Issue 93

December 2014

WORKING PAPERS IN SCANDINAVIAN SYNTAX

LUND UNIVERSITY

UNIVERSITEIT GENT

Working Papers in Scandinavian Syntax is an electronic publication for current articles relating to the study of Scandinavian syntax. The articles appearing herein are previously unpublished reports of ongoing research activities and may subsequently appear, revised or unrevised, in other publications.

The WPSS homepage:
http://project.sol.lu.se/grimm/working-papers-in-scandinavian-syntax/

The 94th volume of WPSS will be published in June 2015. Papers intended for publication should be submitted no later than April 15, 2015.

December 2014,

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Working Papers in Scandinavian Syntax
ISSN: 1100-097x

Contents

Relative clauses are not always strong islands*

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Abstract

Scandinavian relative clause extraction seems to violate purportedly universal locality conditions (i.e. the Complex NP Constraint (Ross 1967), Subjacency (Chomsky 1973) and the Phase Impenetrability Condition (Chomsky 2001)). Recent analyses of the construction rely on the assumption that it involves only subject relative clauses (Kush, Omaki & Hornstein 2013), or that extraction from subject relative clauses should be analyzed differently than extraction from non-subject relative clauses (Platzack 2014). However, Swedish provides evidence that relative clause extraction involves non-subject relative clauses as well. Crossover phenomena, parasitic gap licensing, island effects and connectivity effects show that non-subject relative clause extraction involves two Ā-movement dependencies, which means that relative clauses are not strong islands in all languages. If the Phase Impenetrability Conditions holds, and Ā-movement is successive cyclic through Spec-CP, Swedish relative C must tolerate multiple specifiers. These facts raise questions for a phase-based account of island phenomena.

As non-subject relative clause extraction is very rare, I suggest that speakers must be able to deduce the possibility of extracting from non-subject relatives from the possibility of extracting from subject relatives, and that consequently, we need a unified analysis of subject and non-subject relatives.

*Much of the work presented in this article was carried out in Santa Cruz, where I was a visiting graduate student researcher at the Linguistics Research Center 2013–2014. I presented parts of the article at the Syntax and Semantics Circle at UC Santa Cruz, June 2014, and at the Grammar seminar at Lund University, November 2014, and thank participants at these talks for their helpful comments. I also wish to thank in particular Elisabet Engdahl, Nick Kalivoda and Henrik Rosenkvist for reading and commenting on various versions of the article; Jens Larsson for tirelessly discussing acceptability judgements with me; Maia Andréasson, Sandy Chung, Amy Rose Deal, Donka Farkas, Jorge Hankamer, Jim McCloskey and Erik Zyman for advice and discussion; and Johan Brandtler for helpful editorial comments.

1 Introduction

Swedish exhibits long-distance dependencies in which an antecedent outside of a relative clause is associated with a gap inside the relative clause, as in (1).

(1) [Det språket]$_i$ finns det många islänningar [som talar _$_i$].
the language exist EXPL many Icelanders REL speak
'There are many Icelanders who speak that language.'

The phenomenon is commonly called *relative clause extraction*, and examples like (1) have been discussed in the international syntax community at least since Erteschik-Shir (1973). From a theoretical perspective the possibility of creating such long-distance dependencies is of interest, since it seems to violate purportedly universal locality conditions (i.e. the Complex NP Constraint (Ross 1967), Subjacency (Chomsky 1973) and the Phase Impenetrability Condition (Chomsky 2001)) that have been proposed to account for the ungrammaticality of corresponding sentences in languages other than the mainland Scandinavian.

Beginning with Ross (1967), relative clauses have been identified as syntactic islands: constituents that are opaque to movement relations. A common distinction is that between strong and weak islands (see e.g. Szabolcsi (2006) for an overview). Strong islands are constituents into which movement dependencies cannot reach at all, whereas weak islands allow certain dependencies, but not others. Relative clauses have been taken as the prototypical example of strong islands.

Some recent analyses of Scandinavian relative clause extraction rely on the assumption that these dependencies involve only subject relative clauses (Kush, Omaki & Hornstein 2013), or that extraction from subject relative clauses should be analyzed differently than extraction from non-subject relative clauses (Platzack 2014). These two approaches share the idea that in examples like (1) the relation between the head *islänningar* and the empty position inside the embedded clause is not mediated by an Ā-dependency.

In this paper, I investigate extraction from non-subject relative clauses, as in (2).

(2) [Den där halloweenmasken]$_i$ vill Edith hitta någon$_k$ som hon kan skrämma _$_k$ med _$_i$
the there Halloween mask-DEF want Edith find someone REL she can scare with
'Edith wants to find someone that she can scare with that Halloween mask.'

Similar examples have been noted previously (e.g. Koch-Christensen 1982; Engdahl 1997; Heinat & Wiklund submitted; Platzack 2014), but here I argue that they should be analyzed as involving two Ā-bar dependencies. Based on evidence from crossover phenomena, parasitic gaps and connectivity effects, I furthermore show that these Ā-dependencies have several characteristics commonly associated with movement, and that an analysis in terms of silent pronouns is not viable.

From this I conclude that relative clauses are not strong islands in Swedish, but rather some species of weak island. In effect, this means that it must be possible for speakers to learn that relative clauses are not strong islands in a specific language. Since extraction from non-subject relative clauses seems to be very rare in spontaneous speech and writing, a plausible hypothesis is that speakers can deduce the possibility of extracting from non-subject relative clauses from

the possibility of extracting from subject relative clauses, which occur more often. I take this as an argument for a unified analysis of subject and non-subject relative clauses.

The paper is structured as follows. In the following section, I present the previous proposals by Kush et al. (2013) and Platzack (2014). In section 3, I show that extraction from non-subject relative clauses involves two Ā-bar dependencies. In section 4, I argue for a unified analysis of subject and non-subject relative clauses. Section 5 is a discussion of how the facts from Swedish narrow down the hypothesis space for a feature-driven account of relative clause extraction given the Phase Impenetrability Condition, and of the challenge this analysis poses for this type of account of island phenomena. Section 6 concludes.

2 Background: Two recent proposals

There are several proposals for why the mainland Scandinavian languages allow sentences like (1).[1] Here I will discuss only two of these. Each of them try to explain the exceptionality of the mainland Scandinavian languages in terms of the structure of the embedded clause, and the new data that I present in sections 3 and 4 are hard to square with them. In section 2.1, I will discuss the Small Clause Hypothesis put forth by Kush et al. (2013) and in section 2.2, I turn to a proposal by Platzack (2014).

2.1 The Small Clause Hypothesis

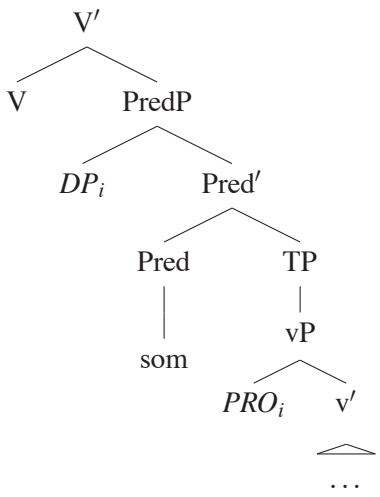
So far I have been assuming that the embedded clause introduced by *som* in (1), here reproduced as (3), is a relative clause, headed by the relative complementizer *som*.

(3) [Det språket]$_i$ finns det många islänningar som talar $\_i$.
the language exist EXPL many Icelanders REL speak
'There are many Icelanders who speak that language.'

Kush et al. (2013), building in part on Kush (2011), try a different tack. They argue that what looks like a relative clause in these examples is actually a small clause. Kush (2011) proposes that this small clause has the structure in (4).

[1] Some of these include Allwood (1982), Andersson (1982), Erteschik-Shir (1973), Erteschik-Shir & Lappin (1979), and Engdahl (1982, 1997). For an overview of different approaches, see Heinat & Wiklund (submitted).

(4)



The account is based on the fact that the relative complementizer *som* in the mainland Scandinavian languages is homophonous with predicational *som*, which has been argued to head small clauses (Eide & Åfarli 1999). According to Kush et al. (2013) then, examples like (3) only *appear* to involve extraction from a relative clause, and are only perceived as acceptable to the extent that the apparent relative clause could be analyzed as a small clause.

The clause is small in the sense that it lacks a CP-layer, which would explain why there is no problem for phrases to move to higher positions outside of the clause without stopping off in intermediate landing sites. However, since the verb in these examples is tensed, we have to assume that the small clause contains a TP, as in Kush's structure above.

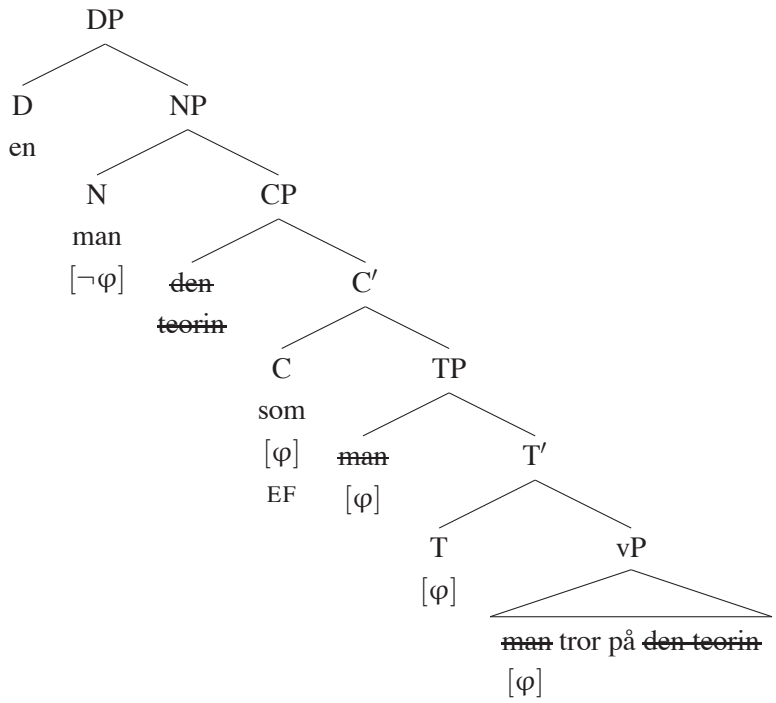
2.2 Platzack's proposal

Contrary to Kush et al. (2013), Platzack (2014) takes examples like (1) and (2) to be true instances of extraction from relative clauses. Specifically, he argues that there is a way to derive subject relative clauses in the mainland Scandinavian languages without moving an element to Spec-CP, thereby leaving an escape hatch in these constructions.

The structure he proposes for extraction out of Swedish restrictive relative clauses is the one in (6), which shows the intermediate step in the derivation of (5) where the extracted phrase *den teorin* is in Spec-CP of the relative clause, i.e. the escape hatch. Crossing out marks unpronounced phrases, and ¬ means that a feature is unvalued and functions as a probe. EF stands for *edge feature*.

(5) [Den teorin]$_i$ känner jag en man som tror på $\_i$.
this theory know I a man who believes in
'I know a man who believes in this theory.'

(6)



In Platzack's account, there is a relation between the relative head and a phrase in the left periphery of restrictive relative clauses, and Agree-relation. The relative head N has unvalued φ-features, and agrees with a relative pronoun or unpronounced phrase in Spec-CP, in German or English, for example. In Swedish on the other hand, φ-features from the subject in a relative clause can become accessible to the relative head without establishing an Ā-chain. Platzack assumes the following: the relative complementizer *som* is merged as T, and when the subject agrees with T *som* gets the subjects φ-features.[2] T is then moved to C to value C's unvalued finiteness feature. Spec-CP and C are equidistant from N, so when N probes for φ-features, it finds the φ-features in C and agrees with them. The extracted phrase *den teorin* is moved to Spec-CP by the edge feature on C.

The crux of this proposal is that no Ā-chain is needed to establish the relation between the head of the relative clause and the relative marker. The preconditions are that the language in question has movement from T to C, and that the relative marker is a complementizer. This leaves Spec-CP unused, hence available as an escape hatch.

3 Multiple Ā-dependencies

A crucial point in both of the proposals presented in section 2 is that examples like (1), with extraction from a subject relative clause, involve only one Ā-dependency. In this section, I show that in examples like (2) with extraction from a non-subject relative clause, there are two Ā-dependencies, both derived by movement.

Ā-movement is commonly characterized by (at least) the properties in (7).

[2]This is not represented in (6), which shows a later step in the derivation.

(7) **Ā-movement**
- leaves a gap
- is apparently unbounded
- licenses parasitic gaps
- exhibits crossover effects
- exhibits connectivity effects
- respects islands

The characteristic that Ā-movement respects islands deserves qualification. If it is the case that the Scandinavian languages provide counter-evidence to the universality of the Complex NP Constraint, of course we do not expect that constraint to be respected. Instead, to see whether a relation is a movement relation, we need to look at constraints that these languages usually do respect, such as the Coordinate Structure Constraint or the Sentential Subject Constraint.

The judgements reported here were collected in elicitation with one consultant in the spring of 2014. They are shared by several colleagues who have heard me present this paper.

3.1 Ā-movement out of the relative clause

We have already seen that the fronted phrase in relative clause extraction is related to an empty position inside the relative clause. Example (8) shows that this relation appears to be unbounded: the phrase *en halloweenmask* is related to a gap inside a relative clause, which is embedded inside two *att*-clauses.

(8) *Apparent unboundedness*

[En halloweenmask]$_i$ sa Olle [$_{CP}$ att Zelda sa [$_{CP}$ att hon känner någon$_k$ [$_{CP}$ som hon
a Halloween mask said Olle that Zelda said that she knows someone REL she
kan ge _$_k$ _$_i$]]].
can give

'Olle said that Zelda said that she knows someone who she could give a Halloween mask to.'

The relation between the fronted phrase and the gap can license a parasitic gap (9).[3]

(9) *Parasitic gap licensing*

Ett av problemen$_i$ kommer jag verkligen inte på något$_k$ jag kan göra _$_k$ åt _$_i$ rg [
one of problems-DEF come I really not on something I can do for
utan att förvärra _$_i$ pg].
without to make worse

'One of the problems, I cannot think of anything to do about without making it worse.'

The next diagnostic for Ā-movement on the list in (7) is strong crossover, and (10) shows that the relation we are dealing with seems to induce strong crossover effects: (10b), where the phrase *Zelda* has crossed over the coreferential pronoun *hon*, is impossible.

[3] In the example, the parasitic gap is marked pg, and the real, licensing gap, rg.

(10) *Strong crossover effects*

a. Zelda$_i$ kan inget språk$_k$ som vi kan tala $\__k$ med henne$_i$.
Zelda knows no laguage REL we can speak with her
'Zelda knows no language that we can speak to her in.'

b. *Zelda$_i$ kan hon$_i$ inget språk$_k$ som vi kan tala $\__k$ med $\__i$.
Zelda knows she no language REL we can speak with

Lastly, connectivity effects of different kinds are often taken as evidence that a dependency relation is created by Ā-movement. For example, if a phrase bears the case it would have been assigned as a complement of a verb in a subordinate clause, this could be taken as evidence that it has moved from that position. In (11), we see that a pronoun in the relevant structural configuration must have the case form it would have if it were inside the verb phrase.

(11) *Case connectivity*

a. Dig$_i$ vet jag inget språk$_k$ de kan tala $\__k$ med $\__i$.
you-ACC know I no language they can speak with
'I know of no language they can speak to you in.'

b. *Du$_i$ vet jag inget språk$_k$ de kan tala $\__k$ med $\__i$.
you-NOM know I no language they can speak with

Crucially, as (11b) shows, the pronoun cannot be nominative. If the relation between the fronted phrase and the position inside the relative clause were not one of movement but involved an Ā-bound pronominal – an idea that will be explored in the next section – the case connectivity would be hard to explain, as the default case in Swedish is nominative. This is shown by the case of pronouns in specificational copular clauses. Swedish differs from Danish in this regard (Mikkelsen 2005):

(12) a. Hej, det är {jag / *mig}. [Swedish]
hi it is I / me
'Hi, it's me.'

b. Hej, det er {*jeg / mig}. [Danish]
hi it is I / me
'Hi, it's me.'

(Mikkelsen 2005, p 174, example 9.24)

3.2 Silent pronouns?

Cinque (1990) proposes that some relations that appear to involve Ā-movement should instead be analyzed as involving an empty pronoun (*pro*) that is Ā-bound by an operator. One of the cases he treats this way is apparent island-violating movement. In this section I will show that this type of analysis is not tenable for Swedish relative clause extraction.

Invoking a particular notion of 'referentiality', Cinque argues that only what he calls referential DPs can participate in these apparently island-violating dependencies. 'Non-referential' DPs like *how many weeks* cannot. It is not entirely clear whether the phrases that are non-referential in Cinque's sense constitute a natural semantic class, but what ties the cases together is the fact that the 'non-referential' DPs cannot bind a pronoun (at least not) in Italian.

An idea, then, if we wanted to try to salvage the claim that relative clauses are universally strong islands, would be to try to argue that the instances of island-violating movement that we have seen above are actually not movement at all, but involve a silent pronoun in the apparent gap site. This approach quickly runs into trouble when applied to Swedish, however.

First, several types of phrases other than DPs can be extracted both from subject and object relative clauses. Examples (13)–(17) show extraction of an AP, a PP, and different types of adverbial phrases introduced by *så*.[4]

(13) Illgrönt$_i$ har jag nog ingenting$_k$ som jag vill måla _$_k$ _$_i$.
piercing green have I PRT nothing REL I want paint
'I probably don't have anything that I want to paint piercing green.'

(14) [Till henne]$_i$ vet jag ingenting jag kan ge _$_k$ _$_i$.
to her know I nothing I can give
'I don't know of anything I can give to her.'

(15) [Så fint]$_i$ känner jag ingen$_k$ som _$_k$ kan sjunga _$_i$
that nice know I no one REL can sing
'I don't know anyone who can sing that well.'

(16) [Så många veckor]$_i$ vet jag nog ingen$_k$ som jag skulle vilja åka på semester med _$_k$ _$_i$.
that many weeks know I PRT no one REL I should want go on vacation with
'I don't know of anyone I would like to go on a vacation with for that many weeks.'

(17) [Så sent]$_i$ vet jag ingen$_k$ som jag kan ringa till _$_k$ _$_i$.
that late know I no one REL I can call to
'I don't know of anyone that I can call that late.'

If we were to maintain that there is a silent Ā-bound *pro* inside the relative clauses here, we would have to enrich the grammar with silent pro-forms of all these categories.

[4] At the Grammar seminar in Lund, Gunlög Josefsson pointed out that (13) also has a reading where *illgrönt* originates as the head N following *ingenting*.

Recalling Cinque's connection between island-violating movement and ability to bind a pronoun, data from left dislocation are relevant. In Swedish left dislocation, a pronoun is bound by a hanging topic preceding Spec-CP, as (18) illustrates.

(18) [[Min kusin Hanna]$_i$, [$_{CP}$ jag gillar verkligen henne$_i$.]]
my cousin Hanna I like really her
'My cousin Hanna, I really like her.'

If an account in the spirit of Cinque were right, we might expect the extracted phrases in (14)–(17) to be able to function as hanging topics in left dislocation constructions. Swedish does have some pro-forms that languages like English and Italian lack (Engdahl 2001), but there are no overt simple pro-forms for phrases like *så sent*, *så fint*, and *så många veckor*. There is a pro-form, *det*, which can be used both for entities and predicates of various types, which could be used in left dislocation with phrases like *illgrönt* in (13). With the extracted phrases in (14) and (15)–(17), this is not possible. Resuming the adverbial phrases with other pronouns, like temporal *då* or manner *så* is not possible either.[5]

(19) ? Illgrönt$_i$, jag har nog ingenting$_k$ som jag vill måla _$_k$ det$_i$.
piercing green I have PRT nothing REL I want paint that
'I probably don't have anything that I want to paint piercing green.'

(20) * [Till henne]$_i$, jag vet ingenting$_k$ jag kan ge _$_k$ dit$_i$.
to her I know nothing I can give there

(21) * [Så fint]$_i$, jag känner ingen$_k$ som _$_k$ kan sjunga det$_i$/så$_i$
that nice I know no one REL can sing that/like that

(22) * [Så många veckor]$_i$, jag vet nog ingen$_k$ som jag skulle vilja åka på semester med _$_k$
that many weeks I know PRT no one REL I should want go on vacation with
det$_i$/då$_i$.
that/then

(23) * [Så sent]$_i$, jag vet ingen$_k$ som jag kan ringa till _$_k$ det$_i$/då$_i$.
that late I know no one REL I can call to that/then

This type of left dislocation, although not ungrammatical, is not that common in Swedish. Instead the co-referent pronoun tends to be fronted, as shown in (24).[6]

(24) Lisa$_i$, henne$_i$ vet jag ingenting$_k$ jag kan ge _$_k$ till _$_i$.
Lisa her know I nothing I can give to
'I don't know anything I can give to her.'

This type is quite common; see Engdahl & Lindahl (2014) for examples from the Nordic Dialect Corpus.

[5] *dit* in (20) is a directional pro-form.
[6] See Andersson (1982), who calls this 'topic movement'.

Fronting the pronoun makes (19) better, as in (25), but it does not improve the other examples (26)–(29).[7]

(25) Illgrönt$_i$, det$_i$ har jag nog ingenting$_k$ som jag vill måla _$_k$ _$_i$.
piercing green that have I PRT nothing REL I want paint
'I probably don't have anything that I want to paint piercing green.'

(26) * [Till henne]$_i$, dit$_i$ vet jag ingenting$_k$ jag kan ge _$_k$ _$_i$.
to her that know I nothing I can give

(27) * [Så fint]$_i$, det$_i$/så$_i$ känner jag ingen$_k$ som _$_k$ kan sjunga
that nice that know I no one REL can sing

(28) * [Så många veckor]$_i$, det$_i$/då$_i$ vet jag nog ingen$_k$ som jag skulle vilja åka på
that many weeks that know I probably no one REL I should want go on
semester med _$_k$.
vacation with

(29) * [Så sent]$_i$, det$_i$/då$_i$ vet jag ingen$_k$ som jag kan ringa till _$_k$ _$_i$.
that late that/then know I no one REL I can call to

Clearly there is not a perfect correlation between the phrases that can be extracted from relative clauses and the phrases that can occur in a left dislocation construction in Swedish. These examples also reveal something else. As we saw above, when the pronoun is not fronted in hanging topic left dislocation, the subject moves to Spec-CP. This provides an additional argument that extraction from relative clauses involves Ā-movement of the phrase that is extracted to Spec-CP. We see this in (30) and (31). When the extracted phrase is in Spec-CP, as in (30), there has to be a gap in the relative clause, and a resumptive pronoun is ungrammatical. The subject stays in Spec-TP. When the extracted phrase is a hanging topic and the subject moves to Spec-CP, as in (31), a gap is ungrammatical.

(30) a. [Den sortens halloweenmask]$_i$ känner jag ingen$_k$ som _$_k$ har _$_i$ (*den$_i$).
that kind-DEF-GEN Halloween mask-DEF know I no one REL has it
'I don't know anyone who has that kind of Halloween mask.'

b. [Den sortens halloweenmask]$_i$ känner jag ingen$_k$ som jag kan ge _$_k$ _$_i$ (*den$_i$).
that kind-DEF-GEN Halloween mask know I no one REL I can give it
'I don't know anyone who I can give that kind of Halloween mask to.'

(31) a. * [Den sortens halloweenmask]$_i$ jag känner ingen$_k$ som _$_k$ har _$_i$.
that kind-DEF-GEN Halloween mask-DEF I know no one REL has

b. * [Den sortens halloweenmask]$_i$ jag känner ingen$_k$ som jag kan ge _$_k$ _$_i$.
that kind-DEF-GEN Halloween mask I know no one REL I can give

[7]There is some variation regarding the acceptability of the examples in (25)–(29). Some people do not like (25) at all, even with the bound pronoun fronted, and some people have a grammatical version of the strings in (27)–(29). When they are grammatical, these strings probably involve an expletive *det* rather than the anaphor. There is also an interpretation of (29) where *så sent* introduces a point in time, which makes it slightly better.

Another type of evidence against a silent pronoun analysis of extraction from relative clauses is provided by sentences that we might analyze as pro-drop. It could be argued that Swedish has a silent *pro* in examples like (32a).[8] In these cases it is always possible to replace the silent *pro* with an overt pronoun (32b). The example is from Platzack (2011, p. 59–60) but with my glosses.

(32) a. [$_{CP}$ *pro* funderade [$_{TP}$ jag faktiskt [$_{vP}$ aldrig [$_{vP}$ ~~jag~~ ~~funderade~~ på ~~*pro*~~]]]]
pondered I actually never on
'I never thought about that, actually.'

b. Det funderade jag faktiskt aldrig på.
that/it pondered I actually never on
'I never thought about that, actually.'

c. * Jag funderade faktiskt aldrig på.
I pondered actually never on

d. * Funderade jag faktiskt aldrig.
pondered I actually never

e. På det funderade jag faktiskt aldrig.
on that/it pondered I actually never
'I never thought about that actually.'

Notably, it is not possible to drop a DP that is not in clause initial position (32c), and it is not possible to drop a preposition along with a DP (32d), even though the whole PP can be fronted (32e). But extraction of a PP out of a relative clause is possible, as we saw in example (14) above.

All in all, an analysis in terms of silent resumptive pronouns is untenable. To maintain it, we would have to adopt several types of silent pro-forms for which there is no independent evidence, and which for some unexplained reason would not be possible to use in examples like (32d), where there is no island involved. These pro-forms would also pattern differently than the *pro* that we *do* see some evidence for, in that they cannot alternate with an overt pronoun or phrase. In effect, we would have to stipulate this type of object in our grammar only for these instances where it would serve the purpose to save a purportedly universal island constraint.

3.3 Ā-movement inside the relative clause

We have now established that the relation between the extracted phrase and the position inside the relative clause is an Ā-movement relation. But this is actually not disputed by either Kush et al. (2013) or Platzack (2014). The two accounts are put forward with extraction from subject relative clauses in mind and aim to explain why movement out of such structures does not violate universal constraints. But here I am looking at non-subject relative clauses. However,

[8]The phenomenon is usually called topic drop (see Mörnsjö 2002 for examples from spoken Swedish).

the more general idea that extraction from relative clauses only involves one Ā-movement dependency should be investigated. Is there any evidence that there is in fact Ā-movement inside non-subject relative clauses in extraction constructions?

Evidence for movement inside a relative clause can plausibly be found in facts about parasitic gap licensing, weak crossover phenomena and in seeing whether relativization respects island constraints that are normally obeyed in the language.

3.3.1 Parasitic gap licensing

Relativization in Swedish licenses parasitic gaps, as we can see in (33), a sign that relative clauses indeed involve an Ā-dependency.

(33) Vi köpte bönor på konservburk, du vet sådana$_i$ som man kan äta _$_{i\ \mathrm{rg}}$ utan att koka
we bought beans on can you know such REL one can eat wihout to cook
_$_{i\ \mathrm{pg}}$.

'We bought canned beans, you know the kind you can eat without cooking.'

The real gap after *äta* in (33), licenses a parasitic gap after *koka* in the adjunct. Consider (34):

(34) Jag vill hitta någon$_i$ som jag kan skrämma _$_{i\ \mathrm{rg}}$ med den där halloweenmasken
I want find someone REL I can scare with the there Halloween mask-DEF
utan att ge _$_{i\ \mathrm{pg}}$ en alltför stor chock.
without INF give a too big shock
'I want to find someone who I can scare with that Halloween mask without giving them too big of a shock.'

This is a sentence with a non-subject relative clause, quite like the ones I have been discussing in this article, but with no extraction from the relative clause. The relative clause dependency licenses a parasitic gap, as expected. In (35) we see that crucially, a parasitic gap is licensed by the relative clause dependency even with extraction of another phrase out of the relative clause.

(35) [Den där halloweenmasken]$_i$ vill jag hitta någon$_k$ som jag kan skrämma _$_{k\ \mathrm{rg}}$ med _$_i$
the there Halloween mask-DEF I want find someone REL I can scare with
utan att ge _$_{k\ \mathrm{pg}}$ en alltför stor chock.
without INF give a too big shock
'I want to find someone who I can scare with that Halloween mask without giving them too big of a shock.'

This last piece of evidence is especially interesting, since it shows that the relative clauses in the examples we are investigating here – i.e. relative clauses from which a phrase has been extracted – are plausibly formed in the same way as regular *som*-relative clauses. There is nothing about extraction of a phrase from the relative clause that excludes parasitic gap licensing or about parasitic gap licensing that makes extraction of another phrase from the relative clause impossible.

Ideally, we would like to be be able to use the parasitic gap test to investigate whether Platzack's proposal – that there is no Ā-movement inside the subject relative clause – is correct. Unfortunately, this is not possible since in a subject relative clause, the real gap would

c-command the parasitic gap, which is ruled out in general (Engdahl 1983, p. 22). In (36) we see an instance of this. The real gap created by the relativization of a subject c-commands the parasitic gap in the adjunct, and the example is ungrammatical.

(36) * Det finns många som _rg talar det språket utan att någon har undervisat
EXPL exist many REL speak the language-DEF without that someone have taught
–pg

Intended meaning: 'There are many people who speak that language without anyone having taught it to them.'

3.3.2 Weak crossover

In Swedish, relativization induces weak crossover effects. The examples below are from Engdahl (1985) who shows that relativization patterns with question formation in this respect, unlike in English, where question formation but not relativization results in weak crossover.

(37) a. * mannen$_i$ som$_i$ hans$_i$ mor tyckte bäst om t_i
the-man that his mother liked best
'the man who his mother liked best'

b. * Vem$_i$ tyckte hans$_i$ mor bäst om t_i
who liked his mother best
'Who did his mother like best?' (Engdahl 1985, p. 9, example 13)

Again, the construction we are concerned with patterns with other relative clauses, even when another phrase is extracted (38)–(39).

(38) * Jag känner en tjej$_i$ som hennes$_i$ syster skrämde _$_i$ med den där halloweenmasken.
I know a guy REL her sister scared with the there Halloween mask-DEF

(39) * [Den där halloweenmasken]$_i$ känner jag en tjej$_k$ som hennes$_k$ syster skrämde _$_k$ med _$_i$.
the there Halloween mask-DEF know I a girl REL her sister scared with

Just like the parasitic gap test in the previous section, weak crossover effects indicate that relative clauses are formed by Ā-movement, even when phrases are extracted from them.

3.3.3 Island effects

Sentential subjects and coordinate structures are syntactic islands in Swedish, and relativization of a position inside of these structures results in ungrammaticality as well, as demonstrated by (40)–(42).

(40) * Den bil$_i$ som [$_{CP}$ att Maja köpte _$_i$] var oväntat hade inte dragkrok.
the car REL that Maja bought was unexpected had NEG towing hook

(41) * Jag fick ett tält$_i$ som Maja hade köpt [$_{DP}$ en röd cykel och _$_i$].
I got a tent REL Maja had bought a red bike and

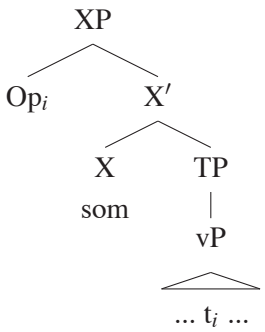
(42) * Jag fick det tält$_i$ som [$_{DP}$ den röda cykeln och _$_i$] hade varit mina föräldrars tidigare.
I got the tent REL the red bike-DEF and had been my parent's earlier

To sum up, all of the diagnostics for movement inside of the relative clause point towards there being an Ā-movement relation. Sections 3.1 and 3.2 established that the relation between the extracted phrase and the position inside the relative clause is also created via Ā-movement. In the next section, I will discuss the consequences of this new data for the proposals put forth by Kush et al. (2013) and Platzack (2014).

3.4 Consequences for the previous proposals

A precondition for the account provided by Kush et al. (2013) is that only subject relative clauses allow extraction, as small clauses are 'subject oriented'. We have seen in section 3.1 that this precondition is not met. In fact, it is hard to see how to extend the small clause analysis to non-subject relative clauses without ending up with a structure that is indistinguishable from that of a non-subject relative clause. Recall that the proposed small clause structure needs to involve a TP, since it is tensed. In section 3.3 we saw that forming the relative clause in cases of extraction from non-subject relatives involves Ā-movement. But if we have a clause containing a TP, with Ā-movement of a silent element (presumably to the specifier of *som*), this looks remarkably like a relative clause, as we see in (43).[9]

(43)



Platzack, on the other hand, acknowledges that it is possible to extract from non-subject relative clauses. Since this is not predicted by his account of extraction from subject relative clauses, he proposes that extraction from non-subject relative clauses is made possible by the Principle of Minimal Compliance (see Richards 1998). In deriving a sentence like (44), the indirect object *Lisa* moves to Spec-CP. This movement is licit, and the PMC then allows the direct object to move to the C-domain as well.

(44) Lisa$_i$ vet jag tre saker som han vill ge t$_i$
Lisa know I three things that he wants give (Platzack 2014, example 25)

[9]There are other reasons not to adopt the Small Clause Hypothesis, for example the possibility of extracting from relative clauses inside DPs embedded under non-small clause selecting verbs like *träffa* 'meet'. The restriction to small clause selecting verbs that Kush et al. 2013 argue for does not actually hold when one takes a wider range of verbs into account (see Müller submitted).

Importantly, Platzack derives extraction from non-subject relatives in a way that has no relation to his account of extraction from subject relatives. In the following section, I will argue that this has certain disadvantages.

4 An argument from learnability

Section 3 shows that extraction from non-subject relative clauses is possible in Swedish, and that the element undergoing extraction may belong to any of several categories. I have furthermore argued that it involves two Ā-movement dependencies: one for relativization itself, and one for extraction from the resulting structure. This means that Swedish relative clauses are not strong islands, a fact which has repercussions for theories of islandhood. If relative clauses are not strong islands in all languages, it needs to be possible for a speaker of a specific language to find out whether a relative clause constitutes an island in that language. Further research is needed to determine how this is possible. But the mere fact that speakers are able to arrive at the conclusion that extraction from non-subject relative clauses is possible can give us a clue about the structure of restrictive relative clauses that these speakers must have available.

Extraction from relative clauses is rather uncommon in spontaneous speech and writing. I have gathered examples I have come across for around three years, and have a collection of a few hundred by now. Among these, only one involves extraction from a non-subject relative clause (45). The example is from a discussion in a web forum about bags for cameras. The commenter is describing a specific bag that he has experience with. I have translated the immediately preceding context to English.

(45) *It fits well, but it's not very well ventilated. I easily get a bit sweaty on my back.*

Fast det$_i$ har jag inte hittat någon ryggsäck$_k$ [jag inte blir _$_i$ av _$_k$].
but that have I not found some backpack I not become of

'But I haven't found any backpack that I don't get sweaty from.'[10]

The collection of these examples has not been controlled, meaning that it is not possible to make reliable estimations about how often extraction from non-subject relative clauses occur compared to extraction from subject relative clauses. However, I hear or read examples with extraction from subject relative clauses at least a few times a week, whereas extraction from non-subject relatives is clearly much more rare.

This raises two questions. First, why is extraction from non-subject relative clauses so rare, if it is grammatical? Second, how can speakers learn that extraction from non-subject relative clauses is possible at all, if it is not in the input?

The first question most likely has more than one answer. Research on processing of relative clauses and questions shows that it is easier to process subject dependencies than object dependencies, at least in Germanic languages such as English and Dutch (see Kluender 2004 and references therein). Since filler-gap dependencies are taxing for processing in general, it is not surprising that the combination should be uncommon. Furthermore, since Swedish exhibits

[10] http://www.sweclockers.com/forum/103-foto-och-video/776107-kameravaska/ (2008)

that-trace effects, extracting the subject from a non-subject relative clause results in ungrammaticality. This means that for extraction from a non-subject relative clause to be possible, there need to be at least two other phrases in the clause, besides the subject, both of which need to be extractable. This greatly reduces the number of non-subject relative clauses where extraction is even possible. Adding to this the requirements on the information states of the participants for the extraction strategy to be used, it is to be expected that such sentences are rare.

But if there are almost no instances of extraction from non-subject relative clauses in the input, and some speakers still seem to deduce that it is possible, what do they deduce this from? I suggest that that the possibility of extraction from subject relatives is precisely what is at play here. Speakers encounter these examples, and from this they can conclude that extraction from other kinds of relative clauses is possible too. This must mean that these speakers derive subject relative clauses in a way parallel to non-subject relative clauses. If what makes extraction possible were connected to something unique to subject relatives, speakers would not be able to generalize the pattern to non-subject relatives.

If this argument is correct, then both Kush et al. (2013) and Platzack (2014) fall short. Since both of the accounts are designed to allow for extraction from (apparent) subject relatives but not from non-subject relatives, they have no way of accounting for the fact that speakers can deduce from these cases that extraction from non-subject relative clauses is possible.

5 Towards a unified analysis

In this section I discuss some options for a unified analysis of extraction from subject and non-subject relative clauses. Since one of the goals of this analysis is to relate the facts about Scandinavian extraction to current assumptions about locality, I will frame the discussion in terms of feature-driven movement obeying the Phase Impenetrability Condition (PIC) (46).

(46) **Phase Impenetrability Condition** The domain of H is not accessible to operations outside HP; only H and its *edge* are accessible to such operations (Chomsky 2001, p. 13).

I do not mean to argue that that the Phase Impenetrability Condition is necessarily the right way to condition locality. My aim is to show what kind of variation grammars have to allow for, given the data I have presented here, and to make clear what the consequences for a PIC-based account are.

I will end up essentially adopting the account in Platzack (2000, 2014) for the attachment site and structure of the relative complex, adding to the analysis a new structure for the relative CP.

5.1 The structure of the relative complex

Platzack (2014) assumes restrictive relative clauses to be complements of N, and the relation between the head and the relative marker to be mediated by an Agree-relation. A theory-internal motivation for the complement-of-N analysis is given in Platzack (2000): aside from Kayne's

complement-of-D analysis it is the only structure for relative clauses that Kayne's (1994) anti-symmetric phrase structure permits.

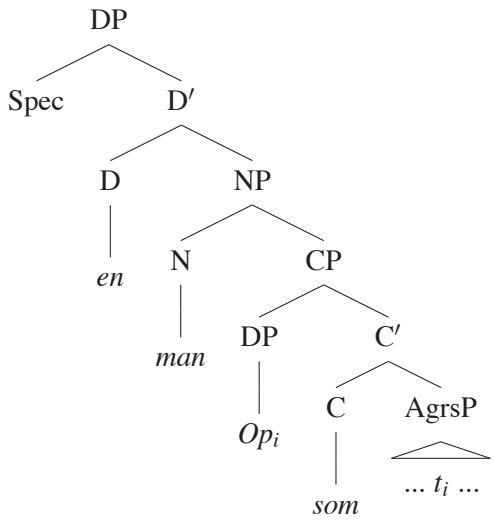
A more traditional view is that relative clauses are adjuncts (either to NP or DP). Against this background, a complement-of-N analysis of relative clauses in the Scandinavian languages is also interesting in relation to proposals about island constraints in the tradition of Huang's (1982) Condition on Extraction Domain (CED), where adjuncts and subjects are islands. Unfortunately for this general approach, grammatical extraction from adjuncts is possible in certain cases in Swedish. The *Swedish Academy Grammar* (SAG) gives (47) as an example that some speakers accept in informal speech (the glosses and translation are mine).[11]

(47) *Den här duken* blir jag arg om du spiller på [-].
the here tablecloth become I angry if you spill on
'I'll get angry if you spill on this tablecloth.' (SAG, vol. 4. p. 424)

This means that the CED fails to capture the Swedish extraction facts, which in turn means we cannot use it as an argument for relative clauses being complements rather than adjuncts.

Semantically, restrictive relative clauses are abstract predicates, and function as intersective modifiers to the nominal head. This in itself does not commit us to any particular analysis of their syntax, but since the data I have collected for this article does not bear on the question of the attachment of the relative clause, I will simply adopt Platzack's proposal that CP is a complement of N. Now, if DP is a phase, we need to explain how a phrase moving out of the relative clause can escape it. This is explained on Platzack's account (2000, p. 275). Restrictive relative clauses have the structure in (48).

(48)



Notably, there is nothing occupying Spec-DP, which means that it is available as an escape hatch. The question now is how phrases get to be accessible to move to Spec-DP.

[11] [-] marks the gap in the notation in the *Swedish Academy Grammar*.

5.2 The structure of the relative CP

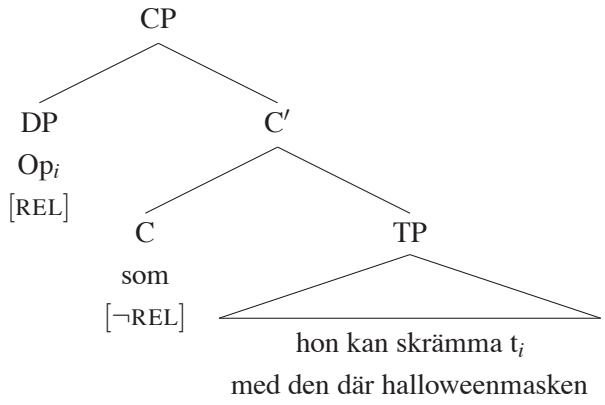
The facts from section 3 narrow down the hypothesis space for the structure of the relative CP. There is a relation inside the relative clause which licenses parasitic gaps and induces weak crossover, and it respects the Coordinate Structure Constraint and the Sentential Subject constraint. If CP is a phase, and the Phase Impenetrability Condition holds, then only C and the edge of CP should be accessible outside of CP. Say that we want to derive (49).

(49) [Den där halloweenmasken]$_i$ vill Edith hitta någon$_k$ som hon kan skrämma _$_k$ med
the there Halloween mask-DEF wants Edith find someone REL she can scare with
_$_i$.

'Edith wants to find someone that she can scare with that Halloween mask.'

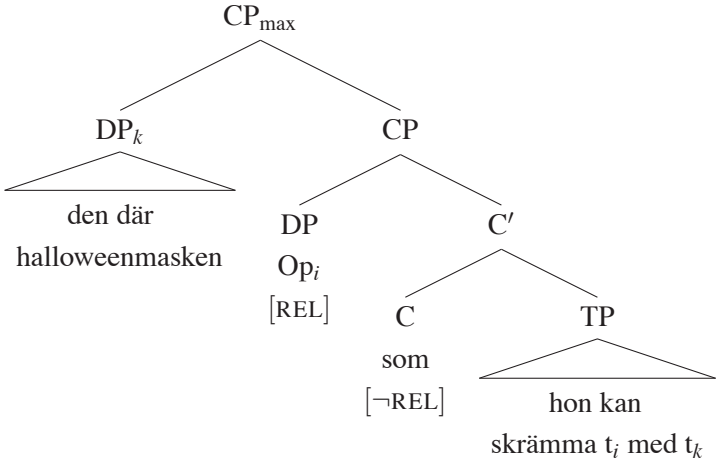
After building the TP, C is merged.[12] C has an unvalued relative feature with an EPP. This attracts the relative operator to Spec-CP. We have the structure in (50).

(50)



Now we need the DP *den där halloweenmasken* to be accessible from outside of CP, and this means that it too must move to the phase edge, resulting in the structure in (51).

(51)



[12] Whether *som* is merged as T or C is not important for the purposes of the paper, but I will assume it is merged as a C here, for ease of exposition. I will also disregard the phasehood of vP. If vP is a phase, it must be possible to move both of the phrases involved in extraction out of vP.

In (51), the phrase has moved to an outer specifier of CP, above the relative operator. The core of restrictive relative clauses in Swedish is just like relative clauses in English. The difference is the option to move an extra phrase to an outer specifier.

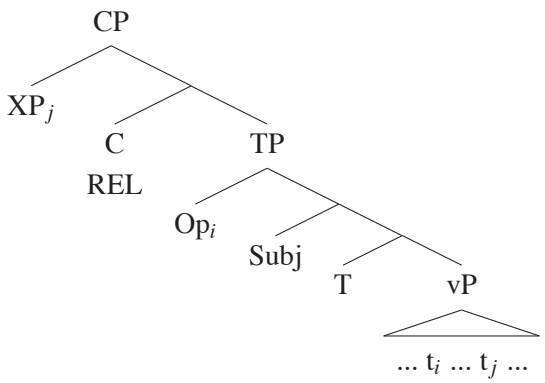
If speakers can in fact deduce that extraction from non-subject relative clauses is licit from the possibility to extract from subject relative clauses, as I argued in section 4, this indicates structural parallelism. Deriving a subject relative clause, then, must also involve moving a relative operator to Spec-CP, and extracted phrases moving through an outer specifier of CP. The assumption would be that encountering sentences involving extraction from subject relative clauses, speakers learn that relative C must be able to host more than one specifier. The parallel mode of derivation allows this to be a generalization about relative C in all restrictive relative clauses.

This analysis may seem undesirable. After all, a strong motivation for the two previous accounts is that they try to give a structural explanation for why the mainland Scandinavian languages, but no others, allow relative clause extraction. According to the proposal I present here, we have no clear answer to this question. We seem to be forced to say that in acquiring a mainland Scandinavian language, it is possible to learn that relative clauses can have two specifiers, whereas in acquiring languages like English, this does not happen. Exactly why this is the case is an important question, and the facts from Swedish raise questions about the explanatory value of a purely phase-based account of the islandhood of relative clauses in other languages.

However, as I have shown in previous sections, the proposals put forth by Kush et al. (2013) and Platzack (2014) are not consistent with the data. If we want to maintain the PIC and other standard assumptions, i.e. that CP is a phase and that Ā-movement is successive cyclic, we are forced to assume this structure for non-subject relative clauses. Otherwise, we would have to accept the possibility of non-successive cyclic Ā-movement, or movement of the relative operator to some position other than Spec-CP.

In fact there is another structure that is consistent with the presented data, where relativization involves Ā-movement not to Spec-CP but to an outer specifier of TP (52).

(52)



In a non-subject relative clause the relative operator would move across the subject, and this would be what caused the weak crossover effect. The moving operator would cause the Coordinate Structure Constraint violation and the Sentential Subject Constraint violation regardless of

whether it moved here or to Spec-CP, and we would have to simply stipulate that this is a type of Ā-movement and, as such, licenses parasitic gaps. Since we have no independent motivation for the existence of two specifiers of TP in Swedish, I will not pursue this alternative here.

Some further support for the idea that extraction involves extra specifiers comes from embedded questions, which also permit extraction (53).

(53) [Det där vinet]$_k$ minns jag inte vem$_i$ som $\__i$ tog med $\__k$ till festen.
the there wine remember I not who C took with to party-DEF
'I don't remember who brought that wine to the party.'

See Engdahl (1986) for an account of extraction from embedded questions, and Engdahl (1980) for an argument about the relevance of Subjacency similar in spirit to the one made here about the PIC.

5.3 Which phrases can move?

So far, we have not been concerned with what types of phrases *cannot* be extracted from relative clauses. While Swedish relative clauses are not strong islands, they do not permit extraction of just any phrase. For example, expletive objects cannot be extracted (54).

(54) a. Jag känner många$_i$ som $\__i$ bara tog det lugnt i somras.
I know many REL only took EXPL.OBJ calm in summer
'I know many people who just took it easy this summer.'

b. * Det$_k$ känner jag många$_i$ som $\__i$ bara tog $\__k$ lugnt i somras.
EXPL.OBJ know I many REL just took calm in summer

Engdahl (1997) and Lindahl (2010) investigate naturally occurring examples of extraction from relative clauses, and conclude that the moved phrase is most often one of a few different types of topics (see Engdahl & Lindahl 2014). The examples in this article have also all involved topics, and were presented to the consultant in a context where the fronted phrase would easily be interpreted in that way. But questioning, clefting and relativization of a position inside a relative clause is also possible.

(55) *Question formation*

[Vilken halloweenmask]$_i$ vill Edith hitta någon$_k$ som hon kan skrämma $\__k$ med $\__i$?
which Halloween mask wants Edith find someone REL she can scare with

'Which Halloween mask does Edith want to find someone that she can scare with?'

(56) *Cleft formation*

Det är [den där halloweenmasken]$_i$ som Edith vill hitta någon$_k$ som hon kan skrämma
it is the there Halloween mask-DEF REL Edith wants find someone REL she can scare
$\__k$ med $\__i$.
with

'Edith wants to find someone that she can scare with that Halloween mask.'

(57) *Relativization*

Jag såg [en halloweenmask]$_i$ som Edith vill hitta någon$_k$ som hon kan skrämma _$_k$ med _$_i$?
I saw a Halloween mask REL Edith wants find someone REL she can scare with

'I saw a Halloween mask that Edith wants to find someone that she can scare with.'

In questions, there is a further restriction. Out of context, an example like (58) probably sounds strange, but given a context where we are talking about a set of people scaring other people with a set of things, it seems fine.

(58) Vad$_i$ vill Edith hitta någon$_k$ som hon kan skrämma _$_k$ med _$_i$?
what wants Edith find someone REL she can scare with
'What does Edith want to find someone that she can scare with?'

This is reminiscent of Pesetsky's notion of D-linking (1987). Extraction of *vilken*-phrases, which are inherently D-linked, is also grammatical (59).

(59) [Vilken halloweenmask]$_i$ vill Edith hitta någon$_k$ som hon kan skrämma _$_k$ med _$_i$?
which halloween mask wants Edith find someone REL she can scare with
'Which halloween mask does Edith want to find someone that she can scare with?'

Note also the effect of clefting which makes it more plausible that the questioned item is D-linked (60).

(60) Vad$_i$ var det Edith ville hitta någon$_k$ som hon kan skrämma _$_k$ med _$_i$?
What was EXPL Edith wanted find someone REL she can scare with
'What was it that Edith wanted to find someone that she can scare with?'

Some adjuncts can also be questioned, in a plausible context. If a speaker A asks the question in (61a), a speaker B can reply with (61b), where an adjunct inside the relative clause is questioned.

(61) a. A: Hur sent kan vi gå och handla?
how late can we go and shop
'How late can we go to the store?'

b. B: Hm ... [hur sent]$_i$ vet du någonstans$_k$ man kan köpa cigaretter _$_k$ _$_i$?
hm ... how late know you somewhere one can get cigarettes
'What is the latest time such that you know of a place that sells cigarettes that is open at that time?'

Given this restricted overview, the types of phrases that can be extracted all seem to relate to the semantics/pragmatics of the discourse context. Except for the relative operator, all of the operations that result in extraction from a relative clause could be argued to be driven by a feature related to the discourse: topics have a topic feature and the pivot of a cleft most likely carries a focus feature. The difference between well formed and ill formed questions of positions inside relative clauses is also related to the discourse context, as we have seen. If we could argue that the relative operator bears some discourse related feature, we would have

something that looks like a natural class of phrases that can be extracted. A possibility may be that the operator bears a topic feature. In Lexical Functional Grammar, the relative pronoun is standardly assumed to have a topic function (though see Falk (2010) for a critique of this view). To determine whether this is a viable path, more investigation into the properties of extractable phrases is needed.

Assuming for now that these features do form a natural class of *discourse-related* features, relative C in the mainland Scandinavian languages would have an unvalued DR-feature, attracting any phrase with such a feature to an outer specifier, where it would be available to later steps in the derivation as in (62).

(62) $[_{CP_1}\ XP_i \ldots [_{DP}\ \sout{XP_i} \ldots [_{CP_2}\ \sout{XP_i}\ Op_k\ [_{C'}$ som $[_{TP} \ldots\ \sout{Op_k} \ldots\ \sout{XP_i} \ldots]]]]]$

$[DR]$ $[DR]$ $[DR]$ $[Rel]$ $[\sout{\neg Rel}, \sout{\neg DR}]$ $[Rel]$ $[DR]$

This is an abstract skeleton, covering the data in this article. In forming a relative clause, first, the operator Op_k moves to Spec-CP_2, creating the core of the relative clause. The extracted phrase XP_i then moves to the outer specifier of CP_2 to satisfy the discourse-related feature on relative C. After moving through the outer Spec-CP_2, the extracted phrase escapes the DP via Spec-DP, and moves to its final landing site, in Spec-CP_1.

While evaluating the proposed structure for relative clauses, we should note that it predicts that we should only ever be able to extract one phrase from a relative clause. Engdahl (1980), however, argues based on constructed data that more than one phrase may be extracted. Thus, there is in principle no motivation for limiting the number of available specifiers. This would involve assuming that the unvalued discourse-related feature on relative C is "insatiable". In that case, Swedish relative C would essentially be what Bošcović (1999) calls an 'Attract all F element'. Such an analysis actually also solves a problem. If the unvalued DR-feature is satisfied by any phrase bearing a feature belonging to that class, and we are assuming that the relative operator bears some DR-feature, it would seem that the movement of just the relative operator should satisfy both of the unvalued features on C. If the unvalued discourse-related feature is "insatiable", this is avoided.

Notably, in Swedish, the extra CP-specifiers can only function as escape hatch positions in a derivation. They cannot be pronounced as intermediate specifiers. This holds for both relative clauses and embedded questions. This makes Swedish different from languages like Bulgarian, where it is possible to pronounce multiple Spec-CPs. A way to account for this would be to add a condition on multiple Spec-CPs, active at PF (cf. Rudin 1988).

6 Concluding remarks

In this paper I have argued that extraction from non-subject relative clauses involves two Ā-movement dependencies. These dependencies exhibit several properties characteristic of movement, e.g. strong and weak crossover, the licensing of parasitic gaps, and case connectivity. The data do not lend themselves to an analysis in terms of silent pronouns. This means that relative clauses are not always strong islands.

In addition, considerations of learnability support the assumption that extraction from subject and non-subject relative clauses must be derived by the same mechanism. I have proposed that what is special about the mainland Scandinavian languages is that they permit multiple specifiers of relative complementizers. The proposal is based on some common assumptions about locality and feature-driven movement, namely the Phase Impenetrability Condition, and successive cyclic movement through Spec-CP. If we are to maintain these assumptions, we are forced to assume something like what I suggest here, unless we can identify something else about the syntax of relative clauses in the mainland Scandinavian languages that sets them apart from relative clauses in other languages.

Clearly, more research is needed about which types of phrases can and cannot be extracted from relative clauses. A careful study of the discourse function and semantics of the fronted phrases is necessary in order to find out exactly what restricts extraction. So far, there is very little research about relative clause extraction in spontaneous discourse, and data from such research would be valuable in this investigation.

Since relative clauses are not strong islands in Swedish, an interesting question is to what extent they are similar to constituents that are usually analyzed as weak islands. Some accounts of weak islands (Szabolcsi 2006) propose that they are an entirely semantic phenomenon, and it would be interesting to see to what extent such an account of relative clause extraction is viable. Specifically, Szabolcsi (2006, p. 515) proposes that phrases that can be extracted from weak islands "range over discrete individuals", while phrases that cannot "denote in a partially ordered domain".[13] It would seem that the grammatical Swedish extractions of adverbial phrases in (21)–(23) and (61) go against this proposal, but more detailed investigations are required to determine whether we ultimately need to state the relevant generalizations in the semantics, the syntax, or both, and in what way role the discourse context plays. This type of study would further our understanding of what islandhood really is.

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[13] This is similar in spirit to Cinque's notion of 'referentiality', although more explicit.

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Pseudocoordination in Swedish with *gå* 'go' and the "surprise effect"*

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Abstract. Pseudocoordination is a construction where two verbs or VPs appear to be conjoined by what looks like the conjunction *och* 'and'. In my paper I focus on pseudocoordination with *gå* 'walk, go' as Verb 1, in particular cases where this has been claimed to give rise to a "surprise effect" (Wiklund 2005, 2008). I set out from the assumption that Verb 1 in pseudocoordination is a light verb, which, following Butt (2003, 2010), is assumed to be a special use of the corresponding main verb. I distinguish three different meaning variants of the main verb *gå* 'walk, go', and connect each of these to a particular type of pseudocoordination with *gå* as Verb 1. The "surprise effect" is associated with one of these, $gå_{\text{HAPPEN}}$. The main verb $gå_{\text{HAPPEN}}$ assigns three theta-roles, one of them to quasi-argumental *det*, as in *Det gick honom illa* (it.N went him bad) 'Things went bad for him'. As a light verb, $gå_{\text{HAPPEN}}$ can assign only two theta-roles; hence one argument, the EXPERIENCER, is "left over", This situation triggers subjectification, meaning that the role is assigned to one of the speech participants, usually to the LOGOPHORIC AGENT (the speaker). The "surprise effect" is a pragmatic interpretation of this pattern of theta-role assignment, in a context where the subject is +HUMAN, hence exerting CONTROL.

As for the alleged conjunction *och*, pronounced [ɔ], I argue that it is a version of the infinitival marker *att*, which is also pronounced [ɔ]. The crucial difference is that it lacks tense.

Key words: pseudocoordination, surprise effect, quasi-argument, subjectification, logophoric agent

1. Introduction

The term *pseudocoordination* refers to a construction with two verbs or verb phrases that appear to be conjoined with an element looking very much like the additive conjunction *och* 'and', pronounced [ɔ].[1] The number of verbs that can

*This paper has been presented at the Research Seminar, at Department of Scandinavian Languages, Lund University. I thank the participants at this occasion for interesting and rewarding discussions. Thanks also to Johan Brandtler for valuable comments. I am responsible for all remaining errors and inadequacies.

[1] For the sake of simplicity I will gloss *och* as AND in this study. In section 5 I discuss the nature of this element, on the basis of the proposed analysis. In a similar way, I will refer to the two parts of a pseudocoordination as *conjuncts*, without thereby implying that *och* 'AND' is a conjunction.

be used as Verb 1 in pseudocoordination is limited. In terms of frequency, *sitta* 'sit', *stå* 'stand', *komma* 'come', and *gå* 'walk, go' are probably the most common ones, but some other possibilities are *ligga* 'lie', *vara vänlig* 'be kind', and *springa* 'run' (see Teleman & al. 1999, vol. IV, § 17–22 for an overview). The main goal of the present study is to account for pseudocoordination with *gå* 'walk, go' as Verb 1, in particular the use illustrated in (1).[2,3]

(1) Hon har gått och gift sig.
she have.PRS go.SUP AND marry.SUP REFL
'It so happens that she got married.'

An intriguing property of pseudocoordination with *gå* 'walk, go' in examples, such as (1), is that it is associated with what has been called a "surprise effect". When sentence (1) is uttered, the speaker conveys the meaning that the event expressed in the second conjunct is unknown, new, or unexpected (see, for example, Wiklund 2008). For some native speakers, the subject is also vaguely ascribed the responsibility for the event denoted by the second conjunct, even in cases where the lower verb is strictly non-agentive, as in *Han har gått och brutit benet* (he have.PRS go.SUP and break.SUP leg.DEF) 'It so happens that he has broken his leg'.

In my study I propose an explanation for the "surprise effect", found in examples such as (1). In short, Verb 1 in pseudocoordination is assumed to be a light verb, and the meaning, as well as the syntactic properties of this verb, can be derived from the lexical semantics and the syntax of the corresponding main verb *gå* 'walk, go'. *Gå* is a highly polysemous verb, and the "surprise effect" is associated with one of the uses of *gå*. However, in the light verb use of this version of *gå*, not all theta-roles can be assigned, which triggers *subjectification*, meaning that the EXPERIENCER role is carried by one of the speech participants.

The outline of the paper is as follows: In section 2, I present some background, including previous analyses of pseudocoordination. Section 3 is an analysis of three versions of *gå* 'walk, go'. Section 4 presents an analysis of pseudocoordination with *gå* 'walk, go', based on the three meaning variants of this verb, presented in section 3. In section 5, the nature of the assumed conjunctive element *och* is discussed. Section 6 is a summary and discussion.

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[2] The following abbreviations will be used: C = common gender, DEF = definite, EXPL = expletive, IM = infinitival marker, N = neuter, PST = past tense, PRS = present tense, SUP = supine, IM = infinitival marker, REFL = reflexive pronoun.

[3] It should be pointed out that it is hard to give a proper English translation for many of the examples with pseudocoordination, in particular a translation that properly captures the "surprise effect".

2 Background

Pseudocoordination has been the subject of much research; see, for instance, Teleman (1974), Josefsson (1991), Ekberg (1983; 1993a; 1993b), Lødrup (2002; 2014), Wiklund (2005; 2008), Darnell Kvist (2008), and Blensenius (2009). In this section I highlight the parts of the abovementioned literature that are relevant for my analysis, as well as some basic properties of light verbs.

Let us first take a look at the central properties of pseudocoordination. As shown in (1), both conjuncts of the pseudocoordination carry the same tense morphology. In sentences with complex tense there is only one finite verb, which appears in the second position of the clause. (This is expected, since Swedish is a V2 language.) (2) shows that there is only one overt subject, and that sentence adverbials may show up only in the first conjunct, never after *och*:

(2) Pelle har förmodligen gått och (*förmodligen) gift sig.
Pelle have.PRS probably go.SUP AND probably marry.SUP REFL
'To my surprise, Pelle has probably married.'

Pseudocoordination, as in (3a), differs from canonical coordination by the second conjunct not being an island for movement. In (3a), the object has raised from the second conjunct. (3b) shows that this is not possible in canonical coordinations:

(3) a Alfred$_i$ sitter hon och tänker på e$_i$ hela dagarna.
Alfred it.PRS she AND think.PRS on e$_i$ all days.DEF
'She spends all days sitting thinking of Alfred.'

b *Flöjt$_i$ sjunger Bo$_i$ i kör och spelar e$_i$ i orkestern.
flute sing.PRS Bo in choir and plays flute in orchestra.DEF
Intended meaning: 'Bo sings in the choir and plays the flute in the orchestra.'

In many cases, the use of pseudocoordination with *sitta* 'sit' and *gå* 'walk, go' conveys what has been referred to as "oavgränsad aktionsart" 'unbounded aktionsart' (Teleman & al. 1999, vol. 4, 904), which roughly corresponds to states or processes. Teleman & al. (1999, vol. 1, 215) also claims that Verb 1 semantically has the character of an auxiliary. However, other analyses have shown that Verb 1 is better viewed as a light verb or a vector verb, and that we understand the construction best if we think of Verb 1 as a version of the corresponding main verb. This is the line that will be pursued in this paper.

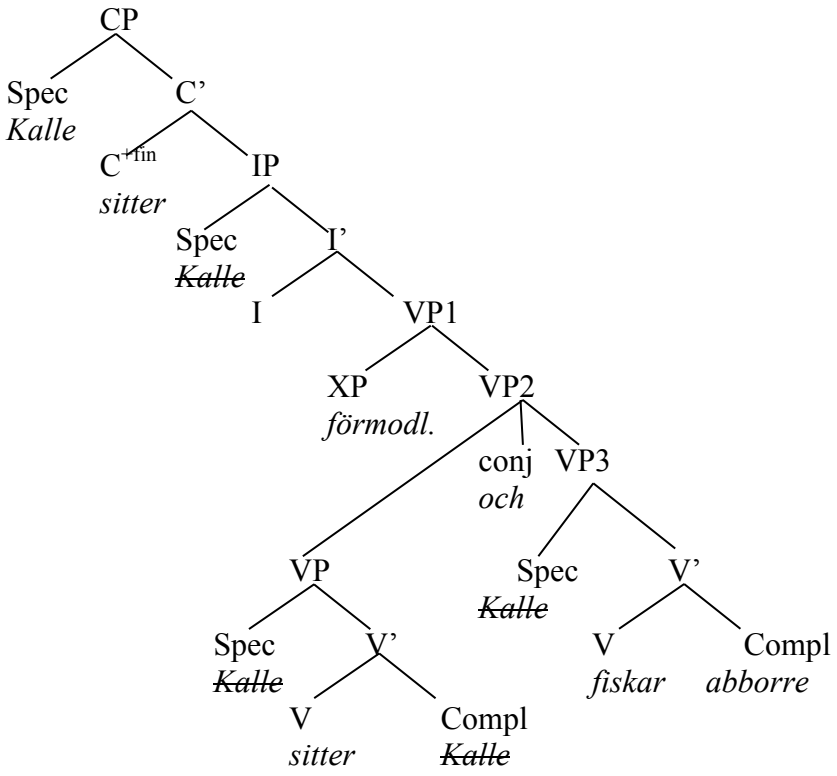
2.1 Some previous analyses of pseudocoordination

In this subsection, I present some of the main ideas put forward in Josefsson (1991), Ekberg (1993a, b), Wiklund (2005; 2008), and Blensenius (2009). The purpose is not to cover all the research in the area, but to introduce the ideas that are relevant for the analysis that I propose in section 4.

2.1.1 Josefsson (1991)

Josefsson (1991) argues that pseudocoordination is a VP + VP coordination. She suggests the following structure for the example *Kalle sitter förmodligen och fiskar abborre* (Kalle sit.PRS probably and fish.PRS perch) 'Kalle is probably fishing perch'.

(4)



Josefsson (1991) bases her analysis on the sentence structure in Holmberg & Platzack (1995), where a strict distinction between tense and finiteness is made. There is only one instance of finiteness in (4), located in C, which takes scope over the whole sentence, and only one inflection node, IP (corresponding to TP in more recent frameworks), which encodes the tense features. One important property of (4) is that the structure corresponds to one single event, though a complex one, each conjunct being associated with a subevent. (For the terms

event and subevent, see Pustejovsky 1991.) The structure in (4) also accounts for the observation that there is only one position for negation and other sentence adverbials, namely in the middle field of the first conjunct. This is in line with the idea that negation is dependent on the presence of a TP (see, for instance, Laka 1990).

(5)	Abborrar	sitter	hon	(inte)	och	(*inte)	fiskar	(*inte).
	perch.PL	*sit.PRS*	*she*	*(not)*	*AND*	*(not)*	*fish.PRS*	*(not)*

Since the second conjunct in (4) is a VP, no sentence adverbials can appear there. As for the subject, Josefsson (1991) assumes some version of coindexing of the noun phrase in Spec VP in both conjuncts, but no detailed account is presented.

Importantly, Josefsson (1991) regards the second conjunct as a VP, not a full clause.

2.1.2 Ekberg (1993a, b)

Ekberg (1993a, b) focuses on coordination with *ta* 'take', as in (6):

(6)	Hon	tog	och	simmade	200	meter.	Ekberg (1993a, 39)
	she	*take.PST*	*AND*	*swim.PST*	*200*	*meters*	
	'She started to swim 200 meters.'						

One of Ekberg's main points is that pseudocoordination operates on a fine grained Event structure, such as the one proposed in Pustejovsky (1991). With *ta* 'take' as Verb 1, the initiation part of the event is foregrounded and treated as volitional or agentive. With a non-agentive verb, such as *somna* 'fall asleep' in (7), coercion takes place, in this case meaning that a non-voluntary action, such as falling asleep, is treated as a voluntary one.

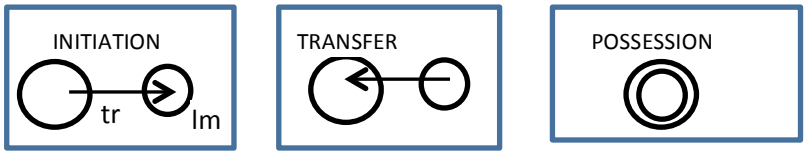
(7)	Ta	och	somna	nu!
	take.IMP	*AND*	*swim.IMP*	*now*
	'Try to go to sleep now!'			

Ekberg argues that there is a close connection between *ta* 'take', used in pseudocoordination, and the main verb use of the verb *ta* – they are, in fact, the same verb. Consider (8):

(8)	Hon	tog	pennan.
	she	*take.PST*	*pencil.DEF*
	'She took the pencil.'		

According to Ekberg, the core meaning of the main verb *ta* 'take', has three components, which are illustrated by the following sequence of image schemata. The components are INITIATION, TRANSFER and POSSESSION:

(9)



Ekberg argues that *ta* 'take', as Verb 1 in pseudocoordination operates on the same sequence of components, but that the INITIATION and the POSSESSION parts are the most prominent ones (though in a metaphorical sense). The notion of POSSESSION corresponds to the observation that pseudocoordination with *ta* takes scope over the whole event. This is shown in (10) and (11), where pseudocoordination with *ta* is contrasted to the use of the "semi auxiliary" *börja* 'begin' in (11), which, in a similar way, foregrounds the first subevent of the complex event, but does not scope over the whole event.

(10) Hon tog och simmade 200 m *(men avbröt efter 100 m).
she take.PST AND swim.PST 200 m. but stop.PST after 100 m.
'She started to swim 200 meters (*but stopped after 100 meters).' Ekberg (1993a:39)

(11) Hon började att simma 200 m (men avbröt efter 100 m).
she start.PST to swim.PST 200 m. but stop.PST after 100 m.
'She started to swim 200 meters (but stopped after 100 meters).' Ekberg (1993a:39)

The idea that a main verb use and the pseudocoordination use of the same verb are intimately related is a corner stone of the analysis that I propose.

2.1.3 Wiklund (2005; 2008)

An important point in Wiklund's analysis is that pseudocoordination is restructuring and that the subject has moved from conjunct 2 to conjunct 1. She also assumes that pseudocoordination is subordination, and that the "conjunction" *och* is a subordinating element, which she represents as *&*. Wiklund claims that pseudocoordination involves two clauses, and that the tense feature of the upstairs verb is copied onto the downstairs one. The idea that pseudocoordination is biclausal will not be considered in this paper, at least not when it comes to pseudocoordination with *gå* 'walk, go'. The "true" nature of

the element *och* is discussed in more detail in section 5, where I draw on Wiklund's analysis.

Wiklund (2008; see also 2005) discusses pseudocoordination with *gå* 'walk, go' and *ta* 'take'. She claims that there is a "surprise effect" associated with both these verbs, when used as Verb 1, and she bases her claim on examples such as (12):

(12) Ragna tog och läste en bok.
Ragna take.PST AND read.PST a book
'Ragna started to read a book.'

More specifically, Wiklund argues that there is "a touch of surprise, unexpectedness, or suddenness" to such sentences (Wiklund 2008:163). I disagree with Wiklund that a possible "surprise effect" in examples, such as (12), is grammatically encoded, and agree with Blensenius (2009:22), that a strict distinction has to be made between surprise as a feature of a syntactic configuration and surprise due to a surprising content of a clause. Hence, the content of (12) might be unexpected, but there is no grammatically triggered surprise reading. In my view, it is only pseudocoordination with *gå* 'walk, go' as Verb 1 that may give rise to what we could consider a grammatically encoded surprise effect – even though the term surprise might not be the best term. If a surprise effect is triggered by other verbs, it is an epiphenomenon, due to other factors, such as surprising content or maybe prosody.[4]

Wiklund suggests an analysis of pseudocoordination with *ta* 'take', which she claims explains the "surprise effect". Taking the functional sequence of Ramchand (2008) as her point of departure, she argues that the "surprise effect" is due to a clash, caused by the way the two verbs realize different segments of this functional sequence. According to Wiklund (2008), the source of the assumed surprise effect with coordination with *gå* 'walk, go' is that there would be a "clash between the initiator and the eventuality of the embedded predicate; from having the initiator be identical to the undergoer in the context of a verb that does not perhaps have an [init] feature in its lexical specification and with which a causativization in this context would yield a funny result" (Wiklund 2008:174). Instead of resorting to a Ramchand style of analysis, I will argue that

[4] A preliminary observation is that the tonal gesture that corresponds to what we might call a "surprise prosody" is akin to that of focus. It might be interesting to investigate the possibility that the use of two verbs in a sequence prolongs the space where the tonal gesture corresponding to focus may occur, which, in turn, would facilitate a "surprise prosody". This, in turn, would imply that a "surprise prosody" may be associated with pseudocoordination more generally.

the surprise effect is due to restrictions on the expression of theta-roles when *gå* 'walk, go' is used as a light verb.

Wiklund's analysis is based on the assumption that Verb 1 in pseudo-coordinations is a light verb. The notion of light verbs or vector verbs will be discussed in more detail below.

2.2 Light verbs

Wiklund (2008) argues that Verb 1 in pseudocoordination is a light verb. This is also the analysis of Ekberg (1993a, b), even though she, basing her analysis on Traugott (1982; 1988), uses the term *vector verbs*. The notion of light verbs, alias vector verbs, will be important in my analysis.

The nature of light verbs is discussed extensively in Butt (2003; 2010). Rather than seeing light verbs as a special verb category, Butt proposes that light verbs are main verbs used in a special way. She also argues that some verbs may be more or less universally used as light verbs, what she calls passepartouts:

> [T]he lexical specification of a handful of verbs (somewhere between 5 and 20) cross linguistically allows for a use as *either* a main verb *or* a light verb. Some common examples cross linguistically are the verbs for 'come', 'go', 'take', 'give', 'hit', 'throw', 'give', 'rise', 'fall' and 'do/make'. One can think of this set of verbs as passepartouts: their lexical semantic specifications are so general that they can be used in multitude of contexts, that is, they 'fit' many constellations. (Butt 2010:22)

An important part of Butt's analysis is that light verbs, in contrast to auxiliaries, are not diachronically the result of a grammaticalization process.[5] She presents evidence from Indo-Aryan that indicates that light verbs may stay the same over decades; in other words, they do not enter the "grammaticalization cline" (Butt 2010:10; see also Bowern 2008, paragraph 174, for a similar conclusion).

At least some of the passepartout verbs that Butt list are commonly used in pseudocoordinations, for example 'come', 'go' and 'take'.

As for the syntax of light verbs, I assume that they are instances of little v (Adger 2003:134). A light verb is a lexico-functional projection which has two arguments, one in Spec vP and one in the complement position. A light verb vP is presumably not recursive.[6]

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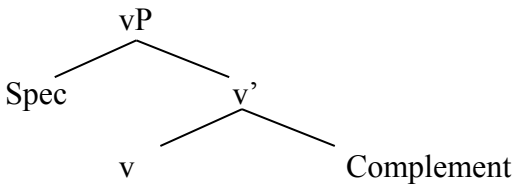
[5] Hopper & Traugott (1993:108), suggest that vector verbs, alias light verbs, optionally enter into the grammaticalization cline.

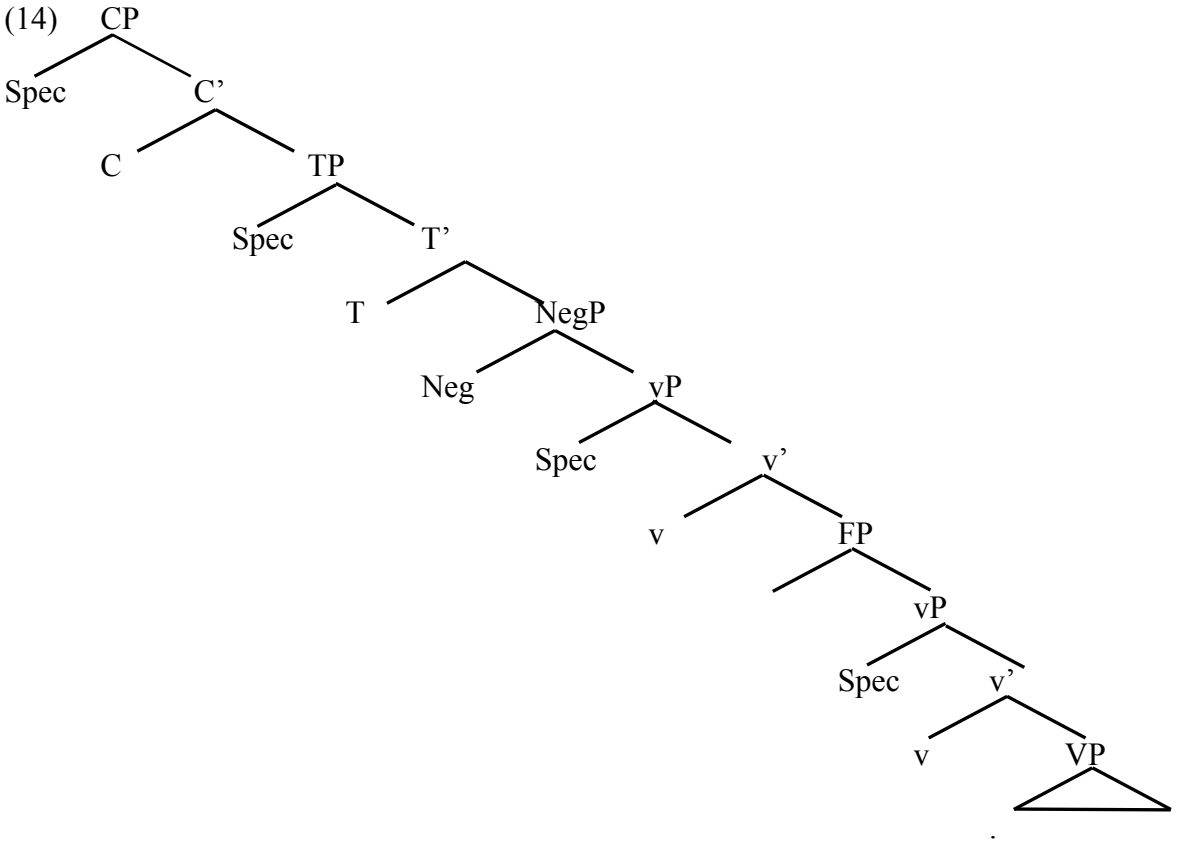
[6] I relate the assumption that a light verb vP cannot be recursive to the observation that a sentence can have no more than three DP arguments (Platzack 2011). Following Baker's UTAH principle (Baker 1988; 1997), Platzack (2011:95) assumes that two theta-roles are

(13)



The complement of v could presumably be of different kinds, for example a VP, a PP, an NP, or a Particle Phrase. In section 4, I develop the idea that the second conjunct of a pseudocoordination is the complement of a light verb. The complement is headed by *och* (and), for convenience represented as F for 'functional' in (14) below:

(14)



hon$_i$	gick$_j$	~~hon$_i$~~	~~hon$_i$~~	~~gick$_j$~~	och	SU$_i$	hämtade$_k$	e$_k$ doktorn
she	*go*				*AND*		*fetch*	*doctor.DEF*

The subject position of the lower predicate is marked SU in (14). Being a phonologically null element, the subject SU may be either a trace, *pro*, PRO or an operator. If it were a trace, we would have to assume movement from one theta-position into another theta-position, which is generally considered not an

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assigned in the VP, the "THEME family" of theta-roles in the complement of V, and the "EXPERIENCER-family" of theta roles in Spec VP. One role can be assigned in Spec vP, the AGENT role. If the vP had the possibility of recursion there would be four possible positions for DP arguments.

option (Chomsky 1991; 1994). The *pro*-analysis is not feasible either, since it would entail that the subject could be phonologically realized, which is not the case. The remaining option is thus to analyze SU as either PRO or an operator. Since PRO is generally associated with infinitival constructions, I will settle for the last alternative, and assume that the subject SU is an operator, which is coindexed with the "upper" subject. It should be stressed that this choice is of not crucial for my proposal.

3 Three shades of *gå* 'walk, go'

The verb *gå* is probably one of the most polysemous of all Swedish words. In this section, I discuss three different meaning variants of this verb. My main point in this section is that the "surprise effect" is related to one of these.

The core meaning of the verb *gå* is presumably the one associated with a +HUMAN subject in a sentence such as *jag går* (I walk.PRS), with the meaning 'I walk', a meaning that is sometime referred to as 'distal' (Wiklund 2008, Blensenius 2009). In my analysis, the notion 'distal' will not be of importance. Instead I will focus on the three versions of *gå* that I refer to as $gå_{\text{OUT}}$, $gå_{\text{AROUND}}$, and $gå_{\text{HAPPEN}}$, the first two of which may, but need not, have a distal meaning.

3.1 *Gå*$_{\text{OUT}}$ 'walk away', 'cease'

Consider (15) for an example of the version of *gå* that I term $gå_{\text{OUT}}$:

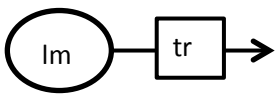
(15) Han har gått.
he have.PRS go.SUP
'He has gone.'

Optionally, the particle *ut* 'out' may be added, as well as a specification of the SOURCE and/or the GOAL:

(16) Han har gått ut från huset till skogen.
he have.PRS go.SUP out from house.DEF to wood.DEF
'He has gone out of the house, to the woods.'

The meaning of $gå_{\text{OUT}}$ can be illustrated by the following image schema; the subject is the trajectory and the source is the landmark:

(17)



The verb *gå*$_{\text{OUT}}$ is clearly +RESULTATIVE. (15) and (16) implies a resultative state: *Han är utgången* 'He is out'. The question of what theta-role the verb *gå* assigns here is a bit more complicated. At first glance it might seem unproblematic to assume that *gå*$_{\text{OUT}}$ assigns the theta-role AGENT to its sole argument; in order to walk, a person has to make an effort or induce power. One problem with such an assumption is that the person who walks out in (15) and (16) is the entity being moved, too, which is one of the characteristic properties of a THEME. In other words, the verb would assign the role THEME to the DP, too. This, in turn, would mean that the verb would assign two theta-roles to the same DP, a violation of the theta criterion. Even more problematic would be the observation that theta-role assignment would depend on the animacy status of the argument itself. Consider (18), where the argument *budskapet* 'the message' is -HUMAN:[7],[8]

(18) *Budskapet* *gick* *ut* *igår.*
message.*DEF* go.PST out yesterday
'The message spread yesterday'

The most reasonable conclusion is therefore that *gå* assigns the theta-role THEME, and only this role. This would be in line with Marantz (1997), where the notion of 'internal force' plays an important role in the assignment of theta roles and the subsequent behavior of the corresponding nominalizations. Motion verbs are defined by an internal force acting upon a participant causing him/her/it to move; therefore I assume that such verbs assign a THEME role. The AGENT role is assigned only to a participant exerting external force upon another participant. So, instead of assuming that the verb *gå*$_{\text{OUT}}$ sometimes assigns the role AGENT, sometimes the role THEME, or that the verb assigns both roles to the same DP, I will assume that the verb *gå*, as well as motion verbs in general, assign the role THEME. Importantly though, if the DP carrying this role is +HUMAN, as in (15) and (16), the participant in question has CONTROL over the event.[9] The notion of CONTROL could be understood as 'the power to voluntarily make a motion Event start of stop'. The notion of CONTROL is important in the analysis that is

[7] In some studies a difference is made between the features HUMAN and ANIMATE. Such a distinction is irrelevant in the present study; the term that will be used is +/-HUMAN.
[8] Thanks to Johan Brandtler for suggesting this example.
[9] The idea that +HUMAN arguments are ascribed CONTROL in the context of motion verbs does not imply that all +HUMAN arguments have this marking; it is presumably a characteristic of motion verbs and maybe some more verb classes.

presented in section 4.[10] It is important to keep the theta-role AGENT and the notion of CONTROL apart, the former being a feature of the lexical conceptual structure of a predicate, the latter being inherent features of an argument.

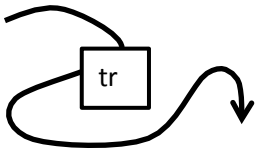
3.2 Gå$_{\text{AROUND}}$ 'wander around'

The second version of *gå* is termed *gå*$_{\text{AROUND}}$. Consider (19) for an example:

(19) a Han går runt.
he walk.PRS around
'He walks around.'

b Han går och går.
he walk.PRS and walk.PRS
'He walks and walks.'

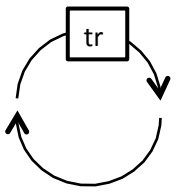
This use of *gå* 'walk, go' can be illustrated by the image schemata in (20a) and (20b). The main point of these diagrams is that the motion has neither SOURCE nor GOAL. This use of the verb is not resultative, but processual.

(20)
a


[10] By assuming that motion verbs, such as *gå* 'walk, go', do not assign the theta-role AGENT, I need to stress that theta-role assignment is not a question of a scientific analysis of whether or not walking is volitional. The important point is that the meaning of the verb is that of the two components MOTION and MANNER. Some motion verbs can indeed assign an AGENT role, which initiates the event by inducing external force, for example *rulla* 'roll' in (i), where *Pia* is the AGENT. Example (i) should be compared to (ii) where *rulla* 'roll' does not assign AGENT role, whether or not the movement is voluntary.

(i) Pia rullade Bo över fältet.
Pia roll.PST Bo over field.DEF
'Pia rolled her sister over the field.'

(ii) Bo rullade over fältet.
Bo roll.PST over field.DEF
'Bo rolled over the field.'

b 

The idea that *gå*$_{\text{AROUND}}$ does not assign the theta-role AGENT should not be controversial. I argue that a +HUMAN participant still has CONTROL over the event though, due to the power of such a participant to start of stop the action or to determine the direction of the movement.

As with *gå*$_{\text{OUT}}$, we get a different meaning if the participant is -HUMAN. The meaning in such cases is roughly 'work, function', which is a process, as in (21a), or a state, as in (21b):[11]

(21) a Maskinen går, trots att klockan är 22.
machine.DEF gå.PRS, despite that clock.DEF is 22.
'The machine is still on, even though it's 10 pm.'

b Klockan går, den är inte trasig!
clock.DEF go.PRS, it be.PRS not broken
'The clock works, it's not broken!'

Gå$_{\text{AROUND}}$ is -RESULTATIVE, regardless of the plus or minus value of the feature HUMAN on the subject.

3.3 Gå$_{\text{HAPPEN}}$

The third version of *gå*, *gå*$_{\text{HAPPEN}}$, is similar to the use of English *go* in sentences such as *It went well*. Consider (22):

(22) Det har gått honom illa.
it have.PRS go.SUP him bad
'Bad things have happened to him.'

Gå$_{\text{HAPPEN}}$ has somewhat intriguing syntactic properties. First of all, the subject in (22) is presumably a quasi-argumental *det* 'it' (for more discussion on quasi-arguments, see Bennis 1986 and Falk 1992). A quasi-expletive element is not merely a filler of a position, but carries a theta-role, which is THEME, by default, or as Falk (1992:86) expresses it, as a last resort. The DP *honom* 'him' in (22) is

[11] It is possible that *gå* in (21b) is better characterized as a fourth version of *gå*. This is not important for my analysis.

an EXPERIENCER, and *illa* ‘bad’ a GOAL or RESULT. The EXPERIENCER does not have to be realized as a noun phrase, it can be conveyed by a PP, as in (23a), or stay implicit, as in (23b). Importantly though, it is present in the lexical conceptual structure, and it can be realized, for example in a PP, normally *för* ‘for’ + DP.

(23) a Det gick illa/bra för honom.
*EXPL go*PST *bad/good for him*
‘It went bad/well for him.’

b Det gick illa/bra.
EXPL go.PST good/bad
‘It went bad/good.’

Now consider (24):

(24) Matchen gick bra (för hemmalaget).
game.DEF go.PST well (for home.team.DEF)
‘The game went well for the home team.’

The example in (24) shows that *det* in (22) and (23) is really a quasi-argument; *det* can easily be exchanged for an ordinary referential DP, which is one of the defining criteria of a quasi-argument (Falk 1992). The subject *matchen* ‘the game’ carries the role THEME, and the EXPERIENCER (*hemmalaget* ‘the home team’), is realized in an adjunct PP. As in (24), the element *bra* ‘good’ is the GOAL. This version of the verb *gå* is clearly +RESULTATIVE (a property that $gå_{\text{HAPPEN}}$ shares with $gå_{\text{OUT}}$.) The schematic meaning is basically ‘something had happened to someone, which made “things” go well/bad in the end’.

It should be noted that DP subjects and quasi-argumental expletive subjects are not totally in free variation. A difference in meaning arises, depending of the subject. Consider two other examples of verbs taking quasi-argumental subjects in (25) and (26):

(25) a Det sjunger i skogen.
it.N sing.PRS in wood.DEF
‘It is singing in the woods.’

b Skogen sjunger.
wood.DEF sing.PRS
‘The wood sings.’

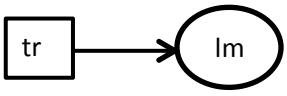
(26) a Det kryllar av larver i busken.
it.N teem.PRS of larva.PL in bush.DEF
'It's teeming of larvae in the bush.'

b Busken kryllar av larver.
bush.DEF teem.PRS of larva.PL
'The bush is teeming of larvae.'

It seems that 'the wood' is more of an AGENT in (25b), as compared to (25a), where the wood is primarily seen as a location. In (26b), movement is to some extent assigned to the bush as a whole, whereas it is assigned to the individual larvae in (26b), at least to a larger extent (Josefsson 1994). This paper is not the proper place for an extensive investigation on the difference in meaning between pairs of sentences, such as the ones in (25a) vs. (25b) or (26a) vs. (26b); there are probably interesting differences between verbs of movement and verbs of sound, for instance. However, the important point is that the lexical meaning of a non-expletive subject has an effect as how to the event is construed. The difference in meaning that we find between examples, such as (23a) and (24), is what we expect with verbs taking quasi-argumental subjects.

Gå$_{\text{HAPPEN}}$ can be illustrated by the image schema below, where the THEME, *det* in (22) and (23), *matchen* 'the game' in (24), is the trajectory, and the GOAL, *illa/bra* 'bad/good' the landmark. (The EXPERIENCER is not represented in the image schema, even though it is presumably present in the lexical conceptual structure.)

(27)



Note that the subject of *gå*$_{\text{HAPPEN}}$ neither in (22), nor (23) or (24) is +HUMAN.[12]

In section 3, I argue that the main verb use of the three versions of *gå* can all appear in pseudocoordinations, giving rise to three different types of pseudocoordination, one of them, *gå*$_{\text{HAPPEN}}$, associated with the surprise effect, illustrated in (1). I also argue that the feature +HUMAN plays an important role here.

[12] There seems to be restrictions as to when the EXPERIENCER can be expressed as a DP, and when it has to be expressed as a PP. This issue is not crucial for my purposes here, and will be ignored.

4 Pseudocoordination with *gå* 'walk, go'

If it is correct that light verbs are basically the same as the corresponding main verbs, we expect that the different versions of *gå* should be possible to use as light verbs. This is, in fact, the starting point for my analysis. Let us first look at $gå_{\text{OUT}}$ and $gå_{\text{AROUND}}$, used as Verb 1 in pseudocoordinations, and then continue with $gå_{\text{HAPPEN}}$ in 4.2.

4.1 The verbs $gå_{\text{OUT}}$ and $gå_{\text{AROUND}}$ used as Verb 1 in pseudocoordinations

Both $gå_{\text{OUT}}$ and $gå_{\text{AROUND}}$ as Verb 1work fine in pseudocoordinations. Consider (28) and (29):

(28) Hon gick och hämtade doktorn.
she go.PST AND fetch.PST doctor.DEF
'She took off to get hold of a doctor.'

(29) Hon gick och funderade på frågan.
she go.PST AND ponder.PST on question.DEF
'She went around thinking about the question.'

The sentence in (28) denotes a +RESULTATIVE event, with a foregrounding of the initiation of the Event. (29) is -RESULTATIVE. The entire event is clearly in the scope of Verb 1 in (28), as witnessed by (30):

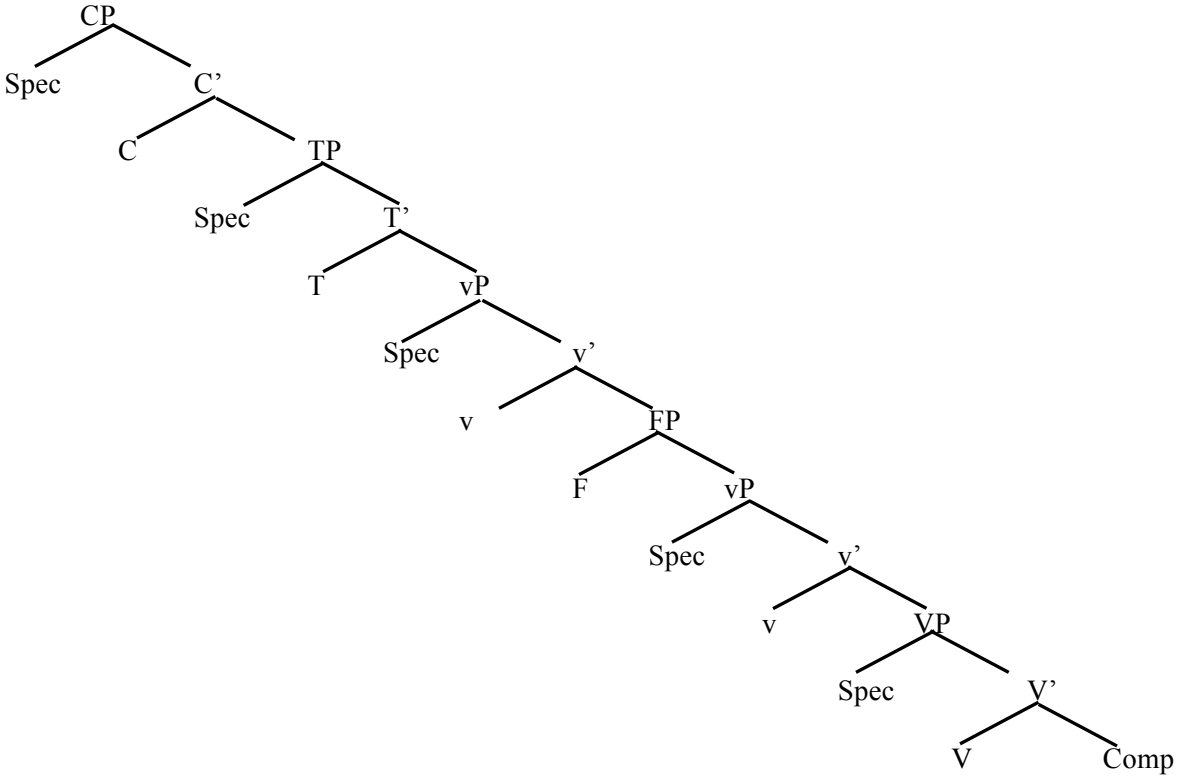
(30) Hon gick och hämtade doktorn (*men hejdade sig innan hon hann dit).
she go.PST AND fetch.PST doctor.DEF but stopped REFL before she got there

In both (28) and (29), the meaning component 'by foot' is demoted, but not completely absent, which motivates classifying this use of *gå* as a light verb use. It would be odd, for instance, to utter the sentences if the subject referents are unable to use their legs. In any case, the lexical or distal meaning of *gå* in (28) and (29) is not demoted to any higher degree than in examples, such as *Hon gick iväg* (she go.PST away) 'She went away' or *Hon gick arbetslös* (she go.PST unemployed) 'She was unemployed'. This shows that a bleaching of the meaning is present in other uses of the verb as well and should not be viewed as a "construction specific" property.

If Verb 1 in a pseudocoordination is a light verb, as assumed in section 2.2, an idea that is based on earlier proposals in the literature, we may conclude that the complement of the light verb is "the second conjunct". The complement is an FP taking a VP or a vP complement, depending on whether or not the lower verb is

agentive. The element *och* is represented as F, standing for Functional element in the structure below.[13]

(31)



a hon$_i$ gick$_j$ ~~hon$_i$~~ ~~gick$_j$~~ och SU$_i$ hämtade ~~hämtade~~ doktorn
she *go.PST* *AND* *fetch.PST* *doctor.DEF*
'She took off to get hold of a doctor.'

b hon$_i$ gick$_j$ ~~hon$_i$~~ ~~gick$_j$~~ och SU$_i$ ~~funderade~~ på frågan.
she *go.PST* *AND* *ponder.PST* *on question.DEF*
'She went around thinking about the question.'

In both examples in (31), the argument of *gå* 'walk, go', *hon* 'she', is the THEME, endowed with the feature CONTROL, due to the feature +HUMAN, inherent in the DP subject. The internal structure of the downstairs predication is different, due to the differences in the lexical conceptual structure of the predicate; *hämta* 'fetch' is an agentive verb, whereas *fundera* 'ponder' is an experiencer type verb.[14] There is certainly some kind of restrictions or criteria as to which version of *gå* 'walk, go' that can match which type of verb downstairs, but such details are not of importance for my investigation, so the question will not be pursued.

[13] The verb *fundera* 'ponder' assigns an EXPERIENCER role to Spec VP. In this case I assume that there is no vP on top of he VP representing Verb 2.

[14] Following Baker (1988; 1997) and Platzack (2011), I assume that theta-roles are assigned to designated positions. See also footnote 6.

4.2 Gå$_{\text{HAPPEN}}$ and the "surprise effect"

Let us now turn to the "surprise effect", exemplified in (1), repeated below as (32a). Some more examples are given in (32b)–(32e). Note that there is considerable variation with regard to Verb 2. Importantly, it can be agentive, as in (31a), or non-agentive, as in (32b)–(32d).

(32) a Hon har gått och gift sig.
she have.PRS go.SUP AND married REFL
'It so happens that she got married.'

b Hon har gått och brutit benet.
she have.PRS go.SUP AND break.SUP leg.DEF
'It so happens that she has broken her leg.'

c Hon har gått och vunnit en miljon.
she have.PRS go.SUP AND win.SUP a miljon
'She just won a miljon.'

d Hon har gått och blivit professor.
she have.PRS go.SUP AND become.SUP professor
'It so happens that she has become professor.'

My proposal, in fact the main point of this study, is that the "surprise effect", sometimes associated with pseudocoordination with *gå*, is related to the use of *gå*$_{\text{HAPPEN}}$ as Verb 1. Recall that *gå*$_{\text{HAPPEN}}$ can be constructed with a quasi-argumental *det*, carrying the theta-role THEME, as subject (see examples (22)–(23)) or with a non-expletive DP subject (see example (24)). In examples such as (33) below I assume that the argument of the light verb *gå*$_{\text{HAPPEN}}$ is coreferential with the subject of the downstairs verb:

(33) Hon$_i$ har gått och SU$_i$ har gift sig.
she has go.SUP AND ~~she~~ has marry.SUP REFL
'Much to my surprise she has married.'

I propose that the notion of CONTROL, which is an inherent aspect of +HUMAN DP arguments (at least with verbs of movement) is what conveys the meaning flavor that the subject in (33) is somehow responsible for or in control of the event expressed of the second "conjunct". The nature and the degree of responsibility differ in the examples in (32), but the VP *bryta benet* 'break a leg'

is clearly non-agentive. Nevertheless, a flavor of CONTROL can be derived from the logic "if one walks, one has, to some extent, control over the situation".[15]

The idea that a +HUMAN subject has CONTROL over an EVENT does not *per se* explain the "surprise effect". In order to achieve a deeper understanding of this we have to take into account that *gå*$_{\text{HAPPEN}}$ assigns an EXPERIENCER theta-role too, to *honom* 'him' in (22) and (23a), repeated below as (34a) and (34b):

(34) a Det har gått honom illa.
EXPL have.PRS go.SUP him bad
'Bad things have happened to him.'

b Det gick illa/bra för honom.
EXPL go.PST bad/good for him
'It went bad/well for him.'

Recall the restriction that light verbs have only two available argument positions, the specifier and the complement. However, the verb *gå*$_{\text{HAPPEN}}$ has three arguments in its lexical conceptual structure: THEME (optionally carried by expletive *det* 'it') EXPERIENCER and GOAL. As a consequence, there will be one theta-role "left over", that cannot be assigned, if this version of *gå* is used as a light verb. The EXPERIENCER argument can neither surface as a DP, nor as a PP:

(35) a Hon$_i$ har gått (*honom) och gift sig
she has go.SUP (him) AND marry.SUP REFL
'Much to my surprise she has married.'

b Hon$_i$ har gått (*för honom) och gift sig.
she has go.SUP (for him) AND marry.SUP REFL

My background assumption is that an argument of a verb can indeed be left unexpressed, but an implicit argument cannot simply disappear. If this is correct, the question is how (35a) and (35b) can be well-formed if the EXPERIENCER role of *gå*$_{\text{HAPPEN}}$ cannot be realized. This is where I argue that the "surprise effect" comes into the picture.

Ekberg (1993a:131) argues that pseudocoordination with *ta* 'take' involves the process of subjectification, which she assumes happens when a lexeme goes from describing a situation in an "objective" perspective to describing it from a speaker-oriented point of view, expressing, for example, the speaker's construal of the situation or how the speaker evaluates the situation. (For more discussion on subjectification, see Traugott 1982; 1988, and Langacker 1990.) In a

[15] From a psychological point of view the idea of CONTROL is straightforward. Even if we know that it is beyond all reason we might be angry with people who get sick or die "on us".

completely different framework, Sigurðsson (2004), shows that inherent speech participants, the *logophoric agent* (the speaker) and the *logophoric patient* (the listener) are syntactically active, and anchored in the C-domain of the clause. This insight is ultimately due to the seminal work of Bühler (1934), who coined the term *origo* for what roughly can be characterized as the speaker's deictic point of view, in other words the speakers NOW, HERE and I.[16] The idea that the the speaker is part of the syntactic make-up of a clause is even more evident if we consider the fact that there are a number of speaker-oriented adverbials, such as *lyckligen* 'happily' and *olyckligtvis* 'unfortunately'.[17] I argue that subjectification, at least in the case of pseudocoordination with *gå*$_{\text{HAPPEN}}$, means that an EXPERIENCER role that cannot be expressed in the syntax is carried by an inherent speech participant, in Sigurdssons (2004) terminology, by the logophoric agent or the logophoric patient. This captures Ekberg's formulation above, the situation goes from describing a situation in an "objective" perspective to "describing it from a speaker-oriented point of view" (Ekberg 1993:131. To formulate this in another way, the speaker becomes the EXPERIENCER of a +RESULTATIVE event which involves a participant (the subject), which, in turm, executes (some amount of) CONTROL over the situation (by virtue of being +HUMAN). Since the speaker does not have CONTROL over the situation, it is construed as out of his or her CONTROL. This, in essence, is the "surprise effect". It should be pointed out that "surprise" might not the best term for the effect of subjectification. In fact, Wiklund (2008:185) talks about a "touch of surprise, unexpectedness, or suddenness". In my view, 'unexpectedness', 'unawareness' or 'lack of control' would be a more appropriate characterizations.[18]

I have claimed that logophoric agent receives the EXPERIENCER role in the cases under discussion. This is not the only possible scenario, however. Consider (36):

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[16] For a recent discussion on the notion of origo, see Petersson, in press, ch. 2 and 4.

[17] For an extensive discussion on speaker-oriented sentence adverbials in Mainland Scandinavian, see Nilsen (2004).

[18] Johan Brandtler (p.c.) points out that the fact that the modal particle *minsann* 'indeed' may be felicitously added to examples with *gå*$_{\text{HAPPEN}}$ is an indication that the pseudocoordination with *gå*$_{\text{HAPPEN}}$ relates to focus. I agree on data here, but disagree with the idea it is "focus construction". *Minsann* is a clearly speaker oriented modal particle, and conveys the speakers attitude towards the proposition, generally the speaker's conviction that the proposition is true, possibly against a background of an expectation that would not be so. This paper is not a proper place for an extensive analysis of the semantics and pragmatics of *minsann*, but we may concude the fact that the modal particle is so clearly speaker oriented fits well with the proposed subjectification analysis of pseudocoordnation with *gå*$_{\text{HAPPEN}}$.

(36) Jag har gått och gift mig.
I have.PRS go.SUP AND married REFL
'I have married.'

Again, it is necessary to point out that the English translation does not convey the full meaning of the Swedish example. By using the wording in (36) the speaker presumes that the information about the subject having married is new, surprising or unexpected to the logophoric patient, in other words to the listener. Generalizing this observation we may say that subjectification means that the theta-role is assigned to a speech participant, the logophoric agent and patient, instead of to the event participants.[19]

To conclude: the so-called "surprise effect" is due to subjectification, meaning that an EXPERIENCER role, which cannot be assigned in the grammar, is assigned in the speech situation. The notion of CONTROL is a feature of the +HUMAN subject, which implies that the EXPERIENCER speech participant lacks control of the event.

5 The nature of the "conjunction" *och*

Wiklund (2005) suggests that *och* is a complementizer, and that it heads a full clausal structure, though with "silent" CP and TP parts. In my view there is little evidence to support this view, in particular since sentence adverbials, including the negation, may occur only in the upper part of the clause. A more plausible solution is that *och* is related to the infinitival marker, *att*, which is generally pronounced [ɔ] as well. An important difference, however, is that an infinitival clause contains a TP, though a defective one (Chomsky 1999). This implies that the infinitival marker checks for tense. The infinitival marker is presumably in C, and the (deficient) T head of the infinitival clause stand in the same checking

[19] The proposed analysis could perhaps be carried over to a problem related to imperatives, discussed in Platzack & Rosengren (1998). Platzack & Rosengren conclude that 2nd person *du* (2SG) 'you' and *ni* (2PL) 'you' may occur in imperative clauses, but hesitate to call them true subjects. Consider (i):

(i) *Köp du en glass!*
buy.IMP you an icecream
'You go ahead and by an icecream!'

If we apply the proposed analysis to *du* 'you' in (i), we conclude that *du* may indeed carry the AGENT theta role, even if it is not a syntactic subject. On a par with pseudocoordinations with *gå* 'walk, go', the AGENT role is assigned in the speech situation, to the logophoric patient(s), optionally realized by a vocative pronoun, such as *du* in (i).

relation to C, as does T to C in finite clauses. This is presumably sufficient to license negation and other sentence adverbials in infinitival clauses. As expected, an infinitival clause may have a time reference that is disjoint from that of its matrix:

(37) Bo lovade igår att inte skräpa ner nästa vecka.
Bo promise.PST yesterday IM not litter.INF down next week
'Bo promised yesterday not to litter next week.'

In other words, what I propose is that *och* 'and' in pseudocoordinations is the infinitival marker *att*, minus tense features. The idea that there is but one TP in pseudocoordinations accounts straightforwardly for the fact that both verbs have the same tense morphology, that the clause describes only one event, and the fact that sentence adverbials can occur only in the first part of the clause.

Somewhat speculatively we may assume that *och* in pseudocoordinations is a member of a word class, suggested in Josefsson (2009:173), that consists of particles introducing non-finite clause equivalents, such as the infinitival marker *att* 'to', *med* 'with', introducing *with*-clauses, and the comparative markers *än* 'than' and *som* 'as'.

6 Summary and conclusion

I have argued that *gå* 'walk, go' as Verb 1 in pseudocoordination is best understood as a light verb with basically the same meaning and syntactic properties as the corresponding main verb *gå*. What has been termed "the surprise effect", sometimes arising in pseudocoordination with *gå* 'walk, go', can be explained as due to two factors: *Gå* is a highly polysemous verb, and the variety of *gå* that is actualized in these cases is the *gå* that is canonically used with a quasi-expletive subject, basically as in *Det går bra* (it go.PRS well) 'Things work well'. This version of *gå* has an EXPERIENCER role that has to be assigned, explicitly, as a DP, or in a PP, or it may remain implicit. Crucially though, the EXPERIENCER role must not be cancelled altogether. In the light verb use of *gå*, here termed $gå_{\text{HAPPEN}}$, the EXPERIENCER role cannot be assigned. This triggers subjectification, in the sense that the EXPERIENCER role is assigned in the speech situation instead, either to the logophoric agent, i.e. the speaker, or, in other cases, to the logophoric patient, the addressee.

In order to fully explain the surprise effect we also need to take the feature +HUMAN into account. I have argued that verbs of motion always assign a THEME role, but that +HUMAN arguments execute CONTROL over the event. In

pseudocoordination with *gå*$_{\text{HAPPEN}}$, the speaker (or in some cases the addressee) is an EXPERIENCER argument and not conceived of as being in control over the event. The subject, which is the argument carrying the THEME role, has CONTROL, due to the feature +HUMAN. The vague feeling that the subject of a pseudocoordination with *gå* as Verb 1 is doing something volitionally, even if the subject cannot reasonably have caused it (break a bone, win a million etc.), is due to the feature CONTROL. Consequently, the term "surprise effect" is not appropriate, even though lack of CONTROL can be pragmatically related to surprise.

Drawing on Wiklund (2005; 2008), contra Josefsson (1991), I have argued that the "conjunction" *och* is not a conjunction, but a version of the infinitival marker *att*, pronounced [ɔ], though differing from *att* in being devoid of tense. There is but one position for sentence adverbials, and the clause can have only one overt subject. Furthermore, there is but one FinP and one TP, which accounts for the fact that a pseudocoordination denotes one single event, which, however, may contain sub-events.

With the analysis proposed in this study, the possibility of using pseudocoordinations of the kind found in Swedish (and presumably also in the other Mainland Scandinavian languages) is at least to some extent a lexical issue – it requires a "deficient" infinitival marker, that is an infinitival marker that lacks tense. Whether or not this may explain similarities and differences between similar constructions in other languages remains to be investigated.

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Alternating Predicates in Icelandic and German: A Sign-Based Construction Grammar Account*

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A long-standing divide between Icelandic and German in the literature takes for granted that there are non-nominative subjects in Icelandic, while corresponding arguments in German have been analyzed as objects (Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989). This is based on two differences between these languages, a) differences with regard to control and conjunction reduction, and b) an apparent subject behavior of the nominative in Dat-Nom constructions in German. This article focuses on the latter, introducing into the discussion the concept of alternating predicates, that is, Dat-Nom predicates that systematically alternate between two diametrically-opposed argument structure constructions, Dat-Nom and Nom-Dat. A comparison between Icelandic and German shows that Icelandic Dat-Nom predicates are of two types, a non-alternating *líka* type and an alternating *falla í geð* type, whereas German seems to exhibit only the alternating type. On this assumption, the apparent subject behavior of the nominative in German is easily explained, since such occurrences in fact involve the Nom-Dat construction and not the Dat-Nom construction. Therefore, the subject behavior of the nominative does not invalidate a subject analysis of the dative in Dat-Nom constructions in German. The analysis is couched in the framework of Sign-Based Construction Grammar (Sag 2012).

1 Introduction

In traditional grammar the nominative has been equated with grammatical subject, irrespective of argument structure and perceived neutral word order. This includes nominatives of "inverse" predicates such as *líka* 'like' and others similar in Icelandic, which select for a Dat-Nom case frame.

* We thank Johan Brandtler, Hans-Martin Gärtner, Götz Keydana, Laura Michaelis, Beatrice Primus and Jim Wood for comments and discussions on earlier versions of this article, as well as the audience in Göttingen (2011), Cambridge (2011), Bergen (2012), Reykjavík/ Eyjafjallajökull (2012), Stockholm (2012), Buffalo, NY (2013), Ghent (2014), and Budapest (2014). We are especially grateful to our German informants: Tina Boyer, Hans C. Boas, Martin Hilpert & Yasmine Syed. This research was supported with two generious grants to Jóhanna Barðdal from the Norwegian Research Council (NonCanCase, grant nr. 205007) and the European Research Council (EVALISA, grant nr. 313461). Finally, we dedicate this article to our late friend, Ivan A. Sag.

(1) ***Dat-Nom predicates in Icelandic***

a. **Rafverktökum** líkaði **sú** **ráðstöfun** illa.
electric.contractors.DAT liked that.NOM arrangements.NOM badly
'The electrical contractors severely disliked that arrangement.'

b. **Mér** leiðist **þetta** **eilífa** **handaband**.
me.DAT tires this.NOM eternal.NOM handshake.NOM
'I find this endless handshaking quite tiresome.'

c. Finnst **þér** ekki **Esjan** vera sjúkleg?
finds you.DAT not Esja.the.NOM be.INF pathological
'Don't you find Mt. Esja awsome?'

However, beginning in the 1960s with the general theorizing of grammatical structure, behavioral properties of subjects were identified (Comrie 1973, Anderson 1976, Keenan 1976, Sasse 1978). This led to the recognition that behavioral subjects could be non-canonically case marked, for instance in the accusative, dative and the genitive (Andrews 1976, Masica 1976). The following examples illustrate such structures:

(2) ***Accusative***

a. **Dóttur** **mína** vantaði myndir á veggina.
daughter.ACC mine.ACC lacked pictures.ACC on walls.the
'My daughter needed pictures on her walls.'

Dative

b. Segir nú að **refum** fækki en fullyrti í vor að
says now that foxes.DAT increase but claimed in spring that
þeim fjölgaði.
they.DAT increased
'Now says that foxes are decreasing but maintained this spring that they were on the increase.'

Genitive

c. **Þessarar ríkisstjórnar** bíða mörg verkefni.
this.GEN government.GEN awaits many.NOM tasks.GEN
'This government has many things on their to-do list.'

In Icelandic, moreover, the perceived neutral word order coincides with the order of the arguments in the argument structure of predicates. This means that with predicates like *líka*, which select for a Dat-Nom case frame, the dative behaves as a grammatical subject and the nominative behaves as an object. This

has been established beyond doubt by earlier research, starting with Andrews (1976) and Thráinsson (1979), followed up by Zaenen, Maling & Thráinsson (1985) in a seminal article on argument linking and grammatical relations in Icelandic and German, where the long-standing divide between these two languages was first proposed. This alleged contrariety between Icelandic and German is in particular based on two factors:

a) different behavior of the dative with regard to conjunction reduction and control infinitives across the two languages
b) the apparent subject behavior of the nominative argument in German

In previous research, we have investigated conjunction reduction and control infinitives in Icelandic and German and shown that subject-like datives in German can, in fact, be omitted in such structures, although only marginally (Barðdal & Eythórsson 2003, 2006, Eythórsson & Barðdal 2005, Barðdal 2006).

(3) ***Conjunction Reduction***

a. Mich **hungert** nach Süssigkeiten und ____ **dürstet** nach
I.ACC hunger for sweets and pro.ACC thursts for
Flüssigkeiten
fluids
'I hunger for sweets and thurst for liquids.'

b. Mir **wird('s) schlecht** und ____ **graut('s)** vor der Zukunft.
I.DAT is.it bad and pro.DAT worries for the future
'I feel sick and worry about the future.'

(4) ***Control Infinitives***

Häufig ist die gesamte Alltagsbewältigung behinderter Menschen auf Assistenz angewiesen, vom Aufstehen, Waschen, Anziehen über Essen und Bewegen. Die Betroffenen bauen fast immer ein Vertrauensverhältnis zu ihren Betreuern auf. Potenzielle Täter nutzen das freundschaftliche Verhältnis häufig aus, um gezielt die Bedürfnisse des behinderten Menschen auszuforschen. Je größer die Abhängigkeit, umso größer ist die Gefährdung. Wie soll man Berührungen auch vermeiden, wenn auch die intimsten Handlungen nicht alleine bewerkstellig werden können? *Ein Recht für geistig wie körperlich behinderte Frauen, ___* ***nur*** *von Frauen bei intimen Handlungen* ***assistiert zu werden,*** gibt es in der Bundesrepublik ... nicht.

> ‘In coping with their everyday life, disabled people are often forced to seek assistance, from the moment they get up, wash, get dressed and with eating and moving around. These people almost always build up a relationship of trust with their carers. Potential offenders often take advantage of this friendly relationship with the specific aim to gather information about the needs of the disabled person. The greater the dependency, the greater the threat. How is one supposed to avoid contact, if even the most personal activities cannot be performed in privacy? *The right for mentally and physically disabled women* ***to only be assisted*** *by women* when engaged in private activities does not exist ... in Germany.’
>
> (www.freitag.de/2002/45/02450402.php)

There is no doubt that there are more severe restrictions on the occurrence of oblique subject predicates in control constructions and conjunction reduction in German than in Icelandic (cf. Barðdal 2006), although such utterances exist and are being produced by native speakers of German. We have dealt with this topic extensively elsewhere and will focus, in this article, on the second difference between Icelandic and German, i.e. the apparent subject behavior of the nominative argument in German Dat-Nom constructions. For that purpose we introduce additional data relevant to subjecthood and non-nominative case marking, data that have not received proper attention in the earlier literature and are vital for a deeper understanding of the overarching problem. These data involve alternating predicates, which behave in such a way that either argument, the dative or the nominative, may take on subject properties. These will be introduced in Section 2.2 below, and will henceforth be refered as *alternating predicates* and the classical *líka* ‘like’ verbs as *non-alternating predicates*.

The earlier discussion in the literature of potential non-nominative subjects in German has reached an impasse, as the behavior of the nominative with such predicates appears to raise an obstacle against analyzing the dative as a subject (Bayer 2004: 25ff., Wunderlich 2008). By considering the relevant predicates in German as alternating between two argument structure constructions, this obstacle is overcome. Hence, the ultimate goal of this article is to introduce the concept of alternating predicates into the discussion of theoretical syntax. This novel concept is not only of importance for analyzing the range of data relevant to the debate on non-nominative subjects, but it is also potentially efficacious for linguistic theory.

In order to reach this goal, we compare the behavior of these two types of predicates in Icelandic, alternating and non-alternaing, and further compare

them with potentially parallel predicates in German, like *gefallen* ‘like, be to sby’s liking’, *misslingen* ‘fail’, and others. Such predicates have traditionally been assumed to be Nom-Dat predicates with a more-or-less obligatory topicalization of the dative (Helbig & Buscha 1988: 51, Bayer 2004: 25ff., Wunderlich 2008). More recently, however, it has been acknowledged that these predicates in German are Dat-Nom predicates, deviating from the general pattern that the subject is the first argument of the argument structure. Instead, with these predicates the subject is uniquely taken to be the second (nominative) argument, since the dative argument in German fails certain subject tests (cf. Haider 2005, 2010, Wunderlich 2008). Through comparison with Icelandic, we demonstrate that the first argument of these predicates in German is indeed the grammatical subject, contradicting the standard analysis of modern German scholarship. A follow-up question which arises is whether these predicates are of the *líka* type or the *falla í geð* type, an issue to be dealt with in Section 3 below.

The structure of this article is as follows: The next section is dedicated to an investigation of the behavior of the two types of predicates in Icelandic, methodically examining them against the bulk of established subject tests for that language. We establish that there are two types of Dat-Nom predicates in Icelandic, the *líka* ‘like’ type which is consistently Dat-Nom, and the *falla í geð* ‘like, be to sb’s liking, please’ type, which alternates systematically between two diametrically-opposed argument structure constructions, Dat-Nom and Nom-Dat. In Section 3, we investigate the syntactic behavior of German *gefallen* ‘like, be to sb’s liking, please’ and show that it indeed patterns with *falla í geð* in Icelandic and not with *líka*. We conclude that German Dat-Nom predicates are also alternating predicates. This, in turn, explains the difference in behavior, noted in the literature, between German *gefallen* ‘like, be pleasing to, please’ and the well-known Icelandic *líka* type. Section 4 contains a formalization of both types of predicates, carried out within the framework of Sign-Based Construction Grammar (Michaelis 2010, 2012, Sag 2012, Kay & Sag 2012, and Webelhuth 2012). We suggest that alternating predicates do not involve two different verbs, and hence not two different lexical entries, but have one lexical entry which interacts with the two diametrically-opposed argument structure constructions. We suggest an unordered list of the arguments in the Attributed Value Matrix, with the order of the arguments being defined by the argument structure constructions themselves, i.e. the Dat-Nom and Nom-Dat constructions. Non-alternating predicates, in contrast, only interact with the Dat-Nom construction. Hence, the order of arguments, in our formalization, is not defined in terms of lexical entries, but is captured through the interaction of

predicates and their respective argument structure constructions. Section 5 contains a summary of the content and conclusions of this article.

2 Non-Canonically Case-Marked Subjects in Icelandic

2.1 Subjecthood

The subject tests that have been used in Icelandic include the following (Andrews 1976, Thráinsson 1979, Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989, Jónsson 1996, Barðdal 2001, inter alia):

- First Position in Declarative Clauses
- Subject-Verb Inversion
- First Position in Subordinate Clauses
- Conjunction Reduction
- Clause-Bound Reflexivization
- Long-Distance Reflexivization
- Subject-to-Object Raising
- Subject-to-Subject Raising
- Control Infinitives

In addition to the existence of non-nominative subjects in several languages, including Icelandic, it has also been demonstrated that the nominative argument of predicates selecting for Dat-Nom in Icelandic, behaves as an object in all respects except for case and agreement. It is well known from several languages that it is in fact the nominative argument, be it the subject or the object, that controls agreement on the finite verb (Barnes 1986, Sigurðsson 1990–91, Thráinsson et al. 2012). Thus, agreement facts do not consitute an argument against a subject analysis of the dative or an object analysis of the nominative.

In Icelandic it has been shown that oblique subjects pass all the subject tests listed above, of which the control test has been taken as the most conclusive one (Andrews 1976, Thráinsson 1979, Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989, Jónsson 1996, Eythórsson & Barðdal 2005). Due to the importance of this test and the ample weight it has been given in the literature, let us pause and examine the properties of this subject behavior in more detail.

Syntactic control causes the subject of an infinitive to be left unexpressed, typically on identity with an argument from the matrix clause, but it does not

affect objects; in control constructions the object behaves in the same way as it does in an ordinary finite clause. This is shown in (5) below for *vera kalt/heitt* 'be cold/warm', *dreyma* 'dream' and *þykja* 'think, consider':

(5) ***Control Infinitives: oblique subjects***

a. Það er ekki gott **að** ___ **vera kalt** og **heitt** á sama tíma.
it.EXPL is not good to PRO.DAT be.INF cold and warm on same time
'It is not good to freeze and feel warm at the same time.'

b. Sagt er að það boði gróða **að** ___ **dreyma** skít.
said is that it.EXPL bodes profit to PRO.ACC dream.INF shit.ACC
'It is said that dreaming about shit forebodes profit.'

c. Það þykir kúl **að** ___ **þykja**
it.EXPL is.considered cool to PRO.DAT find.INF
Eurovision hallærisleg!
European.Song.Contest.NOM lame
'It is considered cool to find the European Song Contest lame!'

In contrast, the object cannot be left unexpressed in control constructions, nor can the subject be expressed. This shows that control constructions can be used to distinguish between subjects and objects. To illustrate this, consider the following examples which show very clearly that a) the accusative subject of *dreyma* 'dream' must be left unexpressed in a control infinitive, b) the dative subject of *þykja* must also be left unexpressed in such a construction, c) the accusative object of *dreyma*, i.e. *skít* 'shit' (nominative *skítur*), must be overt, and d) the nominative object of *þykja,* i.e. *Eurovision*, must also be overt:

(6) ***Control Infinitives: object expressed and subject unexpressed***

a. Sagt er að það boði gróða að (*mann) dreyma *(skít).
said is that it.EXPL bodes profit to one.ACC dream.INF shit.ACC

b. Það þykir kúl að (*manni) þykja *(Eurovision)
it.EXPL is.considered cool to one.DAT find.INF ESC.NOM
hallærisleg!
lame

Moreover, the results of the control test coincide with perceived neutral word order for these structures. That is, the subject-like oblique of *vera kalt/heitt*, *dreyma* and *þykja* in (5a) is the first argument of the argument structure, and hence the grammatical subject, while the accusative in (5b) and the nominative

in (5c) are second arguments, and hence grammatical objects. The reason we bring up this correlation between control infinitives and neutral word order is that one of the most noticable features of Dat-Nom predicates in several languages is the anomaly in word order. That is, the dative, the alleged object, preceeds the nominative, the alleged subject, in neutral word order. The following exampes of the word order distribution of the verb *líka* 'like' in Icelandic, which subcategorizes for the Dat-Nom argument structure, are revealing in this respect:

(7) ***Word Order***

a. **Mér** hafði aldrei líkað **þessi bók**.
me.DAT had never liked this.NOM book.NOM
'I had never liked this book.'

b. **Þessi bók** hafði **mér** aldrei líkað.
this.NOM book.NOM had me.DAT never liked
'This book I never liked.'

c. ***Þessi bók** hafði aldrei líkað **mér**.
this.NOM book.NOM had never liked me.DAT

The neutral word order for *líka* is the one given in (7a), with the dative in first position and the nominative immediately following the nonfinite verb at the end of the sentence. If the nominative occurs in first position, as in (7b), the dative must occur immediately following the finite verb, *hafði* 'had', but cannot follow the nonfinite one, *líkað* 'liked', as shown in (7c). This shows that the nominative in (7b) is a topicalized object in first position, while the dative occurs in a position reserved for subjects. Thus, the structure in (7b) involves topicalization and subject-verb inversion, while (7a) does not.

For predicates that select for the Dat-Nom case frame, such as *líka*, it might appear quite counterintuitive, given the presuppositions of traditional grammar, that the subject is in the dative case and the object in the nominative case. Rather, one would expect the subject to be in the nominative and the object to be in the dative. The discussion of subjecthood in the seventies and the eighties was centered around this issue and conclusive evidence for the Dat-Nom analysis was offered for several languages, although for some languages such evidence remains elusive. In Modern Icelandic, Modern Faroese, Tibeto-Burman, and some modern Indic languages, the subject status of oblique subjects is uncontroversial, while opinions are more divided regarding languages like German (Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989, Bayer 2003,

Haider 2005, 2010), Lithuanian (Holvoet 2013), and Russian (Moore & Perlmutter 2001). See also articles in Serzant & Kulikov (2013) on various languages.

The situation, however, is even more complicated. In addition to the existence of Dat-Nom predicates in languages like Icelandic, where the dative is unambiguously the subject and the nominative is unambiguously the object, there also exist so-called *alternating predicates*. These are predicates which alternate between two inverse argument structures, i.e. they can occur as Dat-Nom predicates as well as Nom-Dat predicates (Bernódusson 1982, Jónsson 1997–98, Barðdal 2001, Eythórsson & Barðdal 2005, Rott 2013). Both represent an equally "neutral" word order, meaning that one is not a topicalization of the other. One such predicate is *falla í geð* 'like, be to sby's liking'.

(8) ***Word Order***

a. **Mér** hefur alltaf fallið **þessi bók** vel í geð.
me.DAT has always fallen this.NOM book.NOM well in liking
'I have always liked this book.'

b. **Þessi bók** hefur alltaf fallið **mér** vel í geð.
this.NOM book.NOM has always fallen me.DAT well in liking
'This book has always been to my liking.'

The example in (8a) corresponds exactly to the example in (7a), showing that the dative is the subject and the nominative the object, as the dative occurs in first position, while the nominative occurs in postverbal position, immediately following the nonfinite verb. It is the example in (8b), however, which is surprising, because on a Dat-Nom analysis, this example should be ungrammatical, exactly like the example with *líka* in (7c) above. In (8b) it is the nominative that occurs in subject position, while the dative occurs in object position. The grammaticality of (8b) thus shows that the nominative is the subject and the dative the object in this particular example. This alternation between two diametrically-opposed case frames, here the Dat-Nom and Nom-Dat, is in fact the defining characteristic of alternating predicates, to be further discussed in the next section.

The comparison above shows that the Nom-Dat order of *líka* in (7b) involves topicalization of the nominative object of the Dat-Nom construction, whereas the Nom-Dat order of *falla í geð* in (8b) is an instance of neutral subject-initial word order. This, in essence, means that Icelandic has two types of Dat-Nom predicates, the *líka* type which can only occur in the Dat-Nom case

frame and the *falla í geð* type which alternates between the Dat-Nom and Nom-Dat case frames. This alternation, in essence, corresponds to two neutral word orders, while other predicates typically exhibit only one neutral word order.

In the following, we first compare the behavior of alternating and non-alternating types of predicates internally for Icelandic, and then compare the Icelandic predicates with potentially parallel predicates in German, like *gefallen* 'like, be to sby's liking', *misslingen* 'fail', and others similar. It is, however, a major anomaly to assume that German predicates exhibiting the Dat-Nom case frame have its second argument as its subject, and not is first argument, like with all other predicates in German. In the remainder of this section we show that the first argument of Dat-Nom predicates in German is indeed the grammatical subject, hence challenging the standard concept of subjecthood in modern German. We also show, in Section 3 below, that these predicates are of the *falla í geð* type and not the *líka* type.

We opened this section by presenting the subject properties that have generally been assumed to be applicable in Icelandic. No definition of subject was given, only the properties were listed. However, during our work on subjecthood, carried out over the last 15–20 years, we have found that when generalizing across the subject properties, it is always the first argument of the argument structure that is targeted by the subject tests. This fact prompted us to suggest a subject definition, already in 2005, based on the order of the arguments of the argument structure (see Eythórsson & Barðdal 2005):

(9) The subject is the first argument of the argument structure of a predicate

By the term *first argument*, we refer to the internal order of the arguments within the subcategorization frame of a given predicate. We further assume that the internal order of the arguments is determined by the force-dynamics between the two (cf. Croft 2012). Given the general fact that grammatical relations, including subjecthood, lie at the core of grammar, they must be adequately captured on all approaches. Our definition in (9) above may be regarded as framework independent; this is intended since it is relevant in order for it to be useful as a working definition across theoretical frameworks.

2.2 Dat-Nom/Nom-Dat Predicates in Icelandic

In the preceding section we introduced the subject tests assumed for Icelandic, and discussed the first one on the list, first position in declarative clauses, in

connection with alternating predicates. We will now continue with a discussion of the remaining tests. In clauses with subject-verb inversion, such as questions, commands and topicalizations, the subject systematically inverts with the verb. In the examples in (10) below, only the dative experiencer of *líka* inverts with the verb (10a), while the nominative stimulus does not show such syntactic behavior (10b). The ungrammaticality of (10b), therefore, shows that *líka* cannot occur in a Nom-Dat argument structure construction.

(10) ***Non-Alternating Dat-Nom***

a. Hefur **þér** alltaf líkað **þessi bók** vel? Dat-Nom
has you.DAT always liked this.NOM book.NOM well
'Have you always liked this book?'

b. *Hefur **þessi bók** alltaf líkað **þér** vel? *Nom-Dat
has this.NOM book.NOM always liked you.DAT well
Intended meaning: 'Has this book always been to your liking?'

(11) ***Alternating Dat-Nom/Nom-Dat***

a. Hefur **þér** alltaf fallið **þessi bók** Dat-Nom
has you.DAT always fallen this.NOM book.NOM
vel í geð?
well in liking
'Have you always liked this book?'

b. Hefur **þessi bók** alltaf fallið **þér** Nom-Dat
has this.NOM book.NOM always fallen you.DAT
vel í geð?
well in liking
'Has this book always been to your liking?'

In (11a), in contrast, we see that the dative experiencer of *falla í geð* inverts with the verb, while the nominative stimulus inverts with it in (11b). In both cases, the other argument is in postverbal position, the nominative in (11a) and the dative in (11b). This supports the analysis that there are two equivalent argument structures involved, and that one of the surface orders is not a topicalization of the other.

Notice that the examples in (7–8) and (10–11) all show that there is an asymmetry in the syntactic behavior of *líka* and *falla í geð*. While *líka* can only instantiate the Dat-Nom construction, evidenced by the ungrammaticality of (7c)

and (10b), *falla í geð* clearly occurs in two different argument structure constructions, Dat-Nom and Nom-Dat.

We now turn to conjunction reduction, in which the subject of a second conjunct is left unexpressed on identity with the subject of the first conjunct. Notice that *líka* and *falla í geð* again show the aforementioned asymmetry. The example in (12a) shows that the dative experiencer of *líka* in the second conjunct may be omitted on identity with the nominative subject of the first conjunct, while (12b) shows that the nominative of *líka* cannot be omitted in conjoined clause:

(12) ***Non-Alternating Dat-Nom***

a. Ég kynntist fólkinu, og ___ hefur líkað Dat-Nom
I got.to.know people.the and pro.DAT has liked
það vel.
it.NOM well
'I got to know the people and have liked them.'

b. *Svona verkefni eru nauðsynleg og ___ *Nom-Dat
such projects are necessary and
hafa líkað **okkur** vel.
pro.NOM has liked us.DAT well
Intended meaning: 'Such projects are necessary and have been to our liking. '

(13) ***Alternating Dat-Nom/Nom-Dat***

a. Ég kynntist fólkinu, og ___ hefur Dat-Nom
I got.to.know people.the and pro.DAT has
fallið **það** vel í geð.
fallen it.NOM well in liking
'I got to know the people and have liked them.'

b. Svona verkefni eru nauðsynleg og ___ hafa Nom-Dat
such projects are necessary and pro.NOM have
fallið **okkur** vel í geð.
fallen us.DAT well in liking
'Such projects are necessary and have been to our liking.

In contrast to (12b), the nominative stimulus of *falla í geð* in (13b) may be left unexpressed in conjoined clauses on identity with the nominative subject of the first conjunct. The same is true for dative (13a). The well-formedness of both

examples in (13) supports the analysis that the dative is the subject in (13a) and the nominative in (13b). Again, there is an asymmetry in the syntactic behavior of the arguments of *falla í geð* and *líka*.

Yet another syntactic test of subjecthood involves clause-bound reflexivization. It is generally assumed in the literature that only subjects may bind reflexives within their minimal clause. Below we see that only the dative experiencer of *líka* can bind a reflexive (14a), while the nominative stimulus cannot (14b):

(14) ***Non-Alternating Dat-Nom***

a. **Konunni**$_i$ hefur líkað bókin **sín**$_i$ vel. Dat-Nom
woman.the.DAT has liked book.the.NOM hers.NOM well
'The woman has liked her book.'

b. ***Hann**$_i$ hefur líkað konunni **sinni**$_i$ vel. *Nom-Dat
he.NOM has liked wife.the.DAT his.DAT well
Intended meaning: 'He has been to his wife's liking.'

(15) ***Alternating Dat-Nom/Nom-Dat***

a. **Konunni**$_i$ hefur fallið bókin **sín**$_i$ Dat-Nom
woman.the.DAT has fallen book.the.NOM hers.NOM
vel í geð.
well in liking
'The woman has liked her book.

b. **Hann**$_i$ hefur fallið konunni **sinni**$_i$ vel í geð. Nom-Dat
he.NOM has fallen wife.the.DAT his.DAT well in liking
'He has been to his wife's liking.'

The facts are different with *falla í geð*, as can be seen in (15) above. In (15a) the dative experiencer of *falla í geð* binds the nominative reflexive possessive *sín* 'self's', while the nominative stimulus binds the dative reflexive possessive *sinni* in (15b). These facts corroborate the hypothesis that the dative experiencer is the syntactic subject in (15a), while the nominative stimulus takes on the subject role in (15b). Again, the by now well-known asymmetry between *líka* and *falla í geð* is manifested in these examples.

However, the facts of clause-bound reflexivization are not so simple as presented above. It has been noted in the literature that objects may also bind reflexives (Hyams & Sigurjónsdóttir 1990, Kiss 2003: 163). True though this may be, objects still exhibit different behavior than subjects with respect to

reflexive binding, meaning that reflexivization can in fact be employed to distinguish between subjects and objects. Whereas subjects must bind reflexives within their minimal clause, objects do so only optionally. This is shown in (16) below, where the subject *hann* 'he' must bind the reflexive *sér* 'self' and cannot bind the anaphor *honum* 'him' (16a). In contrast, the object *honum* 'him' can either bind the reflexive *sér* 'self' or the anaphor *honum* 'him' in (16b).

(16) ***Subject Binding***

a. **Hann**$_i$ heyrði sögur af **sér**$_i$/ *honum$_i$
he.NOM heard stories.ACC of himself.DAT/him.DAT
'He heard stories of himself.'

Object Binding

b. Ég sagði **honum**$_i$ sögurnar af **sér**$_i$/ **honum**$_i$
I.NOM told him.DAT stories.the.ACC of himself.DAT/him.DAT
'I told him stories of himself.'

Let us now compare the binding facts of the dative and the nominative with *líka* and *falla í geð* in Icelandic. With *líka*, only the dative in (17a) obligatorily binds a reflexive, thus behaving syntactically as a subject. The nominative in (17b), in contrast, cannot bind the reflexive, showing that it is a non-subject argument.

(17) ***Non-Alternating Dat-Nom***

a. **Konunni**$_i$ hefur líkað bókin um Dat-Nom
woman.the.DAT has liked book.the.NOM on
sig/*hana vel.
self.ACC/her.ACC wel
'The woman has liked the book about herself.'

b. ***Hann** hefur líkað konunni **sinni**/ hans vel. *Nom-Dat
he.NOM has liked wife.the.DAT self.DAT/his.DAT well
Intended meaning: 'He has been to his wife's liking.'

(18) ***Alternating Dat-Nom/Nom-Dat***

a. **Konunni**$_i$ hefur fallið bókin um Dat-Nom
woman.the.DAT has fallen book.the.NOM on
sig$_i$/ *hana$_i$ vel í geð.
self.ACC/her.ACC well in liking
'The woman has liked the book about herself.'

b. **Hann**$_i$ hefur fallið konunni **sinni**$_i$/*hans$_i$ Nom-Dat
he.NOM has fallen wife.the.DAT self.DAT/ his.DAT
vel í geð.
well in liking
'He has been to his wife's liking.'

In contrast, the examples in (18) with *falla í geð* show that the first argument, be it the dative or the nominative, must obligatorily bind a reflexive, while binding of anaphors is excluded. Therefore, both arguments of *falla í geð* behave syntactically as a subject, the dative when the it is the first argument and the same goes for the nominative, while this does not hold for objects. Again, the asymmetry between *líka* and *falla í geð* is manifested in these examples.

A further important subject test in Icelandic is Long-Distance Reflexivization. It entails that a subject in a main clause binds a reflexive in a subordinate clause. Such examples are easily construable with *líka* and *falla í geð*.

(19) ***Long-Distance Reflexivization***

a. **Henni** líkar vel að staða **sín** sé rædd.
she.DAT likes well that position.NOM hers be discussed
'She likes the fact that her position is being discussed.'

b. **Henni** fellur vel í geð að staða **sín** sé rædd.
she.DAT falls well in liking that position.NOM hers be discussed
'She likes the fact that her position is being discussed.'

Since Long-Distance Reflexivization is only found with human arguments, this test cannot be applied to the Nom-Dat alternant of *falla í geð.*

The next subject test to be discussed is Subject-to-Subject Raising. Consider the examples in (20) below, where the verb *líka* is embedded under *virðast* 'seem'. As (20a) shows, the dative experiencer of *líka* behaves syntactically as the subject of *virðast*. The nominative stimulus, however, does not take on the subject role of *virðast* at all (20b), showing that *líka* can only instantiate the Dat-Nom construction and not the Nom-Dat construction. The verb *virðast* 'seem' here behaves similarly to an auxiliary in that it does not take a subject of its own, but engages the subject of the lower verb for this purpose. The example in (20a) shows that only the dative with *líka*, and not the nominative (20b), takes on the behavioral properties of subjects:

(20) ***Non-Alternating Dat-Nom***

a. **Henni** virðist hafa líkað **bókin** vel. Dat-Nom
she.NOM seems have.INF liked book.the.NOM well
'She seems to have liked the book.

b. ***Bókin** virðist hafa líkað **henni** vel. *Nom-Dat
book.the.NOM seems have.INF liked herself.DAT well
Intended meaning: 'The book seems to have been to her pleasing.'

(21) ***Alternating Dat-Nom/Nom-Dat***

a. **Henni** virðist hafa fallið **bókin** vel í geð. Dat-Nom
she.NOM seems have.INF fallen book.the.NOM well in liking
'She seems to have liked the book.

b. **Bókin** virðist hafa fallið **henni** vel í geð. Nom-Dat
book.the.NOM seems have.INF fallen herself.DAT well in liking
'The book seems to have been to her pleasing.'

For *falla í geð*, the examples in (21) show that either the dative experiencer of the Dat-Nom alternant or the nominative stimulus of the Nom-Dat alternant take on the role of the subject of the verb *virðast* 'seem' in the matrix clause. Hence, the asymmetry between *líka* and *falla í geð* is again evident with Raising-to-Subject in Icelandic.

Subject-to-Object Raising is also one of the established subject tests in Icelandic. In (22a) below, the dative experiencer of the Dat-Nom alternant of *líka* behaves as the syntactic object of the matrix verb *telja* 'assume'. This is evident from the placement of the adverb *aldrei* 'never', demarcating the left edge of the verb phrase, showing that the "raised subject" *sér* 'self' really is the object of *telja* 'assume'. The reflexive form of *sér* 'self' further shows that the dative experiencer is an object in this construction, since reflexives cannot be subjects. Notice that the dative case of the subject of the lower verb is maintained in Raising-to-Object constructions, as is well known from Icelandic. Only the dative experiencer in (22a) below may be "raised" to object with this verb. The ungrammaticality of (22b), however, is expected on the assumption that *líka* cannot instantiate the Nom-Dat construction

(22) ***Non-Alternating Dat-Nom***

a. Hún taldi **sér** aldrei hafa líkað **bókin**. Dat-Nom
she.NOM assumed herself.DAT never have.INF liked book.the.NOM
'She assumed that she never liked the book.'

b. *Hún taldi **bókina** aldrei hafa líkað **sér**. *Nom-Dat
she.NOM assumed book.the.ACC never have.INF liked herself.DAT
Intended meaning: 'She assumed that the book was never to her liking.'

(23) ***Alternating Dat-Nom/Nom-Dat***

a. Hún taldi **sér** aldrei hafa fallið Dat-Nom
she.NOM assumed herself.DAT never have.INF fallen
bókin vel í geð.
book.the.NOM well in liking
'She assumed that she never liked the book.'

b. Hún taldi **bókina** aldrei hafa fallið Nom-Dat
she.NOM assumed book.the.ACC never have.INF fallen
sér vel í geð.
herself.DAT well in liking
'She assumed that the book was never to her liking.'

In (23a) above, it is evident that the dative experiencer of *falla í geð* behaves in the same way as the dative experience of *líka* in (22a) above. The nominative, occurring in the object position, is preserved. In (23b) it is in fact the nominative of *falla í geð* that behaves as the subject, evident from the fact that it receives accusative case from the matrix verb *telja* 'assume'. The differences in grammaticality between the examples in (22) and (23) confirms again the above-established asymmetry between *líka* and *falla í geð*.

The last subject test we would like to discuss for Icelandic involves control infinitives, already introduced in Section 2.1 above. It is a well-known fact from earlier research that only subjects of finite clauses must be left unexpressed in control infinitives, while objects are obligatorily expressed. Consider the examples below with the verb *líka*; (24a) shows that the dative experiencer may be left unexpressed in a control infinitive, while (24b) shows that the nominative of *líka* cannot be left unexpressed.

(24) ***Non-Alternating Dat-Nom***

a. maður þarf að vera haldinn þrælslund til **að** Dat-Nom
one.NOM must to be held severe.servility for to
__ **líka** slík fásinna.
PRO.DAT like.INF such craziness.NOM
'one must be be equipped with severe servility to like such craziness'

b. *Umræður … geta verið erfiðar vegna löngunar *Nom-Dat
discussions can be difficult because.of longing
til **að** __ **líka** félögunum
for to PRO.NOM like.INF friends.the.DAT
Intendend meaning: ‘Discussions … can be difficult because of their need to be to their peers’ liking’

(25) ***Alternating Dat-Nom/Nom-Dat***

a. maður þarf að vera haldinn þrælslund til Dat-Nom
one.NOM must to be held severe.servility for
að __ **falla í geð** slík fásinna.
to PRO.DAT fall.INF in liking such craziness.NOM
‘one must be equipped with severe servility to like such craziness’

b. Umræður … geta verið erfiðar vegna löngunar til Nom-Dat
discussions can be difficult because.of longing for
að __ **falla** félögunum **í geð**.
to PRO.NOM fall.INF friends.the.DAT in liking
‘Discussions … can be difficult because of their need to be to their peers’ liking’

In contrast, either argument of *falla í geð* can be left unexpressed in control constructions. In the attested example in (25a), the dative experiencer of the Dat-Nom alternant of *falla í geð* has been left unexpressed on identity with an indefinite nominative subject in the matrix clause. The same is true for the nominative stimulus of the Nom-Dat alternant in (25b), which is omitted on identity with an inanimate nominative subject. These examples therefore show that either the nominative or the dative, one at a time, is left unexpressed in control infinitives with *falla í geð*, again confirming the analysis that the predicate *falla í geð* may instantiate two different argument structure constructions, both Dat-Nom and also Nom-Dat.

To summarize the discussion so far, the data presented in this section show that alternating Dat-Nom/Nom-Dat predicates, like *falla í geð*, behave systematically such that the first argument takes on the syntactic behavior of subject, be it the dative of Dat-Nom or the nominative of Nom-Dat. In contrast, non-alternating Dat-Nom predicates, like *líka*, behave such that only the dative argument takes on the syntactic behavior of subject. Crucially, the nominative argument of *líka*, can, under no circumstances, take on the syntactic behavior of subject.

Having shown that Icelandic exhibits two types of Dat-Nom predicates, alternating and non-alternating ones, we now proceed to a discussion of Dat-Nom predicates in German. Our aim is to establish that Dat-Nom predicates in German are more similar to the *falla í geð* type in Icelandic than to the *líka* type.

3. Non-Canonically Case-Marked Subjects in German

Like Icelandic, German also exhibits structures in which the subject-like argument is not in the nominative case, but in the accusative or the dative case. The examples below illustrate three different case frames, intransitive Dat-only, transitive Dat-Nom and Acc-PP.

(26) ***Dat-only***

a. **Uns** ist bange, aber wir verzagen nicht.
us.DAT is scared but we.NOM despair not
'We are afraid but we don't despair.'

Dat-Nom

b. **Mir** schwebt **der Gedanke** vor.
me.DAT hovers the.NOM thought.NOM for
'I have the thought in mind.'

Acc-PP

c. **Mich** hungert **nach Macht**.
me.ACC hungers for power.DAT
'I hunger for power.'

According to the standard story, there is a categorical difference between Icelandic and German, in that Icelandic has oblique subjects, while German does not (Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989, Fischer & Blaszczak 2001, Haspelmath 2001, Fanselow 2002, Bayer 2004, Haider 2005, 2010, Wunderlich 2008). Elsewhere we have taken issue with the standard story, showing that non-nominative subject-like arguments in German do in fact exhibit more subject properties than is generally assumed in the literature (Barðdal & Eythórsson 2003, Eythórsson & Barðdal 2005, Barðdal 2006, Barðdal & Eythórsson 2006). This includes the ability of the first argument to be left unexpressed in both conjunction reduction and control infinitives, the two major subject tests that German oblique subject predicates have been claimed not to pass. In the next section, we present German examples of both

conjunction reduction and control infinitives with verbs that appear to be of the alternating type. Thereafter, we present additional examples of control infinitives with Dat-only verbs and Dative passives, documenting that non-nominative subject-like arguments in German do in fact occur in control infinitives with the non-nominative subject-like argument left unexpressed, exactly as nominative subjects do.

It has been regarded as a problem for the oblique subject analysis for German that the nominative of Dat-Nom predicates may exhibit some subject properties in that language (Wunderlich 2008). This raises the question of whether German Dat-Nom predicates may actually involve alternating predicates, i.e. that Dat-Nom predicates in German are of the *falla í geð* type rather than the *líka* type, an idea that we have mentioned in passing in previous work (Eythórsson & Barðdal 2005). We will examine this question in the next section.

3.1 Dat-Nom/Nom-Dat Predicates in German

In the following we provide data from German suggesting that Dat-Nom predicates in that language are in fact alternating Dat-Nom/Nom-Dat predicates.

Starting with first position in declarative clauses, either the dative experiencer or the nominative stimulus may occupy first position in German, and both orders are equally neutral.

(27) ***Alternating Dat-Nom/Nom-Dat***

a. **Mir** hat **das** **Hotel** gut gefallen. Dat-Nom
me.DAT has this.NOM hotel well *ge*.fallen
'I always liked this hotel.'

b. **Dieses** **Haus** hat **mir** letztes Jahr schon so gut gefallen. Nom-Dat
this.NOM house has me.DAT last year already so well *ge*.fallen
'This house was already to my liking last year.'

That both word orders are equally neutral has been noted by Lenerz (1977) and Primus (1994: 40ff., 2012: 396) among others. In this sense, German *gefallen* 'like, be to sby's liking' is more like *falla í geð* than *líka* in Icelandic.

The next subject behavior to be discussed is subject-verb inversion:

(28) ***Alternating Dat-Nom/Nom-Dat***

a. Hat **dir** denn **das** **Hotel** gut gefallen? Dat-Nom
has you.DAT then this.NOM hotel well *ge*.fallen
'Did you like this hotel then?'

b. Hat **dieses** **Haus** **dir** letztes Jahr schon Nom-Dat
has this.NOM house you.DAT last year already
so gut gefallen?
so well *ge*.fallen
'Was this house already to your liking last year?'

Either argument, the nominative or the dative, inverts with the verb in constructions involving subject-verb inversion in German. Again, German *gefallen* patterns with Icelandic *falla í geð* and not *líka*.

In this connection it should be noted that German is different from Icelandic with respect to the order of arguments in the middle field. For instance, weak pronouns, such as nominative *es* 'it', as a rule, precede other arguments in German:

(29) ***Middle Field***

a. Hat **es** **dir** denn gut gefallen?
has it.NOM you.DAT then good *ge*.fallen
'Has this then been to your liking.'

b. *Hat **dir** **es** denn gut gefallen?
has you.DAT it.NOM then good *ge*.fallen

This fact may appear as a counterargument to our claim that both word orders, Dat-Nom and Nom-Dat, are equally neutral. However, there is a rule in German restricting the occurrence of weak nominative pronouns in the middle field (Hawkins 1986, Primus 1994: 43). This rule is independent of the order of the arguments in any argument structure construction and thus has no bearing on our claim that *gefallen* is an alternating predicate of the *falla í geð* type.

The best kind of examples to illustrate our claim would be with two nouns which are both animate, in order to control for animacy and heaviness. Two such example pairs are presented below:

(30) ***Animacy and Heaviness***

a. Offenbar haben **den Leuten die Kinder** gefallen.
obviously have the.DAT people the.NOM children *ge*.fallen
'The people obviously liked the children.'

b. Offenbar haben **die Kinder den Leuten** gefallen.
obviously have the.NOM children the.DAT people *ge*.fallen
'The children were obviously to the people's liking.'

(31) ***Animacy and Heaviness***

a. Eigentlich haben **den Professoren die Studenten**
actually have the.DAT professors the.NOM students
nicht so gut gefallen.
not so well *ge*.fallen
'Actually, the professors didn't like the students.'

b. Eigentlich haben **die Studenten den Professoren**
actually have the.NOM students the.DAT professors
nicht so gut gefallen.
not so well *ge*.fallen
'Actually, the students weren't to the professors' liking.'

Native German speakers whom we have consulted agree that both orders are equally fine, although there seem to be some individual speaker preferences. A scrambling analysis is also excluded, since there are no perceivable semantic or pragmatic differences between the two word orders. That is to say, facts of word order in the middle field also support our analysis that *gefallen* in German may instantiate two different argument structure constructions, exactly like *falla í geð* in Icelandic, and unlike *líka*.

Turning now to Conjunction Reduction, consider the following examples:

(32) ***Alternating Dat-Nom/Nom-Dat***

a. Doch wer wird siegen, wer wird überleben, Dat-Nom
though who will conquer who will survive
und ___ wird es gelingen?
and will it succeed
'Though who will conquer, who will survive, and (who) will succeed with it?

b. dass er ein falsches Spiel mit der Familie ... getrieben Dat-Nom
that he a false game with the family … ran
hat ***und*** __ ***wird es gelingen***
has and will it succeed
'that he's been running a scam … on the family and is getting away with it.'

c. Das Zimmer ist gross und ___ **hat mir** Nom-Dat
the.NOM room is big and has me.DAT
gut gefallen.
well *ge*.fallen
'The room is big and has been to my liking.'

The last example (32c) shows that the nominative stimulus may be left unexpressed on identity with a nominative subject of the first conjunct. This is expected. What is more surprising, however, given the standard story, is that the dative experiencer can also be left unexpressed in conjunction reduction. In (32a) the dative experiencer of Dat-Nom *gelingen* 'succeed' is left unexpressed on identity with the nominative indefinite pronoun *wer* 'who' in the first conjunct. In (32b) the dative experiencer is again left unexpressed, this time on identity with the nominative 3rd person pronoun *er* 'he' in the first conjunct. These examples therefore show that the Dat-Nom predicate *gelingen* in German may instantiate two different argument structure constructions, Dat-Nom and Nom-Dat, exactly like *falla í geð* in Icelandic and not like *líka*.

Proceeding to clause-bound reflexivization, recall from Section 2 above that there is an asymmetry in the binding properties of subjects and objects in Icelandic, in that subjects must bind reflexives within their minimal clause, while objects do so only optionally. The same pattern is found in German, as shown in (33a–b) below:

(33) ***Subject Binding***

a. **Er**$_i$ hat Geschichten über **sich**$_i$/ *ihn$_i$ gehört.
he.NOM has stories.ACC of himself.ACC/him.ACC heard
'He heard stories of himself.'

Object Binding

b. Ich habe **ihm**$_i$ Geschichten über **sich**$_i$/ **ihn**$_i$ erzählt.
I.NOM have him.DAT stories.ACC of himself.ACC/him.ACC told
'I told him stories of himself.'

Let us now consider how *gefallen* behaves with respect to binding.

(34) ***Alternating Dat-Nom/Nom-Dat***

a. **Ihm**$_i$ gefallen Geschichten über **sich**$_i$/ *ihn$_i$. Dat-Nom
him.DAT *ge*.fall stories about self.ACC/*him.ACC
'He likes stories about himself.'

b. **Er**$_i$ gefällt **sich**$_i$/ *ihm$_i$. Nom-Dat
he.NOM *ge*.falls self.DAT/*him.DAT
'He's pleased with himself.'

The German examples in (34a–b) clearly show that both the dative experiencer and the nominative stimulus of *gefallen* can only bind a reflexive within their minimal clause and not an anaphor. In this respect, either argument of *gefallen* behaves syntactically like a subject, exactly as with *falla í geð* in Icelandic and unlike *líka*.

We now turn to data relevant to Raising-to-Subject in German:

(35) ***Alternating Dat-Nom/Nom-Dat***

a. **Den Grundeln und den Garnelen** scheint **es** Dat-Nom
the.DAT gobys.DAT and the.DAT prawns.DAT seem it
gut zu gefallen.
good to *ge*.fall
'The gobys and the prawns seem to be pleased with it.

b. **Das kalte Spielzeug** scheint **ihm** gut Nom-Dat
the.NOM cold toy.thing seems him.DAT good
zu gefallen.
to *ge*.fall
'The cold toy seems to be pleasing to him.'

As evident from the examples in (35) either argument of *gefallen* can take on the subject behavior of the raising-to-subject verb *scheinen* 'seem' in German, exactly as with *falla í geð* in Icelandic, and in contrast to *líka*. These facts, thus, corroborate our analysis that *gefallen* is an alternating predicate in German, which can instantiate two inverse argument structures, Dat-Nom and Nom-Dat.

When it comes to Raising-to-Object, or on some analyses Clause Union or Restructuring (Haider 2003, Wurmbrand 2003), German behaves differently from both English and the Scandinavian languages, in that *believe*-type verbs and verbs of saying are excluded from the construction. Causatives in German,

however, select for infinitive clauses, so let us compare 'let' causatives in Icelandic and German instead:

(36) ***Alternating Dat-Nom/Nom-Dat***

a. Ich lasse **mir** **den** nicht gefallen. Dat-Acc
I.NOM let me.DAT it.ACC not *ge*.fall.INF
'I won't put up with that.'

b. Ich lasse **den** **mir** nicht gefallen. Acc-Dat
I.NOM let it.ACC me.DAT not *ge*.fall.INF
'I won't put up with that.'

(37) ***Icelandic*** '**let**' ***structures with alternating Dat-Nom/Nom-Dat***

a. Hann lætur **sér** ekki nægja **venjulegan síma**. Dat-Acc
he.NOM lets self.DAT not suffice.INF ordinary.ACC phone.ACC
'He doesn't let it suffice with an ordinary phone. '

b. Hann lætur **venjulegan síma** ekki nægja **sér**. Acc-Dat
he.NOM lets ordinary.ACC phone.ACC not suffice.INF self.DAT
'He doesn't let it suffice with an ordinary phone.

We are aware of the fact that there is a major debate going on within German linguistics of the status of *lassen* 'let' and its complements in the grammar. Several different analyses have been proposed (cf. Reis 1973, 1976, Höhle 1978), corresponding with different meanings, but at this stage no consensus exists as of how to analyze sequences with *lassen*. Irrespective of how one choses to analyze the structure of the German examples with *lassen* in (36) above, the main point is that the German examples show the same pattern as the Icelandic examples with regard to the distribution of the two arguments in the infinitive clause, although the nominative in non-causatives shows up as an accusative with 'let' causatives. This, however, applies equally to Icelandic and German. In other words, *gefallen* in German behaves as *falla í geð* in Icelandic and not as *líka* in constructions involving 'let' causatives.

The standard German analysis of examples like these would assume that it is in fact the nominative that is the subject of *gefallen*, which receives accusative case in 'let' causatives, and that in Dat-Acc orders like in (36a), the dative experiencer has been scrambled to the left across the original subject. Given that the alternating word order is also found in Icelandic, and the nominative of finite clauses also shows up in the accusative in that language, a different analysis is also possible. Scrambling, for instance, is not a part of Icelandic syntax, so a

scrambling analysis for Icelandic is excluded. The most natural analysis for Icelandic is that we are here dealing with two distinct argument structure constructions, and given the validity of such an analysis for Icelandic, it may also be a viable analysis for German. An alternating analysis, however, has not been suggested for German due to a general lack of knowledge in the syntactic community of the existence of such predicates.

Since the Icelandic examples of Raising-to-Object in Section 3 above did not involve 'let' causatives, consider now how the non-alternating *líka* behaves in this respect. Exactly as with *gefallen* and *falla í geð*, the nominative object of finite *líka* shows up in the accusative case when *líka* is embedded under the causative *láta* (cf. Barðdal 2011, Wood 2011).

(38) ***Icelandic*** '**let**' ***structures with non-alternating Dat-Nom***

a. Þór Saari lætur **sér** vel líka **glundroða-** Dat-Acc
Þór Saari lets self.DAT well like chaos-
og geðþóttastjórnina.
and arbitrary.ruling.ACC
'Þór Saari takes liking in chaos and arbitrary decisions.'

b. *Þór Saari lætur **glundroða- og geðþóttastjórnina** Acc-Dat
Þór Saari lets chaos- and arbitrary.ruling.ACC
vel líka **sér**.
well like self.DAT

(39) a. Hann lætur **sér** ekki líka **venjulegan síma**. Dat-Acc
he.NOM lets self.DAT not like.INF ordinary.ACC phone.ACC
'He doesn't like an ordinary phone.

b. *Hann lætur **venjulegan síma** ekki líka **sér**. Acc-Dat
he.NOM lets ordinary.ACC phone.ACC not like.INF self.DAT
'He doesn't like an ordinary phone.

Observe that the word order distribution found with *líka* in (38–39) shows the same asymmetry as was documented between *líka* and *falla í geð* in Section 3, again confirming that *líka* is a non-alternating Dat-Nom verb.

Since *líka* is not an alternating predicate, but can only instantiate the Dat-Nom construction, it is excluded that the assignment of the accusative to the nominative argument is based on a potential subject status of the nominative. Where, then, does the accusative in (38–39) come from? An obvious possibility is that the accusative is assigned by the causative 'let' construction itself, so that

a nominative of a finite clause shows up as an accusative in this type of infinitives, irrespective of grammatical relations. The same would also hold for German. On such an analysis, 'let' causatives would of course not involve Raising-to-Object. For our purposes, this is immaterial, as our goal is first and foremost to show that *gefallen* in German behaves in the same way as *falla í geð* in Icelandic and not as *líka*. We have documented such a behavior here with 'let' causatives rather than with Raising-to-Object constructions.[1]

The final and most important test of subjecthood is control infinitives. Consider the following German examples of the Dat-Nom verbs *gefallen* und *misslingen* 'fail':

(40) ***Alternating Dat-Nom/Nom-Dat***

a. Also tut er es, um __ ihr Nom-Dat
therefore does he it in.order PRO.NOM her.DAT
zu gefallen.
to *ge*.fall.INF
'So he does it to please her.'

b. Seit wann geht es **um ___ etwas "zu** Dat-Nom
since when is it about PRO.DAT something.NOM to
gefallen"? Vielmehr ist doch die Frage, was wollen
ge.fall rather is though the question what want
die und wofür!
they and why
'Since when has the issue been about "liking" something? The question is much rather what do they want and why!'

c. Ich will wohlerwogene Risiken eingehen, um Dat-Nom
I will well.considered risk in.come in.order
darüber zu träumen und darauf zu bauen, **um**
there.about to dream and there.upon to build in.order
__ **zu mißlingen** und erfolgreich zu sein.
PRO.DAT to fail.INF and successful to be
'I will arrive at well-considered risks, dream about them and build upon them, in order to fail and become successful.'

[1] Fischer (1990) has argued that only 'let' is original with small clauses of this type in the history of English, and that verbs of saying, believing and perception entered the construction later due to Latin influence, despite the fact that both Gothic and Old Norse-Icelandic allow a wide variety of verb classes in small clauses of this type (cf. Harbert 2007 for Gothic and Kristoffersen 1996 for Old Norse-Icelandic). However, the difference documented here between *telja* 'consider' and *láta* 'let' in Icelandic may support Fischer's assumption.

In (40a) the nominative of *gefallen* is left unexpressed on identity with the nominative subject *er* 'he' in the matrix clause. This is expected on the analysis that the nominative is the subject. However, in example (40b), it is the dative experiencer that is left unexpressed, as is evident from the fact that the nominative *etwas* 'something' is present. There is no antecedent in the preceding context; given the generic reading of the whole clause, the antecedent is retrievable from the context. The fact that the dative is left unexpressed in (40b) is only compatible with a subject analysis of the dative, again corroborating our claim that *gefallen* is an alternating predicate like Icelandic *falla í geð*, and unlike *líka*. The example in (40c) contains the verb *misslingen* 'fail' and not *gefallen*. Here the dative argument is left unexpressed on identity with a nominative subject *ich* 'I' in the matrix clause. These three examples suggest that either the nominative of Nom-Dat (40a) or the dative of Dat-Nom (40b–c) may be left unexpressed in control infinitives in German, and hence that Dat-Nom predicates in German alternate between two inverse argument structures, exactly like *falla í geð* in Icelandic. Recall that examples like (40b–c), with the dative experiencer being left unexpressed in control infinitives, are generally taken to be the most conclusive evidence for the subject status of non-nominative subjects by the linguistic community.

To summarize the content of this section, we have presented German data involving word order, reflexivization, raising-to-subject, 'let' causatives, and control, which all point to the behavior of these predicates in German as being parallel to that of Icelandic alternating predicates, i.e. predicates of the *falla í geð* type, as opposed to the *líka* type. The recognition of this fact is important because it helps to explain the deviant behavior of such predicates in German, which neither behave properly as Nom-Dat predicates, nor as Dat-Nom predicates. Of course, if one takes the word order distributions, involving both Dat-Nom and Nom-Dat surface structures in German, to reflect only one argument structure, predicates like *gefallen* clearly seem to exhibit anomalous behavior. On an alternating analysis, however, this apparent anomaly is accounted for.

Despite the consensus that Dat-Nom is neutral word order for predicates like *gefallen*, many scholars have rejected the hypothesis that there are dative subjects in German, partly on the basis of the fact that the nominative may be left unexpressed in control infinitives in German, of the type given in (40a). Cole et al. (1980: 727), for instance, give the following examples as evidence for the subject status of the nominative as opposed to the dative, as suggested by the

fact that the nominative is left unexpressed in control constructions (41a) and the dative is not (41b):

(41) ***Nom-Dat***

a. Ich versuchte, __ diesen Damen **zu gefallen**.
I.NOM tried PRO.NOM these.DAT ladies.DAT to *ge.*fall.INF
'I tried to please these ladies.'

Dat-Nom

b. *Ich versuchte, __ diese Damen **zu gefallen**.
I.NOM tried PRO.DAT these.NOM ladies.NOM to *ge.*fall.INF
Intended: 'I tried to like these ladies.'

Since the nominative takes on the behavioral properties of subject with *gefallen*, as shown in (41a), an analysis of the dative as being subject has been excluded by the Germanic linguistics community. In general, the argument structure of these predicates is regarded as being Dat-Nom, but yet subject status has been assigned to the second-ranked argument of the argument structure rather than the first argument. This stipulation applies to no other verb class in German, where it is otherwise always the first argument of the argument structure that is analyzed as a subject.

By assuming an alternating analysis as we have done here, we can dispense with the stipulation that the subject is the second-ranked argument for this verb class and this verb class only, and we can analyze the first argument of the argument structure as a subject, regardless of case marking. The data presented in this section corroborate an alternating analysis, namely that predicates like *gefallen* may instantiate either the Dat-Nom case frame or the Nom-Dat case frame. As a consequence, neither the Dat-Nom word order nor the Nom-Dat word order involves a topicalization of the other; instead Dat-Nom and Nom-Dat count as two related but independent argument structure constructions in German. Such an analysis also invalidates the view that the subject properties of the nominative exclude the possibility of German having oblique subjects, as has been the dominant view (cf. Cole et al. 1980, Wunderlich 2008).

One might now object that it is considerably easier to omit the nominative in control infinitives than the dative (cf. 40b). This objection, hower, does not qualify as an argument against a subject analysis of the dative, since dative-subject-like arguments can be left unexpressed, although with restrictions. The examples in (39b–c) are by no means our only examples of dative subject-like

arguments being omitted in control constructions. Below we present four additional examples.

(42) ***Control Infinitive***

Shermer deutete auf die Rohre in einem Brause-Raum im Mauthausen Lager hin, das Touristen als eine Hinrichtungs-"Gaskammer" vorgeführt wird. Indem er behauptete, daß durch diese Rohre Dampf geleitet wurde, um den Raum zu heizen, warf er die Frage auf: "Was kann es anderes (anderes als Tötungsabsichten) bedeuten? Warum würden Sie ein Brausebad wärmen wollen?" *Nun, wie wäre es damit, um vielleicht jemanden, der sich duschen wollte, davor zu bewahren,* ***kalt zu ___ werden*** oder weil derjenige, der die Installationen anbrachte, sich nicht um Ästhetik kümmerte und die Rohre sichtbar ließ oder unzählige andere vernünftige Gründe.

'Shermer pointed at the pipe in a shower room in the Mauthausen camp, which is presented to tourists as an execution 'gas chamber'. Claiming that steam was lead through this pipe in order to heat up the room, he raised the question: 'What else can it mean (than an intention to kill)? Why would you want to warm up a shower cabin?' *Well, how about maybe in order to prevent somebody who would like to take a shower from* ***feeling cold****,* or because the person who fitted the installation did not care about aesthetics and let the pipeline be visible, or countless other sensible reasons.'

(http://www.zundelsite.org/german/artikel/RevDeb.html)

In this example it is the predicate *kalt sein* 'to feel cold' which selects for a dative subject-like argument, that occurs in a control infinitive with the dative omitted. The context shows that this is not the homophonous *kalt sein* with a nominative used about actual temperature as opposed to experienced temperature. Hence, there is no doubt that the unexpressed argument is a dative, and not a nominative.

In our next example, it is the predicate *übel werden* 'feel sick' that occurs in a control infinitive, and it is also clear from the context that a dative subject-like argument has been left unexpressed and not a nominative argument, since the meaning is clearly 'feel sick' and not 'be evil'.

(43) ***Control Infinitive***

Hier sind wir noch halb sinnlich, und es ist äusserst naturwidrig, hier alles verleugnen wollen, was Gott dem physischen Menschen zum Labsal und zur Erfrischung hie und da am Pfade unserer Wallfarth aufgetischt hat: aber den Lebensweg darum pilgern, um an diesen Erquickungsorten zu schmausen, *das ist so verächtlich, daß man das Auge davon abwenden muß,* ***um ___ nicht übel zu werden.***

Here we are still half sensuous, and it is very much against nature to abstain from everything here that the Lord has served the physical person for comfort and refreshment here and there on the path of our pilgrimage: but to take a pilgrimage on the path of life in order to feast at these rest places, *that is so disgusting that one has to turn (the eye) away* ***in order not to feel sick***.'

(home.t-online.de/home/dr.erich.mertens/STILLIN2.htm, *1789*)

Consider next example (44), where the passive *widersprochen werden* 'be assisted' occurs in a control infinitive, with the dative subject-like argument being omitted.

(44) ***Control Infinitive***

Denn ein Teil dieser Erkenntnisse, die mathematischen, ist im alten Besitze der Zuverlässigkeit, und gibt dadurch eine günstige Erwartung auch für andere, ob diese gleich von ganz verschiedener Natur sein mögen. *Überdem, wenn man über den Kreis der Erfahrung hinaus ist, so ist man sicher, ___ durch Erfahrung nicht* ***widersprochen zu werden***.

'Because a part of this knowledge, the mathematical one, has always possessed reliability, and by means of this it provides a favorable expectation for others, even though these may be of a quite different nature. *Besides, if one has left the sphere of experience, one can be certain not* ***to be contradicted*** *by experience*.'

(www.gutenberg2000.de/kant/krva/krva003.htm, *1781*)

Our last example is also a passive, in this case *assistiert werden* 'be contradicted', with the dative subject-like argument unexpressed, repeated here from Section 1, as example (45).

(45) ***Control Infinitive***

Häufig ist die gesamte Alltagsbewältigung behinderter Menschen auf Assistenz angewiesen, vom Aufstehen, Waschen, Anziehen über Essen und Bewegen. Die Betroffenen bauen fast immer ein Vertrauensverhältnis zu ihren Betreuern auf. Potenzielle Täter nutzen das freundschaftliche Verhältnis häufig aus, um gezielt die Bedürfnisse des behinderten Menschen auszuforschen. Je größer die Abhängigkeit, umso größer ist die Gefährdung. Wie soll man Berührungen auch vermeiden, wenn auch die intimsten Handlungen nicht alleine bewerkstellig werden können? *Ein Recht für geistig wie körperlich behinderte Frauen,* ___ ***nur*** *von Frauen bei intimen Handlungen* ***assistiert zu werden****,* gibt es in der Bundesrepublik ... nicht.

'In coping with their everyday life, disabled people are often forced to seek assistance, from the moment they get up, wash, get dressed and with eating and moving around. These people almost always build up a relationship of trust with their carers. Potential offenders often take advantage of this friendly relationship with the specific aim to gather information about the needs of the disabled person. The greater the dependency, the greater the threat. How is one supposed to avoid contact, if even the most personal activities cannot be performed in privacy? *The right for mentally and physically disabled women* ***to only be assisted*** *by women* when engaged in private activities does not exist ... in Germany.'

(www.freitag.de/2002/45/02450402.php, *2002*)

The examples in (42–45) above demonstrate that attested utterances exist in which a subject-like dative has been left unexpressed in a control infinitive in the German language. The examples above are all documented examples, they all stem from speakers who use these predicates with dative subject-like arguments, and three out of four producers of these examples (44–45) are academics. Of these, example (44) is from Immanuel Kant's *Critique of Pure Reason*, example (43) is from a contemporary gender researcher, and example (42) is from Prof. Jung-Stilling's revised version of *Rede über den Werth der Leiden* (Lecture on the significance of suffering).

More examples of this type have been reported in Barðdal & Eythórsson (2003b, 2006), Eythórsson & Barðdal (2005) and Barðdal (2006). However, all the examples we reported on in our previous work are either passives (*widersprochen/assistiert werden*) or compositional predicates with the verb 'be'

and an adjective (*übel/kalt sein*). The example in (40b) adds a Dat-Nom predicate to this list.

There is no doubt that the omissibility of oblique subjects in control constructions in German is significantly more restricted than that of nominative subjects. We would like to emphasize that examples of this type are few and far between. They are certainly marginal and not accepted by all speakers. We refer the reader to our own acceptability judgment studies, reported on in Eythórsson & Barðdal (2005), Barðdal (2006) & Barðdal & Eythórsson (2006), where we show that speakers vary a great deal in their internal rating of examples like these. Interestingly, this is also true for Modern Icelandic, where there is more variation in speakers' judgments than is often discussed in the literature. The question is whether the marginality of these examples is relevant or not. What is important here, we believe, is that the German and Icelandic speakers who have uttered and accepted these strings treat the dative of Dat-Nom predicates in the same way as they treat canonical nominative subjects.

There may be different reasons for why the omission of nominative subjects is easier in control constructions than the omission of oblique subjects. One possibility is that oblique subjects are a marked alternative in the grammar, while nominative subjects are unmarked. That may, in turn, result in different restrictions on the omissibility of nominative vs. oblique subjects (Bayer, Bader & Meng 2001, Barðdal 2006). If so, then the restricted nature of the omissibility of oblique subjects in German is not an argument against a subject analysis. It then follows that the difference between Icelandic and German is not categorical but gradient, contrary to the standard story (Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989, Fanselow 2002, Bayer 2004, Wunderlich 2008) that Icelandic has oblique subjects and German does not. The great Icelandic–German divide, therefore, does not exist.

At this juncture, we would like to draw the reader's attention to the fact that alternating predicates of the type described above are not limited to Icelandic and German, even though our discussion so far has been focused on these languages. They are also well known in Modern Faroese (Barnes 1986), and their existence has been argued for in the history of English (Allen 1995) and the history of the Mainland Scandinavian languages (Barðdal 1998). As such, alternating predicates may have to be reconstructed for Proto-Germanic, and their roots may go even further back than that as we have encountered potential examples of such predicates in Lithuanian, Latin, Ancient Greek and Sanskrit.

Having demonstrated in this section that Dat-Nom predicates in German like *gefallen* show the same syntactic behavior as Icelandic *falla í geð* and not as

Icelandic *líka*, we now turn to the relationship between Dat-Nom and Nom-Dat argument structures for these predicates, and how they may be modeled in the grammars of Icelandic and German.

4. Sign-Based Construction Grammar Account

The earliest work on alternating predicates in the syntactic literature was purely descriptive. Bernódusson (1982) was the first to discuss these predicates in Modern Icelandic, and the issue was subsequently taken up by Barnes (1986) for Faroese, Allen (1995) for Old English, and Barðdal (1998) for the history of the Scandinavian languages. It is not obvious how to account theoretically for this alternating behavior of one and the same predicate. In addition to earlier descriptive accounts, some theoretical suggestions have been made, which we will review in the following, including the accounts of Barðdal (1999, 2001), Platzack (1999), and Wood & Sigurðsson (2014). We conclude this section by presenting our own analysis, couched within the framework of Sign-Based Construction Grammar (Sag 2012, Michaelis 2010, 2012, Boas & Sag 2012).

A default option would be to assume homophony, i.e. two verbs with the same phonetic form but two different syntactic behavioral patterns. Barðdal (1999, 2001) argued against such an account, proposing instead a constructional analysis of the phenomenon, in which only one entry in the lexicon is needed, and the difference in behavior is accounted for by assuming the existence of two complementary diametrically-opposed argument structure constructions. In a response to this account, Platzack (1999) suggested a minimalist analysis which assumes that the argument structure of these predicates is a lexical property peculiar to them. He assumes that alternating predicates have a different structure than Dat-Nom predicates of the *líka* type, since his analysis of the *líka* type excludes Nom-Dat structures. Unfortunately, this proposal reduces the problem to a stipulation, and cannot be considered to have any explanatory value.

A more recent analysis is suggested by Wood & Sigurðsson (2014) who also deal with the two types of Dat-Nom predicates discussed here, under the label *symmetric* and *asymmetric* predicates (first suggested by Barðdal 2011). They claim that there are empirical differences between the two types of Dat-Nom predicates, both with respect to syntactic behavior and event structure. Starting with the differences in event structure, they propose that non-alternating predicates express an experience, state or activity, while alternating predicates

highlight a property of the nominative argument. This, in turn, results in differences in syntactic behavior, namely that alternating predicates can occur in an argument structure without the dative, while non-alternating predicates do not have this option. Wood & Sigurðsson point out that there are some exceptions to this. The two exceptions that they mention are, first, that the verb *líka* may marginally occur without the dative, and, second, that verbs like *hugnast* 'like' and *ofbjóða* 'be shocked at' are alternating predicates, and not non-alternating predicates, as predicted on Wood & Sigurðsson's own account.

With regard to *líka*, we maintain that the argument structure without the dative is indeed felicitous in Icelandic, and not in any way marginal, as Wood & Sigurðsson claim. We provide three attested examples below to corroborate this and more are readily found on the World Wide Web:

(46) ***Alternating Dat-Nom/Nom-Dat***

a. Ef **þetta** **líkar vel** er þetta nánast bylting fyrir frystihúsin.
if this.NOM likes well is this almost revolution for fish.factories
'If this turns out well, this will almost be a revolution for the fish factories.' (Dagur, 14.07.1986)

b. Það er búið að skrifa handritið og prufuþáttur í
it.EXPL is done to write manuscript.the and demo in
undirbúningi og ef **hann** **líkar vel** þá fer þetta í framleiðslu.
preparation and if he.NOM likes well then goes this in production
'The manuscript has been written and a demo is being prepared, and if it turns out well, this goes into production.' (Vísir, 20.10.2010)

c. **Þetta** **líkar vel** og hefur selst.
this.NOM likes well and has sold.REFL
'This has been a success and has sold well.'
(http://flateyri.wordpress.com/page/14/, 15.12.2009)

This behavior is not at all special for the verb *líka*; there are several other non-alternating Dat-Nom predicates, which consistently occur in the argument structure without the dative, contra Wood & Sigurðsson. Two such predicates are *ganga vel/illa* 'be un/successful' and *þykja* 'be considered'. The examples below are all taken from the Icelandic press:

(47) a. **Snjómokstur gengur vel** á Ísafirði.
snow.ploughing.NOM goes well on Ísafjörður
'The snow ploughing is working well in Ísafjörður.'
(Morgunblaðið, 15.04.2013)

b. **Jólaverslunin gengur ágætlega**.
Christmas.shopping.the.NOM goes well
'The Christmas shopping is going well.' (Vísir 22.12.2012)

c. **Hann þykir** hafa staðið sig vel sem utanríkisráðherra.
he.NOM is.considered have stood himself well as foreign.minister
'He is considered to have done a good job as foreign minister.'
(Pressan 15.11.2012)

In addition, there are several alternating Dat-Nom predicates that should occur in the argument structure without the dative, according to the predictions of Wood & Sigurðsson, contrary to fact. Below is a list of a few such alternating predicates taken from Barðdal (2001: 53–55):

berast í hendur 'receive', *falla e-ð í skaut* 'receive', *falla verk úr hendi* 'fail to do sth', *hrjóta af vörum* 'let words slip', *hverfa veröldin* 'sleep for a while, *koma við* 'be of sby's business', *koma í koll* 'get in trouble', *liggja e-ð á hjarta* 'be anxious', *ratast á munn* 'accidentally speak', *renna til rifja* 'cut to the quick', *standa fyrir þrifum* 'hampered by sth', *vaxa e-ð í augum* 'find sth more difficult than it really is', *vera ofvaxið* 'be beyond sby's power', *verða til lífs* 'survive', *vera til lista lagt* 'have a talent'

The examples in (48) illustrate, for three predicates, that they cannot occur without the dative:

(48) a. *Sannleikurinn ratast alltaf á munn.
truth.NOM finds.way always on mouth

b. *Þetta varð til lífs.
this.NOM became to life

c. *Margt var til lista lagt.
much.NOM was to skill put

As is evident from the list of predicates above, these are not predicates that modify the theme, (using the terminology of Wood & Sigurðsson), but rather predicates that modify a state/experience/activity. The proposal of Wood &

Sigurðsson that there is a semantic distinction between the two types of verbs thus appears to be without any empirical foundation.

With regard to the second exception that Wood & Sigurðsson bring up, i.e. the word order distribution of verbs like *hugnast* 'like' and *ofbjóða* 'be shocked at', these predicates should be non-alternating according to their analysis, again contrary to fact, as they acknowledge. The problem with their analysis is that they assume that a semantic distinction goes hand in hand with syntactic behavior, whereas in reality it does not. It is on this distinction that their theoretical analysis is based, an analysis that is not tenable, as we have shown here.

Instead, we would like to suggest a constructional approach, in terms of Sign-Based Construction Grammar. In contrast to Wood & Sigurðsson, we do not assume that there is a semantic difference between the two types of verbs, alternating vs. non-alternating predicates. An important reason is that there are several synonymous predicates found across the two classes. One pair is *líka* and *falla í geð* which both mean 'like', another is *geðjast* and *hugnast* also meaning 'like', *svíða* and *sárna*, which both mean 'feel hurt' in addition to the near synonyms *áskotnast* 'acquire' and *berast* 'receive' and *gremjast* 'be annoyed' and *vera fjarri skapi* 'dislike'. This shows that whether a Dat-Nom verb is alternating or not is a lexical idiosyncrasy. This is confirmed by the fact that historically there is a porous boundary between the two classes; *líka*, for instance, may have been an alternating predicate in Old Icelandic (cf. Barðdal 2001: 60), which is possibly the Proto-Germanic situation with this verb, as suggested by the evidence for the corresponding verb in Old English (Fischer & van der Leek 1983). Observe that we are not claiming that there cannot be a semantic difference between the different subclasses of alternating and non-alternating predicates, but rather that there is substantial enough semantic overlap between the two types to invalidate Wood & Sigurðsson's analysis.

Therefore, we do not suggest that the syntactic difference between the two types of predicates is stipulated in the lexical entry. Instead, we propose that the difference is accounted for through the interaction between the lexical entry and the argument structure constructions a predicate may instantiate. Non-alternating predicates may only instantiate the Dat-Nom argument structure construction, while alternating predicates may instantiate either the Dat-Nom or the Nom-Dat argument structure construction. This means that from the perspective of a modular theory, we move the locus of the explanation from the lexicon to the syntax. As Construction Grammar is a non-modular, monostratal, theory, the

difference between the two types of predicates is accounted for through different networks and hierarchies of constructions.

More technically, we would like to suggest a formalization of the lexical entry, as in the Attributed Value Matrix (AVM) in Figure 1 for *falla í geð*. Notice that the lexical entry for German *gefallen* would be identical except for the FORM. First, the curly brackets in the argument structure list (ARG-ST) indicate that this is an unordered list; the ordering of the arguments is determined by the argument structure construction (see Figures 2–3 below). Second, the tag indicated by the boxed numeral on the agreement (AGR) value and the nominative marked argument NP-Nom$_j$ indicates that the verb will agree in person and number with the nominative-marked argument, regardless of whether this is the left-most argument (subject) or not.

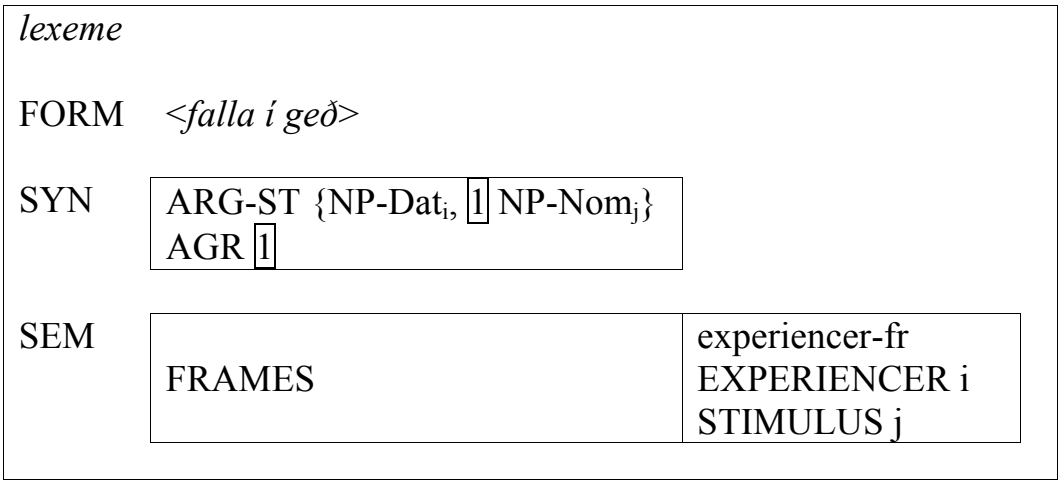

Figure 1: Lexical Entry for *falla í geð*

The entries for the two argument structure constructions, Dat-Nom and Nom-Dat, are given in Figures 2–3. Note that the ARG-ST lists are now ordered, indicated by the angled brackets. Observe that the difference between the two argument structures does not relate to lexical semantics, i.e. there are not two separate lexical entries for *falla í geð* or *gefallen*, one meaning 'like' and another meaning 'please'. Instead, each argument structure construction foregrounds one aspect of the event denoted by the lexeme (see below); the event structure for the two argument structure constructions is identical, as indicated by their identical SEM entries.

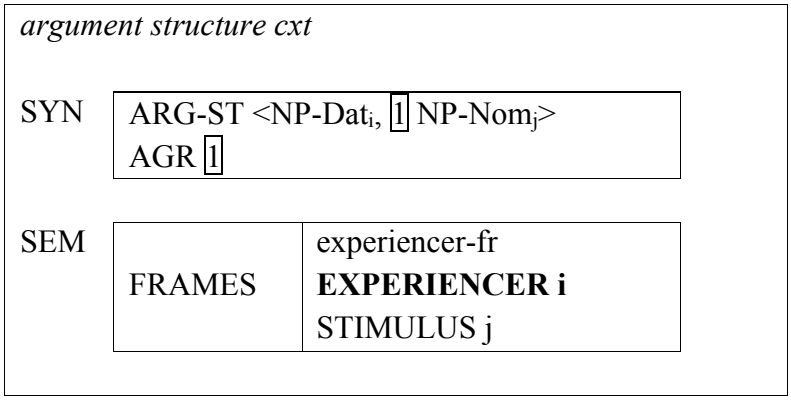

Figure 2: Dat-Nom Argument Structure Construction

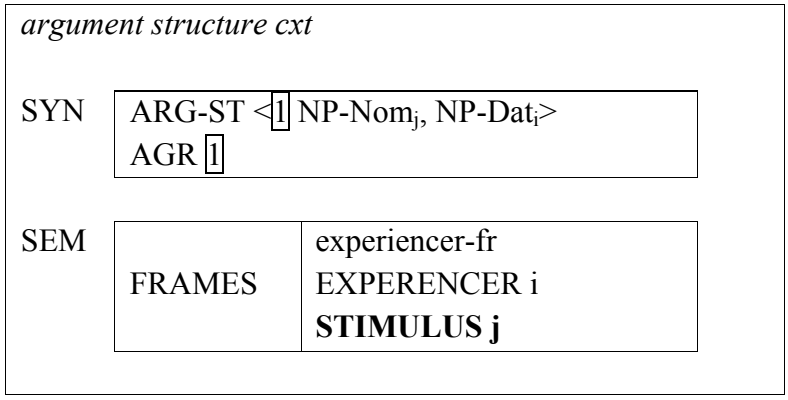

Figure 3: Nom-Dat Argument Structure Construction

The difference between the two argument structures is rather that different elements of the semantic frame are foregrounded: In the Dat-Nom argument structure construction, it is the dative experiencer that is foregrounded, shown in Figure 4, while in the Nom-Dat argument structure construction, it is the nominative stimulus that is foregrounded, see Figure 5.

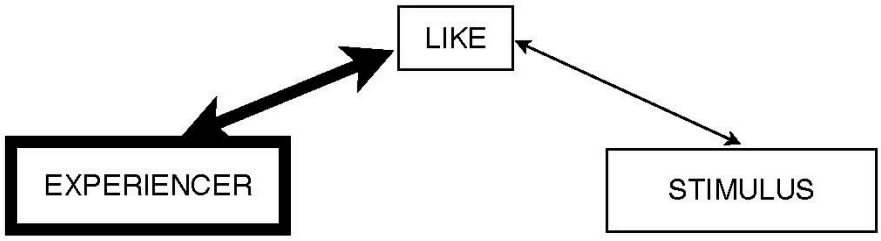

Figure 4: Foregrounding of the Experiencer in the Dat-Nom Construction

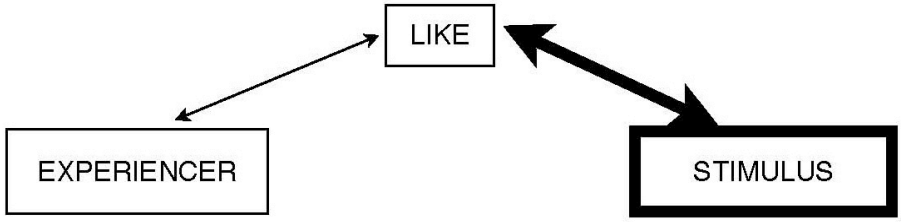

Figure 5: Foregrounding of the Stimulus in the Nom-Dat Construction

The difference between the two argument structure constructions is thus similar to the difference suggested by Langacker (1991: 154–156) for different uses of the predicate *be near*, which he analyzes in terms of foregrounding:

(49) a. John is near Mary.
b. Mary is near John.

The relation between the two arguments of *be near*, in this case, John and Mary, is static. Hence, this relation can be expressed either by foregrounding John or by foregrounding Mary, depending on the speaker's stance, and depending on which of the two arguments the speaker choses to zoom in on.

The situation with alternating predicates and their ability to enter into two diametrically-opposed argument structure constructions is parallel to the situation with *be near*. The speaker has a choice as to which of the two arguments s/he foregrounds. In the following examples, it is the referent of the nominative argument that is foregrounded in (50a–b), while the referent of the dative argument is foregrounded in (51a–b). In (50a–b and 51a) the subject is also linked by the immediate context, while in (51b) it is linked by the wider context.

(50) a. Norðursigling notar gamla íslenska eikarbáta … við starfsemi sína.
Það fellur gestum vel í geð.
'The Northern Cruise uses old Icelandic oak boats … in their business. This is very much to their guests liking.' (Morgunblaðið, 02.05.2013)
b. Stytting náms er nú til skoðunar hjá menntamálaráðuneytinu en **hugmyndin** fellur ekki öllum í geð.
'The shortening of the study program is now under consideration at the Ministry of Education, although the idea is not to everybody's liking.' (DV, 22.06.2013)

(51) a. Greinilegt var á undirtektum tónleikagesta að **þeim** féll vel í geð bæði efnisval og flutningur á þessum tónleikum.
‘It was obvious from the applauses of the concert guests, that they really liked both the choice of songs and the performance at this concert.’

b. Þannig var oft á tíðum nokkuð margt í eldhúsinu, sem eflaust sumir hefðu amast við, en **Ástu** féll þetta vel í geð.
‘In those days, there were often a lot of people in the kitchen, which some people might doubtless have been unhappy about, but Ásta quite liked this. (Morgunblaðið, 21.05.1994)

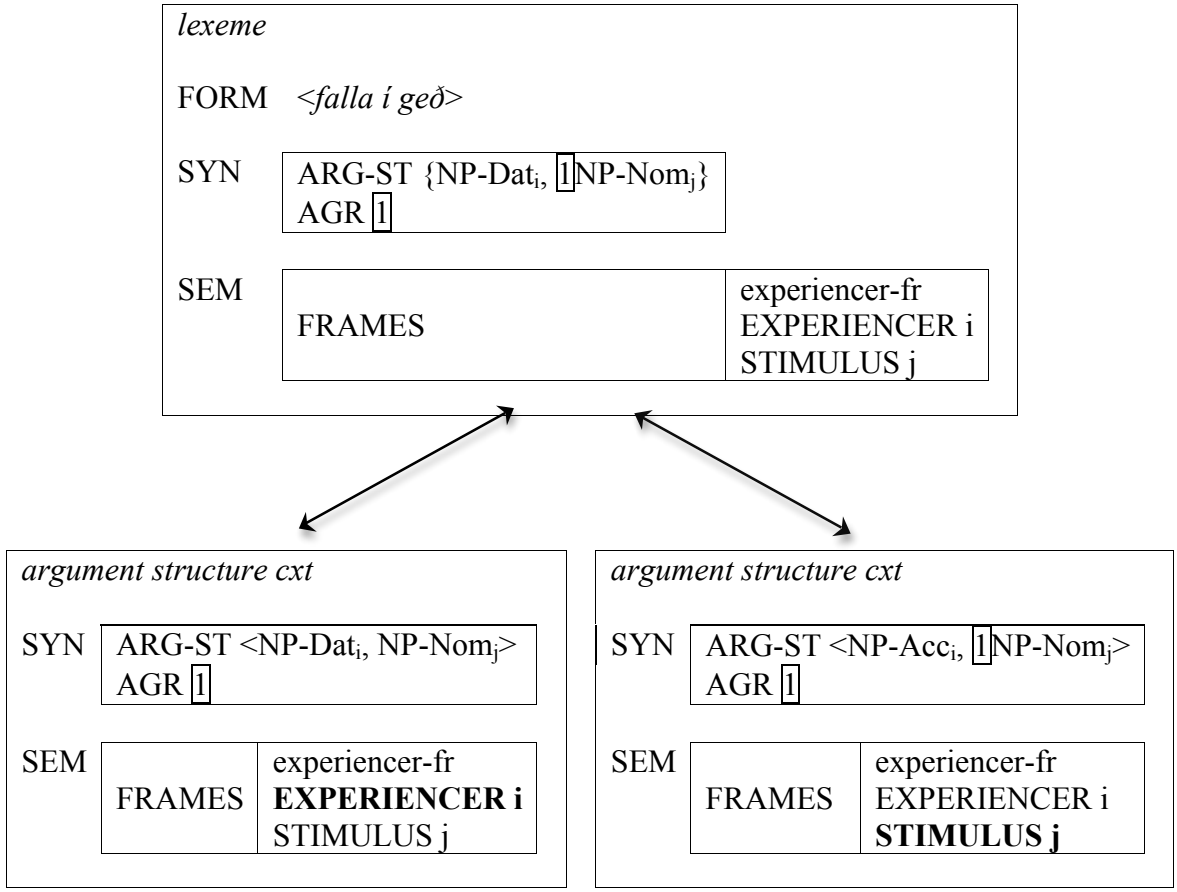

Figure 6: Constructional Network for Alternating Predicates

Returning to the SBCG formalism, the lexical entry for *líka* would be identical to the lexical entry for *falla í geð*, except for the FORM field. The difference between the two predicates lies in the fact that *líka* only instantiates the Dat-Nom argument structure construction in Figure 2, and not the Nom-Dat

argument structure construction in Figure 3. This results in a different network for alternating and non-alternating predicates, with reciprocal links between the lexical entries and the argument structure constructions, again emphasizing the non-modular property of Construction Grammar.

Figure 6 represents the constructional network for alternating predicates like *falla í geð* with links between the lexical entry and the two argument structure constructions, while Figure 7 represents the constructional network for non-alternating predicates like *líka* with reciprocal links between the lexical entry and only the Dat-Nom argument structure construction.

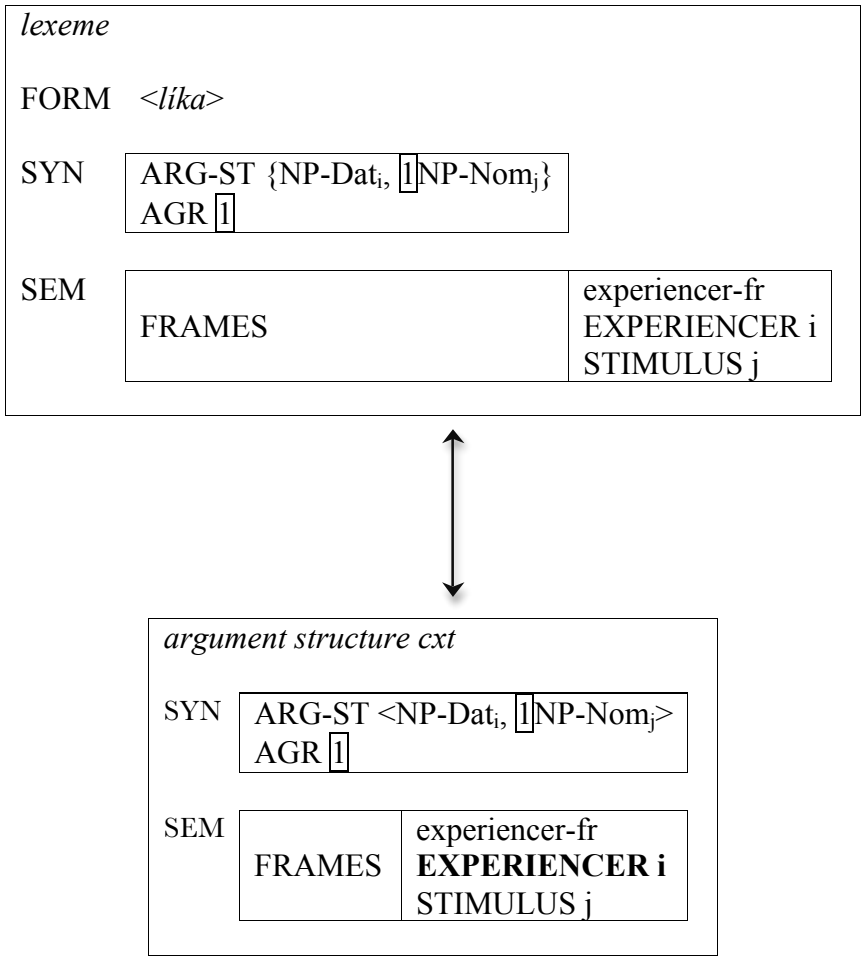

Figure 7: Constructional Networks for Non-Alternating Predicates

Returning to the issue of ordered vs. non-ordered lists of arguments within the lexical entry, three theoretical possibilities may be entertained:

1) All predicates have an ordered list of arguments
2) All predicates have an ordered list of arguments, except alternating predicates which have an unordered list of arguments
3) All predicates have an unordered list of arguments

Starting with the first option, it is problematic for two reasons. First, if there is an ordered list of arguments in the lexical entry, the argument structure construction has simply been moved into the lexical entry, and thus becomes redundant as a construction of its own. Second, it has already been established for a number of languages that argument structure constructions are needed independently of lexical entries, recall the classical discussion about English *kick* which can occur in several different argument structure constructions (cf. Goldberg 1995: 11). On a modular approach that operates with lexicon and syntax as two separate modules, this amounts to moving the argument structure into the lexicon. To continue the analogy with the preposition *near*, it would appear as theoretically unsatisfactory to assume two different lexical entries for the English *near* depending on whether Mary is near John or John is near Mary.

The second option might seem attractive, with an unordered list for alternating predicates only, and an ordered list for all other predicates. The argument against this option is partly the same as against the first option; we would still be moving the argument structure into the lexical entry for all predicates, except for alternating ones. This would also not be adequate for verbs like English *kick*, as already mentioned. Furthermore, assuming that the arguments of alternating predicates are listed in an ordered list in the argument structure construction amounts to stipulation for one particular class of predicates, and thereby eliminates the possibility of consistency within the structure of the lexicon. It also entails that the argument structure constructions for all predicates become redundant, as they have been moved into the lexical entry, except with alternating predicates, where the argument structure has not been moved into the lexical entry, hence resulting in differences in the structure of the constructional network for different predicates. We also believe that this second option runs counter to the cognitive reality in the minds of speakers; as has been shown by Goldberg & Bencini (2005) and Allen et al. (2012), argument structure constructions are independent cognitive entities that must be assumed to exist irrespective of the verbs instantiating them, and ongoing work further corroborates this assumption.

The third option, that all predicates have an unordered list of arguments in their lexical entries, appears as conceptually adequate based on the data under

investigation here. The order of the arguments is instead found in the argument structure construction itself. The existence of alternating predicates demands a solution like the present one, where the list of arguments is unordered in the lexical entry. If not, there would have to be two lists in the lexical entry for these predicates, which amounts to moving the argument structure into the lexical entry, an option that we have already argued against above. In other words, for alternating predicates, we assume a link with two argument structure constructions, while for non-alternating ones, there is only a link to one of the two argument structure constructions. This way, we achieve consistency throughout the constructional network across different types of predicates.

Note that it is, of course, not only predicates like *kick* that may instantiate several argument structure constructions, also some of the oblique subject predicates discussed above can occur in several argument structure constructions, without the dative, like *líka* in (42) above which may occur in intransitives without the dative, and multiple argument structure constructions are found for several other predicates. In fact, this may be the rule rather than the excpetion. These additional argument structure constructions are also reciprocally linked to the lexical entry of each predicate, but are not located in the lexical entry itself.

One variant of this last option is to assume an unordered list and a "shuffle operator" that orders the arguments in the ARG-ST list (cf. Müller 2012). The problem with this variant is that through this shuffling operation, two lexical entries arise, exactly as on the traditional account. This outcome is, in our view, unappealing, given the arguments against assuming separate lexical entries for the two argument structure constructions of alternating predicates. Furthermore, the shuffle operator would not account for additional argument structure constructions that a verb may instantiate, like intransitive variants of *líka* 'like' and *henta* 'suit' without the dative. Hence, a shuffle operator would, anyway, only account for a subset of the argument structure constructions a predicate can occur in.

5. Summary

Icelandic is well known for being one of the languages of the world where syntactic subjects do not have to be canonically marked in the nominative, but may occur in the accusative, dative or genitive case. One subtype of oblique subjects in Icelandic is the standard Dat-Nom argument structure construction,

where the subject is in the dative case and the object in the nominative case. This is the argument structure that we find with the well-known verb *líka* 'like' in Icelandic. However, as we have shown above, Icelandic has an additional type of Dat-Nom predicates, which alternates systematically between two diametrically-opposed argument structures, namely Dat-Nom and Nom-Dat. This pattern is found with *falla í geð* 'like, be to sb's liking, please', and a detailed comparison between the two word orders shows that one is not a topicalization of the other, but that these are in fact two distinct, but related argument structure constructions. The subject behavior used to establish this involves word order, binding, raising, reduction of coordinated subjects, and control. When the word order is Dat-Nom, the dative takes on the behavioral properties of subjects, whereas with the Nom-Dat word order, the nominative shows exactly the same behavioral subject properties.

One of the reasons that the dative of Dat-Nom predicates in German, like *gefallen* 'like, be to sb's liking, please', have not been analyzed as a syntactic subject in that language is the fact that the nominative shows some behavioral properties of subjects. This appears as a major paradox. However, on an alternating analysis, this behavior is expected. Therefore, we have by means of a systematic comparison analyzed the syntactic behavior of verbs like *gefallen* in German and found that they pattern in the same way as Icelandic *falla í geð*, and not like Icelandic *líka*. Either the dative or the nominative show the word order distribution of subjects, either argument shows the word order distribution of objects, either argument may be left unexpressed in conjunction reduction and control infinitives, either one can be raised to subject, and either one behaves as ordinary nominative subject do with regard to binding. The subject behavior of the nominative is found with the Nom-Dat word order, while the subject behavior of the dative is found with the Dat-Nom word order. This correlation between subject behavior and word order corroborates our analysis that these are in fact two distinct, although related, argument structure constructions.

We have also presented additional examples of non-nominative subjects being left unexpressed in control infinitives in texts from different periods of German, with the compositional predicates *kalt sein* 'feel cold' and *übel sein* 'feel sick', and the passives *assistiert werden* 'be assisted' and *widersprochen werden* 'be contradicted'. We are well aware of the fact that not all German speakers find such examples felicitous. However, these examples are attested in texts produced by native speakers, which testifies to the fact that these speakers treat the dative as the syntactic subject in control infinitives. We have, in connection with earlier work, carried out grammaticality judgement tests among

native speakers of German, which show that the examples are accepted by a proportion of the population, although certainly not by everybody. Parallel surveys, conducted among Icelandic speakers show similar results in that not all attested examples are accepted by the whole population. There is thus no doubt that examples of this type are marginal, but they exist and are being produced by native speakers. This fact cannot be ignored by the scholarly community, and examples of this type must be included in the description of the languages where they are found, as well as being coherently accommodated within any theoretical framework.

We have here opted for an account within Sign-Based Construction Grammar, in which we assume only one lexical entry for alternating predicates, exactly as with non-alternating ones, the difference being that the *líka* type can only instantiate the Dat-Nom argument structure construction, while the *falla í geð/gefallen* type can occur in either the Dat-Nom or the Nom-Dat argument structure construction. The lexical entry consists of an unordered list of arguments, while in the argument structure constructions the list is ordered. We have favored this analysis over having an ordered list in the lexical entry, since this would in essence mean that the argument structure has been moved into the lexical entry, and thus becomes redundant as a construction of its own. Empirical evidence, however, supports the existence of argument structure constructions as cognitive entities. In our model, the *falla í geð/gefallen* type is linked with reciprocal links to both argument structure constructions, Dat-Nom and Nom-Dat, while the *líka* type is only linked with the Dat-Nom construction. We have also argued that the choice between the Dat-Nom and Nom-Dat constructions with the *falla í geð/gefallen* type is based on which of the two arguments is foregrounded by the speaker, and is thus analogous to the situation with English *be near*, where the speaker has to make a choice with regard to the relative positioning of one of the referents to the other.

Alternating predicates of the type discussed in this article are found in Icelandic and Faroese, and have been argued to exist in the history of the Scandinavian languages and Old English. The existence of alternating predicates is, however, not well known in the field of theoretical syntax, and hence the behavior of predicates like German *gefallen* ‘like, be to sb’s liking, please’, appears as paradoxical. On an alternating analysis, this paradoxical behavior finds a natural explanation; the dative shows behavioral properties of subjects when *gefallen* occurs in the Dat-Nom construction, whereas the nominative behaves as subject when *gefallen* occurs in the Nom-Dat construction. This explains one major discrepancy between Icelandic and German discussed in the

literature, on which basis Icelandic has been deemed as having oblique subjects and German not. The data presented here invalidate this alleged major divide believed to hold between these two closely related languages, showing that no such fundamental difference between Icelandic and German exists. Rather, the difference is that German, in contrast to Icelandic, only has alternating Dat-Nom predicates, while Icelandic has both alternating and non-alternating predicates. Without an understanding of the nature of alternating predicates, the difference between Icelandic and German cannot be fathomed. There are reasons, moreover, to believe that alternating predicates are not confined to Germanic, but are also found in other Indo-European languages, and perhaps even further afield.

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Scandinavian Verb Particle Constructions and the Intonational Properties*

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Abstract

In this paper, I discuss Scandinavian verb particle constructions from the perspective of the intonational properties of the Scandinavian languages. I show with experimental data that the final pitch peak occurs on the main verb in East Swedish and Övdalian, in which object pronouns cannot move across a particle, whereas it occurs on the sentence-final particle in East Norwegian and East Danish, in which object pronouns move across a particle. The grammatical word order of verb particle constructions conforms to the basic pitch pattern of the main verb in each respective language, i.e. a HL contour in East Swedish, a LHLH(L) contour in Övdalian, a HLH contour in East Norwegian and a LH contour in East Danish. Those basic pitch patterns correlate with the absence of Object Shift in East Swedish and Övdalian on one hand, and its presence in East Norwegian and East Danish on the other.

1. Introduction

In almost all the Scandinavian languages, a weak, unstressed object pronoun moves across a sentential adverb. This movement phenomenon is called *Object Shift* OS.[1] Specifically, a full NP object does not move in the unmarked case (1a), whereas a weak pronominal object moves across the negation (1b).[2] OS is obligatory in some of the Scandinavian varieties, but optional in others. In Övdalian, the Älvdalen dialect of Swedish, OS never occurs (Hellan and

* Many thanks to Anders Holmberg for his invaluable help for a series of my work. Thanks also to Johan Brandtler for his helpful comments on this paper. Any errors are my own.

[1] In this work, the term *Object Shift* is used to refer to pronominal shift only.

[2] ‘OK’ indicates that the relevant sentential element can be located in that position. ‘*’ indicates that the relevant one cannot be located there.

Platzack 1999, Garbacz 2009). The weak pronominal object *åna* 'it' always follows the negation (1c).[3,4]

(1) a. Jag kysste (*Marit) inte (^{OK}Marit). [Swe.]
I kissed Marit not Marit
'I didn't kiss Marit.'

b. Jag kysste (^{OK}henne) inte (^{OK}henne). [Swe.]
I kissed her not her
'I didn't kiss her.'

c. Ig tjyöpt (*åna) it (^{OK}åna). [Övd.]
I bought it not it
'I didn't buy it.'

Despite the fact that object pronouns can move across a sentential adverb in most of the Scandinavian languages as illustrated in (1b), there are parametric differences between the Scandinavian languages with regard to the word order of verb particle constructions. Object pronouns must precede the particle in Danish (2a) and Norwegian (2b), whereas the former always follows the latter in Swedish (2c) and Övdalian (2d).[5,6]

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[3] This fact was first pointed out by Levander (1909:124): '[n]egationen *inte* sättes alltid före objektet' ('the negation *inte* is always placed before the object') (The translation is by the author).

[4] OS has long been one of the most controversial issues in generative syntax. OS seems to be the only known movement phenomenon that is dependent on the movement of another sentential element (*Holmberg's Generalization*, Holmberg 1986). Specifically, when a main verb moves to the second position, an object pronoun can move too: e.g. *jag kysste henne inte [$_{VP}$ ~~kysste~~ ~~henne~~]*. When a main verb does not move, an object pronoun cannot move either: e.g. **jag har henne inte [$_{VP}$ kysst ~~henne~~]*. See e.g. Diesing (1992, 1997), Holmberg and Platzack (1995), Bobaljik and Jonas (1996), Collins and Thráinsson (1996), Holmberg (1999), Chomsky (2001), Sells (2001), Vikner (2001), Josefsson (2003, 2010), Fox and Pesetsky (2005), Erteschik-Shir (2005a,b), Richards (2006), Broekhuis (2008), Mikkelsen (2011), Engels and Vikner (2013, 2014), among others.

[5] In this paper, I discuss only Mainland Scandinavian, i.e. Swedish, Norwegian and Danish, and do not discuss Insular Scandinavian, i.e. Icelandic and Faroese. See Svenonius (1996) for thorough data on Scandinavian verb particle constructions including Insular Scandinavian.

(2) a. Jeg skrev (^{OK}det) op (*det). [Dan.]
b. Jeg skrev (^{OK}det) opp (*det). [Nor.]
c. Jag skrev (*det) upp (^{OK}det). [Swe.]
I wrote (it) up (it)
'I wrote it down.'
(Holmberg 1999:2,(3a-c))
d. Å ar aingt (*eð) upp (^{OK}eð). [Övd.]
she has hung (it) up (it)
'She has hung it up.'
(Garbacz 2009:84,(10c))

In this paper, I discuss Scandinavian verb particle constructions from the perspective of the intonational properties of the Scandinavian languages. I show with experimental data that the pitch peak occurs on the main verb in East Swedish and Övdalian, whereas it occurs on the sentence-final particle in East Norwegian and East Danish.[7] In each of the Scandinavian languages, the grammatical word order of verb particle constructions conforms to the basic pitch pattern of the main verb, i.e. a HL contour in East Swedish, a LHLH(L) contour in Övdalian, a HLH contour in East Norwegian and a LH contour in East Danish. Those basic pitch patterns correlate with the absence of OS in Swedish and Övdalian on one hand, and its presence in Danish and Norwegian on the other.

This paper is organized as follows. Section 2 introduces previous proposals on the derivational mechanism of OS. Contra Chomsky (2001), I argue that the semantic effects on object pronouns are irrelevant to the presence or absence of OS. I also argue that a purely syntactic account by Fox and

[6] Johan Brandtler (p.c.) addresses the question whether pronominal movement in verb particle constructions is actually a kind of OS. I assume here, following the literature (e.g. Engels and Vikner 2013, 2014), that an object is base-generated to the right of a particle in verb particle constructions, thus that pronominal movement in verb particle constructions is a kind of OS.

[7] Hereafter, notations such as *East Swedish* are used like a proper noun that refers to a Scandinavian variety.

Pesetsky (2005) cannot provide a coherent account for parametric differences in the Scandinavian verb particle constructions. Section 3 introduces the intonational properties of East Swedish, Övdalian, East Norwegian and East Danish in turn. Section 4 presents experimental data on the Scandinavian verb particle constructions. The data shows that the pitch peak occurs on the main verb in East Swedish and Övdalian, whereas it occurs on the sentence-final particle in East Norwegian and East Danish. Section 5 discusses the intonational properties of the Scandinavian verb particle constructions, where the grammatical word order of verb particle constructions conforms to the basic pitch pattern of the main verb in each of the Scandinavian languages. Section 6 briefly concludes this paper.

2. Scandinavian verb particle constructions and the derivational mechanism

Most of the accounts of OS in generative syntax are based on the *Mapping Hypothesis* (Diesing 1992, 1997). According to this hypothesis, arguments interpreted as non-specific, new to the discourse and/or focused remain in their original positions, whereas those interpreted as specific, old information and/or defocused must move to a higher position. According to this hypothesis, object pronouns which are old information/defocused must move out of VP.

Following this hypothesis, Chomsky (2001) proposes an account of OS within the *phase* theory (Chomsky 2000). Syntactic derivations proceed by *Merge*, an operation that takes two syntactic objects (either lexical items or phrases) and combines them. A phase is a domain in which a series of such syntactic operations are conducted. *v** (a functional head that specifies the category of a transitive verb) and *C* are assumed to be phasal heads. A phase in which a series of required syntactic operations have been completed is sent to

the phonological component and is no longer accessed by further syntactic operations. This derivational point is called *Spell-Out* (S-O). At the S-O of a phase, the complement of a phasal head is spelled out by assumption. Specifically, when v*P and CP are spelled out, the complement of v* and that of C, i.e. VP and TP, are sent to the phonological component, and they are no longer accessible to any further syntactic operation. The *EPP* ('Extended Projection Principle'), the condition that a functional head requires an overt category in its Spec (especially referring to the requirement of a sentential subject, Chomsky 1981, 1986, 1995), is now formulated as the feature that triggers movement in general. A phasal head can have an EPP feature and raise an argument to its Spec when a new semantic effect is produced on the argument.[8]

According to Holmberg (1999), OS is blocked not only when a main verb does not move but also when any other visible category is left VP-internally. A typical case is the Swedish verb particle construction, where a particle remains inside VP and an object pronoun cannot move across it (3-4).[9]

(3) a. Jag talade inte [$_{VP}$ ~~talade~~ med henne]. [Swe.]

[8] See a series of the papers by Chomsky (2000, 2001, 2004, 2008, 2013) for the details of the derivational mechanism that consists of the *probe-goal* system and a syntactic operation called *Agree*, in which a functional head probes a category acting as its goal and the uninterpretable φ-features of the former are valued by the interpretable counterpart of the latter.

[9] Holmberg claims that not only verb particles but also indirect objects prevent OS:

i) a. Jag gav inte [$_{VP}$ ~~gav~~ Elsa den]. [Swe.]
I gave not Elsa it
'I didn't give it to Elsa.'

b. *Jag gav den inte [$_{VP}$ ~~gav~~ Elsa ~~den~~].
I gave it not Elsa

With the hypothesis that the object pronoun moves to cause downstep, Hosono (2013) accounts for the fact above in the way that the indirect full NP *Elsa* is the most appropriate candidate for the carrier of the focus of the sentence, and the final pitch peak is likely to occur on it; since downstep must not occur before it, the object pronoun must not move across it and cause downstep. I follow her account and do not discuss the issues on indirect objects in this paper.

I spoke not with her
'I didn't speak with her.'

b. *Jag talade henne inte [$_{VP}$ ~~talade~~ med ~~henne~~].
I spoke her not with

(4) a. De kastade inte [$_{VP}$ ~~kastade~~ ut mig]. [Swe.]
they threw not out me
'They didn't throw me out.'

b. *De kastade mig inte [$_{VP}$ ~~kastade~~ ut ~~mig~~].
they threw me not out
(Holmberg 1999:2,(2a-c))

Taking Holmberg's claim into account, Chomsky (2001) presents an account of OS in the following way: only when an object rejects the interpretation that it receives in the base-generated position, is the EPP assigned to a phasal head and OS applies. Specifically, after all VP-internal categories have moved out of VP, an object is assigned a focus interpretation and/or new information by the rules of information structure in the Scandinavian languages. When the object is a full NP, v* does not carry the EPP-feature, and consequently a full NP object does not move (5). An object pronoun, however, rejects such an interpretation. v* carries the EPP, and the object pronoun moves to [Spec,v*P]. In the moved position, it receives an interpretation which is consistent with its (inherent) categorical property, i.e. defocused and/or old information (5).[10]

(5) a. Jag kysste inte Marit. [Swe.]
I kissed not Marit

[10] Chomsky in fact argues that movement of the object pronoun to the position between the main verb (in the original position) and the negation occurs in syntax; the object pronoun moves across the negation in the phonological component. See his paper for the details.

'I didn't kiss Marit.'

b. … inte [$_{VP}$ ~~kysste~~ Marit]
↑ focus/new info.

(6) a. Jag kysste henne inte. [Swe.]
I kissed her not
'I didn't kiss her.'

b. … henne [inte [$_{VP}$ ~~kysste~~ ~~henne~~]]
↑ defocus/old info.

It is questionable whether the interpretion of the object is actually responsible for the presence and absence of OS in the Scandinavian verb particle constructions. The particle class includes 'prepositions and adverbs with locative or temporal meaning' (Kristoffersen 2000:288,ft.12). As we saw in (3-4), object pronouns strictly follow verbal particles in Swedish. Norwegian allows both the shifted and unshifted pattern. According to Fretheim and Halvorsen (1975), *vekk* 'aside' always follows object pronouns (7a), whereas *på* 'at' always precedes them (7d). *Gjennom* 'through' (7b) and *over* 'over' (7c) may or may not precede object pronouns, but the acceptability differs between native speakers.

(7) a. Hun la (^{OK}den) vekk (*den). [Nor.]
she put it aside it
'She put it aside.'

b. Han har tenkt ($^{?}$det) gjennom (^{OK}det).
he has thought it through it
'He has thought it through.'

c. Han har tenkt (*?det) over (^{OK}det).
he has thought it over it
'He has thought it over.'

d. De så (*dem) på (^{OK}dem).
they looked them at them
'They looked at them.'
(Fretheim and Halvorsen 1975:458-459,(17-20))

In Danish, object pronouns precede adverbial particles, as illustrated in (2a), which is repeated in (8a) below. Some prepositions, e.g. *på* 'on, in(to)' and *om* 'on', however, strictly precede objects (8b). These facts indicate that the presence or absence of OS is determined by each individual particle; hence, the interpretation of the object pronoun is irrelevant to the application of OS.

(8) a. Jeg skrev (^{OK}det) op (*det). [Dan.]
I wrote (it) up (it)
'I wrote the number/it down.'

b. Vi tage (*Landet) på (^{OK}Landet) (*Lørdag) om (^{OK}Lørdag).
we take (the-country) in (the-country) (Saturday) on (Saturday)
'We go into the country on Saturday.'

The question would be addressed whether the difference in grammaticality illustrated in (7-8) can be accounted for in semantic terms.[11] According to the recent literature (e.g. Andreàsson 2010), an object pronoun remains in situ when it refers, e.g. to a VP, as in the answer sentence such as (*did you play the piano yesterday? – yes,*) *I did that*, contrary to the case in which an object pronoun refers to a noun phrase. The point here is that it is attributed to the property of individual particles of each Scandinavian variety whether an object pronoun moves across them or not: an object (pronoun) follows some particle groups

[11] I would like to thank Johan Brandler (p.c.) for addressing this question.

((7d) and (8b)) but can precede other groups ((7a-c) and (8a)). Thus, whether an object pronoun moves across a particle cannot be derived from the semantic properties that are imposed on object pronouns.

Fox and Pesetsky (2005) propose a derivational syntactic account of OS, *Cyclic Linearization*, in which successive cyclicity of movement is associated with order preservation. In this system, the information on linearization established at S-O is not deleted in the course of derivation, but is added to the ordering information established at the next S-O. Assume that [$_D$ X Y Z] is a domain D that is sent to the phonological component at an S-O point. The ordering information at the S-O of D is X<Y and Y<Z ('<' means *precedes*). Assume further i) that A merges with D, which results in A<[$_D$ …], ii) that some category inside D moves higher than A, and iii) that the next domain D' is spelled out. Some derivational cases can be considered:

(9) a. [$_{D'}$ … X A [$_D$ ~~X~~ Y Z]] (X<A, A<[$_D$ …]; thus, X<Y)

b. *[$_{D'}$ … Y A [$_D$ X ~~Y~~ Z]] (Y<A, A<[$_D$ …]; thus, Y<X)

c. [$_{D'}$ … X Y A [$_D$ ~~X~~ ~~Y~~ Z]] (X<Y, Y<A, A<[$_D$ …])

In (9a), X moves higher than A, which results in X<A. The ordering information, A<[$_D$ …], indicates A<Y. The sequences, X<A and A<Y, indicate that X precedes Y at the S-O of D'. Since this ordering information does not contradict the one at the S-O of D, i.e. X<Y, the derivation is licit. In (9b), Y moves higher than A, which results in Y<A. The ordering information, A<[$_D$ …], implies A<X. The sequences, Y<A and A<X, indicate Y<X. This ordering information contradicts the one at the S-O of D, i.e. X<Y. Thus, this is an illicit derivation. In (9c), both X and Y move, which results in X<Y and Y<A. The original ordering information, X<Y, is still maintained after both X and Y move

from inside D, which makes the derivation licit.[12]

Specifically, Fox and Pesetsky's system applies to OS in the following way. Assuming that CP and VP are S-O domains and that the subject is not involved in linearization, the ordering information at the S-O of VP is V<O. In simple tense forms (10), both the main verb *såg* and the object pronoun *den* move after the sentential adverb *inte* merges to VP. When CP is spelled out, the verb still precedes the pronoun, i.e. V<O. Since the ordering information at the S-O of CP does not contradict the one at the S-O of VP, the derivation is licit.[13]

(10) [$_{CP}$ jag såg [$_{TP}$ ~~jag~~ den inte [$_{VP}$ ~~såg~~ ~~den~~]]]
(V<O at the S-O of VP, and V<O at the S-O of CP)

The proposed mechanism cannot provide a coherent account for parametric differences in the Scandinavian verb particle constructions illustrated in (2). Object pronouns cannot move across verb particles in Swedish, whereas they can move in Norwegian. Fox and Pesetsky refer to the Swedish case, and claim that when object pronouns move, the ordering information at the S-O of VP, i.e. particle<O, contradicts the one at the S-O of CP, i.e. O<particle; thus, the derivation is illicit as illustrated in (11a). This analysis, however, does not

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[12] One more derivational case that Fox and Pesetsky give is illustrated below:
i) [$_{D'}$ … Y A ~~[$_{D}$ X Y Z]~~] (Y<A, A<~~[$_{D}$ …]~~)
After Y moves higher than A, which results in Y<A, the domain, [$_{D}$ …], is subject to ellipsis. They claim that the illicit movement of Y, which would yield the contradictory ordering information, i.e. Y<X, is remedied under the ellipsis of the previous S-O domain.

[13] The ungrammatical derivation in complex tense forms, e.g. (Swe.) **jag har den inte sett* (I have it not seen) (cf. *jag har inte sett den* (I have not seen it 'I haven't seen it')), in which the object pronoun *den* moves but the past participle main verb *sett* does not move, is accounted for in terms of the illicit case (9b). As illustrated in i), the ordering information at the S-O of VP is V<O. After movement of the object pronoun, however, it precedes the main verb at the S-O of CP, i.e. O<V. Since the ordering information at the S-O of VP contradicts the one at the S-O of CP, this derivation is illicit.
i) *[$_{CP}$ jag har [$_{TP}$ ~~jag~~ den inte ~~har~~ [$_{VP}$ sett ~~den~~]]]
(V<O at the S-O of VP, but O<V at the S-O of CP)

extend to Norwegian, in which object pronouns follow verb particles at the S-O of VP, i.e. particle<O.[14] Object pronouns precede verb particles at the S-O of CP, i.e. O<particle. Though the ordering information at the S-O of VP contradicts the one at the S-O of CP, the construction is grammatical as illustrated in (11b).

(11) a. *[$_{CP}$ jag skrev [$_{TP}$ ~~jag~~ det [$_{VP}$ ~~skrev~~ upp ~~det~~]]] [Swe.]
(particle<O at the S-O of VP, but O<particle at the S-O of CP)

b. [$_{CP}$ jeg skrev [$_{TP}$ ~~jeg~~ det [$_{VP}$ ~~skrev~~ op ~~det~~]]] [Nor.]
(particle<O at the S-O of VP, but O<particle at the S-O of CP)

3. The intonational properties of the Scandinavian languages[15]

The Swedish dialects are traditionally classified by their word accent system. Most of the Swedish dialects maintain a distinction in word accents: accent 1 and accent 2. Accent 2 cannot occur on the last syllable of a sentence (including the only syllable of a monosyllabic word), and always requires an unstressed syllable after an accented syllable. Thus, all monosyllabic words have accent 1, whereas di- and polysyllabic words have either accent 1 or accent 2. Each of the word accents is associated with a tonal pattern that consists of a H(igh) and/or a L(ow). In East Swedish spoken, e.g. in Stockholm, accent 1 is represented as

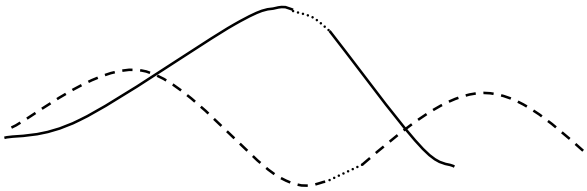
[14] As stated in footnote 6, I assume here that an object is base-generated to the right of a particle in verb particle constructions (e.g. Engels and Vikner 2013, 2014).

[15] The description in this section is based on Meyer (1937), Gårding (1975), Bruce (1977), Bruce and Gårding (1978), and Bruce (1982, 1994, 2005, 2007) for Swedish; Haugen (1967), Fretheim (1992), Fretheim and Nilsen (1992), Gussenhoven (2004), and Kristoffersen (2000, 2006, 2007) for Norwegian; Kristoffersen (2008) and Garbacz (2009) for Övdalian; Thorsen (1982), Rischel (1983, 1986), Basbøll (1985, 2005), Dyhr (1992), Grønnum (1998), Bruce and Hermans (1999), Bruce (2007), and Grønnum and Basbøll (2007) for Danish.

HL*, in which an accent is associated with a L. Accent 2 is represented as H*L, in which an accent is associated with a H.

Övdalian, the Swedish dialect spoken in the Älvdalen area (in Dalarna), has complex pitch properties. Accent 1 is represented as L*H*(L), in which a stressed syllable consists of a L and the following H. For sentence-final disyllabic words, the H peak occurs on the final part of a stressed syllable, which is followed by the L on the next, final syllable. Thus, when the disyllabic accent 1 word *skenet* [stʃi:neð] 'the shine' appears in sentence-final position, the H peak occurs on the final part of the stressed syllable *ske-*, which is followed by the L on the next syllable *-net*; see (12). Accent 2 (of disyllabic words) is represented as LH*LH(L), in which both a stressed syllable and the following unstressed syllable are associated with a H. Thus, when the disyllabic accent 2 word *skina* [skainɑ] 'to shine' appears in sentence-final position, both the first stressed syllable *ski-* and the following syllable *-na* consist of a rise, a H peak and a fall. The pitch then lowers sentence-finally; see (12).

(12) Accent 1 (*skenet* 'the shine') and accent 2 (*skina* 'to shine') in Övdalian:



——— : (vowel of) accent 1; ------- : (vowel of) accent2;
····· : consonant
(From Kristoffersen 2008:138, Fig. 20)

Most Norwegian dialects make a similar distinction between accent 1 and accent 2. The Norwegian word accent system has been traditionally analyzed in the following way: both accent 1 and accent 2 are assumed to have a basic tone;

an additional leading tone which is associated with an accent occurs before a basic tone for accent 2. In East Norwegian spoken, e.g. in Oslo, the basic word tone is LH. Accent 1 is represented as L*H, in which an accent is associated with a L. Accent 2 is represented as H*LH, in which a leading H is associated with an accent before the basic LH tone.[16]

East Danish spoken, e.g. in Copenhagen, has a sound property, *stød*, instead of the distinction in word accents observed in Swedish and Norwegian. Stød is uttered by constricting the glottis. It occurs on a syllable with a relatively high pitch, after which the F0 decreases drastically. It is widely claimed that the distribution of stød words corresponds to that of accent 1 words, and the distribution of non-stød words corresponds to that of accent 2 words. In the relevant context here, stød obligatorily occurs before the clitic form of the weak pronominal objects, *den* and *det* (/ən, əð/), when the preceding word has a short full vowel: e.g. *på den* 'on it' [pɔˀən].[17] The intonation pattern of East Danish is described as L*H, in which an accent is associated with a L and the next H typically occurs on the syllable following the accented syllable. A general declining trend can be observed towards the end of a sentence.[18]

4. Verb particle constructions and the intonational properties

4.1. The properties of the Scandinavian verb particle constructions[19]

[16] Another important feature of the Swedish and Norwegian varieties is the *focal H contour*, which realizes the focus of a sentence. The focal H contour is added to the H pitch gesture of the accented syllable of a focused word in the Swedish dialects such as East Swedish and Övdalian. In the Norwegian dialects such as East Norwegian, the focal H contour is realized by raising the (second) H of a focused word extremely high.

[17] 'ˀ' stands for a stød sound.

[18] Danish does not have a default pitch accent that occurs on the last intonational phrase of a sentence. To focalize a word, the H on a focused word is raised higher than the H on the preceding word(s).

[19] The description in this section is based on Fretheim and Halvorsen (1975), Haugen (1987),

The Scandinavian languages do not behave in a uniform way with regard to the accentuation of verb particle constructions. In Swedish and Danish, particles are accented (they have accent 1 in Swedish, since most of them are monosyllabic); see (13).[20] In contrast, Norwegian displays a more flexible accentuation, as the accent can be located either on the main verb or on the particle. *ˈkomme ˌin* below can also be uttered as *ˌkomme ˈin*, where the primary accent is located on the particle.

(13)

Swedish:	Norwegian:	
ˌkomma ˈin	ˈkomme ˌin	'enter'
han har ˌtänkt ˈöver det	han har ˈtenkt over ˌdet	'he has thought it over'
har du ˌgjort ˈrent	har du ˈgjort ˌrent	'have you cleaned up?'

(Bruce and Hermans 1999:628,(10))

Main verbs in Norwegian obligatorily have accent 2 when they are accented. Verbs that inherently have accent 2, e.g. *komme* 'come' and *finne* 'find' in (14), maintain that accent. Verbs that have accent 1, e.g. *kommer* 'comes' and *finner* 'finds' in (14), are accented when they are followed by a particle, and they obtain accent 2. When a particle has accent 2 and is primarily stressed, however, accent shift is not likely to occur.

(14)

^{2}komme + ^{1}over	→ ^{2}komme ˌover	'to come across'
^{2}finne + ^{1}ut	→ ^{2}finne ˌut	'to find out'
^{1}kommer + ^{1}over	→ ^{2}kommer ˌover	'comes across'
^{1}finner + ^{1}ut	→ ^{2}finner ˌut	'finds out'

Bruce and Hermans (1999), Kristoffersen (2000) and Hellan (2005).

[20] 'ˈ' stands for a primary accent, and 'ˌ' stands for a secondary accent.

(Kristoffersen 2000:288,(20))

Accent shift in Norwegian occurs when an object pronoun intervenes between a main verb and a particle. In (15), both *setter* 'sets' and *ga* 'gave' inherently have accent 1. As illustrated by *[1]ga+den*, the combination of a main verb and an object pronoun does not affect accent shift. When a particle is present, those main verbs acquire accent 2. Norwegian allows both the shifted and unshifted pattern as illustrated in (7a-d), repeated in (16a-d). A particle can either precede or follow an object pronoun when a main verb has accent 2; see (16a-c).[21] A particle strictly precedes an object pronoun when a main verb has accent 1; see (16d).

(15) [1]setter → [2]setter + han + den + frem? 'does he set it forward?'
Jon [1]ga+ den → Jon [2]ga + den + bort 'Jon gave it away'
(Hellan 2005:141-142,(9))

(16) a. Hun [2]la ([OK]den) vekk (*den). 'She put it aside.'
b. Han har [2]tenkt ([?]det) gjennom ([OK]det). 'He has thought it through.'
c. Han har [2]tenkt (*[?]det) over ([OK]det). 'He has thought it over.'
d. De [1]så (*dem) på ([OK]dem). 'They looked at them.'

From the description above, we make the following predictions of the pitch contours of the Scandinavian verb particle constructions. In East Swedish, particles obligatorily have an accent. Since most particles are monosyllabic, they have accent 1, i.e. HL*. The initial H of the HL* contour of a particle is the continuation of the falling pitch on a main verb. It is predicted that the pitch peak occurs on the main verb, and the pitch lowers on the particle following it and falls on the sentence-final object pronoun.

[21] Some Norwegian particles always follow an object pronoun as in (16a), as stated in section 2.

The accent 1 of Övdalian is represented as L*H*(L), in which both a L and the following H are associated with an accent. The pitch falls sentence-finally regardless of whether a sentence-final word has accent 1 or accent 2. It is predicted that when a monosyllabic particle with accent 1 follows the main verb, the pitch falls before the particle and then rises on it. The pitch will then fall on the sentence-final object pronoun.

In East Norwegian, accent shift occurs when a main verb is accented and an object pronoun intervenes between a main verb and a particle. The main verb in verb particle constructions has accent 2, H*LH, in which an accent is associated with the first H and another H is added after the pitch falls on the accented syllable of the main verb. It is predicted that the unstressed object pronoun as well as the particle with less prominence than the main verb are incorporated into the pitch contour of the main verb and form part of its H*LH contour.

The basic pitch pattern of East Danish is L*H, in which an accent is associated with a L and the next H typically occurs on the syllable following the accented syllable. Particles obligatorily have an accent in East Danish. It is predicted that an unstressed object pronoun as well as a particle with less prominence than a main verb are incorporated into the pitch contour of the main verb and form part of its L*H contour.

4.2. Pitch contours of the Scandinavian verb particle constructions

In this section, I present the pitch contours of verb particle constructions of the Scandinavian varieties investigated: East Swedish, Övdalian, East Norwegian and East Danish.

Experimental procedure:

i) The target sentence contains a main verb (accent 2), a particle (accent 1) and an object pronoun, with the distinction in word accents irrelevant for East Danish. Those sentential elements are ordered according to the grammatical word order of each of the Scandinavian varieties investigated, which I turn to soon below;

ii) The context: On the basis of the literature on information structure (e.g. Lambrecht 1994, Vilkuna 1995, Kiss 1998), an appropriate context, *polarity-focus*, was built with a question and answer, the latter corresponding to a target sentence. Theoretically speaking, the main verb carries the focus of an answer sentence, provided that the sentence has one and the only one focus and that there are no sentences that do not have a focus (cf. Lambrecht, 1994). It is also cross-linguistically confirmed that the focus of a sentence is carried by a main verb both in (contrastive) verb-focus and polarity-focus (cf. Vilkuna, 1995). Polarity-focus is the most neutral context to observe the intonational properties of verb particle constructions. The test sentences are given below:

(17) Plöjer du upp din åker? – Ja, jag plöjer upp den. [Swe.]
plow you up your field yes I plow up it
'Do you plow up your field? – Yes, I plow it up.'

Winder du aut buotję dąi? – Ja, ig winder aut åna. [Övd.]
throw you out the-book your yes I throw out it
'Do you throw out your book? – Yes, I throw it out.'

Pløyer du opp åkeren din? – Ja, jeg pløyer den opp. [Nor.]
plow you up field your yes I plow it up
'Do you plow up your field? – Yes, I plow it up.'

Pløjer du din mark op? – Ja, jeg pløjer den op. [Dan.]
plow you your field up yes I plow it up
'Do you plow up your field? – Yes, I plow it up.'

iii) The conditions under which the test sentence was read: The informants were asked to read the test sentence five times; consequently, each sentence was recorded five times. They were asked to read the question-answer pair in appropriately rapid speech, in such a way as they speak in a real-life conversation; and

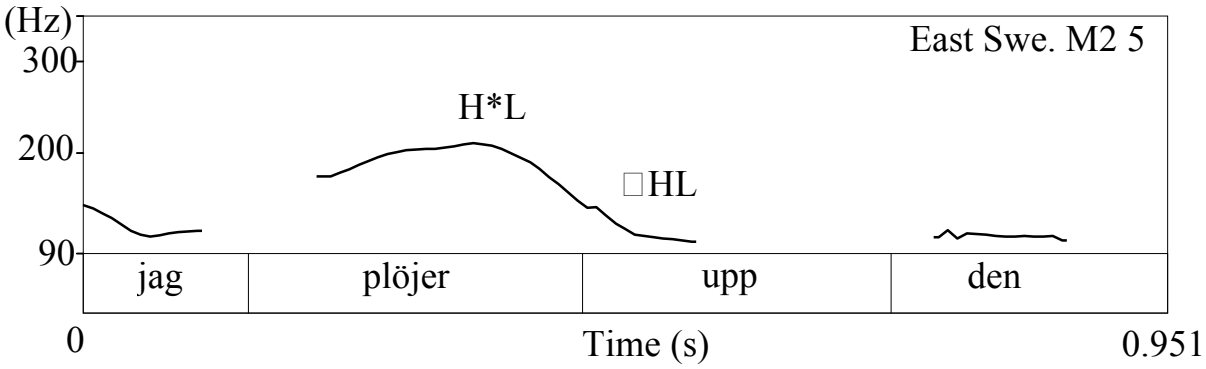
iv) The way of data collection and data analysis: The recordings were made one by one, typically in a small lecture room, by the author herself using a laptop with Praat software (Boersma and Weenink 1996) and a microphone. For the Scandinavian varieties that were not recorded by the author herself, the author commissioned an experimental phonetician in each relevant Scandinavian area to carry out the recording; commissioned phoneticians were asked to send the sound file to the author by e-mail attachment. Data was collected from at least four (two female and two male) native speakers for each of the Scandinavian varieties investigated. The sound data was analyzed with Praat software by the author herself.

The pitch contours of East Swedish and Övdalian, in which an object pronoun cannot move across a particle, are presented in (18a-b).[22] As predicted above, the pitch peak typically occurs on the main verb in East Swedish (18a). After the pitch falls on the main verb, the following particle receives a low pitch. The pitch is also low on the sentence-final object pronoun. In Övdalian (18b) too, the pitch peak is likely to occur on the main verb. After the pitch falls on the accented syllable of the main verb, the pitch rises again on the following particle and lowers on the sentence-final object pronoun, which conforms to the

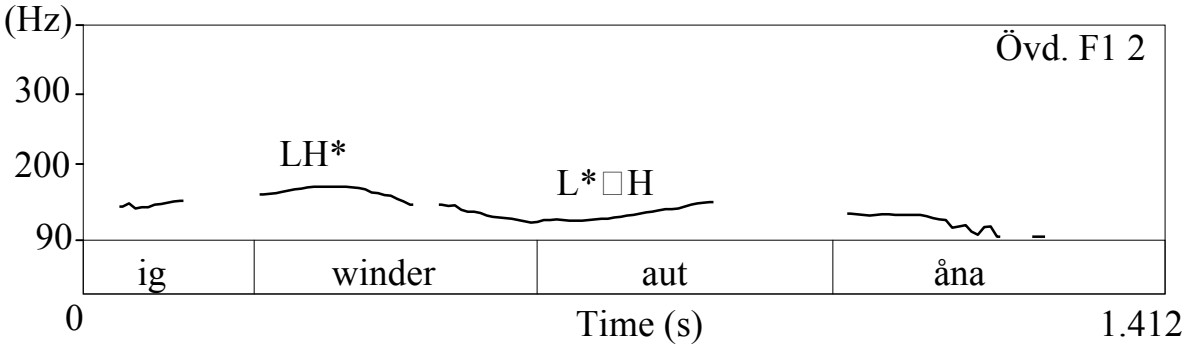
[22] The notation *East Swe. M2 5* at the upper right stands for the dialectal name, the sex, the informant number and the token number (token number 1 through 5).

prediction above.[23] Note that though particles are accented in both the Swedish varieties, downstep occurs on the H of the particle, as indicated by '□' located in front it.

(18) a. East Swedish:
Jag plöjer upp den. (I plow up it 'I plow it up')



b. Övdalian:
Ig winder aut åna. (I throw out it 'I throw it out')

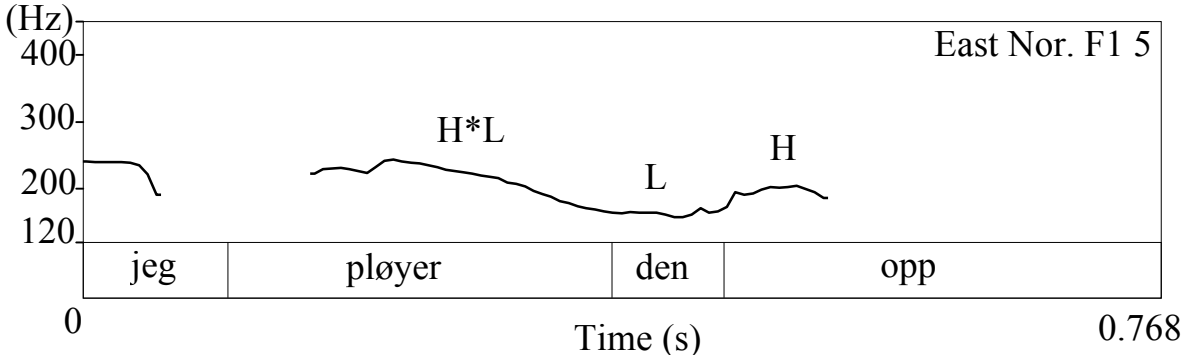


The pitch contours of East Norwegian and East Danish, in which an object pronoun moves across a particle, are presented in (19a-b). In East Norwegian (19a), the pitch falls on the accented syllable of the main verb. The pitch is low on the shifted object pronoun. The pitch rises on the following particle, and the final pitch peak occurs on it. As predicted above, being incorporated into the

[23] The pitch can be low on a particle and rise on the primary stressed syllable of a sentence-final object pronoun in some cases.

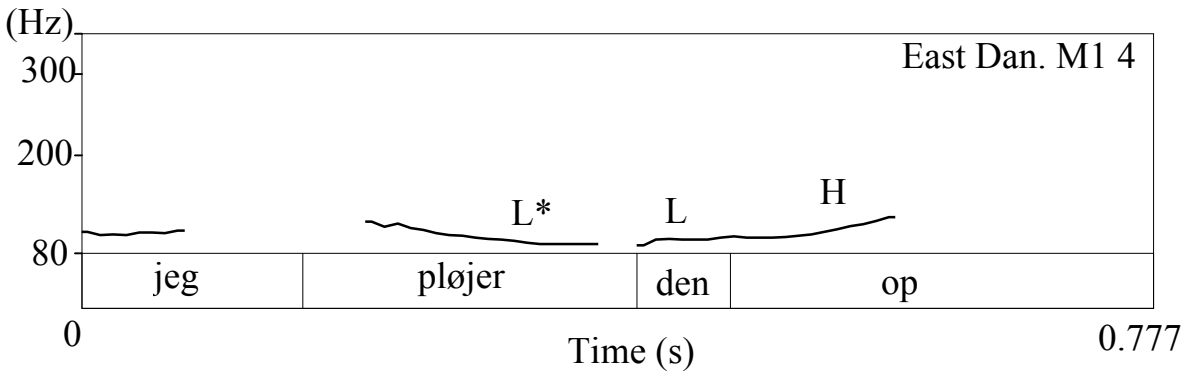
H*LH pitch contour of the main verb, the shifted, unstressed object pronoun forms the L, and the following particle with less prominence than the main verb forms the final H, of the H*LH contour of the main verb. In East Danish (19b), the pitch starts with the accented L on the main verb and is still low on the shifted object pronoun.[24] The pitch rises on the following particle, and the final pitch peak occurs on it. As predicted, being incorporated into the L*H pitch contour of the main verb, the shifted, unstressed object pronoun forms a part of L, and the following particle with less prominence than the main verb forms the final H, of the L*H contour of the main verb. In both East Norwegian and East Danish, the pitch level on the particle is either the same as or even higher than that on the main verb. Note that in East Danish (19b), a stød occurs before the monosyllabic object pronoun, as shown by the break of the pitch contour.

(19) a. East Norwegian:
Jeg pløyer den opp. (I plow it up 'I plow it up')



b. East Danish:
Jeg pløjer den op. (I plow it up 'I plow it up')

[24] The high pitch on the first half of the main verb is a leading H tone.



The observation in this section that the pitch peak occurs on the main verb in East Swedish and Övdalian but on the sentence-final particle in East Norwegian and East Danish is confirmed by the statistical data on downstep in the Scandinavian verb particle constructions, which I give in Appendix I.

5. Discussions

The questions to be addressed are i) why an object pronoun cannot move across a particle in East Swedish and Övdalian but moves in East Norwegian and East Danish, and ii) how this fact relates to the intonational properties of those Scandinavian varieties. We saw in section 4.2. that the experimental result of all the Scandinavian varieties investigated conforms to the prediction presented in section 4.1. This indicates that the intonation pattern of verb particle constructions conforms to the basic intonational properties of each of the Scandinavian varieties investigated.

In East Swedish (18a), the pitch peak typically occurs on the main verb. The initial H of the HL* contour of the accent 1 particle is the continuation of the falling pitch on the main verb. When an object pronoun follows the particle, the pitch simply falls sentence-finally. Thus, the main verb, the particle and the object pronoun in that order form a HL contour, i.e. the basic pitch pattern of East Swedish.

Let us now consider what would happen if the particle followed the object pronoun, instead. After the pitch falls on the object pronoun immediately following the main verb, the pitch would have to rise on the sentence-final particle so that it can get the initial H of a HL* contour. These pitch properties are not acceptable as Swedish pitch patterns.

In Övdalian (18b), accent 1 of particles is represented as L*H*(L), in which a stressed syllable consists of a L and the following H. The pitch falls sentence-finally regardless of whether a sentence-final word has accent 1 or accent 2. When an object pronoun follows the particle, the pitch that rises on the particle can simply fall on the sentence-final object pronoun. Imagine that the particle would follow an object pronoun. The pitch would lower on the object pronoun that follows the main verb. The pitch would rise on the particle following the object pronoun and the sentence-final pitch pattern would be LH, which does not conform to the basic intonation pattern of Övdalian in which the pitch should lower in sentence-final position.

In East Norwegian (19a), a shifted object pronoun forms the L, and the following particle forms the final H, of the H*LH contour of the accent 2 main verb. Being incorporated into the H*LH contour of the main verb, the pitch always rises on a monosyllabic particle after the pitch falls on the main verb. Now hypothesize that the object pronoun would follow the particle. After the pitch falls on the main verb, the pitch would rise on the following particle and then fall on the sentence-final object pronoun. This pitch contour does not conform to the basic pitch pattern of the Norwegian accent 2, i.e. HLH. Thus, a monosyllabic particle must strictly follow an object pronoun, as illustrated in (19a).

In the case of disyllabic particles, there is an option for the pitch to either simply fall or to fall and rise. As illustrated in (16b-c), a disyllabic particle can either precede or follow an object pronoun. When a disyllabic particle precedes

an object pronoun, the pitch falls on the former and rises on the latter. When a disyllabic particle follows an object pronoun, the pitch lowers on the latter and rises on the former. The pitch movement is a gradient phenomenon, not a binary property. Thus, the acceptability varies among Norwegian native speakers as stated in section 2.

When the main verb has accent 1, L*H, as in (16d), an initial H does not occur on the main verb contrary to accent 2. When a monosyllabic particle directly follows the main verb, the pitch starts to rise on the latter. The pitch is still low on the following monosyllabic particle, since it has L*H too. The pitch then rises on the sentence-final object pronoun. The accent 1 main verb, the particle and the object pronoun in that order form a LH contour together. If the particle were to follow the object pronoun, however, the pitch would rise on the object pronoun following the accent 1 main verb. The pitch would then fall on the sentence-final particle. This pitch pattern does not conform to the basic pitch pattern of the Norwegian accent 1, i.e. LH.

In East Danish (19b), the object pronoun forms a part of L, and the accented particle forms the final H, of the L*H contour of the main verb. This pitch pattern conforms to the basic pattern of East Danish, i.e. LH. The pitch level on the particle is even higher than that on the main verb.

Recall that stød obligatorily occurs before the clitic form of the weak pronominal objects, *den* and *det* (/ən, əð/), when the preceding word has a short full vowel, as illustrated in (19b). If we assumed that the object pronoun followed the particle, the particle would form the final H of the L*H contour of the preceding main verb. As stated in section 3, stød occurs on a syllable with a relatively high pitch. The vowel of a particle has a short full vowel and the final consonant of it almost always disappears. Since the primary stressed syllable of a particle has a high pitch, a stød would be likely to occur on it. But after it occurs, the F0 decreases drastically as stated in section 3. The pitch should fall

on the sentence-final object pronoun. This pitch pattern is not acceptable as Danish pitch patterns.

The fact that the pitch contour of the grammatical word order of verb particle constructions conforms to the basic pitch pattern of each Scandinavian variety in fact indicates that the pitch contour of the grammatical order conforms to that of the main verb. In East Swedish (18a), the main verb with accent 2 has the HL contour; the H of the following particle is the continuation of the falling pitch of the main verb and downstepped. In Övdalian (18b), the final pitch contour is LH(L), which would appear to be the pitch contour of the particle with accent 1. With the H of the accented particle downstepped, however, that H is the continuation of the pitch gesture of the main verb with accent 2: the LH(L) contour of the particle is part of the LHLH(L) contour of the accent 2 main verb. In East Norwegian (19a), the main verb with accent 2 has the HLH contour, in which (the object pronoun and) the particle is incorporated. In East Danish without the distinction in word accents (19b), the accented main verb has the LH pitch pattern, in which (the object pronoun and) the particle is incorporated.

The reason why the pitch contour of the grammatical word order conforms to that of the main verb is derived from the fact that the main verb carries the focus of verb particle constructions. Verb particle construction consists of a main verb and a particle. They form a close unit, regardless of whether an object pronoun intervenes between them. In the context of polarity-focus, the most neutral context for verb particle constructions, the main verb carries the focus of the sentence. Thus, it is plausible that the pitch contour of the grammatical word order conforms to that of the main verb, regardless of whether the main verb is accented as in the Norwegian varieties or a particle is accented as in the Swedish and Danish varieties.

6. Conclusion

In this paper, I have discussed the Scandinavian verb particle constructions from the perspective of the intonational properties of the Scandinavian languages. I have shown with experimental data that in East Swedish and Övdalian, in both of which object pronouns cannot move across verb particles, the pitch peak occurs on the main verb. In East Norwegian and East Danish, in both of which object pronouns move across verb particles, on the other hand, the pitch peak occurs on the sentence-final particle.

In each of these Scandinavian varieties, the grammatical word order of verb particle constructions conforms to the basic pitch pattern of the main verb, i.e. a HL contour in East Swedish, a LHLH(L) contour in Övdalian, a HLH contour in East Norwegian and a LH contour in East Danish. Those basic pitch patterns correlate with the absence of OS in East Swedish and Övdalian on one hand, and its presence in East Norwegian and East Danish on the other. That is, the basic pitch pattern is broken up by the presence of OS in the former two and by its absence in the latter two.

In this paper, I have not been concerned with the word order of verb particle constructions that contain a full NP. In Danish (20a), a full NP as well as an object pronoun must precede a particle. In Norwegian (20b), a full NP can either precede or follow a particle contrary to an object pronoun which must precede a particle. In Swedish (20c) and Övdalian (20d), both a full NP and an object pronoun must follow a particle. Many intonation patterns are expected for full NPs depending on contexts. I leave the issue on the word order of verb particle constructions that contain a full NP for future research.

(20) a. Jeg skrev (^{OK}nummeret/^{OK}det) op (*nummeret/*det). [Dan.]
b. Jeg skrev (^{OK}nummeret/^{OK}det) opp (^{OK}nummeret/*det). [Nor.]
c. Jag skrev (*numret/*det) upp (^{OK}numret/^{OK}det). [Swe.]
I wrote (the-number/it) up (the-number/it)
'I wrote the number/it down.'
(Holmberg 1999:2,(3a-c))
d. Å ar aingt (*måladkalln/*eð) upp (^{OK}måladkalln/^{OK}eð). [Övd.]
she has hung (the-picture/it) up (the-picture/it)
'She has hung it up/hung up the picture.'
(Garbacz 2009:84,(10c),(11b))

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Appendix I: Statistical data

I present the statistical data on downstep in the Scandinavian verb particle constructions which confirms the observation in section 4.2. that the pitch peak occurs on the main verb in East Swedish and Övdalian, whereas it occurs on the

sentence-final particle in East Norwegian and East Danish. Downstep is here defined as the pitch difference between the first key pitch point P_1 that occurs relatively early in the utterance and the second key pitch point P_2 that follows towards the end of the utterance, which I refer to as the *downstep size*. When downstep is indeed a fall in pitch, its value will be positive. The higher the value is, the larger the downstep size is. The negative value indicates that downstep does not occur in a sentence – in fact, upstep occurs. The lower the value is, the higher the size of upstep/non-downstep is. Two key pitch points are determined semi-automatically: the first point is on the accented syllable of the main verb, and the second point is on the primary stressed syllable of a particle, i.e. the next accentable syllable after the main verb. The decrement at which the F0 lowers from the main verb to a particle is computed.

The downstep size is expressed in terms of a musical scale, using the *semitone* (st) as a convenient unit of measurement for the perceived magnitude of a change in pitch. The semitone is one-twelfth of an octave; an octave is a doubling of the F0. The Praat software measures the F0 in hertz (Hz). The interval between any two key pitch points in Hz can be converted to semitones by the following formula : $12*[\log(P_1/P_2)/\log(2)]$.[25] A complication is that in my recordings, the time interval between P_1 and P_2 is shorter than 3 seconds; it does not normally exceed the duration of one second. It can be estimated that the pitch lowering in the sentence type I used should be roughly 2 semitones.[26] Thus, I define a proper instance of downstep in my materials as a pitch decrement between P_1 and P_2 larger than 2 semitones. This indicates that the difference in semitones between P_1 and P_2 must be larger than 2 to say that

[25] Without multiplication by 12, this formula computes the pitch interval in octaves.

[26] This estimate is based on the formula ($D = -11 / t + 1.5$) to compute the declination in semitones per second (= D) for utterances shorter than 5 seconds, where t is the duration of the utterance (‘t Hart, Collier and Cohen, 1990, Rietveld and Van Heuven, 2009).

downstep actually occurs in a sentence.

Two dependent variables which characterize the extent of downstep are defined as follows. The first one is the *incidence of downstep*. This variable expresses what percentage of the utterances recorded for a given sentence type in a given Scandinavian variety shows downstep (where the pitch decrement between P_1 and P_2 is larger than 2 semitones). The second variable is the *mean size of the pitch decrement* between P_1 and P_2, irrespective of whether the pitch decrement qualifies as a downstep or not (i.e. regardless of whether the semitone between two points is larger than 2 or not).

The incidence of downstep and the mean of the pitch decrement are computed by choosing two representative male and two representative female speakers in each of the Scandinavian varieties investigated. The F0 is computed for each utterance by using the autocorrelation method implemented in the Praat software. Reasonable upper and lower frequency bounds are set depending on the gender and vocal characteristics of the speaker. Each word is marked off by boundaries on a time-aligned annotation grid in Praat. Within each of the target words, the main verb and a particle, the F0 maximum is automatically found and extracted by the Praat software. The F0 values (in Hz) extracted at P_1 and P_2 are then converted to semitones and further processed with the SPSS statistical software.

The result of computation is given in Table 1. The incidence of downstep, which is given in the column *Downsteps > 2st (%)*, is extremely higher in East Swedish and Övdalian, 68.4% and 80.0% respectively, than in East Norwegian and East Danish, 45.0% and 6.25% respectively. The mean pitch decrement, which is given in the column *Mean decrement (st)*, is also larger in East Swedish and Övdalian, 2.75st and 3.48st respectively, than in East Norwegian and East Danish, 2.64st and -1.98st respectively. In East Danish, even upstep is likely to occur as shown by the minus value. This result confirms

the observation that the pitch is likely to lower sentence-finally in East Swedish and Övdalian but to rise in sentence-final position in East Norwegian and East Danish, in verb particle constructions.

Scandinavian Variety	Downsteps > 2st (%)	Mean decrement (st)
East Swedish	68.4	2.75
Övdalian	80.0	3.48
East Norwegian	45.0	2.64
East Danish	6.25	-1.98

Table 1: The incidence of downstep and the mean pitch decrement