or D'Avis (2001)). The main question in this paper, however, is whether Swedish exclamatives are main clauses or subordinate clauses. Although the answer to this question is probably relevant to the question of whether or not exclamatives should be considered a clause type in its own right, I will not discuss the clause type issue in any detail in this paper, but simply assume that exclamatives do constitute a separate clause type.

The paper has the following outline: To begin with, section 2 provides a short presentation of my basic theoretical assumptions concerning the differences between main clauses and subordinate clauses in Swedish. Section 3 is, first and foremost, intended to serve as a background for subsequent discussions about how Swedish exclamatives are best understood in relation to the main clause/subordinate clause dichotomy. However, the section also includes my preliminary analyses of the three basic kinds of exclamatives in Swedish. In section 4, some Icelandic and Danish data are presented, which serve as a basis of comparison in the subsequent discussions of Swedish exclamatives. Section 5 provides a presentation and discussion of two previous analyses, according to which Swedish exclamatives are main clauses. In section 6, the notion of presupposition is defined and discussed. It is shown that the propositional content is presupposed in all three construction

types. In 7, I return to the core question of whether Swedish exclamatives are main clauses or subordinate clauses. I argue that they are in fact subordinate and elaborate on my preliminary analyses from sections 3.2.1–3.2.3, discussing the details the subordination analysis that I propose. Next, in section 8, the analysis of Swedish exclamatives is related to the main clause/subordinate clause dichotomy. Finally, a summary is given in section 9.

2. Basic theoretical assumptions

The purpose of this section is to give a brief account of the basic theoretical assumptions that I make concerning the dividing line between main clauses and subordinate clauses in Swedish. As was pointed out in the previous section, the overall aim of the present paper is to discuss Swedish exclamatives from a main clause/subordinate clause perspective. The main clause/subordinate clause dichotomy that is outlined in this section is consequently a necessary prerequisite for reaching this goal. However, the purpose of this paper is, first and foremost, to discuss the hierarchical status of Swedish exclamatives. This section is consequently not intended to provide an exhaustive account of the clausal asymmetry in Swedish, but rather a theoretical background for subsequent discussions on the status of exclamatives. For in-depth discussions about matters concerning the relation between V2 and illocutionary force in general and in Mainland Scandinavian in particular, the reader is referred to Andersson (1975), den Besten (1983), Holmberg and Platzack (1995), Vikner (1995), Bentzen et al. (2007), Julien (2007) and Petersson (in preparation).

Swedish belongs to the Germanic V2-languages. It is well-known that these languages, among other things, are characterized by a structural asymmetry between main clauses and subordinate clauses. In the case of the Mainland Scandinavian languages (among which Swedish is found), this asymmetry can easily be observed

in clausal structures that contain a negation (or other sentence adverbials) in its canonical position, i.e. merged between the VP and the TP. In the case of a prototypical Swedish main clause, the finite verb precedes the negation, whereas it, in a subordinate clause, instead is preceded by the negation. In accordance with a widely accepted view, I take it that this structural asymmetry is a reflection of differences in the C-domain. In short, I assume that the difference between the two categories of clauses can be described in the following way: In a main clause, the finite verb moves from V to C°. In a subordinate clause, C° is instead filled by a complementizer, which is base generated in this position. When C° is occupied by a complementizer, the finite verb is prevented from moving there and stays in situ in V (cf. den Besten (1983), Holmberg and Platzack (1995) and Vikner (1995)).

The asymmetry between Swedish main clauses and subordinate clauses is not limited to differences in syntactic structure. It also reflects and corresponds to semantic/pragmatic differences. I follow Petersson (2009), which is an attempt to account for the semantic/pragmatic aspect of the Swedish main clause/subordinate clause asymmetry by applying a simplified version of Rizzi's (1997) split CP-model. Petersson writes:

V-to-C movement is associated with illocutionary force, which could be described in terms of a split CP, containing a projection, ForceP, to which the finite verb of a main clause moves. In subordinate clauses, the finite verb does not undergo V-to-C movement, but stays in situ. This is the case because in a subordinate clause, Force° contains a complementizer which moves there after being lexicalized in FinP. It connects, or anchors, the clause structure in a superordinate structure and also prevents the finite verb from moving to ForceP, meaning that the clause cannot get an independent speech act value (Petersson, 2009, p. 108).

In accordance with this description of the main clause/subordinate clause asymmetry in Swedish, I argue that a clausal structure can contain no more than one specification for speech act value. And this specification can only be made in the

highest available ForceP, to which the finite verb moves.

Thus far, I have argued that the categories main clause and subordinate clause form a dichotomy, based on differences in the configuration of the C-domain. However, clauses are not the only linguistic structures that can be used for performing speech acts. This becomes obvious once interjections are taken into consideration. A speaker can make an exclamation (and consequently perform a speech act) by uttering a single interjection, such as *aj* ‘ouch’ or *hoppsan* ‘whoopsadaisy’. I argue that interjections are best regarded as independent Force projections, consisting of a single interjection, base generated in Force^o.

Based on the observation that non-verbal elements may be used to convey speech acts, it must be concluded that the hypothesis which stipulates a firm connection between verb movement and speech act value only applies to finite propositions, i.e. clauses.

3. Exclamatives in Swedish – a background

This section provides a general description of the three basic categories of exclamatives in Swedish, exemplified in (1)–(3) above. The account is based mainly on Delsing (2010), Teleman et al. (1999) and Rosengren (1992).

The section is outlined as follows: In 3.1, the basic meaning components and structural properties, common to all three categories of exclamatives are described. This general description is followed by a detailed presentation of *wh-*, *som-* and *att-* exclamatives respectively, in sections 3.2.1– 3.2.3. In 3.3, I discuss the possibilities of negating, modalizing and embedding Swedish exclamatives.

3.1 Form and meaning of Swedish exclamatives

Two basic facts will serve as a point of departure to our investigation of Swedish exclamatives. Firstly, Swedish exclamatives have the form of prototypical

subordinate clauses and secondly, they are grammatical and convey speech acts without the presence of an overtly realized matrix. Consider the clauses in (1)–(3), represented below as (4)–(6).

(4) Vilken stor katt du (har) köpt!

Which big cat you (have) bought

'What a big cat you have bought!'

(5) Som ni (har) grisat ner!

SOM you (have) made.a.mess PART

'What a mess you've made!'

(6) Att du inte köpt bilen!

that you not bought car.the

'Oh, why haven't you buy the car!'

The question that arises, considering the contradictory characteristics displayed by the clauses in (4)–(6), is whether exclamatives should be analyzed as main clauses or subordinate clauses.

First of all, let us recapitulate the structural properties commonly associated with the term "subordinate clause" in the case of Swedish. These properties are often summed up in the following four points (cf. Platzack, 1987, p.79):

- A) They are introduced by a subordinating element, which can be a complementizer, a pronoun or an adverb.
- B) Finite instances of the auxiliary *ha* ('have') may be omitted.
- C) The subject is the first constituent after the subordinating element.

D) If present, sentence adverbials precede the finite verb¹.

The properties listed above constitute typical but not necessary criteria for classifying a clause as subordinate. On a textbook level, the fulfillment of one of these criteria is often considered sufficient for a subordinate clause classification (see, for example, Josefsson, 2009, p. 165).

It should be noted that the criteria in A) - D) are not completely parallel with respect to their applicability. The criteria in A) and C), respectively, can always be employed as tests for determining whether a particular clause is a subordinate clause or not. Criterion A) is straightforwardly binary; a clause either does or does not contain a subordinating element, meaning that A) is applicable to any clause.² As for criterion C), there are very few exceptions to the general rule that a clause must contain an overtly realized subject in Swedish, other than in imperative clauses of course, but they cannot be subordinated in contemporary Swedish anyhow. Consequently, criterion C) can also be applied to, practically, any clause. Concerning the criteria in B) and D), however, the picture is somewhat different. Both B) and D) require that the clause contains certain, non-obligatory elements and consequently they cannot always be applied as tests determining whether a particular clause is subordinate or not.

Although a categorization based on the criteria in A)–D) is overly simplified and unsatisfactory, not least due to the differences in applicability, it can nevertheless serve as a preliminary indication as to whether a particular clause is a main clause or a subordinate clause. If we apply the criteria in A)–D) to the exclamatives in (4)–(6), we find that the *wh*-exclamative in (4) fulfils criteria A), B) and C) and that the

¹ Marginally, a focusing or negating sentence adverbial may precede the subject of a subordinate clause, as exemplified in (i):

(i) Lisa vet att bara Kalle kan komma.
Lisa knows that only Kalle can come

² It should be pointed out that I accept the possibility of covert complementizers.

som-exclamative in (5) meets the criteria in A) and B), whereas the *att*-exclamative in (6) fulfils all four criteria.

As mentioned, criteria B) and D) are not always applicable since they require optional constituents. It should, however, be pointed out that *wh*- and *som*-exclamatives can never be tested according to criterion D); inserting a negating or modalizing sentence adverbial into these kinds of exclamatives always renders an unacceptable sentence, irrespective of whether it is placed before or after the finite verb. These restrictions are presumably due to semantic/pragmatic factors, rather than any structural property of the clauses. This matter is discussed in detail in section 3.3.

If we now turn to the basic meanings conveyed by exclamatives we may first note the rather obvious fact that exclamatives are used for making exclamations. Broadly speaking, this means that they express the speaker's surprise about and/or emotional reaction to, a particular state of affairs, conveyed by the clause.

Exclamatives commonly express the speaker's surprise about the high value of a property (a variable *x*) in a particular state of affairs. However, Swedish data show that exclamatives are not necessarily expressions of surprise. In Swedish, exclamatives can be used to express either that the speaker is surprised about the high degree of a variable *x* or that he or she finds a particular state of affairs somehow remarkable (but not necessarily surprising). Thus, the common semantic/pragmatic denominator for all three basic kinds of Swedish exclamatives can be formulated as a 'reaction to a state of affairs'. There seems to be a clear semantic/pragmatic dividing line that separates *wh*- and *som*-exclamatives from *att*-exclamatives. It appears that the former kinds are always expressions of surprise, whereas the latter kind is normally not.

Let us begin by looking at *wh*- and *som*-exclamatives. As pointed out above, they are expressions of surprise. However, surprise alone does not give us an exhaustive description of the meaning that these clauses convey. Normally, an

additional meaning component is also present. We might call this component ‘qualitative assessment’. Consider (7) and (8).

(7) Vad långhårig du har blivit!
what longhaired you have become
 'My, your hair has really grown long!'

(8) Som du slåss!
SOM you fight
 'My, the way you fight!'

Both the *wh*-exclamative in (7) and the *som*-exclamative in (8) involve an implicit scale and the speaker expresses his or her surprise about the high value that a variable *x* has on this scale. In the case of the *wh*-clause in (7), the speaker is surprised about the length of the listener's hair and in (8) he or she finds the degree (or possibly the manner) to which the listener fights surprising.

In addition to surprise, the speaker typically also expresses a qualitative assessment of the state of affairs denoted in the clause. He or she may find it good or bad, pleasing or displeasing. In isolation, the exclamative clauses themselves, normally, do not give sufficient information as to decide the more exact nature of the speaker's reaction. In order to determine, for instance, whether the speaker finds the particular state of affairs denoted by the clause good or bad, contextual factors must be taken into consideration (Teleman et al, 1999, bind 4, pp 765–766). The state of affairs denoted in (7), for example, is 'your hair has (really) grown long'. Depending on the context and speech situation in which this particular exclamative is uttered, the nature of the speaker's reaction to this state of affairs can differ. In order to decide whether the speaker finds the surprising hair length pleasing or displeasing, we must know, or be able to infer, something about his or her

preferences concerning haircuts.

The *wh*-exclamative in (7) and the *som*-exclamative in (8) both convey the speaker's surprise. *Att*-exclamatives, however, differ from the aforementioned kinds of exclamatives, since they do not typically express surprise. Consider (9).

- (9) Att du aldrig kan städa ditt rum!
that you never can clean your room
 'Why can't you ever clean your room!'

The clause in (9) denotes a particular state of affairs, namely that 'you (can) never clean your room'. A speaker uttering an *att*-exclamative, treats the state of affairs denoted in the clause as known, or immediately inferable, to both himself and the hearer. This is seen in (9), where it does not come as a surprise to the speaker, that the addressee hasn't cleaned his or her room. What the speaker expresses is rather his or her discontentment with the state of affairs denoted in the *att*-clause.

Although an *att*-exclamative, as in (9), does not have to convey a surprise reading, there are contexts where such clauses do express the speaker's surprise about the state of affairs denoted in the clause. Consider (10).

- (10) A: Greger säger att grisar är lika mycket värda som människor.
Greger says that pigs are as much worth as humans
 'Greger says that pigs are just as valuable as people.'

- B: Att man ens kan tänka en sådan tanke!
att one even can think a such thought
 'I can't believe anyone can even think such a thought!'

In the case of (10), it is reasonable to regard the *att*-exclamative in B as an expression of surprise. The speaker is surprised about a state of affairs that he or she has only just become aware of.³ Consequently, we may conclude that *att*-exclamatives differ from the two other kinds of exclamatives, with regard to the meaning component of surprise. Unlike *wh*- and *som*-exclamatives, an *att*-exclamative does normally not convey the speakers' surprise about the state of affairs denoted in the clause. This does however not mean that *att*-exclamatives are never expressions of surprise. Provided that certain contextual requirements are met (as in (10)), they may well express surprise, in addition to the obligatorily present meaning of qualitative assessment.

The meaning component that all is always present in all three kinds of Swedish exclamatives is that of 'qualitative assessment'. This is, for instance, seen in (10), where the speaker clearly expresses that he or she is appalled with the fact that someone can even conceive of the idea to claim that pigs are as valuable as people.

To sum up the possible interpretations of the three basic kinds of exclamatives in Swedish, we conclude that they always convey an emotionally oriented reaction to a state of affairs expressed in a proposition P. This reaction always involves a qualitative assessment which can be one of liking or disliking. Further, we may conclude that the three categories of exclamatives differ from each other concerning the possibilities of conveying a surprise reading. *Wh*- and *som*-exclamatives always seem to be associated with a surprise reading, whereas *att*-exclamatives may, but do not have to convey a surprise reading.

Thus far we have seen that exclamatives convey various (emotional) reactions

³ It is worth noting that the *att*-exclamative in (10) B, requires a preceding utterance such as that in (10) A. This points towards another difference between *wh*- and *som*-exclamatives on the one hand and *att*-exclamatives on the other, namely that the former kinds are significantly much better in out of the blue contexts than the latter. It seems that *att*-exclamatives have to be reactions to states of affairs that are somehow given or salient in the context, whereas *wh*- and *som*-exclamatives can be used to draw the listeners attention to a state of affairs that is not necessarily mentioned or otherwise contextually salient. I thank Johan Brandtler for bringing this to my attention.

to states of affairs. Let us now turn to their place in a communicative exchange. Exclamatives express exclamations and, as pointed out by Rosengren (1992, p.270), exclamations are typically initiative speech acts. In other words, exclamatives cannot serve as answers. Consider (11)–(13).

(11) Q: Vad tycker du om vädret idag?

'What do you think of the wheather today?'

A: Vilket underbart väder vi har fått!

'What a lovely weather we have today!'

(12) Q: Hur var det på jobbet?

'How was your day at work?'

A: Som jag har jobbat!

'How I have worked!'

(13) Q: Vad tycker du om katten?

'What do you think of the cat?'

A: Att han är så stor!

'How big he is!'

The fact that exclamatives normally are not appropriate as answers to questions is not unexpected, considering the nature of the speech act exclamation. Exclamations are immediate verbal reactions to things, states or courses of events that the speaker has only just become aware of. This explains the direct, deictic nature of exclamatives. That a clause expressing such a speech act cannot serve as an answer is more or less self evident. There are, however, apparent exceptions, which are worth commenting on. Consider (14) and (15) below.

(14) A: Greger kom med rosor idag.

'Greger brought roses today'

B: Vilket charmtroll han är!

'What a bundle of charm he is!'

(15) A: Greger spöade tydligen upp en åldring igår.

'Apparently, Greger beat up an old man yesterday.'

B: Att det ens kan finnas såna människor!

'I can't believe there are people like him!'

The exclamatives in (14 B) and (15 B) connect, and are reactions to their respective preceding statements. In light of this it might perhaps seem reasonable to consider them responsive utterances. However, since exclamatives do not serve as linguistic reactions to questions, it must be maintained that they are not answers. It can further be established that a question/answer-exchange requires two speakers. This does not hold for the sentence pairs in (14) and (15). In both cases, it is throughout possible that both sentences A and B are uttered by the same person. We may thus conclude that the exclamatives in (14 B) and (15 B) cannot be labelled responsive.

As we have just concluded, exclamatives cannot serve as answers to questions. They can however constitute verbal reactions to situations. This is in fact the typical case; the speaker utters the exclamative as a reaction to a particular state of affairs. In that case the exclamative is not, so to speak, motivated by any preceding utterance. However, as illustrated by the dialog pairs in (14) and (15), an exclamative may also constitute a reaction to a preceding statement. In such cases, the exclamative serves as a comment to a linguistically expressed state of affairs. In light of this, we may conclude that a speaker may react to a linguistically expressed stimulus just as he might to a non-linguistic state of affairs which he observes. In other words, one can compare the initial declaratives in (14) and (15) to any other,

non-linguistic, stimuli to which one might react. A speaker may just as well utter the exclamative in (14) in reaction to seeing Greger bring roses for someone. Reacting to a linguistically expressed state of affairs is, in principle, not different from reacting to an observed, non-linguistic state of affairs.

To sum up, exclamatives are typically immediate verbal reactions to non-linguistic states of affairs. Consequently, they normally convey initiative speech acts. But they may also serve as reactions to preceding statements. Crucially, however, an exclamative cannot be used as an answer to a question.

3.2 Detailed descriptions and preliminary analyses

This section serves the two, partly overlapping, purposes of firstly providing more detailed accounts of the three basic kinds of Swedish exclamatives and secondly presenting my preliminary analyses of their respective internal structure. These preliminary analyses will later be elaborated on further in section 7.

3.2.1 *Wh*-exclamatives

Wh-exclamatives⁵ are scalar, meaning that a speaker who utters a *wh*-exclamative expresses his or her surprise about the high value that a variable *x* has on an implicit scale. Consider the examples in (16) and (17).

⁵These clauses are standardly referred to as *wh*-exclamatives. This particular term is however not entirely satisfactory, since it may suggest that the *wh*-elements found in exclamatives are semantically parallel to those that introduce questions, and this does not seem to be the case. In *wh*-questions, the *wh*-element can be considered to be an operator, which is tied to an open (unspecified) variable in the clause. This does not apply to the elements introducing *wh*-exclamatives. These *wh*-elements are not associated with the semantics of questions. Furthermore, *wh*-exclamatives can also be introduced by *så* ('such') or *sådan* ('such'), neither of which can be labeled *wh*-elements. Nevertheless, for want of a better term, I will stick to the conventional terminology and refer to these clauses as *wh*-exclamatives (including those introduced by *så* or *sådan*). The differences between *wh*-elements in questions on the one hand and exclamatives on the other will be discussed further in section 7.4.1.

- (16) Vilka stora öron du har!
which big ears you have
 'What big ears you've got!'

- (17) Vad små fiskarna är!
what small fish.the are
 'How small the fish are!'

In (16), the speaker expresses that he or she finds the addressee's ears remarkably or surprisingly big and in (17), he or she expresses surprise or astonishment about how small the fish are. In both cases the speaker conveys that he or she thinks that the degree of largeness or smallness, respectively, has a unexpectedly or remarkably high value on an implicit scale (cf. Teleman et al, 1999, bind 4, p.766 and Delsing, 2010).

Wh-exclamatives may be introduced either by the *wh*-elements *vilken*, lit. 'which' and *vad*, lit. 'what' or by the *so/such*-elements *så*, lit. 'so', *så(da)n*, lit. 'such' or *sicken* 'such' (Delsing, 2010, p. 18). These elements have different distributions. The most important difference is that between *vilken* and *vad*, as shown by Delsing. He writes: “*Vad* is adverbial (typically occurring in AP:s), whereas *vilken* only occurs in NP:s. *Vad* can be used with adverbs, adjectives and verb phrases (which is impossible with *vilken*), and *vilken* may be used with nouns (which is impossible with *vad*)”. The difference is illustrated in (18) and (19) (examples from Delsing 2010, pp. 20–21).

- (18) a. Vad/ *Vilken dum han är!
 what/ which stupid he is
 b. Vad/ *Vilket du röker ofta!
 what/ which you smoke often

- (19) a. Vilken/ *Vad idiot han är!
 which/ what idiot he is
 b. Vilket/ *Vad monster du har skapat!
 which/ what monster you have created

Drawing on Delsing (2010, p. 21), I assume that *vilken* is located in a determiner position of a DP and that *vad* is an adverbial in an AP. This gives us the structures illustrated in (20) and (21) (after Delsing (2010, p. 21)).

- (20) [DP Vilken [idiot]] han är!
 which idiot he is

- (21) [AP Vad dum] han är!
 what stupid he is

The structures represented in (20) and (21) illustrate a point that is highly relevant to the present study, namely that the *wh-* or *such-*element forms a single constituent with the nominal or adjectival head. On the basis of this observation, we may preliminarily assume the following structure for *wh-*exclamatives:

- (22) a. [_{CP,Spec-CP} [_{DP} Vilka idioter]_i C [_{TP} han [_{vP} känner e_i]]]]!
 b. [_{CP,Spec-CP} [_{AP} Vad dum]_i C [_{TP} han [_{vP} är e_i]]]]!
 c. [_{CP,Spec-CP} [_{AP} Så snäll]_i C [_{TP} han [_{vP} är e_i]]]]!

The status of C will be discussed in section 7.4.1.

3.2.2 *Som*-exclamatives

Just as *wh*-exclamatives, *som*-exclamatives are scalar, meaning that a speaker who utters a *som*-exclamative typically expresses his or her surprise about the high value that a variable *x* has on an implicit scale. This is illustrated in (23).

- (23) Som pojken svettas!
 SOM *boy.the sweats*
 'My, does he sweat a lot!'

The speaker who utters the exclamative in (23) expresses that he or she is surprised about how much the boy sweats (or possibly the manner in which he sweats). In other words, the verb phrase *svettas* is modified with respect to degree (or on a more peripheral reading, manner).

As pointed out by Delsing (2010, p.26), *som*-exclamatives are restricted to modifying verb phrases. They cannot modify adverbials or adjective phrases. Consider the sentences in (24)–(25).

- (24) * Som han svettas mycket!
 SOM *he sweats much*
 Intended meaning: 'My does he sweat a lot!'

- (25) * Som han är svettig!
 SOM *he is sweaty*
 Intended meaning: 'My, is he sweaty!'

(24) is a *som*-exclamative modifying an adverb phrase (*mycket*) and (25) is a *som*-exclamative which modifies an adjectival phrase. As indicated above, both are ungrammatical. However, as can be seen in (26) and (27), these restrictions do not

apply to *wh*-exclamatives.

- (26) Vad han svettas mycket!
what he sweats much
 'My, does he sweat a lot!'

- (27) Vad han är svettig!
what he is sweaty
 'My, is he sweaty!'

As illustrated in (26) and (27), both adverb phrases and adjectival phrases may be modified by *wh*-exclamatives introduced by *vad* 'what'.

The surface structure of a *som*-exclamative is parallel to that of relative clauses and comparative clauses introduced by *som*. Consider the sentences in (28) and (29).

- (28) Han snusar lika mycket som hon röker.
he takes.snuff like much SOM she smokes
 'He takes snuff just as much as she smokes.'

- (29) Som hon röker!
 SOM *she smokes*
 'My, does she smoke a lot!'

The sentence in (28) consists of two clauses, a matrix (*Han snusar lika mycket*) and a comparative clause introduced by the complementizer *som*, (*som hon röker*). (29) is a *som*-exclamative. As we can see, the exclamative clause displays the very same surface structure as the comparative clause in the preceding example. The obvious

difference between the two kinds of clauses exemplified in (28) and (29) is that the comparative clause requires an overtly realized matrix, whereas the exclamative does not.

A property common to all *som*-clauses is that they, at least on a superficial analysis, seem to lack a constituent. This point is illustrated by the sentence pairs in (30)–(33), where the "missing" constituent is an argument of the verb in the relative clause.

(30) Jag såg mannen som du träffade.

I saw man.the SOM you met

'I saw the man that you met.'

(31) * Du träffade.

you met

(32) Som det blev!

SOM it became

'Outrageous/fantastic etc., the way things finally turned out!'

(33) * Det blev.

it became

The relative clause in (30) is grammatical although it lacks an overt realization of the object, which is otherwise part of the valency of the verb *träffa* 'meet', as illustrated by the main clause in (31) that is ungrammatical due to the missing object. The *som*-exclamative in (32) is parallel to the relative clause. It is grammatical without an overt realization of the predicative, which is normally an obligatory argument of the verb *bli* 'become' in a regular main clause, as we can

gather from the ungrammatical sentence in (33). As we shall see, all three kinds of *som*-clauses and their "missing" constituents can be given a unified account within a minimalist framework.

Under certain conditions, Swedish *som*-clauses may contain overtly realized material in Spec-CP. This is for instance the case in indirect *wh*-questions like the one in (34), where Spec-CP is filled by the pronoun *vem*'who'.

- (34) Karin undrade vem som inte kunde komma på festen.
Karin wondered *who* SOM *not could come on party.the*
 'Karin wondered who couldn't come to the party.'

Most Swedish *som*-clauses, however, do not (and indeed cannot) contain any overtly realized constituent in Spec-CP. This is for instance the case with relative clauses introduced by *som*. Following Platzack (2000), Stroh-Wollin (2002) and Brandtler (2010), I assume that such *som*-clauses contain an operator situated in Spec-CP. This operator binds an empty position further down in the structure (in the case of relative clauses, presumably in the vP). The operator is coindexed with the empty position and typically has the same reference as the noun phrase that the relative clause modifies. The proposed structure is illustrated in (35).

- (35) Mannen_i [CP Op_i C° som [vP Ø_i köpte hunden]]
man.the SOM *bought dog.the*
 'The man who bought the dog'

In the relative clause in (35), the operator in Spec-CP binds an empty position in Spec-VP, corresponding to the "missing" subject. The operator is coindexed with

the noun phrase that is modified by the relative clause⁶.

This operator analysis can be extended to include comparative clauses introduced by *som*, as in (36).

- (36) Han snusar lika ofta_i [CP Op_i C° som [TP hon [vP röker Ø_i]]].
he takes.snuff like often SOM she smokes
 'He takes snuff just as often as she smokes.'

Returning to the *som*-exclamatives, I can see neither theoretical nor empirical reasons to exclude these clauses from the operator analysis presented above; quite on the contrary. The operator analysis can in fact, very successfully, account for the

⁶ On the basis of negated cleft constructions, Stroh-Wollin (2002) argues that the reference of the constituent to which the operator in a *som*-clause corresponds is contextually determined. Consider (i).

- (i) Det var *inte* Kalle som Lisa träffade.
it was not Kalle SOM Lisa met
 'It wasn't Kalle who Lisa met.'

Stroh-Wollin reasons along the following lines: In the relative clause in (i), it is presupposed that Lisa met someone. However, as the matrix clause is negated, this someone cannot be the subject of the main clause. On the basis of examples like the one in (i), she consequently argues that the reference of the operator is determined on the basis of pragmatic/contextual factors. In this case, however, I believe Stroh-Wollin is jumping to a conclusion. She overlooks the crucial fact that *inte Kalle* 'not Kalle' identifies a semantically restricted set. As far as indexation is concerned, there is no principal difference between meeting *Kalle* and meeting *inte Kalle*. Both identify a restricted set. For this reason, I stick to the generalization that the operator of a relative *som*-clause is coindexed with the noun phrase that the relative clause modifies. As a consequence, I have to conclude that *som*-exclamatives differ from relative *som*-clauses in this respect, since the operator in a *som*-exclamative, for obvious reasons, cannot be coindexed with a constituent in the matrix clause. This is discussed further in section 7.4.2.

characteristics of *som*-exclamatives. I argue that the internal structure of a *som*-exclamative is identical to that of any other *som*-clause. In effect, this means that we, by extending the operator analysis to include also the internal structure of exclamative *som*-clauses, can provide a unified account of all Swedish *som*-clauses. Consequently, I further argue that the differences in use and meaning between the three kinds of *som*-clauses are due, not to clause internal but to clause external factors and to the nature of the operator. This is discussed in detail in section 7.

Delsing (2010, p. 26) claims that *som*-exclamatives are always associated with a manner reading. Although a manner reading is certainly possible, I do not agree with Delsing, that all *som*-exclamatives have a manner reading. It seems clear that they can also be associated with a degree reading. In fact, the degree reading even seems more salient and unmarked than the manner reading. Consider (37)⁷ and (38).

(37) Som du bor!
 SOM *you live*
 'Your flat is really big/small/central...'

(38) Som han svettas!
 SOM *he sweats*
 'My, does he sweat a lot!'

The clause in (37) clearly has a manner reading. Consequently, it is reasonable to assume that the operator in Spec-CP binds an empty position corresponding to a manner adverbial. The *som*-exclamative in (38) can only marginally be interpreted as having a manner reading. What it conveys is instead a degree reading. Hence, the operator in Spec-CP binds an empty position corresponding to an adverbial of degree. The interpretation of *som*-clauses that have a degree reading is much more

⁷ Example (35) is taken from Delsing (2010).

fixed than that of clauses with a manner reading. They always express that the action denoted by the verb is carried out to a high degree. The clause in (38), for instance, expresses a high degree of sweating.

The different readings of the exclamatives in (37) and (38) can be directly related to lexical restrictions on gradability. The verb *bo* 'to live' is not gradable. You either live somewhere or you don't. In contrast, *svettas* 'to sweat' is a clear example of a gradable verb. You can sweat a little, pretty much or very much (and everything in between). This explains why a degree reading is available in (38) but not in (37). As mentioned, the exclamative in (38) can marginally be associated also with a manner reading. Consequently, we may conclude that gradability does not completely block out a manner reading. It should however be emphasized that the degree reading is significantly more salient than the manner reading in cases such as (38), where the verb is gradable. For this reason, I am inclined to argue that the degree reading is the typical and unmarked interpretation and that a manner reading arises only in very specific contexts or in cases where the verb is not gradable and consequently incompatible with a degree reading.

In connection with the discussion concerning the two possible readings of *som*-exclamatives, it is important to note that those *som*-exclamatives that convey a manner reading, do not, as such, constitute exceptions to the general characteristic that *som*-exclamatives are scalar. Both those *som*-exclamatives that convey a degree reading and those that convey a manner reading involve a scalar meaning. What essentially separates them is the element that is associated with this scalarity. In cases where the *som*-exclamative conveys a degree reading, it is the action, state or process denoted by the gradable verb that has a high value on an implicit scale. In the case of *som*-exclamatives expressing a manner reading, on the other hand, it is the manner adverbial that has a high value on the implicit scale. Consider (39).

- (39) Som du bor!
 SOM *you live*
 'Your flat is really nice/awful etc.'

The operator in (39) corresponds to a manner adverbial such as *fint* 'nice' or *hemskt* 'awful'. The crucial point is that this manner adverbial is scalar. Something can, for instance, be nice, pretty nice or even very nice (and everything in between). Consequently, it is the manner adverbial that contributes with scalarity in *som*-exclamatives which convey a manner reading. What a speaker who utters a *som*-exclamative like the one in (39) expresses is thus that the covert manner adverbial has an unexpectedly high value on this implicit scale.

Before moving on to *att-exclamatives*, I will conclude this section by presenting a proposal for a preliminary analysis of *som*-exclamatives. The structure that I assume is represented in (40).

- (40) [_{CP} OP_i C° Som [_{TP} han [_{vP} svettas Ø_i]]] !

As can be concluded from the structural representation in (40), I argue that the internal structure of an exclamative *som*-clause is identical to that of other *som*-clauses.

3.2.3 *Att-exclamatives*

Att-exclamatives are introduced by the complementizer *att*. They differ from the other two categories of exclamatives in one significant respect. Unlike *wh*- and *som*-exclamatives they are polar and do not involve any scalar meaning. Instead, a speaker who utters an *att*-exclamative expresses that he or she finds it remarkable and possibly surprising that P is the case. Consider (41) and (42).

adverbials. This is shown in (44)–(46).⁸

(44)* Vilka stora kor Gusten nog har!
which big cows Gusten probably has

(45)* Som pojken faktiskt svettas!
SOM boy.the actually sweats

(46)* Att han kanske flyttat!
that he maybe moved

That an exclamative cannot be modalized by a sentence adverbial is presumably due to the fact that its propositional content is presupposed. The speaker presents and treats the proposition denoted by the clause as uncontroversially true, and modalizing a presupposed proposition, particularly with respect to epistemicity, gives rise to a pragmatic/semantic clash, not only in the case of exclamatives. Consider (47).

(47) # Sture ångrar att han kanske köpte bilen.
Sture regrets that he maybe bought car.the
 'Sture regrets that he maybe bought the car.'

As a result of the fact that the matrix verb *ångra* 'regret' is factive, the *att*-clause in (47) (or rather its propositional content) is presupposed. However the *att*-clause is also modalized epistemically by the sentence adverbial *kanske* 'maybe', and this results in a semantic/pragmatic clash. Expressing doubts as to whether a particular

⁸ However, one informant says that he would judge (44) and (46) grammatical if they were modalized by *faktiskt* 'actually'.

state of affairs is true is simply not compatible with presupposing its truth. The same semantic/pragmatic restrictions apply to exclamatives. That the propositional content of exclamatives is presupposed is shown and further discussed in section 6.

Regarding the possibilities to negate the clauses, the discussed types of exclamatives differ from each other. *Wh-* and *som-*exclamatives cannot be negated, whereas *att-*exclamatives can. Consider (48)–(50).

(48)* Vilken fet katt du inte har!
which fat cat you not have

(49) * Som pojken inte svettas!
SOM boy.the not sweats

(50) Att han inte skäms!
that he not is.ashamed
 'I can't believe he isn't ashamed of himself!'

The possibilities of negating the different categories of exclamatives can be related to the division into scalar exclamatives on the one hand and polar exclamatives on the other. As pointed out by Rosengren (1992, p. 302), the facts illustrated in (48)–(50) are to be expected. When a speaker utters a *wh-* or *som-*exclamative, s/he expresses that s/he finds the value of a variable in the clause remarkably high. The reason why these exclamatives cannot be negated is simply that a negated proposition is incompatible with a scalar reading. One cannot be surprised about the value of a variable *x* in an event or state of affairs that does not take place or exist, respectively. That *att-*exclamatives, on the other hand, can be negated is also to be expected. They are polar, meaning that they express that the speaker finds it remarkable or possibly surprising that the propositional content of

the clause is true. The state of affairs that are the source of the emotional reaction/assessment may just as well be P as not P and consequently, *att*-exclamatives can be negated.

Rosengren's explanation to the restrictions on negating *wh*- and *som*-exclamatives is appealing in its simplicity and straightforwardness and it does account for most cases. There are however cases in which it doesn't seem to provide a completely satisfactory explanation. Consider (51) and (52).

(51) Som han ljuger!

SOM *he lies*

'He is always lying!'

(52) * Som han inte talar sanning!

SOM *he not speaks truth*

Intended meaning: "He never tells the truth!"

As we can see, the clause in (51) is grammatical whereas the negated exclamative in (52) is ungrammatical. However, from a semantic point of view they are very similar. Both express that 'he is lying'. In light of this similarity one would perhaps expect that both would be grammatical.

In order to better understand the restrictions illustrated in (51) and (52), we must once again return to the operator analysis presented in 3.2.2. It was shown that *som*-exclamatives can be assumed to contain an operator in Spec-CP, which binds an empty position further down in the structure, corresponding to an adverbial of manner or degree. To keep things simple, let us take a *som*-exclamative with a degree reading as our point of departure. Consider the analysis of (53).

(53) * [_{CP} Op_i Som] han inte talar sanning Ø_i

The operator in (53) binds an empty position which corresponds to an adverbial of degree. That the clause is ungrammatical is expected, because the predicate cannot be modified with respect to degree, a fact that can be concluded from the main clauses in (54) and (55).

(54) Han talar sanning.

he speaks truth

'He speaks the truth.'

(55) * Han talar sanning mycket

he speaks truth much

As we can see, the clause in (54) is grammatical. In (55) on the other hand, the predicate is modified by a degree adverbial, which results in an ungrammatical sentence. If a certain predicate cannot be modified by an overtly realized degree adverbial in a regular main clause, we cannot expect the same predicate to be grammatical when modified in a *som*-clause containing an operator that binds a position corresponding to a degree adverbial.

Other restrictions on *som*-exclamatives can be explained along the same lines. Consider (56)-(59).

(56) Han bryter mycket.

he speaks.with.accent much

'He speaks with a strong accent.'

(57) * Han talar med brytning mycket.

he speaks with accent much

- (58) [_{CP} Op_i som] han bryter Ø_i!
 SOM *he speaks.with.accent*
 'My, he really has a strong accent!'

- (59) * [_{CP} Op_i som] han talar med brytning Ø_i!
 SOM *he speaks with accent*

On the basis of (56), we can conclude that the verb *bryta* 'to speak with an accent' may be modified by a degree adverbial. As seen in (57), the verb+PP-string *tala med brytning* 'speak with an accent' is ungrammatical when modified by the same degree adverbial. It is to be expected that the *som*-exclamatives in (58) and (59) behave accordingly. *Bryta* may be modified by a degree adverbial and this is just as acceptable if this adverbial is covert and bound by and operator. *Tala med brytning*, on the other hand, does not allow an adverbial of degree, irrespective of whether it is overtly realized as in (56) or covert and bound by an operator as in (59).

Having now looked at the possibilities of modalizing and negating exclamatives, we will finally, consider the possibilities of embedding them under overt matrices. As we shall see, all three categories of exclamatives can be embedded under regular declarative matrices. Consider (60)–(62).

- (60) Det är fruktansvärt vilka krämpor Gusten har!
 it is terrible which ailments Gusten has
 'They're just terrible, Gusten's ailments!'

- (61) Det är hemskt som han svettas!
 it is awful SOM he sweats
 'It's just awful, the way he sweats!'

(62) Det är fantastiskt att pojken inte svimmar!

it is fantastic that boy.the not faints

'It's amazing that the boy doesn't faint!'

The sentences in (60)–(62) show that embedded exclamatives have the same structure as independent ones, i.e. that of prototypical subordinate clauses.

Concerning the matrices under which exclamatives can be embedded, two properties are of crucial importance. Firstly, the predicates of the matrices are normally factive (cf. Teleman et al., 1999, bind 4 p. 563). Examples of possible predicates are adjectives and participles such as *beklämmande* 'deplorable', *otroligt* 'unbelievable', *hemskt* 'awful', *chockerande* 'shocking' and *förvånande* 'surprising'.

The second property that should be mentioned about the matrix clause is the fact that it normally cannot be negated. Consider (63)–(65)⁹.

(63) #Det är inte fruktansvärt vilka krämpor Gusten har!

it is not terrible which ailments Gusten has

'They aren't terrible, the ailments that Gusten has!'

(64) # Det är inte hemskt som han svettas!

it is not awful SOM he sweats

'It isn't awful, the way he sweats!'

(65) # Det är inte fantastiskt att pojken inte svimmar!

it is not fantastic that boy.the not faints

'It isn't fantastic that the boy doesn't faint!'

⁹ The sentences in (63)–(65) aren't necessarily bad in all contexts and uses. They may be used by a speaker who objects to a particular wording used in a preceding utterance. It should however be emphasized that the negation, in such metalinguistic cases, only alters the factive predicate. It does not cancel the presupposition.

The sentences in (63)–(65) cannot be understood as exclamations of any sort. This is easily explained if one considers the role of the matrix predicate. As we concluded in section 3, an exclamation expresses that the speaker finds P, or the high value of a variable in P, surprising or remarkable. When an exclamation is embedded, the matrix predicate ('fantastic', 'awful' etc.) is the element that carries the meaning component that something is remarkable or surprising. If the matrix is negated, then this meaning component is negated and that is incompatible with an exclamation of the kind normally expressed by exclamatives.

4. A brief survey of Danish and Icelandic

The purpose of this section is to draw attention to certain features of exclamatives in Danish and Icelandic. These features are relevant, primarily, in connection with the discussions in sections 6 and 7. The Danish data support the view that Swedish exclamatives are subordinate whereas the Icelandic data support the conclusion that Swedish exclamatives are presupposed. For a detailed account of exclamatives in Danish and Icelandic, the reader is referred to Delsing (2010) and Gisli Jónsson, (2010).

4.1 V-to-C movement in Danish exclamatives

Scandinavian exclamatives normally display a prototypical subordinate clause word order. This applies to Swedish, Norwegian and Icelandic alike. Danish, however, deviates from this general pattern. In Danish, *wh*-exclamatives come in two variants, one with subordinate clause word order (as in (66)) and one with main clause word order (as in (67)) (Delsing, 2010, p. 31).

(66) Hvor du har mange penge!
how you have many money
 'My, what a lot of money you've got!'

(67) Hvor har du mange penge!
how have you many money
 'My, what a lot of money you've got!'

The clause in (66) patterns with the Swedish *wh*-exclamatives in displaying subordinate clause word order. The clause in (67), on the other hand, is different. It has a prototypical main clause word order, where the finite verb occupies the second position. Considering that Danish is a V2 language it is most reasonable to assume that this is an instance of V-to-C movement (or V-to-Force movement, in a split CP model).

The exclamative with the typical main clause word order differs from that with the prototypical subordinate clause word order in one significant respect: It cannot be embedded (Delsing, 2010, p. 32)¹⁰. Consider the ungrammatical sentence in (68), where the exclamative clause has V2 word order, and the grammatical sentence in (69), where the exclamative clause has a prototypical subordinate clause word order.

¹⁰ It should be mentioned that intuitions seem to differ. According to an informant whom I have been in contact with, the following sentence is grammatical:

i) Det er utrolig hvor har du store fødder!
it is incredible how have you big feet

However, a possible reason for this informant's judgment of this particular sentence could perhaps be that he perceived it as consisting of two main clauses. The sentence would then correspond to (ii), in which case the second clause isn't embedded and we consequently would expect it to be judged as grammatical.

(ii) It is incredible. What big feet you have got!

(68)* Det er utrolig hvor har du mange penge!
it is unbelievable how have you many money
 'My, what a lot of money you've got!

(69) Det er utrolig hvor mange penge du har!
it is unbelievable how many money you have
 'My, what a lot of money you've got!'

On the basis of the data presented in (68) and (69), I draw the conclusion that Danish *wh*-exclamatives, unlike Swedish ones, come in both a main clause and a subordinate clause variant. The differences concerning the possibilities of embedding the two kinds of Danish exclamatives are to be expected if one simply assumes that different syntactic structures reflect differences in hierarchical status. I argue that those *wh*-exclamatives that display a prototypical main clause structure in Danish are in fact main clauses. Consequently, I assume that the finite verb has undergone V-to-Force-movement in these clauses. This accounts for the surface structure of these exclamatives, but, more importantly, it also explains why they cannot be embedded. That the finite verb has moved from V to Force has two crucial consequences. Firstly, it means that the clause is coded for speech act value and secondly it means that the only possible complementizer position is occupied. Both of these consequences of V-to-Force-movement rule out the possibility of subordination. According to the main clause/subordinate clause dichotomy outlined in section 2, a clausal structure can carry only one specification for speech act value. Considering that speech act value is directly linked to V-to-Force-movement in the Scandinavian languages, embedding a Danish *wh*-exclamative that displays the prototypical main clause word order would violate this rule. The main clause/subordinate clause dichotomy furthermore requires that a subordinate clause must contain a covert or overt complementizer in Force^o. This complementizer

anchors the clause in and relates it to the finiteness- and speech act value that is coded in a higher CP. As the relevant clauses display a prototypical main clause word order, which arguably is the result of V-to-Force-movement, it is reasonable to assume that the only possible complementizer position is occupied.¹¹

Concerning those Danish *wh*-exclamatives that have a prototypical subordinate clause structure, I assume that they are structurally parallel to their Swedish counterparts. In section 7, I propose an analysis according to which these clauses are in fact regular subordinate clauses, typically embedded under covert matrices.

4.2 Icelandic *að*-exclamatives

Icelandic has preserved its mood system to a much greater extent than Swedish. Its use of mood is interesting, not least in connection with exclamatives, since it may offer some clues as to how they should be analyzed in relation to the main clause/subordinate clause dichotomy.

The choice of mood in Icelandic subordinate clauses is largely dependent on the semantic properties of the matrix verb. Depending on whether the matrix predicate belongs to the class of (semi-)factives, non-factives or true factives, the finite verb of the subordinate clause may be either in the indicative or in the subjunctive. Semi-factives such as 'know' or 'discover', normally take complement clauses in the indicative, whereas non-factives such as 'say' or 'believe' and true factives such as 'awful' or 'deplorable' normally take complements in the subjunctive. Crucially, however, there are two different kinds of subjunctives, each of which is associated with its own class of matrix predicates. Sigurðsson (2010) distinguishes between the

¹¹ In section 6, I argue that the propositional content of a Swedish exclamative is presupposed. I assume that the presupposition is externally licensed through a factive adjective or an interjection, which constitutes a non verbal matrix, under which the exclamative is embedded. However, since I argue that Danish *wh*-exclamatives with V2 word order are main clauses, their propositional content cannot be presupposed in the same way. Tentatively, I propose the following solution to this problem: Danish main clause exclamatives are structurally presupposed in the same way as *wh*-questions. A *wh*-question requests the value of a variable x (corresponding to the *wh*-element) that yields a true proposition. Everything apart from the *wh*-element is presupposed. I argue that Danish main clause exclamatives are structurally presupposed in the same way as *wh*-questions. What separates the two clause types is that the *wh*-word has lost its rogativity in the case exclamative and only conveys a meaning of high degree.

(regular) subjunctive on the one hand and the periphrastic *skulu*-subjunctives ('shall'-subjunctives) on the other. Non factives normally take complements in the regular subjunctive, whereas true factives take complements in the *skulu*-subjunctive (Sigurðsson 2010, pp. 43–46). Consider the examples in (70) and (71), which are taken from Sigurðsson (2010, p. 45).

(70) Ég vona að tunglið **brosi**/*brosir/*skuli brosa.

*I hope that moon.the smiles.SBJV/*smiles.IND/*shall.SBJV smile*

'I hope that the moon smiles.'

(71) Það er gaman að tunglið **skuli brosa**/*brosi/?brosir.

*it is fun that moon.the shall.SBJV smile/*smiles.SBJV/?smiles.IND*

'It is fun that the moon smiles.'

As illustrated in (70), the non-factive matrix predicate *vona* 'hope' takes a complement clause in which the finite verb is in the subjunctive. Both the indicative and the *skulu*-subjunctive render the sentence ungrammatical. In (71), the matrix predicate is a true factive and consequently takes a complement clause in the *skulu*-subjunctive. The regular subjunctive is ungrammatical after this predicate and the indicative is only marginally acceptable. In a footnote, Sigurðsson comments on the marginally acceptable cases where the subordinate clause is in the indicative even though embedded under a true factive. He argues that the matrix clauses, in these cases, in fact contain a covert factive NP, which would explain the possibility of having the subordinate clause in the indicative. He writes: "True factives can be interpreted as taking a silent factive NP, like *the fact*, the silent NP in turn heading the complement clause:

- (i) a. I regret (~~the fact~~) that the moon smiles.
 b. (~~The fact~~) that the moon smiles is fun.

On a reading where a silent factive NP is semantically present, the complement may at least marginally be indicative" (Sigurðsson, 2010, p.45).

Thus far, we have concluded that the mood of an Icelandic subordinate clause is dependent on whether the matrix predicate belongs to the class of (semi-)factives, non-factives or true factives. Crucially, the periphrastic *skulu*-subjunctive is firmly linked to true factive matrix predicates. Interestingly, however, this is not the only environment in which the *skulu*-subjunctive occurs. It is also found in constructions which Sigurðsson call "independent clauses, with a subordinate form" (2010, p. 42). Consider (72)¹².

- (72) Að Maria skuli vera hér!
that Maria shall.subj be here
 'My, I had no idea Maria would be here!'

The clause in (72) is in fact an example of an Icelandic að-exclamative. It is a complementizer headed clause which lacks an overtly realized matrix clause and is used for making polar exclamations. Just as its Swedish counterpart, the *att*-exclamative, it displays two characteristic properties. Firstly, it has a prototypical subordinate clause structure, being introduced by a complementizer, and secondly it is factive in the sense that its propositional content is presupposed. Considering these properties and the fact that the *skulu*-subjunctive otherwise typically is found in subordinate clauses embedded under true factives, the idea immediately presents itself, that these seemingly independent að-clauses are in fact embedded under covert, true factives.

¹² The example was kindly presented to me by Halldór Sigurðsson.

Note that if mood is disregarded, the Icelandic *að*-exclamative in (72) patterns with the Swedish *att*-exclamative. The Icelandic data consequently lends support to the assumption that Swedish exclamatives are factive in the sense that their propositional content is presupposed and that this presupposition is licensed from outside of the clause which denotes the presupposed proposition. An analysis that shares Sigurðsson's insight is presented in section 6.

5. Previous main clause analyses

In this section, previous approaches to Swedish exclamatives are discussed in closer detail. In most of the analyses that have been put forth in the literature, it is argued (or more often just presupposed) that exclamatives are independent main clauses. Among those that adopt a main clause analysis are Rosengren (1992, 1994), Brandtler (2010), Teleman et al. (1999) and Delsing (2010). In this section, I present and comment on two analyses according to which exclamatives are main clauses, namely Teleman et al. (1999) and Delsing (2010).

5.1 A main clause analysis as suggested by Teleman et al. (1999)

It is the outspoken ambition of Teleman et al. (1999) to provide an exhaustive, yet purely descriptive grammar of the Swedish language. The authors strive to account for the surface structure of grammar, making as few theoretical assumptions as possible (cf. Teleman et al, 1999, bind 1, pp. 37–38). Such an approach is certainly motivated considering the descriptive purpose. Nevertheless, it is not possible to completely avoid making theoretical assumptions and choices, although they perhaps may be implicit. In this section, we will take a look at some of the consequences that the choices made by Teleman et al. have for their account of Swedish exclamatives.

In order to understand how Teleman et al. (1999) have reached their

categorization of exclamatives, we must turn to their definition of subordination. Since they strive to keep the description as close to the surface structure as possible, they are reluctant to assume covert structure (cf. Teleman et al., 1999, bind 1, pp. 37–38). This can be avoided by defining subordination in terms of overt constituenthood. Consequently, Teleman et al. define a subordinate clause as a clause that functions as a constituent in another, overtly realized clause. As a result of this view, the basic categories of Swedish exclamatives must be considered main clauses, since they lack matrices but still function as independent grammatical utterances. There are however instances of exclamatives where a finite matrix clause is realized. In such cases, the exclamatives meet the requirements for a subordinate clause classification. Consequently, Teleman et al. have to conclude that there are both main clause and subordinate clause instances of exclamatives. In fact, they discuss embedded exclamatives (such as *Det är förfärligt vilka stora fötter han har!* 'It's awful, what big feet he has') in a separate section, together with other subordinate clauses. Interestingly, the authors note in passing that the mentioned types of subordinate exclamatives have the same structure as their independent main clause counterparts. Although they do not comment on this further, it is an important observation, because it would mean that exclamatives would differ significantly from other clause types. The reason for this is that all other Swedish clause types that come in both a main clause and a subordinate clause version, normally display different structures depending on whether they are independent or not. In main clauses, the finite verb undergoes V-to-Force-movement. In subordinate clauses it does not, a difference that can be directly observed on the surface structure. If we are to follow the analysis presented in Teleman et al., however, we would have to conclude that this asymmetry does not apply to Swedish exclamatives.

5.2 A main clause analysis, following Delsing (2010)

The argumentation in this section is largely based on the assumption that Delsing's (2010) analysis in effect presupposes that Swedish exclamatives are main clauses. It should however be emphasized that Delsing himself does not address the question about whether exclamatives are main clauses or subordinate clauses in Swedish. In my view, however, it follows from Delsing's analysis that he considers these clauses to be main clauses. The most important reason for my conclusion is the fact that Delsing argues that Swedish exclamatives are asserted, a property which is normally not compatible with subordination.

Delsing's paper provides a survey of syntactic variation in Scandinavian exclamatives. He concludes that there are basically two possibilities as to how such an investigation can be carried out:

Either you define the sentence type of exclamatives in syntactic terms, and study the properties of these, or you define exclamatives in pragmatic terms, and investigate the range of syntactic variation in these. I have chosen to do the latter, mainly because the syntactic properties vary across languages (Delsing, 2010, p. 16).

It should be acknowledged that Delsing's approach does have certain advantages. By choosing to define exclamatives in pragmatic terms, one avoids the risk of overlooking relevant exclamative construction types by limiting the investigation to a specific structural configuration. However, Delsing's approach is also very likely to miss the target completely. The risk is that one ends up studying a particular illocution, rather than a clause type. This problem becomes obvious if we try to define another clause type in a similar way. The speech act 'question' could, for instance, be defined pragmatically as 'an utterance intended as a request for a particular piece of information'. If this definition was also extended to serve as a definition of the clause type 'question', one would necessarily also have to conclude

that a prototypical declarative structure used for making an inquiry is a question with respect to clause type, which would be an unfortunate analysis.

Without presenting further arguments in support of his view, Delsing claims that exclamatives contain an assertion and that this “assertion is related to a presupposition, typically a hidden expectation” (Delsing, 2010, p.16). He then presents the following definition of exclamatives: "I take the defining property of exclamatives to be a mismatch between the assertion and the presupposition. This mismatch often gives rise to a surprise effect” (Delsing, 2010, pp. 16–17).

According to Delsing's view, exclamatives are used to make statements, i.e. their propositional content is asserted. Consequently, what is presupposed is not the proposition denoted by the clause but the expected or normal case. Consider (73).

- (73) Vilka stora fötter du har!
which big feet you have
 'My, what big feet you've got!'

On Delsing's analysis, (73) asserts 'you have big feet' and presupposes the expected case of normal foot size.

Delsing's analysis suffers from three important weaknesses. Firstly it is not clear how he defines the notions of presupposition and assertion. In my view, it is not evident why the expectation of normality is a presupposition. Secondly, it is not made clear how exclamatives get their assertive force. Clearly it cannot be through the otherwise typical V-to-Force-movement.

Thirdly, as implied earlier, Delsing's definition seems more like a definition of a particular illocution (exclamation) than a clause type. This becomes clear if one considers an example such as (74), which is taken from Delsing (2010, p 24).

(74) ÄR jag trött!
am I tired
 'Boy, am I tired!'

Delsing claims that the clause in (74) is an example of a V1-exclamative, a kind of exclamative which, according to him, is found in substandard varieties of southern Swedish. Structurally they coincide with regular Swedish yes/no-questions, but they are distinguished by a "strong stress on the verb" (Delsing, 2010, pp. 24–25). On my analysis, the clause in (74) is a main clause question, as far as hierarchical status and clause type is concerned. It may perhaps be used to convey an exclamation but an exclamation is a speech act (which can be expressed by a number of different linguistic means), whereas an exclamative (arguably) is a clause type. These notions must be kept apart. The fact that the clause in (74) can be used to express an exclamation does not make it an exclamative, just as a declarative structure employed to ask a question shouldn't be categorized as question, with respect to clause type.

6. Presupposed propositions

On Delsing's analysis, exclamatives contain both an assertion and a presupposition. According to him the proposition denoted by the clause is asserted. What is presupposed is an expectation of normality. Delsing's analysis is however not unchallenged. On the contrary, it has repeatedly been argued that the proposition denoted by an exclamative is presupposed, rather than asserted. Among the proponents of this view are Zanuttini & Portner (2003), who investigate exclamatives on the basis of data from Italian, Paduan and English, and Abel (2010), who discusses English *what-a* and *how-very* exclamatives. Also in accounts of Swedish, it has been suggested that exclamatives are presupposed. Although they

do not present any arguments in support of their view, Teleman et al. (1999, bind, 4, p. 767) claim that Swedish exclamatives (or 'expressive main clauses', as they call them), are factive. They write: "In an expressive main clause, the speaker presupposes that the state of affairs that gives rise to the surprise, or that the evaluation is concerned with, is true"¹³. I agree with the analysis that the propositional content of an exclamative clause is presupposed, and in this section, I present arguments supporting the assumption that Swedish exclamatives are factive.

The notion presupposition is often considered to be, in essence, a semantic concept and normally, consistency under negation provides a clear indication that a particular proposition is presupposed. This means that a proposition A presupposes a proposition B if B is true irrespective of whether A is affirmative or negative. This is illustrated below in (75).

(75) a. Kalle ångrar att han köpte bilen.

Kalle regrets that he bought car.the

'Kalle regrets that he bought the car.'

b. Kalle ångrar inte att han köpte bilen

Kalle regrets not that he bought car.the

'Kalle does not regret that he bought the car.'

As can be seen in (75), it is true that Kalle bought the car, irrespective of whether the matrix is negated or not. This allows us to conclude that the proposition conveyed by the *att*-clause is presupposed.

Unfortunately, a test of the kind exemplified in (75) cannot be felicitously applied to exclamatives, since their matrices cannot be negated (see section 3.3). Instead, I adopt a pragmatically oriented definition of presupposition (which, as

¹³ My translation.

such, does not contradict the semantic definition): A proposition is presupposed if the speaker presents and treats it as given and uncontroversially true. According to this view, the crucial difference between an asserted proposition and a presupposed one is that its truth value is up for discussion in the former case but not in the latter. A hearer may object to the truth of the presupposed proposition but it cannot be done in the same direct way as when the proposition is asserted by the speaker. In order to object to a presupposition, its truth value must be explicitly brought up to negotiation by the hearer and that requires more elaborate linguistic means than simply denying the truth of an asserted proposition.

Although I adopt a pragmatic definition of the notion, I maintain firstly that assertion and presupposition are mutually exclusive concepts, and, secondly, that a lexical presupposition normally must be triggered, or licensed, by an element outside of the presupposed proposition¹⁴.

Applying the pragmatic definition, we can test whether the propositional content of exclamatives is presupposed by using dialogue pairs. Consider (76)–(79).

(76) - Vilken klippa han är!

'What a great guy he is!'

- Ja!

'Yes!'

(77) - Vilken klippa han är!

'What a great guy he is!'

?? - Nej!

'No!'

¹⁴ It should be noted that this does not apply to structural or existential presuppositions, which come about through a specific, clause internal structural configuration (*wh*-questions, clefts etc.) or definiteness respectively.

(78) - Lars är en klippa.

'Lars is a great guy.'

- Nej!

'No!'

(79) - Vilken klippa han är!

'What a great guy he is'

- Nej, det tycker jag faktiskt inte.

'Actually, I don't really think so.'

As shown in (76), support (or affirmation) is an expected and accepted answer to the exclamative *vilken klippa han är!* To answer *nej* 'no', on the other hand, is not felicitous. If the second speaker in the dialogue wants to object to the propositional content, then he or she must bring it up to negotiation by using a more marked and lengthy answer, as in (79). This is normally not the case with ordinary declarative clauses, as in (78). When the first speaker, by using a declarative clause, has claimed that Lars is a great guy, the second speaker can object to that by simply answering no. This shows that the truth value of the proposition in the exclamative clause, as opposed to that in the declarative clause, is presented and treated as given or self evident. This suggests that the proposition conveyed by the exclamative is presupposed.

The view that the propositional content of an exclamative is presupposed, is further supported by the fact that exclamatives embed under factive predicates, not under assertive or non-assertive predicates. It is also in accordance with the Icelandic data presented in section 4.2: As was shown, the finite verb of an Icelandic *að*-exclamative is in the periphrastic *skulu*-subjunctive, a mood which is otherwise only found in *að*-clauses embedded under true factives. These Icelandic exclamatives are parallel to the Swedish *att*-exclamatives, save the mood of the

finite verb. Assuming that exclamatives are presupposed, this mood is exactly what is to be expected.

Last but not least, an argument in support of the assumption that the propositional content of an exclamation is presupposed is provided by the fact that exclamatives cannot be modalized by sentence adverbials. If the proposition denoted by an exclamation were asserted, as Delsing proposes, we would expect it to be possible to modalize it through an epistemic sentence adverbial, such as *kanske* 'maybe' or *förmodligen* 'probably'. However, as was shown in section 3.3, the insertion of a modalizing sentence adverbial gives rise to a semantic/pragmatic clash which makes the clause unacceptable. The restrictions on modalizing exclamatives are expected and highly intuitive in light of a presupposition analysis: If the speaker presupposes the truth of a given proposition, we do not expect it to be possible for him or her to express uncertainty concerning the truth of this particular proposition at the same time.

7. The proposal: Swedish exclamatives are subordinate

In this section I propose an analysis according to which Swedish exclamatives are embedded under matrices that in most cases are covert but also may be overtly realized. The proposed analysis provides an explanation both for the typical subordinate clause word order found in Swedish exclamatives and for the fact that the propositional content of an exclamation is presupposed.

7.1 Finite and non-verbal matrices

As was shown in 3.3, all three variants of Swedish exclamatives can be embedded under regular, full matrices. For convenience, this is illustrated once more in (80).

(80) Det är fruktansvärt vad han klagar!

it is terrible what he complains

'My, really complains an awful lot!'

The sentence in (80) is a typical example of what Teleman et al. (1999) would call an embedded exclamative.¹⁵ The matrix clause contains a subject (*det*), a finite verb (*är*) and a factive adjective (*fruktansvärt*). This matrix clause explains both the word order of the exclamative and the fact that it is presupposed. Firstly, because it is subordinated, it has the word order of a prototypical subordinate clause. Secondly, it is embedded under a factive predicate which accounts for the fact that its propositional content is presupposed. The presupposition is externally licensed.

The claim that the *wh*-clause in (80) is a subordinate clause is quite uncontroversial (it is the analysis proposed by Teleman et al. (1999)). I see no reason to assume that a (superficially) independent exclamative like that in (81) is different.

(81) Vad han klagar!

what he complains

'My, he really complains an awful lot!'

As pointed out in sections 5.1 and 5.2, both Teleman et al. (1999) and Delsing (2010) assume that a *wh*-exclamative like the one in (81) should be analyzed as a main clause. In doing so, however, they fail to give a convincing explanation both to the word order and the presupposed status of the clause.

A point, which in my opinion is absolutely crucial, is that the internal structure of the independent exclamative in (81), is identical to that of the, clearly,

¹⁵ However, it is important to note that there are no structural properties that distinguish these "embedded exclamatives" from regular declarative main clauses that contain a subordinate *wh*-clause.

subordinated clause in (80). If the clause in (81) were a main clause, then exclamatives would deviate completely from the prototypical Swedish pattern of asymmetry between main clauses and subordinate clauses, with respect to the position of the finite verb.

In my view, it is significantly more consistent and theoretically economical to assume an analysis according to which the exclamative in (81) is a subordinate clause, embedded under a covert matrix with features corresponding to that of the overtly realized matrix in (80). An analysis along those lines accounts for both the word order and the presupposed status of the exclamative clause.

Stroh-Wollin (2008) shows that exclamatives, *wh- som-* and *att-*varieties alike, can be preceded by swear words. This is illustrated below in (82)–(84).

(82) Fan vilka stora fötter du har!

damn which big feet you have

'Damn, what big feet you've got!'

(83) Fan som det ser ut här inne!

damn SOM it looksPART. here inside

'It looks god damn awful in here!'

(84) Fan att han aldrig lär sig!

damn that he never learnsREFL.

'Damn it, why doesn't he ever learn!'

Inspired by an analysis originally put forth by Magnusson (2007), Stroh-Wollin suggests that the swear words in sentences like the ones in (82)–(84) in fact constitute non-verbal matrices (i.e. matrices without a verb) under which the

exclamatives are embedded¹⁶. On her analysis, this matrix is always present in the structure, whether covert or overtly realized as an interjection. An exclamative would thus have the structure represented in (85) (Stroh-Wollin, 2008, p.77).

- (85) a. [Fan [vilka stora fötter du har!]
 b. [Ø [Vilka stora fötter du har!]

I believe that Stroh-Wollin is on the right track and I adopt the basic analysis that she proposes.

Teleman et al. (1999, bind 4, pp.760–761), show that all three categories of exclamatives may also be preceded by the word *tänk*, lit. 'think' and that *wh-* and *som-* exclamatives, in addition, also may be preceded by the words *se*, lit. 'see' and *titta*, lit. 'look'. This is illustrated in (86)–(88).

- (86) Titta vilka feta katter han har!
look which fat cats he has
 'Boy, what fat cats he's got!'

- (87) Se som han svettas!
see SOM he sweats
 'My, does he sweat!'

¹⁶ Julien (2009) has put forth a similar analysis for certain instances of sentences containing a clause introduced by *plus(s) att(t)*, lit. 'plus that'. Consider (i), which is an example from Julien (2009):

- (i) Finns en del spelare som kan bli riktigt grymma i framtiden, **plusatt** de har en bra tränare också.
 'There are a few players that can become really wicked in the future, plus, they've got a good coach too.'

On Juliens analysis the sentence in (i) consists of two main clauses, the second of which is introduced by *plus att*, lit. 'plus that'. Julien argues that *plus att*, in fact constitutes a minimal matrix (cf. my term, non-verbal).

(88) Tänk att han aldrig lär sig!

Think that he never learns REFL.

'Jesus, why doesn't he ever learn!'

The elements preceding the exclamatives are interesting from a word class perspective. Firstly, it should be noted that the words *tänk*, *se* and *titta* have forms that coincide with verbs in the imperative. However, as suggested by Teleman et al. (1999, bind 4, p. 760–761), they are probably better looked upon as imperatives that have drifted semantically and become interjections. In other words, they are “non-verbal” elements. Diachronically, they certainly stem from their imperative counterparts but the imperative meaning is not present in the exclamative constructions. They convey expressive speech acts, not directive ones. The view that they are interjections rather than imperatives is further supported by the fact that they do not take PP complements. The corresponding imperative versions of *tänk*, *titta* and *se* respectively, all take PP complements. This is decidedly odd in the exclamative constructions. Consider the imperative in (89), and compare it to the infelicitous exclamative in (90).¹⁷

(89) Tänk på döden!

think on death.the

'Think about death!'

(90)?? Tänk på vilken fet katt han har!

think on which fat cat he has

'Think about what a fat cat he has!'

¹⁷ It should be pointed out that the sentence in (90) is grammatical when used as an imperative. However, as an exclamative, it is not felicitous.

Interestingly, parallel analyses have recently been put forth for Hungarian *képzeld* 'imagine' and Norwegian *tenk* 'think'. Fretheim & Vaskó (2011) argue that "the Hungarian form *képzeld* and the Norwegian form *tenk* are lexically ambiguous, either an imperative verb form used in a directive speech act or else a so-called mirativity particle (mirative marker) used in a declarative (representational) speech act, as an indicator of surprise at the truth of the proposition expressed (and the factuality of the state of affairs represented)". Although Fretheim & Vaskó use the term particle and not interjection, their main point is identical to mine: Norwegian *tenk*, Hungarian *képzeld* and Swedish *tänk*, *titta* and *se* are lexically ambiguous and belong to different word classes depending on how they function in a specific context.

The various swear words that may serve as matrices for exclamatives seem to differ with respect to word class status. The most common of these words, *fan* lit. 'the devil', seems to be a factive adjective.¹⁸ This can be concluded from the fact that it may serve as the predicate of a full, finite matrix clause, in a manner that is parallel to other, typical factive adjectives. Consider (91) and (92).

- (91) Det är ju fan som här ser ut!
*it is*MOD. SWEAR SOM *here looks* PART.
 'It's just awful, the way it looks in here!'

- (92) Det är ju sorgligt som här ser ut!
It is MOD *sad* SOM *here looks*PART.
 'It's just sad, the way it looks in here!'

¹⁸ Although less common, it seems that NP:s can function in a similar way. Consider (i), in which the matrix contains the NP *skit* (lit. 'shit' or 'crap') :

- (i) Det är ju skit som här ser ut!
it is MOD *crap* SOM *here looks* PART.
 'It's just awful, the way it looks in here!'

Other swear words that may function as non-verbal matrices cannot be analysed as adjectives. Instead they must be regarded as interjections, on a par with *tänk*, *titta* or *se*. Examples are *gud* (lit. 'god') and *fy* ('oh', 'damn' etc.). Unlike typical factive adjectives such as *sorgligt* ('sad'), *gud* or *fy* cannot be the predicate of a full, finite matrix clause. This is illustrated in (93) and (94).

(93) a. Gud som här ser ut!
god SOM *here looks* PART.

b.*Det är gud som här ser ut!
it is god SOM *here looks* PART.

(94) a. Fy vad han klagar!
 FY *what he complains*

b.* Det är fy vad han klagar!
it is FY *what he complains*

On the basis of the facts illustrated in (91)–(94), we can draw the rather curious conclusion that *fan* (lit. 'the devil') seems to be an adjective, whereas *gud* (lit. 'god') appears to be an interjection.

7.2 Swedish exclamatives are embedded under non-verbal matrices

It is clear that both finite and non-verbal matrices for exclamatives are grammatical. However, when we are to analyse any given exclamative that lacks an overtly realized matrix, we must choose between the two possible structures.

The independent exclamative itself gives few leads as to whether a finite or a non-verbal matrix analysis is more reasonable. However, if an adjective or

interjection is present in front of the exclamative, this may narrow down the possibilities. As was shown in 7.1, an interjection, such as *gud*, lit. 'god' or *tänk*, lit. 'think' cannot serve as complements of a matrix verb. Consequently, we may conclude that all exclamatives that are preceded by interjections must be analysed in terms of a non-verbal matrix. If the exclamative is preceded by an adjective on the other hand, the picture is a bit more complicated. A factive adjective, such as *fan*, lit. 'the devil' or *förskräckligt* 'terrible' may function as a constituent in a full, finite matrix under which the exclamative is subordinated. The fact that this is possible does however not necessarily mean that the presence of an adjective in front of the exclamative allows us to conclude that the structure involves a covert instance of a finite matrix. The reason for this is that we cannot rule out the possibility that the overtly realized adjective is situated in Force[°], rather than in the complement of a vP. An exclamative preceded by a factive adjective may, in principle, have the structure represented in (95), just as well as that illustrated in (96).

(95) [CP (Det) Force[°] (är) [vP fan]] att han aldrig kommer!

it is devil that he never comes

'Damn it, why doesn't he ever come!'

(96) [Force[°] Fan] att han aldrig kommer!

devil that he never comes

'Damn it, why doesn't he ever come!'

As indicated by the structural representations in (95) and (96), the presence of a factive adjective in front of the exclamative, does not give any decisive evidence as to whether we should assume a full, finite matrix or a non-verbal one in these cases. Nevertheless, I argue that the non-verbal analysis should be chosen over the finite, for three reasons. The first reason is that an overtly realized, non-verbal matrix, can

be associated only with an exclamation reading, whereas a finite matrix could also be used for making a statement (although the different interpretations would presumably be associated with separate prosodic patterns). Secondly, a non verbal matrix, containing an interjection, also accounts for the direct deictic nature of exclamatives. Thirdly, assuming a non-verbal matrix rather than a full finite one, is more economical. When choosing between two analyses involving covert structure, the minimal assumption is to prefer.

7.3 Licensing the presupposition

In section 6, I claimed that certain types of presuppositions must be licensed by an element outside the presupposed proposition. In syntactic terms, this means that the clause denoting the presupposed proposition must be selected by a licensing element in a matrix structure. There are also pragmatic factors which restrict a presupposed proposition from standing alone. That this is the case is easily realized if one considers the notion of presupposition in light of the basic ideas of Grice's cooperative principle. As presented by Grice, the cooperative principle is a superordinate principle which can be divided into the four more specific categories of quantity, quality, relation and manner. The first of these is explained in the following way: "The category of Quantity relates to the quantity of information to be provided, and under it fall the following maxims:

1. Make your contribution as informative as is required (for the current purposes of the exchange).
2. Do not make your contribution more informative than is required" (Grice, 1989, p.26).

Recall the definition of presupposition put forth in section 6: "A proposition is presupposed if the speaker presents and treats it as given and uncontroversially

true". It is easily realized that a presupposition alone, as defined above, does not meet the requirements of Grice's first maxim of quantity. An isolated proposition which is treated and presented as given and uncontroversially true simply cannot be informative. In fact, it is hard to even imagine an utterance which only conveys presupposed information. In order for the presupposition to be meaningful, it has to be accompanied by a linguistic expression, which at the very least provides us with information as to how the speaker relates to the presupposition¹⁹.

The most typical and least complicated case is when the presupposed proposition is embedded in a declarative matrix structure, containing a licensing element such as a factive predicate. The presupposition is then accompanied by an assertion and licensed by an element within the clause that carries this assertion. This is precisely the case that follows from an analysis according to which the exclamative is subordinated under a full, finite matrix. Consider (97).

- (97) (Det är fantastiskt) vilka stora fötter han har!
it is fantastic which big feet he has
 'It is just fantastic, the size of his feet!'

The *wh*-clause in (97) is embedded under a full finite matrix (covert or overt), containing a factive predicate. At a first glance, an analysis along these lines seems appealing, as it provides a straightforward account for how the presupposition is licensed. To argue that a factive predicate presupposes its complement is quite uncontroversial. However, this kind of full matrix analysis has an important drawback to it. The main problem associated with it is the fact that the matrix clause

¹⁹ It seems reasonable to assume that this is the intuition that underlies Delsing's analysis, according to which an exclamative, at the same time, contains both an assertion and a presupposition. However, since his analysis of exclamatives only involves one CP, it fails to account for the licensing of the presupposition (it cannot be licensed externally). Moreover, his analysis violates the rule that presuppositions and assertions are mutually exclusive.

(and consequently the sentence as a whole) is identical to and inseparable from a regular declarative clause, typically used to make a statement. In other words, the full matrix analysis fails to give a structural explanation to the unique properties of exclamatives. As we shall see, however, a non-verbal matrix analysis does not suffer from this problem. In fact, such an analysis can account for the presupposed status of the clause's propositional content and at the same time ascribe the matrices of exclamatives a syntactic structure which separates them from other clause types.

In order to understand how interjections license presuppositions, we must consider their communicative function. Typically, a speaker utters an interjection as an immediate response to a particular stimulus, be it a sensation, the perception of an object or a certain state of affairs. On the basis of this, we may first of all conclude that interjections are informative and meaningful and consequently meet the minimal requirements of Grice's first maxim of quantity.

As a second step in understanding how interjections license presuppositions, we may assume that the stimulus that the speaker reacts to exists, provided of course that the speaker adheres to Grice's cooperative principle and its maxim of quality which, essentially, dictates that a speaker should tell the truth (cf. Grice, 1989, p. 27). For instance, if a person exclaims *aj* 'ouch', we must assume that he or she is reacting to a painful sensation. Consequently, it can be argued that the utterance of an interjection presupposes the existence of the state of affairs to which the speaker reacts. Similarly, the interjection in a non-verbal matrix presupposes the truth of the proposition in the following clause. Whether or not the state of affairs is actually true to the rest of the world is irrelevant. What is important is that it is true, or treated as true, in the world of discourse.

So far we have concluded that interjections do not require any additional linguistic structure to meet with the first maxim of quantity, and also that the utterance of an interjection presupposes the existence of the stimulus to which the speaker reacts. In light of these facts we can reach a better understanding both of the

surprise effect, commonly associated with exclamatives and of how the propositional content of an exclamation is related to the stimulus, which triggers the linguistic reaction.

An interjection in isolation typically functions as a linguistic signal of an immediate reaction to states of affairs, objects, courses of events etc. that the speaker has only just become aware of. The choice of interjection offers some information about the nature of the reaction and, to a lesser extent, the stimulus to which it forms a reaction. For instance, *aj* 'ouch' signals pain, *oj* 'oh!/'wow' etc. signals surprise and *usch* 'yuck' signals disliking or mild disgust. Crucially, however, the interjection itself does not carry any propositional content. The interjection *aj* 'ouch', for example, is not the proposition 'it hurts'. It is a direct linguistic reaction to a state of affairs that is present in the world of discourse. It is reasonable to assume that the aspect of surprise, which is often associated with exclamatives, is directly related to the immediateness of the reaction.

But exclamatives do not always consist of isolated interjections. In fact, the non-verbal matrix that the interjection constitutes often completely lacks overt representation in the utterance. This raises the question of how the overt, subordinate part of the exclamation should be understood, particularly in relation to the matrix. My proposal is that this clause is the (optional) linguistic expression of the stimulus to which the speaker reacts; it is a “propositionalisation” of the stimulus that triggers the utterance.

A consequence of this proposal is that isolated interjections must be considered to be minimal exclamatives.

7.4 A formal account of the three basic Swedish exclamatives

In this section, I present the formal analyzes that I propose for Swedish exclamatives. Common to all three basic kinds of exclamatives is that they are assumed to involve a non-verbal matrix under which the *att-*, *som-* or *wh-*clause is

embedded. However, since the internal structures of the subordinate clauses differ between the three varieties, *att*-, *som*- and *wh*-exclamatives, are discussed in separate subsections.

7.4.1 *wh*-exclamatives

I assume that the *wh*-element, together with a nominal or adjectival head, forms a single constituent which is located in Spec-CP. C contains a complementizer. In most cases this complementizer has no representation in the surface structure. However, if the constituent in Spec-CP is the subject of the clause, the complementizer must obligatorily be present in the surface structure, as illustrated in (98) (this does not apply only to *som*-exclamatives but is true for all instances of *som*-clauses alike). The complementizer is optionally realized in cases where Spec-CP is filled by a non-subject constituent, provided that this constituent is heavy enough. This is exemplified in (99).

(98) Vilken trevlig tant *(som) köpte huset!

Which nice (old).lady SOM bought house.the

'What a nice old lady who bought the house!'

(99) Vilken otroligt stor och fin trädgård (som) du har anlagt!

which incredibly big and fine garden SOM you have layed.out

'What an incredibly big and nice garden that you have layed out!'

In my view, the possibility (or, as in (98), even necessity) of realizing a complementizer in C, constitutes a strong argument for assuming that the structure of a *wh*-exclamative always involves a complementizer in C, irrespective of whether it is overt or covert.

The structure proposed for Swedish *wh*-exclamatives, exemplified with (100a),

is shown in (100b).

- (100) a Fan vilka mockasiner (som) du har köpt!
damn which moccasins (SOM) you have bought
 '(Damn), those are quite some moccasins that you have bought!'
- b [_{ForceP} Fan [_{Spec-CP} vilka mockasiner_C (som) [_{TP} du har [_{VP} köpt]]]]

The internal structure of the subordinate clause in (100) is parallel to that of an indirect *wh*-question. Consider (101).

- (101) Jag undrar vilka mockasiner (som) du har köpt.
I wonder which moccasins (SOM) you have bought
 'I wonder which moccasins that you have bought.'

Jag undrar [_{Spec-CP} vilka mockasiner_C (som) [_{TP} du har [_{VP} köpt]

However, the indirect question in (101) obviously does not convey the same meaning as the exclamative in (100). As suggested in section 3.2.1 (see footnote 5), this difference is presumably related to differences between the *wh*-elements introducing the two kinds of clauses. In the following, I will attempt to account for the semantic differences between those *wh*-elements that introduce questions on the one hand and those that introduce exclamatives on the other.

Let us begin by looking at *wh*-elements in questions. Basically, a *wh*-word can be assumed to carry the two following features:

- A) Rogativity: A semantic feature, Q, responsible for sentence mood (OPEN)
 B) Focus feature: A syntactic feature, F, responsible for set creation (λx)

In the case of a regular *wh*-question, the above features interact. The rogativity feature Q of the *wh*-word ensures that the sentence mood operator of the clause has the specification OPEN and that the *wh*-word requests the value of a variable x in the clause. Further, the focus feature F determines a set of alternatives (Jackendoff (1972), Rooth (1985)). Consequently, F contributes by creating a set of possible, alternative propositions. The set of alternative propositions, the so-called “presuppositional set” is defined originally by Jackendoff (1972) as the set of the set of values which, when substituted for x in Presupp (x), yield the true proposition and is symbolized with the expression $\lambda x \text{Presupp}(x)$.

In the answer to the *wh*-question – in the assertion of a declarative sentence – the focus is obligatorily a member of the presuppositional set:

$$\text{Focus} \in \lambda x \text{Presupp}(x)$$

This means that the answer to a *wh*-question contains the focus constituent which corresponds to the variable of the question: Consider (102).

(102) A: - Vad åt Kalle?
 what ate Kalle
 'What did Kalle eat?'

B: - Gröt.
 'porridge.'

At the time when the question 'what did Kalle eat' is asked, a presuppositional set (an open proposition) is created since x may assume a number of possible lexical values ('bananas', meatballs', ' a lingon berry' etc.). As B answers the question, a certain value is ascribed to x and all other possible values are excluded. This gives us the focus of

the clause. Although all other possible values are excluded, they are of course, in a sense, present as a basis of comparison.

In the case of a *wh*-exclamative, the *wh*-element only carries the F-feature and contributes to set creation. Crucially, it is not endowed with the rogativity feature and consequently cannot be regarded as an open proposition. As opposed to *wh*-questions, *x* has a fixed value in a *wh*-exclamative. The selection of a high value on the scale, formalized as λx created by F and the exclusion of all other possible values is obligatory. The other degrees on the scale are however still relevant as a basis of comparison.

What distinguishes the *wh*-elements found in *wh*-questions from those found in *wh*-exclamatives is thus that the former has the combination of two relevant features – rogativity and focus – ensuring the creation of an open set whereas in the latter only the focus feature (leading to set creation) is present. The absence of the rogativity feature in *wh*-exclamatives explains also the fact that the subordinate clause in a Swedish *wh*-exclamative may be introduced by lexical items such as *så* 'so' or *sicken* 'such'/'so', elements that never introduce questions (see also Rosengren (1994), p.47). *Så* and *sicken* are not rogative but they do select a high value from a set of possible values on an implicit scale.

7.4.2 *Som*-exclamatives

The structure that I assume for *som*-exclamatives bears some resemblance to *wh*-exclamatives. The Spec-CP slot is occupied by an operator which binds, and is coindexed with, an empty position further down in the structure, presumably in the vP. C is obligatorily filled by an overt complementizer (*som*). The operator may be thought of as a covert counterpart to the *wh*-element situated in the Spec-CP of *wh*-exclamatives. The structure that I assume for *som*-exclamatives is given in (103).

- (103) Fan som han ljuger!
damn SOM he lies
 'Damn it, he does nothing but lie!'

[_{ForceP} Fan [_{Spec-CP} OP_i C som [_{TP} han [_{vP} ljuger Ø_i]]]]

A remark should be made on the relation between the operator in Spec-CP and the variable that it binds. The exact nature of the variable bound by the operator is determined entirely on contextual factors. For obvious reasons it cannot be coreferential with any constituent within the matrix, a fact that separates *som*-exclamatives from relative clauses introduced by *som*. The operator in a relative clause is typically coreferential with its antecedent.

7.4.3 *Att*-exclamatives

The internal structure of an *att*-exclamative is identical to that of regular *att*-clauses. The proposed analysis is given in (104).

- (104) Fan att Kalle var hemma!
damn that Kalle was home
 'Damn it, I didn't think Kalle would be home!'

[_{ForceP} Fan [_{CP} att [_{TP} Kalle [_{vP} var hemma]]]]

As we can see in (104), what separates *att*-exclamatives from "regular" *att*-clauses is not the internal structure of the subordinate clause, but rather the nature of their respective matrices. "Regular" *att*-clauses, on the one hand, are subordinated under a prototypical, finite matrix, whereas *att*-exclamatives, on the other hand, are embedded under smaller, non-verbal, deictic matrices.

8. Exclamatives in the main clause/subordinate clause dichotomy

According to the analysis proposed in 7, Swedish exclamatives fit well in to the main clause/subordinate clause dichotomy outlined in section 2. The dichotomy is based on the differences between Swedish main clauses and subordinate clauses regarding the properties of the C-domain. The strong hypothesis is that there is a one-to-one correlation between a clauses' syntactic structure and its semantic/pragmatic status. I argue that Swedish main clauses are characterized by V-to-Force-movement and that this property corresponds to the semantic notion of speech act value. The dichotomy stipulates that only the highest available CP in a clause structure, to which a finite verb has moved, can carry illocutionary force. In principle, any one clause structure can carry no more than one speech act value and that value is coded by the finite verb moving to the highest available Force projection.

In subordinate clauses, the head of the CP is occupied by a complementizer (overt or covert) which anchors it in and relates it to the finiteness and speech act value of a higher CP. Since the system is recursive, this CP can be linked to another CP, which in its turn may be connected to yet another CP, and so on. The complementizer blocks V-to-Force-movement in the subordinate clause, rendering a word order where the finite verb stays in situ in the vP.

The hypothesis which stipulates a firm connection between verb movement and speech act value only applies to finite propositions, i.e. clauses. It does not exclude the possibility of coding of speech act value without V-to-Force-movement in non-verbal utterances. This way, we can account for interjections and other non-verbal elements, which can be used to convey speech acts and consequently must be considered non-verbal codifications of speech acts. In the case of interjections, we may assume that they are base generated directly in Force, whereas AP:s and NP:s must be assumed to have been generated further down in the structure, before moving to Force^o.

Considering these non-verbal matrices and adding them to the overarching analysis of the relation between Force and speech act value, we may make the following generalization: If the highest available Force^o is filled by an element other than a complementizer, the structure in question is coded for speech act value.

The hypothesis that V-to-Force-movement is associated with speech act value and incompatible with subordination is further supported by data from Danish, where *wh*-exclamatives come in two varieties. In Danish, a *wh*-exclamative may have the prototypical subordinate clause word order or display V2 word order. Crucially, only the former variety may be embedded under a matrix clause. Consequently, Danish can be assumed to have both main and subordinate clause instances of exclamatives, as opposed to Swedish which only allows subordinate exclamatives.

9. Summary

This paper has been concerned with Swedish exclamatives from a hierarchical point of view. The question that has been in focus is whether they are main clauses or subordinate clauses.

Three basic kinds of exclamatives were distinguished, namely *wh*-exclamatives, *som*-exclamatives and *att*-exclamatives. All three kinds are characterized by displaying prototypical subordinate clause word order and at the same time being independent in the sense that they are grammatical without an overt matrix. It was shown that Swedish exclamatives cannot be modalized by sentence adverbials and that they cannot be used as answers to questions. It was further shown that they can be embedded under matrices containing factive predicates. These facts, it was argued, are all in accordance with the analysis that the propositional content of an exclamative is presupposed by a factive element in an overt or covert matrix.

In addition to the possibility of embedding exclamatives under full finite matrices, it was shown that they also may be preceded by non-verbal matrices, consisting of interjections. On the basis of these facts an analysis was put forth,

according to which all three categories of exclamatives in Swedish are subordinate to matrices. These may be either covert or overt but are always present in the structure. It was shown that this analysis can account both for the prototypical subordinate clause structure (i.e. complementizer and V-in-situ) and for the fact that the propositional content of an exclamation is presupposed.

Following the analysis that exclamatives are in fact subordinate clauses, it was concluded that they fit well into the subordinate clause/main clause dichotomy outlined in section 2. They are not coded for an independent speech act value (which is in accordance with the fact that they are presupposed). This is mirrored in their internal syntactic structure. In exclamatives, the head of C is occupied by a complementizer, which relates the clause to a higher Force projection, in this case a non-verbal matrix. Consequently, what distinguishes the three investigated kinds of exclamatives from the other, basic, clause types in Swedish is not the internal structure of the subordinate clauses but the nature of the matrix. In an exclamation, the matrix minimally consists of a non-verbal element (typically an interjection or an adjective) situated in Force^o. Since the matrix is non-verbal, it does not contain a TP, which means that it does not, and indeed cannot, be specified for tense relations. This explains why exclamatives cannot refer to the past or the future. The non-verbal matrix is a direct deictic, linguistic reaction to a stimulus, be it an object, an event or a state of affairs. The subordinate clause (i.e. the clause which we often regard as the whole exclamation) is a "propositionalization" of the stimulus to which the exclamation (i.e. the matrix) is a reaction.

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Contact information:

David Petersson, Lund University, Centre for Languages and Literature, Scandinavian Languages, SE-221 00 Lund, Sweden.

E-mail: david.petersson@nordlund.lu.se

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1. Tarald Taraldsen: Som (1983)
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