Object shift in Scandinavian languages: The impact of contrasted elements

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This paper argues for a unified analysis of mainland Scandinavian pronominal object shift and Icelandic full NP shift. Building on data showing the impact of accessibility on object placement in Swedish, Danish and Icelandic, I propose an Optimality Theoretic analysis where semantic/pragmatic constraints involving accessibility, information structure and contrast interact, but are ranked lower than syntactic constraints on, for example, verb placement. Finally, the impact of prosody on pronominal object shift is discussed.

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1. WHAT IS SCANDINAVIAN OBJECT SHIFT?

Object shift is – in brief – the configuration in which an object appears in a position following the finite verb but preceding a sentence adverbial in Scandinavian languages, henceforth the SHIFTED position, instead of following the sentence adverbial, henceforth IN SITU. Object shift is only licensed in V2 sentences where the lexical verb is finite, see (1).[1,2]

(1) a. Du känner henne inte. / *Du har henne inte känt.   [SW(EDISH)]
       you känner her   not   you have her   not known
       'You don't know her.'/'You have not known her.'

   b. Jón las   bækurnar ekki. / *Jón hefur bækurnar ekki lesið. [ICE(LANDIC)]
      Jón read the.books not   Jón has   the.books not read
      'Jón didn't read the books.'/'Jón has not read the books.'

Object shift is a phenomenon that has been the focus of much interest in the linguistic community, since Holmberg (1986) first brought attention to this phenomenon in Scandinavian languages, see e.g. Holmberg (1986, 1999), Josefsson (1992, 2003, 2010), Pedersen (1993), Vikner (1994, 1997, 2005), Hellan & Platzack (1995), Collins & Thráinsson (1996), Sells (2001a), Thráinsson (2001, 2007, 2013 this issue), Svenonius (2002), Andréasson (2008, 2009, 2010), Anderssen & Bentzen (2012), Bentzen, Anderssen & Waldmann (2013 this issue), Engels & Vikner (2013 this issue), Ørsnes (2013 this issue).

It is a well known fact that there is variation across the Scandinavian languages, when it comes to the nature of the objects that shift. Whenever the structural environment allows it, pronominal objects shift in all the languages, see (1), but only in Icelandic may full NPs precede negation.[3,4,5]

One of the non-syntactic restrictions on pronominal object shift in mainland Scandinavian already discussed by Holmberg (1986) is that a pronominal object with a contrast interpretation does not shift. This restriction gaves rise to the original analysis of pronominal object shift, where an unstressed pronoun was assumed to 'escape' from a FOCUS domain. '[N]on-focused arguments have to move out of VP, the focus domain, into the presupposition domain, i.e. the space between C and VP' (Holmberg 1999:23). Recent studies show that it is not only the dichotomy contrasted vs. non-contrasted that affects the position of objects; also the accessibility of the object referent regulates which objects appear in the shifted position and which objects appear in situ (Andréasson 2008, 2009, 2010; see also Anderssen & Bentzen 2012, Bentzen et al. 2013, Ørsnes 2013). This effect of accessibility is one ingredient in a more detailed explanation of both pronominal object shift in mainland Scandinavian languages and full NP object shift in Icelandic, particularly so in sentences where there is no contrastive focus.

In this paper I will address the impact of contrastive focus on object placement against the background of the effect of accessibility. On the one hand contrastive focus causes objects that normally shift to appear in situ, and on the other hand it causes the shift of some objects that ordinarily are in situ. Facts about contrastive focus thus strengthen the claim that accessibility must be considered in an analysis of object shift.[6]

The roadmap of this paper is as follows: In Section 2, I summarise the facts about object shift and accessibility, and in Section 3 I show how contrast in a sentence affects object positions. In Section 4, I sketch an Optimality Theoretic analysis of the findings and finally I summarise and discuss outstanding issues in Section 5.

2. OBJECT SHIFT AND ACCESSIBILITY

Andréasson (2008, 2009) notes that most analyses of object shift seem to deal with only those pronominal objects that have NP antecedents, such as *henne* 'her' in example (1a) above. Andréasson shows that object pronouns with sentence antecedents have a significantly different distribution, and that this distributional difference is linked to the accessibility of the object referents.

In an investigation of a corpus of written Swedish and Danish, Andréasson shows that pronominal objects with sentence antecedents, like *det* in (2) below, appear in situ to a greater extent than pronominal objects with NP antecedents, both in Swedish

and – more surprisingly – in Danish, where non-contrasted objects in situ are considered ungrammatical.

(2) [Maria köpte   boken.]   Trodde du   inte det?   [DA(NISH)]
    [Maria købte   bogen.]   Troede du   ikke det?
     Maria bought the.book thought you not   that
    'Maria bought the book. Didn't you think she did?'

Andréasson (2008, 2009, 2010) shows that it is not the type of antecedent per se that lies behind the difference in distribution between object pronouns with sentence antecedents and those with NP antecedents. What affects the distribution is instead the accessibility that the referent of an object pronoun is assumed to have, in the mind of a reader or a listener, and the choice of referential NP depends on these assumptions.

There is a vast body of literature on how referential expressions are prototypically linked to referring expressions (some examples of relevance to this paper are Ariel 1988, 2001; Gundel, Hedberg & Zacharski 1993; Lambrecht 1994; Vallduví & Engdahl 1996; Gundel, Borthen & Fretheim 1999). These accounts propose, in various ways, that the use of a certain referring expression is an indication of how much cognitive effort a speaker assumes will be involved for the listener to link the expression to the intended referent. When there is little or no assumed effort, the expressions are short and unstressed, like unstressed personal pronouns or even zero representations. When the speaker assumes that there will be a more substantial cognitive effort, she chooses expressions with more lexical content, like full NPs. All the literature seems to agree that there is some kind of prototypical linking between referring expressions and cognitive status or cognitive effort. I will present only two such scales or hierarchies here, namely the ACCESSIBILITY MARKING SCALE (AMS) of Ariel (1991) and the GIVENNESS HIERARCHY (GH) of Gundel et al. (1993).[7]

Ariel (1988, 2001:31) presents a very elaborate accessibility marking scale ranging from referential expressions that are prototypically used for less cognitively accessible referents to those where the referents are more accessible, see (3).[8]

(3) Zero > verbal person inflections > cliticized pronoun > unstressed pronoun > stressed pronoun > stressed pronoun + gesture > proximal demonstrative (–NP) > distal demonstrative (–NP) > proximate demonstrative + NP > distal demonstrative + NP > proximate demonstrative + modifier > distal demonstrative + modifier > first name > last name > short definite description > long definite description > full name > full name + modifier

Gundel et al. 1993, Gundel et al. 1999 and Gundel 2010 present in the GH a scale, given in Figure 1 below, that is not as extensive as Ariel's in including all possible definite nominal expressions. On the other hand the GH includes the

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
it		*this* N/ *this/that/* SHE		*that* N		*the* N		*indefinite this* N		*a* N

Figure 1. Givenness Hierarchy (Gundel, Hedberg & Zacharski 1993, Gundel 2010).

non-accessible indefinite noun phrase and maps the different nominal expressions to distinct cognitive statuses, IN FOCUS, ACTIVATED, etc.

Gundel and colleagues do not deny that there are prototypical connections between nominal expressions, but they show how semantic and pragmatic factors other than accessibility (such as for example need for disambiguation) may affect the choice of nominal expression. Therefore their scale is not to be seen as a 'hierarchy of DEGREES of (ease of) accessibility' according to Gundel (2010), who explains that

> forms hypothesized to encode cognitive statuses on the GH as part of their conventional meaning may be characterized as constraining, and thus providing information about, *manner* of accessibility, i.e. how/where the referent can be mentally accessed. (Gundel 2010:149; emphasis in the original)

Gundel (2010) shows that even when a referent is for example 'in focus' there may be independent reasons not to use an unstressed pronoun to refer to it. For instance, when the use of a pronoun may give rise to an ambiguous sentence, there are reasons to use a full NP instead.

To conclude, the choice of any nominal expression is made by a speaker in relation to her assumptions about the degree of cognitive effort that it will take for the listener to identify the referent of the nominal. This choice of a referring expression is made in consideration of a range of factors, such as accessibility or resolution of ambiguity, but the choice of for example a full NP over an unstressed pronoun prototypically signals that the speaker assumes that it will take more effort for the listener to resolve the referent of the expression.

For the purpose of this paper, I will formalise these different levels as activation (ACTVN) values on a numerical scale, where a lower number signifies less effort, and a higher more effort (see Andréasson 2008). I will discuss only the type of expressions where I have data for the languages investigated, even though both Gundel et al.'s GH and notably Ariel's AMS are much more elaborate. Table 1 shows this scale for Swedish/Danish, Icelandic and English, with only the relevant forms included.[9]

The less cognitive effort a certain speaker assumes that the listener will make in order to retrieve the correct object referent, the further to the left of this scale the speaker may go when she chooses a suitable nominal expression. If an object referent

	ACTVN 0	ACTVN 1	ACTVN 2	ACTVN 3
	unstressed pronouns	stressed pronouns	definite NPs	indefinite NPs
SW	*honom/henne*, *den*, *det*	*det*	*böckerna*	*böcker*
DA	*ham/hende*, *den*, *det*	*det*	*bøgerne*	*bøger*
ICE	*hann/hana*, *það*	*það*	*bækurnar*	*bok*
EN	*him/her*, *it*	*that*	*the books*	*books*

Table 1. Activation.

is completely new in the context, and not otherwise assumed to be relevant, the speaker must choose an indefinite NP for the communication to be successful; reference with a pronoun would in this case most probably result in the communication breaking down. When a referent has been mentioned in the immediate context, on the other hand, this referent should be highly accessible in the listener's mind, and in such a case the speaker most felicitously chooses from an expression at the left of the scale. The different numerical values of the ACTVN feature in Table 1 is a conceptualisation of this. Note that the notion STRESSED in this table does not indicate contrastive stress, but rather that a pronoun is not unstressed. The difference is discussed in connection with example (4), below.

In the following, I will discuss some findings in the work of Gundel et al. (1993), Gundel et al. (1999) and Gundel (2010) that are relevant to the analysis of this paper.

The choice between an unstressed (ACTVN value 0) and a stressed (ACTVN value 1) personal pronoun in Scandinavian languages, corresponds to the choice between *it* (ACTVN value 0) and *that* (ACTVN value 1) in English. Gundel et al. (1999) assume that the referents of noun phrases are brought into the listener's focus of attention, and that it is hence felicitous to use an unstressed personal pronoun, for example *it*, in a following sentence. Referents of sentences on the other hand, such as situations and facts, are assumed to be at least in the addressee's working memory; in English this prototypically leads to the use of *that* in a following sentence (see Gundel et al. 1999, Gundel, Hegarty & Borthen 2003, Gundel 2010).

Andréasson (2010) shows that in Swedish the two highest levels in the GH do not correspond to different word forms, but to one pronoun, with prosodic variation, see (4) from Andréasson (2010).

(4) Agnes har tydligen köpt [ett nytt dataspel]$_i$. [SW]
    [Agnes har tydligen köpt ett nytt dataspel]$_k$.
  Agnes has apparently bought a new computer.game
  a. Ja, jag har faktiskt sett ^{0}det$_i$.
    yes I have actually seen it
  b. Ja, jag har faktiskt sett 'det$_k$.
    yes I have actually seen that

With an NP antecedent, as in (4a), *det* has no stress, here marked with ^{0}. With a sentence antecedent, on the other hand, as in (4b), *det* must have at least a word

accent, here marked with '.[10] This slight difference in stress does not signal contrast, but it correlates very well with what is noted in Gundel et al. (1999), namely that the choice between *it* and *that* in English corresponds in Norwegian to, on the one hand, a de-accented pronoun (ACTVN value 0) and, on the other, a slightly more accented one (ACTVN value 1).

Andréasson (2008, 2009, 2010) notes that object pronouns with sentence antecedents appear in situ to a significantly greater extent when the matrix verb is a non-factive verb, as in example (2) above, where the matrix verb is *tro* 'think'. This correlates with facts about the choice between *it* and *that* in English. It has been shown by Hegarty, Borthen and Gundel in different works (see Hegarty, Gundel & Borthen 2002, Gundel et al. 2003) that when a sentence is introduced under a bridge verb, an immediate reference with *that* (ACTVN value 1) is preferred (Hegarty et al. 2002:176).

However, Andréasson's (2008, 2009, 2010) results on object shift and matrix verbs do not involve the antecedent, but the pronoun itself being embedded under a non-factive matrix verb. It is well known that factive verbs trigger a presupposition, namely that their complements have a truth value. Non-factive verbs on the other hand do not trigger presupposition. When a matrix verb is factive, this indicates that the truth value of the proposition represented by the subordinate clause is presupposed, and assumed to be known by the listener. In such a case, it is felicitous to use a linguistic form which signals that no further activation is needed – in mainland Scandinavian an unstressed pronoun, *det*. However, if the matrix verb is non-factive, the proposition of the subordinate clause does not have a presupposed truth value. This may be the reason why pronouns embedded under non-factive verbs seem to signal some cognitive effort, ACTVN value 1.

At first glance, the syntactic position preceding the negation, shifted, seems to be reserved for elements that have the ACTVN value 0, unstressed pronouns, both in Swedish and in Danish. I will call this 'the ACTVN effect' on object shift. We will see later in this section that the ACTVN effect on Icelandic object placement is different. The ACTVN effect for Swedish and Danish are illustrated in (5).

(5) unstressed pronouns > NEG > stressed pronouns, definite and indefinite NPs

The symbol > in (5), and in (9) below, indicates precedence. The hierarchy shows the position of the negation in relation to nominal objects in Swedish and Danish neutral contexts, where object shift is possible. Pronouns with ACTVN value 0, i.e. unstressed pronouns, shift while all other nominal expressions remain in situ.[11]

In Icelandic, also definite full NPs may shift and the ACTVN effect has another cut-off point, lower on the scale than in Swedish and Danish, since more referential expressions are licensed in the shifted position. Examples (6)–(8) below illustrate the facts of Icelandic object shift, in neutral contexts. Similar examples may be

found in Thráinsson (2007:31f.). We will return to the facts regarding sentences with contrastive focus in Section 3 below.

(6) a. Hann les ekki bækur. [ICE]
  he reads not books
  'He doesn't read books.'
 b. *Hann les bækur ekki.

(7) a. Hann les ekki bókina. [ICE]
  he reads not the.books
  'He doesn't read the book.'
 b. Hann les bókina ekki.

(8) a. *Hann les ekki hana. [ICE]
  he reads not it
  'He doesn't read it.'
 b. Hann les hana ekki.

Example (6) shows that indefinite objects like *bækur* 'books' are not allowed in the shifted position, in (7) we see that definite objects like *bókina* 'the book' may be shifted or appear in situ, and example (8) illustrates that pronouns that have an NP antecedent appear in the shifted position. The hierarchy in (9) shows the ACTVN effect on Icelandic, in contexts where object shift is possible.

(9) unstressed and stressed pronouns, definite NPs > NEG > definite NPs, indefinite NPs

In Icelandic, this illustrates that objects with referents that have ACTVN value 0 (unstressed pronouns) shift, while objects with referents that have value 3 (indefinite NPs) appear in situ. Objects with ACTVN value 2 (definite NPs) may appear preceding or following the negation. The ACTVN effect holds in a syntactic environment that allows object shift in a neutral context where there is no contrastive focus. In the next section we will see how contrastive focus in the sentence modifies the ACTVN effect.

3. OBJECT SHIFT AND CONTRASTIVE FOCUS

The information structure constraint most commonly related to pronominal objects shifting or appearing in situ is contrast. In mainland Scandinavian languages only unstressed pronominal objects shift; objects with contrastive stress must appear in situ. Interestingly contrast on another element in the clause also affects the object position. I will first recapitulate the facts about contrasted objects.

3.1 Contrast on the object

The primary function of contrastive focus is the evoking of alternatives. The focusing of a constituent raises the assumption of the existence of a set of alternative elements to the one expressed. This alternate set may be overt in the context or presupposed (see Rooth 1992). Whenever a Danish or a Swedish pronominal object has a contrast

interpretation and – in speech – contrastive stress, this prevents it from shifting; instead it is licensed in the in situ position, see the Danish example in (10).

(10) a. Han så   ikke HENDE (men han så den anden pige). [DA]
       he   saw not   her
       'He didn't see HER (but he saw the other girl).'
     b. *Han så HENDE ikke.

In example (10) both the contrastive stress on the object pronoun (here and throughout this paper marked with capitals) and the position of the pronoun to the right of the negation are linguistic markers of contrast. Nevertheless, the object referent is still just as accessible as it would have been in a non-contrastive context, and its ACTVN value is still 0.

This restriction on pronominal objects to remain in situ when contrasted is what gave rise to the analyses of object shift suggesting that an unstressed pronoun escapes from a focus domain (see Holmberg 1999:23). Interestingly, when an Icelandic object pronoun has a contrastive interpretation, it does not have to remain in situ. Contrasted object pronouns are also allowed in the shifted position, see the examples in (11) and (12) from Thráinsson (2007:32, 67).

(11) Jón   las   aldrei HANA.   [ICE]
     John read never her
     'John never read IT (but he may have read something else).'

(12) Hún sá   MIG ekki.   [ICE]
     she saw me   not
     'She didn't see me.'

Definite full NP objects in Icelandic are, however, constrained to remain in situ when contrasted. Collins & Thráinsson (1996:406) state: 'A stressed (and therefore focused) definite NP behaves like a nonspecific indefinite NP, in that it prefers not to undergo object shift'.

To sum up, contrastive stress on the object overrides the ACTVN effect, both in Icelandic and in Swedish and Danish. But it does not override it completely, at least not in Icelandic. The findings for Icelandic show us that there is in fact no constraint on ALL contrasted objects in Scandinavian languages to appear in the in situ position; in Icelandic pronominal objects with contrast seem to shift as readily as those with no contrast.

3.2 Contrast on another element

Contrast influences object placement in yet another way. A non-contrasted object that would otherwise be strongly dispreferred in the shifted position due to the ACTVN effect may shift quite felicitously, when there is contrast on ANOTHER element in the clause, for instance the verb, the sentence adverbial or the subject. This is a phenomenon that has been observed for Icelandic by Diesing & Jelinek (1993:24;

see also Diesing 1997; Thráinsson 2001:190, 2007:32) and for Swedish and Danish by Andréasson (2009, 2010). The example in (13) is from Diesing (1997:412).

(13) Ég les   bækur ekki . . .   [ICE]
    I   read books not
    'I don't READ books . . . (I only BUY them).'

In a context with no contrast, the ACTVN effect would lead to the indefinite NP object *bækur* 'books' in (13) appearing in the in situ position. With contrast on the the verb *les* 'read' this changes, and the object is allowed in the shifted position.

Let us now turn to Swedish and Danish. Recall from the above that the ACTVN effect leads to a Swedish pronominal object with a non-factive matrix verb, for instance *tro* 'think/believe', appearing in the in situ position. In the Swedish Parole corpus 90% of the object pronouns in sentences with *tro* are in situ (Andréasson 2010); there are only eleven examples with a shifted object pronoun.[12] In six of these sentences there is a clear contrast on something other than the object referent. In the Danish corpus KorpusDk a similar pattern emerges.[13] Several of the shifted *det* in examples with *tro* involve contrast on element other than the object referent.

In the Swedish example (14) from the Parole corpus, the verb is contrasted, just as in the Icelandic example in (13) above.

(14) CONTEXT: Så du tror att hon är en mördare?   [SW]
    'So you think she is a murderer?'
    Jag tror   det inte. Jag fruktar det.
    I   think it   not   I   fear   it
    'It is not a matter of thinking. I fear it.'

In (14) the antecedent of *det* 'it' is *hon är en mördare* 'she is a murderer'. The speaker does not negate her being a murderer, quite the opposite, since the following sentence implies that s/he actually fears there might be some truth in this. Instead the negated domain is the attitude of *tro* (*att hon är en mördare* 'thinking (that she is a murderer)'). This attitude is negated, and contrasted with the attitude of fearing the same thing, which is expressed explicitly in the following sentence, *Jag fruktar det* 'I fear it'.

Similar examples can be found in Danish. The example in (15) is from a novel.[14]

(15) CONTEXT: 'Tror du, Peto vil spørge din far om I kan blive gift?' Vi ser begge hen mod Peto og Talo. Anns blik bliver fyldt af glæde.   [DA]
    'Do you think Peto will ask your father, if you can get married?' We both look towards Peto and Talo. Anns eyes are filled with joy.'
    'Jeg *tror*   det ikke. Jeg ved   det.'
    I   think that not   I   know that
    'It's not something that I think he will do. I know he will.'

In the context of example (15) the question if Ann thinks that Peto will be asking her father for her hand is uttered. In Ann's answer the verb *tro* is contrasted with *ved* in the following clause. The author has even marked the prosodic prominence that falls on the verb *tro* with italics.

There are examples both in the Swedish and in the Danish corpus where elements other than the verb are contrasted. In (16) the contrast is on the subject *andre* 'others'.

(16)   Nogle folk tror de får kræft på grund af luftforurening eller kemikalier, men . . .
       'some people think they get cancer on ground of air-pollution or chemicals but . . .'
       andre   tror   det   ikke.   [DA]
       others   think   it   not
       ' . . . others don't think so.'

The context of (16) is a discussion on how children, during the formal operational stage of the development of their cognitive abilities, become able to relate diseases to external causes. In the example a young child is expressing this in words. The antecedent of *det* in (16) is the proposition *de får kræft på grund af luftforurening eller kemikalier* 'they get cancer from air-pollution or chemicals' in the immediately preceding sentence. In the sentence with the shifted pronominal object the subject *andre* 'others' contrasts with the subject of the preceding sentence, *nogle folk* 'some people'.

As we have seen, contrastive stress on elements other than the object also seems to override the ACTVN effect in all the languages discussed here, but not in the same way as when the object is contrasted. In Icelandic all non-contrasted objects actually seem to avoid appearing in the in situ position when there is contrast on another element. In Swedish and Danish on the other hand not all objects seem willing to shift, even in these contexts it is only personal pronouns that shift. All other objects must still be in situ. This indicates that there must be some other factor that is involved in mainland Scandinavian object shift than accessibility and contrast. We will return to this in Section 4.6.

To sum up, the impact of contrast is neither that all contrasted objects appear in situ nor that all NON-contrasted objects shift. One way to account for the effect of contrast on another element could be to say that the objects escape from a position where they otherwise may be misinterpreted as carrying contrastive focus, along the lines of Holmberg's (1986) original proposal for pronominal object shift. However, this does not explain why not all non-contrasted objects can shift to avoid being misinterpreted as contrasted. The fact that some contrasted objects are allowed to shift in Icelandic further complicates the escape analysis. In the following section I will suggest an analysis where the ACTVN effect, the impact of contrast and also to some extent information structure interact.

4. CONSTRAINTS ON OBJECT PLACEMENT

We are dealing with an interaction between several different pragmatic factors. Accessibility plays a role, contrastive focus plays a role, and we will see that information structure is also involved. I will analyse the interaction of these pragmatic factors as violable constraints in a version of Optimality Theory (OT). I propose that the differences between Swedish/Danish on the one hand and Icelandic on the other can be accounted for by alternative rankings of OT constraints referring to these linguistic factors (for a more elaborate introduction to OT, see Sells 2001a, b; Vikner 2001).

One of the things that cannot be ignored when OT is applied to pragmatic phenomena, like accessibility, information structure and contrastive focus, is that the optimal candidate in OT syntax, the winner, is supposed to be the one that is 'grammatical', while all the other candidates are 'ungrammatical' (see e.g. Choi 1999:6; Legendre 2001:3; Vikner 2001:428). In Scandinavian languages, this problem becomes particularly evident since several word order patterns often may be considered grammatical. If an optimisation has an input that is underspecified, when it comes to pragmatic factors, such as information structure or accessibility, several word order patterns will most probably be grammatically equally optimal. What the OT analysis in this paper tries to capture is in fact NOT the distinction grammatical vs. ungrammatical, but rather a scale of pragmatic optimality. I admit that this is rather unorthodox in an OT setting. Nevertheless for our purposes such an analysis serves as an illustration of how the interplay between several pragmatic factors favours certain word orders in a context, and how language users may make a choice between two or more grammatical word orders. When pragmatic information is included in the input, we must allow ourselves not to define the optimal candidate as 'the only grammatical string', but rather as the pragmatically optimal one. We must also possibly admit that the optimal candidate is not even the only pragmatically possible one in a given context, but only optimal in the sense of 'the best of several possible alternatives'.

In this article, I will for the most part leave out referring to the syntactic constraints on Scandinavian word order (see instead Andréasson 2007a) and I will only discuss constraints that have relevance for the choice between the shifted and the in situ position in clauses where object shift is syntactically possible.

4.1 The not too hierarchical model

I adopt a simple model for describing Scandinavian clause structure, THE NOT TOO HIERARCHICAL MODEL, where the phrase structure in Swedish, Danish and Icelandic is flat in the area between a finite element and an optional VP, see example (17) and
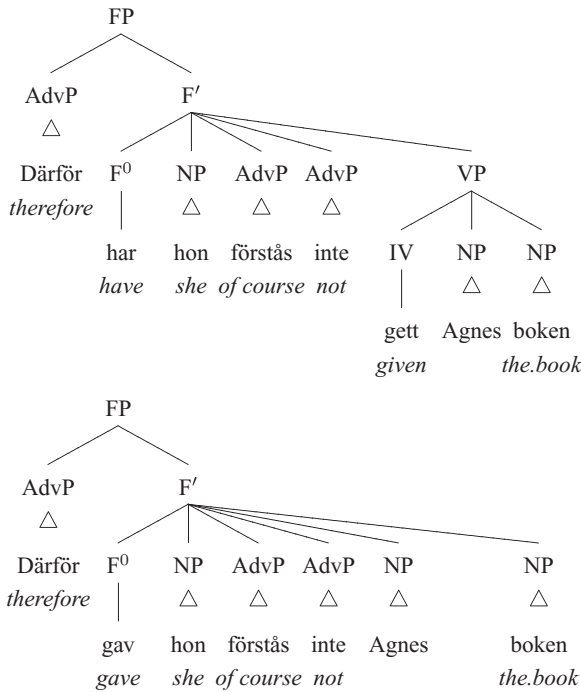
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                              FP
                         ╱         ╲
                    AdvP            F′
                     △         ╱  ╱ │ ╲    ╲
                  Därför     F⁰  NP  AdvP AdvP      VP
                 therefore   │   △    △    △      ╱  │  ╲
                            har  hon förstås inte  IV  NP  NP
                           have  she of course not  │   △   △
                                                   gett Agnes boken
                                                   given    the.book
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                              FP
                         ╱         ╲
                    AdvP            F′
                     △         ╱ ╱ │ ╲ ╲      ╲
                  Därför     F⁰  NP AdvP AdvP NP      NP
                 therefore   │   △   △   △   △       △
                            gav  hon förstås inte Agnes    boken
                           gave  she of course not        the.book
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Figure 2. C-structures with VP and without any VP.

(18), and Figure 2. The ordering of the constituents in this flat area is not fixed, but falls out from a ranking of violable OT constraints.[15]

(17) Därför   har hon förstås   inte gett   Agnes boken.   [sw]
      therefore has she of.course not   given Agnes the.book
      'That's why she hasn't given Agnes the book.'

(18) Därför   gav hon förstås   inte Agnes boken.   [sw]
      therefore gave she of.course not   Agnes the.book

The claim in Andréasson (2007a, b) is that there is only evidence for one functional projection in Swedish, an FP.[16] The F′ hosts the finite verb in main clauses and the complementiser in subordinate clauses (Engdahl, Andréasson & Börjars 2004). The area including and following the finite verb (the F′ domain) is flat, and the word order in this local domain is determined by structural, semantic and pragmatic factors. In main clauses with a finite main verb, there is no independent evidence that there is a VP in Swedish (see Dalrymple 2001:52 on Icelandic). In clauses where the main verb is non-finite, however, constituent tests show that there is evidence for a VP, at least in Swedish (Andréasson 2007a).

4.2 Constraints on accessibility

The ACTVN values will be expressed here as a family of so-called alignment constraints, where each constraint expresses a tendency for elements with a certain ACTVN value to appear as far to the left as possible in the F′ domain.[17] More generally an alignment constraint requires a certain element to be aligned in relation to the edge of a given domain, for example the daughter nodes of the same mother node (see e.g. the discussion on the notion of domains in Sells 2001b). Here the domain that the alignment constraints relate to is F′, as shown in Figure 2 above.

One example of this type of constraint is HEAD-L, see (19) below, which requires a head to appear at the left edge of a domain. In the F′ domain of a declarative clause, the head is the finite verb.

(19) HEAD-L
   Align L (head, local domain, edge), i.e. align the head with the left edge of the
   local domain.

HEAD-L is assumed to be ranked higher than all the constraints discussed in this paper, reflecting the fact that verb second in Scandinavian declarative clauses outranks any pragmatic constraint on word order in this area of the clause.

The definition of the alignment constraints on different ACTVN values follows the model of $ACTVN_0$-L in (20).

(20) $ACTVN_0$-L
   Align L (ACTVN, local domain, edge), i.e. align elements with the ACTVN value 0
   with the left edge of the local domain.

The internal ranking between the different ACTVN values given in (21) demonstrates the tendency for elements that are contextually given to appear earlier in a sentence, and for elements that are new to appear later.

(21) $ACTVN_0$-L $\gg$ $ACTVN_1$-L $\gg$ $ACTVN_2$-L $\gg$ $ACTVN_3$-L

These ACTVN constraints compete with other pragmatic constraints on word order in the F′ domain. First we will consider the faithfulness constraint in (22). This constraint rewards modifiers preceding the domain they modify, ICON-MOD (from Andréasson 2007a); ICON stands for 'iconic' and MOD stands for 'modification'. The relative order between a modifier and the modified domain should reflect their semantic relationship; one element that modifies another should precede and c-command the modified element. In the examples in this paper, an iconic word order should reflect the fact that a sentence negation or a sentence adverbial modifies the clause.

(22) ICON-MOD
   Modifiers precede and c-command the domain modified.

In an F′ domain with a sentence negation, this constraint is maximally satisfied only if all other elements in the sentence follow the negation. However this is not

grammatical in Scandinavian declaratives, see (23). This is illustrated by the HEAD-L constraint, from (19) above, outranking ICON-MOD, see OT Tableau 1.

(23) a. Jag [hörde inte].   [SW]
          I   heard not
          'I didn't hear.'
      b. *Jag [inte hörde].

Tableau 1. HEAD-L vs. ICON-MOD.

	Jag . . .	HEAD-L	ICON-MOD
☞	*hörde inte*		*
	inte hörde	*!	

In Tableau 1, the word order *inte hörde* (example (23b)) satisfies the constraint ICON-MOD in that the verb follows the modifier. Nevertheless, the ranking of HEAD-L higher than ICON-MOD demonstrates that the winner is the word order where the finite verb is at the left end of the F' domain. To simplify, I will in the following leave out the constraint HEAD-L in all tableaux where the verb is not part of the competition, and only include candidates that fulfill this constraint.

We will now turn to constraints on object placement. As we will see in the following, it is the ranking of ICON-MOD in relation to the relevant ACTVN constraints that accounts for the facts about object shift in neutral contexts in Swedish, Danish and Icelandic. Example (24) and Tableau 2 illustrate that the shifted word order is preferred in Danish, when the object is a pronoun with the ACTVN value 0. This holds also for standard Swedish, see example (1) above, and for Icelandic, see example (8) above.[18]

(24)   Marie er min lærer. Du . . .   [DA]
        'Marie is my teacher. You . . .'
    a. kender hende ikke.
        know   her   not
        'don't know her.'
    b. *kender ikke hende.

Tableau 2. ACTVN$_0$-L vs. ICON-MOD in Danish (Swedish and Icelandic).

	Marie er min lærer. Du . . .	ACTVN$_0$-L	ICON-MOD	ACTVN$_1$-L
☞	*kender hende ikke*	*	**	
	kender ikke hende	**!	*	

In Tableau 2 ICON-MOD is violated twice for the shifted word order, since two elements, *kender* 'know' and *hende* 'her' precede the modifier *ikke* 'not'. The in situ word order only violates this constraint once. Nevertheless, the referent of the pronoun *hende* is fully activated and since the constraint ACTVN$_0$-L outranks ICON-MOD, the violations of ICON-MOD do not affect the outcome of the competition. In

the shifted word order only one element precedes the pronoun *hende* in the domain and this violates ACTVN$_0$-L once. The in situ word order gets two stars since both the verb and the negation precede the object pronoun. The shifted word order has the least violations of the highest ranked constraint, and it is the winner, marked by the pointing hand.

In (25) the antecedent is the entire proposition in the question and the pronoun *det*, has the ACTVN value 1.[19]

(25) Kommer du på festen ikväll?   [SW]
       'Will you come to the party tonight?'
   a. Jag tror   inte det.
       I   think   not   it
       'I don't think so.'
   b. #Jag tror det inte.

Tableau 3. ICON-MOD vs. ACTVN$_1$-L in Swedish (and Danish).

	Jag . . .	ACTVN$_0$-L	ICON-MOD	ACTVN$_1$-L
	tror det inte.		**!	*
☞	*tror inte det.*		*	**

In Tableau 3 it is the ranking of ICON-MOD higher than ACTVN$_1$-L (and all lower ACTVN constraints) that makes the in situ word order the winner.

In Icelandic, ICON-MOD is ranked significantly lower than in Swedish/Danish. As we have seen, in Icelandic not only pronouns but also definite full NPs shift, see (26) (from (7b) above)). This is illustrated by the ranking of all the constraints ACTVN$_0$-L ≫ ACTVN$_1$-L ≫ ACTVN$_2$-L higher than ICON-MOD.

(26) Hann les   bókina   ekki.   [ICE]
      he   reads   the.books   not
      'He doesn't read the book.'

Tableau 4. ACTVN$_2$-L vs. ICON-MOD in Icelandic.

	Hann . . .	ACTVN$_2$-L	ICON-MOD	ACTVN$_3$-L
☞	*las bókina ekki.*	*	**	
	las ekki bókina.	**!	*	

Also in this case ICON-MOD is violated twice by the shifted word order. Nevertheless, the ranking of ACTVN$_2$-L higher than ICON-MOD makes the shifted word order win the competition.

When the Icelandic NP is indefinite as in (27) (from (6a)), the in situ word order is the best in a neutral context.

(27) Hann les   ekki bækur.   [ICE]
      he   reads   not   books
      'He doesn't read books.'

Tableau 5. ACTVN$_3$-L vs. ICON-MOD in Icelandic.

Hann . . .	ACTVN$_2$-L	ICON-MOD	ACTVN$_3$-L
las bækur ekki.		**!	*
☞ *las ekki bækur.*		*	**

In Tableau 5 it is ICON-MOD that gets to pick the winner, since the active constraint on givennness, ACTVN$_3$-L, is ranked lower than ICON-MOD to account for the fact that the in situ word order is preferred for indefinite NP objects.

4.3 Constraints on information status

As we saw in example (7) above, definite NPs may appear preceding or following a negation in Icelandic. Here, the ranking of ICON-MOD in relation to the ACTVN constraints does not give us the winner. However, the distribution is not random. Thráinsson (2007:76) notes that the information status of the objects may play a role here (see also Broekhuis 2000 for a similar account, and Diesing 1997 for a different opinion).[20]

In this paper, I make a distinction between accessibility, see above, and the informative intentions a writer has with a sentence. In written text, where prosody is not present, word order is the main tool for making these intentions clear to a reader, a syntactic INFORMATION PACKAGING (see Vallduví & Engdahl 1996). Information that a writer or speaker is primarily intending to add to what is already under discussion is packaged as the information status RHEME. The parts of the statement that connect the RHEME to what is under discussion is packaged as the information status GROUND, see (28) (Andréasson 2007a).[21] The general constraint on information status is RESP-I, see (29) (Andréasson 2007a).

(28) a. RHEME: The information in a statement that is intended to increase the listener's knowledge.
    b. GROUND: Constituents that relate the RHEME to questions the speaker assumes are under discussion
(29) RESP-I
    The linear order of constituents respect the information principle: i.e. GROUND < RHEME.

RESP-I is a faithfulness constraint rewarding an ordering of constituents in a clause based on their information status. This constraint is related to the typological tendency for GROUND material to appear earlier in a clause than rhematic elements, whenever structural constraints allow this.

In example (30) below (from Thráinsson 2007:76), the book title *Stríð og frið*, a definite description with ACTVN value 2, has not been mentioned in the context. Instead it is Jón's unknown regular activities during his vacation that are under discussion, and the RHEME of the sentence is his reading *War and Peace*. Hence the

object is part of the RHEME, as shown by the attribute–value matrix in (31) which gives the LFG i(nformation)-structure that constitutes part of the input for the OT competition (see Andréasson 2007b).[22]

(30) CONTEXT A: Hva gerir Jón i fríinu sínu?   [ICE]
    'What does Jón do in his vacation?'

    a. *Hann les   *Stríð og frið*   alltaf _
       he   *reads* *War and Peace* *always*
       'He always reads *War and Peace*.'

    b. Hann les   alltaf   Stríð og frið.
       he   *reads* *always* *War and Peace*
       'He always reads *War and Peace*.'

(31)   *I-structure input*

$$\begin{bmatrix} \text{GROUND} & \{he, always\} \\ \text{RHEME} & \{read, War and Peace\} \end{bmatrix}$$

Tableau 6. RESP-I vs. ACTVN$_2$-L, Icelandic I.

	Hann . . .	RESP-I	ACTVN$_2$-L	ICON-MOD
	. . . les Stríð og frið alltaf.	**!	*	**
☞	*. . . les alltaf Stríð og frið.*	*	**	*

In this context the habit expressed by the adverb *alltaf* 'always' is implied in the question. In the shifted word order, two elements representing the RHEME, *les* 'reads' and *Stríð og frið*, precede this ground element, and the constraint RESP-I is violated twice. The in situ word order only gets one star, since there is only one rhematic element that precedes *alltaf*. The ranking of RESP-I higher than ACTVN$_2$-L illustrates that the in situ word order is the winner, when this particular information structure is part of the input.

In example (32) below (from Thráinsson 2007:76), on the other hand, the book *Stríð og frið* is mentioned in the context. The question whether John knows this book is under discussion, i.e. a possible but yet unknown relation between Jón and *War and Peace* constitutes the GROUND part of the sentence. The answer is affirmative: *Já* 'yes', Jón knows this book. And then the speaker continues on the same subject and adds that Jón always reads this book during his vacation, i.e. the RHEME of this sentence fills in the blank; the evidence for his familiarity with *War and Peace* is his habitual reading of the book during his vacation.

(32) CONTEXT B: Þekkir Jón *Stríð og frið*?   [ICE]
    'Does Jón know *War and Peace*?'

    a. Já, hann les   Stríð og frið   alltaf í   fríinu   sínu.
       yes *he*   *reads* *War and Peace* *always* *in* *the.vacation* *his*
       'Yes, he always reads War and Peace in his vacation.'

b. ?Já, hann les alltaf Stríð og frið í fríinu sínu.
   yes he reads always War and Peace in the.vacation his
   'Yes, he always reads *War and Peace* in his vacation.'

(33) *I-structure input*

$$
\begin{bmatrix}
\text{GROUND} & \{ \textit{he, War and Peace} \} \\
\text{RHEME} & \{ \textit{read, always, during his vacation} \}
\end{bmatrix}
$$

Tableau 7. RESP-I vs. ACTVN$_2$-L, Icelandic II.

	Já, hann . . .	RESP-I	ACTVN$_2$-L	ICON-MOD
☞	. . . *les Stríð og frið alltaf* (*during his vacation*).	*	*	**
	. . . *les alltaf Stríð og frið* (*during his vacation*).	**!	**	*

In this context the in situ word order is marked.[23] This is modelled by the constraint on information status, RESP-I being ranked higher than ICON-MOD. Instead, the shifted word order as in (32a) is preferred, where the GROUND element *Stríð og frið* precedes the rhematic elements *alltaf* 'always' and *í fríinu sínu* 'during his vacation'. The rhematic verb, as usual, is constrained by the highly ranked HEAD-L to appear at the left edge of the F′ domain, and this violates RESP-I once. In the in situ candidate, RESP-I is violated twice, since two rhematic elements precede *Stríð og frið*.

4.4 Constraints on contrastive focus

Let us now turn to the effects of contrastive focus. Both Andréasson (2007a, for Swedish) and Engels (2012, for German, English and French) discuss how sentence adverbials 'multitask' in sentences with a contrastive focus (Engels' FOCUS).[24] On the one hand they retain their semantic function as proposition modifiers, on the other hand the presence of a contrastive focus triggers a sentence adverbial to play the part of a focus operator.

As we saw in Section 3 above, contrastive focus affects object placement in two ways. It makes contrasted objects remain in situ, and it makes non-contrasted objects shift when there is contrast on another element in the clause. Engels (2012:112) proposes two separate constraints to deal with these effects of contrast on object positions in German, see (34).

(34) a. ADVERB < +FOCUS
    A constituent that is focused by a focus-sensitive adverb does
    not c-command the adverb.
   b. −FOCUS < ADVERB
    A constituent that is not focused by a focus-sensitive adverb does
    not c-command the adverb.

Engels' (2012) ADVERB < +FOCUS covers the tendency for contrastively focused (in the following +FOC or FOCUS DOMAIN) objects to appear to the right of a focus

operator (in the following F-OP), here a sentence adverbial, in examples like (10) and (11) above. Engels' –FOCUS < ADVERB on the other hand covers the tendency for non-focused elements (in the following –FOC) to appear preceding a sentence adverbial in sentences like (13)–(16) above. Examples (35) and (36) below are Engels' (2012) (3.17a) and (3.18a).

(35) Er [beTRÜGT]$_{[+foc]i}$ sie sogar t$_i$.   [GERMAN]
       he cheats.on   her even
       'He even cheats on her.'

(36) [LuIse]$_{[+foc]j}$ empfiehlt   ihm das Buch auch t$_j$. [GERMAN]
       Luise   recommends him the book   too
       'Also Luise recommends the book to him.'

In both these examples it is the presence of a +FOC element that triggers the word order where the complements precede the sentence adverbial. In (35) it is the verb that is +FOC and in (36) it is the subject. In both examples the sentence adverbial acts as the F-OP.

In this paper I will make use of Engels' (2012) constraints, with some adjustments, see (37) below. The original ADVERB < +FOCUS constraint makes the right predictions in its present form; the order sentence adverbial preceding +FOC is preferred. The constraint –FOCUS < ADVERB, however, does not explicitly mention an input including a +FOC element. Hence, it would constrain all non-focused elements to appear preceding a sentence adverbial, whether there is a +FOC element in the sentence or not. By using a notion FOCUS OPERATOR (F-OP) instead of ADVERB, I ensure that both constraints are vacuously fulfilled in sentences with no elements with +FOC. Referring to an F-OP in the constraint also opens up for using the same or a similar constraint for other languages where elements other than sentence adverbials act as an F-OP.

In (37), I also adjust Engels' (2012) constraints to the theoretical assumptions in my analysis. The non-hierarchical model has a flat F′ domain; hence the notion of c-command will not suffice to represent the linearisation of the elements in the constraint. Therefore this constraint will also refer to precedence.

(37) a. F-OP < +FOC
         A focus operator precedes and c-commands its focus domain.
     b. –FOC< F-OP
         A focus operator does not precede and c-command non-focused elements.

Example (38) below (repeated from (10)) shows that a pronominal object with contrast interpretation is required to appear in the in situ position in Danish. The same holds for Swedish. Since there is no context provided, the i-structure is underspecified for information status. Consequently the i-structure input in (39) just specifies the focus domain with the sentence adverbial acting as an F-OP.

(38) a. Han så   ikke HENDE (men han så den anden pige). [DA]
   he *saw* *not* *her*
   'He didn't see HER (but he saw the other girl).'
  b. *Han så HENDE ikke.

(39) *I-structure input*

$$\left[\text{FOCUS} \quad \begin{bmatrix} \text{DOMAIN} & \{her\} \\ \text{OPERATOR} & \{not\} \end{bmatrix} \right]$$

Tableau 8. Contrasted pronominal object, Danish (and Swedish).

	Han . . .	F-OP < +FOC	ACTVN$_0$-L
	så HENDE ikke	*!	*
☞	*så ikke HENDE*		**

The constraint F-OP < +FOC is ranked higher than all ACTVN constraints in Swedish and Danish, and therefore this constraint settles the competition in Tableau 8. The shifted word order is the best candidate when it comes to ACTVN, but the in situ word order is the best candidate when it comes to contrast on the object. The constraint F-OP < +FOC is violated once in the shifted word order, and the winner is the in situ word order. In a sentence with no +FOC this constraint would be vacuously fulfilled and ICON-MOD would pick the winner.

 Let us now turn to contrast in Icelandic. As mentioned above, Collins & Thráinsson (1996:406) state that contrasted definite NP objects in Icelandic must be in the in situ position, see (40). The ranking for Icelandic in Tableau 9 below accounts for this.

(40) Hann les   ekki BÆKURNAR.   [ICE]
  he   *reads* *not*   *the.books*
  'He doesn't read the BOOKS(, but he reads something else).'

(41) *I-structure input*

$$\left[\text{FOCUS} \quad \begin{bmatrix} \text{DOMAIN} & \{books\} \\ \text{OPERATOR} & \{not\} \end{bmatrix} \right]$$
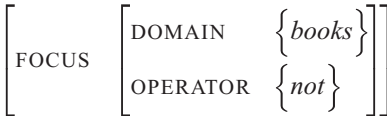
Tableau 9. Contrasted definite NP object, Icelandic.

	Hann	F-OP < +FOC	ACTVN$_2$-L	ICON-MOD	ACTVN$_3$-L
	las BÆKURNAR ekki,	*!	*	**	
☞	*las ekki BÆKURNAR,*		**	*	

In Tableau 9 the ACTVN constraint $ACTVN_2$-L is violated twice by the in situ word order *ekki bækurnar* 'not the books', with contrast on *bækurnar*. However the ranking F-OP < +FOC ≫ $ACTVN_2$-L makes the in situ word order the winner, since this word order does not violate F-OP < +FOC by placing a contrasted element in position other than directly to the right of the focus operator, the negation. Also $ACTVN_3$-L is ranked lower than F-OP < +FOC, which matches the fact that indefinite objects remain in situ when contrasted, just as they do in a neutral context with no contrast.

Let us turn to the facts about contrasted pronominal objects to see where F-OP < +FOC is to be ranked in relation to $ACTVN_0$-L in Icelandic. Example (42) from Thráinsson (2007:32, 67) (repeated from (11) and (12) above) shows that pronouns with the ACTVN value 0 may appear shifted or in situ in Icelandic.

(42) a. Jón   las   aldrei HANA.   [ICE]
       John   read   never   her
       'John never read IT (but he may have read something else).'
   b. Hún   sá   MIG   ekki.   [ICE]
       she   saw   me   not
       'She didn't see me.'

(43)   *I-structure input*

$$
\begin{bmatrix}
\text{FOCUS} & \begin{bmatrix} \text{DOMAIN} & \{her/me\} \\ \text{OPERATOR} & \{not\} \end{bmatrix}
\end{bmatrix}
$$
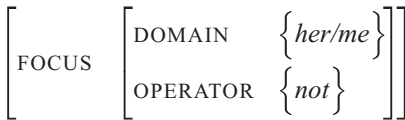
Tableau 10. Contrasted pronominal object, Icelandic.

	Hún . . .	$ACTVN_0$-L	F-OP < +FOC	$ACTVN_1$-L
☞	*sá MIG ekki,*		*	
	sá ekki MIG,	**!		

In Tableau 10 the constraint $ACTVN_0$-L is violated twice for the in situ word order while F-OP < +FOC is violated once for the shifted word order. The dashed lines between the constraints indicate that the competition between the two candidates is not fixed. The ranking may be $ACTVN_0$-L ≫ F-OP > +FOC with the shifted word order as the winner, as illustrated in the tableau, or F-OP < +FOC ≫ $ACTVN_0$-L with the in situ word order as the winner. It is unclear which factor decides when a contrasted object pronoun is in situ and when it is preferred to be shifted, but the most intriguing of these positions is without doubt the shifted one, since it makes it clear that not all contrasted pronominal objects have to follow a sentence adverbial (if present) in Scandinavian languages. Furthermore, I have at this point no clear data for elements with ACTVN value 1 in Icelandic, therefore the ranking for F-OP in relation to $ACTVN_1$-L cannot be settled here either.[25] I will have to leave these two questions for future research, and this is marked with dashed lines in the tableau.

As we saw in the previous section, there is also a tendency for non-contrasted elements to be dispreferred in the in situ position, in sentences where there is contrast on another element. This tendency is captured by the constraint –FOC < F-OP, see (37b) above.

The constraint –FOC < F-OP penalises non-contrasted elements appearing in the in situ position, but only when the i-structure input contains a focus domain and an F-OP. When there is no contrastive focus, and hence no F-OP, in the input, this constraint is vacuously fulfilled and the ranking of other constraints decide the competition.

In the Icelandic sentence from Diesing (1997:412) in (44) (repeated from (13)) it is the verb that is contrasted.

(44) Ég les bækur ekki . . .   [ICE]
    I   read books not
    'I don't READ books . . . (I only BUY them).'

(45) *I-structure input*

$$\left[\text{FOCUS} \left[\begin{array}{ll} \text{DOMAIN} & \{read\} \\ \text{OPERATOR} & \{not\} \end{array} \right] \right]$$

Tableau 11. Contrast on another element, Icelandic.

	Hann . . .	–FOC < F-OP	ICON-MOD	ACTVN$_3$-L
☞	*LES bækur ekki,*		**	*
	LES ekki bækur,	*!	*	**

In Icelandic the constraint –FOC < F-OP is ranked higher than both ICON-MOD and ACTVN$_3$-L, and it is violated by an in situ word order, where a non-contrasted element follows the F-OP. Instead, the shifted word order is the winner. For Icelandic, we know that –FOC < F-OP must be ranked higher than ICON-MOD to allow shifted indefinite NPs in these contexts. It is however not settled where this constraint is ranked in relation to the constraints higher in the hierarchy and notably in relation to RESP-I.

In Swedish and Danish it is objects with the ACTVN value 1 that unexpectedly appear in the shifted position when there is contrastive focus on another element. The constraint –FOC < F-OP must also in these languages be ranked higher than ICON-MOD, which here means that it outranks ACTVN$_1$-L and all other lower ranked ACTVN constraints. I repeat the Swedish example (14) here as (46).

(46) CONTEXT: Så du tror att hon är en mördare?   [SW]
    'So you think she is a murderer?'
    Jag tror   det inte. Jag fruktar det.
    I   think it   not I   fear   it
    'It is not a matter of thinking. I fear it.'

(47) *I-structure input*

$$
\begin{bmatrix}
\text{FOCUS} & \begin{bmatrix}
\text{DOMAIN} & \left\{ \textit{think} \right\} \\
\text{OPERATOR} & \left\{ \textit{not} \right\}
\end{bmatrix}
\end{bmatrix}
$$
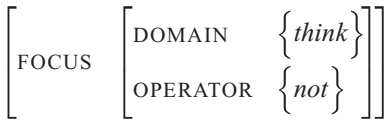
Tableau 12. Contrast on another element, Swedish (and Danish).

	Jag [. . .] Jag FRUKTAR det.	–FOC < F-OP	ICON-MOD	ACTVN$_1$-L
☞	[*TROR det inte.*]		**	*
	[*TROR inte det.*]	*!	*	**

In Tableau 12, –FOC < F-OP is violated once by the in situ word order *TROR inte det* 'not it'. The shifted word order on the other hand does not violate this constraint and *TROR det inte* is the winner.[26] The competition between –FOC < F-OP and ACTVN$_0$-L on the other hand cannot be settled at this time, since both reward a shifted word order.

4.5 Comparing Swedish/Danish and Icelandic

In Sections 4.2–4.4 I have presented constraints on linguistic factors that affect object positions in the F′ domain in Swedish/Danish on the one hand and Icelandic on the other. In this section I recapitulate the similarities and differences between the rankings.

(48) a. *Swedish/Danish*
        HEAD-L ≫ F-OP < +FOC ≫ ACTVN$_0$-L ≫ ICON-MOD ≫ ACTVN$_1$-L ≫
        ACTVN$_2$-L ≫ ACTVN$_3$-L
    b. *Icelandic*
        HEAD-L ≫ ACTVN$_0$-L | F-OP < +FOC | ACTVN$_1$-L ≫ RESP-I ≫
        ACTVN$_2$-L ≫ ICON-MOD ≫ ACTVN$_3$-L

Looking at the partial ranking in (48) we find that there are both similarities and differences between Swedish/Danish and Icelandic. The highest ranked constraint for both varieties is HEAD-L, which ensures that the head of the F′ domain, i.e. the finite verb, precede all other elements in this domain (Tableau 1 above). In Icelandic it has not been settled where F-OP < +FOC is ranked in relation to the two highest ACTVN constraints (Tableau 10 above), whereas it has been shown that this constraint is ranked higher than all ACTVN constraints in Swedish/Danish (Tableau 8). The vertical bars in the ranking for Icelandic represent the competition not being settled.

The ICON-MOD constraint is also ranked differently for the two varieties. For Swedish/Danish this constraint is ranked high, to account for the fact that only objects with the highest ACTVN value shift in neutral contexts. In Icelandic, this constraint is ranked lower, between ACTVN$_2$-L and ACTVN$_3$-L to account for elements

with ACTVN_{0-2} shifting in neutral contexts (Tableaux 4 and 5). The constraint on information structure, RESP-I, is ranked higher than ACTVN_2-L to account for rhematic definite objects appearing in the in situ position in Icelandic (Tableaux 6 and 7). The role of RESP-I in relation to object positions in Swedish and Danish has not been discussed here, but see Ørsnes (2013) for an account for Danish.

The constraint –FOC < F-OP is not included in (48). The ranking of this constraint is not completely set, but (49) shows its ranking relative to ICON-MOD.

(49) *Swedish/Danish and Icelandic*
 –FOC < F-OP ≫ . . . ≫ ICON-MOD

Tableaux 11 and 12 show that –FOC < F-OP must be ranked higher than ICON-MOD both in Swedish/Danish and in Icelandic to account for the fact that objects that would otherwise appear in situ do shift when another element in the sentence is +FOC. The dots in (49) represent any other constraint that may intervene between –FOC < F-OP and ICON-MOD.

This paper mainly deals with object positions relative to sentence adverbials in the F′ domain. To develop a more general OT analysis of word order in this domain, we need to include also subjects and grammatical relations. Furthermore, a complete account of object placement needs to take the initial position into account but this is beyond the scope of this article, see Engdahl et al. (2004) and Andréasson (2007a) on the word order in the F′domain, and Ørsnes (2013) for an account including the initial position. There is, however, a problem with the suggested ranking of –FOC < F-OP in Swedish/Danish which I will discuss in the next section.

4.6 The need for a constraint on prosody

Tableau 12 above, shows that the constraint –FOC < F-OP must be ranked higher than the ACTVN constraints with values 1 and higher in Swedish and Danish. Unfortunately, such a ranking would also allow all nominal objects to shift in a sentence with contrastive focus on some element other than the object. This is not grammatical in Swedish and Danish. In the following, I will draft a possible solution to this.

Josefsson (2010) presents an analysis which takes into account syntactic, information structure and prosodic aspects of pronominal object shift in Swedish. Josefsson focusses on the prosodic features and her main purpose is to investigate to what extent it is optional for unstressed pronominal objects to appear in situ, in syntactic environments where object shift is possible in Swedish. Josefsson suggests that shifted objects form a prosodic word with the element to their left, whether it is the finite verb, a subject NP or an adverb. This word unit has the Swedish word accent 1, where there is stress on the first syllable and any following syllables are unstressed. In Josefsson's investigation the informants were asked to read out test sentences, with no stress on the object pronoun, and judge their acceptability. The

informants seemed to accept the two object pronouns, *henne* 'her' and *honom* 'him' in situ more readily than the monosyllabic pronouns. Josefsson proposes that this may be due to *henne* and *honom* being disyllabic, and hence prosodically 'heavier' than the monosyllabic pronouns.

Andréasson (2008, 2010) shows that non-contrasted *henne* and *honom* appear in situ only to a very limited extent in writing. Only about 5% of the *henne*/*honom* from written sources appear in situ without a clear contrast in the context. Bentzen et al. (2013) on the other hand have found that as much as 36% of all Swedish non-contrasted object pronouns with NP antecedents appear in situ in written sources, and that *henne*/*honom* 'her/him' only represent three out of the total of 17 instances found, while 14 instances are monosyllabic. This discrepancy between the results of Andréasson, Josefsson and Bentzen et al. is interesting. Bentzen et al. have worked with authentic spoken material and it seems that pronominal objects remain in situ to a greater extent in speech than in writing. However, Bentzen et al. have not had access to the sound files for the Swedish material, and to confirm their results, a more thorough prosodic analysis would have to be performed.

Nevertheless, we see a possible difference between spoken and written Swedish. Recall example (4) above, where the difference in pronunciation of the pronoun *det* was the only thing that indicated that the antecedent in (4a) was the computer game and in (4b) the act of Agnes buying a computer game. In writing, the answer would have been ambiguous.

In spoken language there is a possibility for prosodic marking of contrast and, as we have seen here, of accessibility. This prosodic marking is not available in writing. In written text we must instead use other means to avoid ambiguity. In example (4), a writer may have considered using an expression with more descriptive content than a pronoun to resolve the ambiguity. And – as we have seen – in a sentence where object shift is an option, the shifted word order may be used to syntactically mark a high ACTVN value as well as contrast on another element.

We know that only unstressed object pronouns are allowed in the shifted position in Swedish and Danish. Let us return in example (50) to the sentence in (46) above, now marked with prosodic information.

(50) Jag TROR ^{0}det inte. Jag fruktar det.   [SW]
    I   think   it   not   I   fear   it

In Section 2, I showed that the difference between elements with the ACTVN value 0 and 1 in the examples discussed in this paper is prosodic and not lexical. ACTVN value 0 is unstressed, and value 1 is slightly stressed. In this example, the object pronoun *det* 'it' is embedded under the non-factive matrix verb *tro* 'think', which I take to mean that its ACTVN value is 1. In a sentence where *det* is in situ (see example (2) above), or for example in a sentence with no sentence adverbial, the pronoun would be slightly stressed. In (50) it is unstressed. It is not likely that contrast on

another element has suddenly promoted the referent of this pronoun to ACTVN value 0, i.e. made the referent more accessible. Rather it seems that the pronoun has been de-stressed to be allowed in this position. Even if this needs to be investigated further on naturally occurring data, it does suggest that some objects actually get de-stressed regardless of their ACTVN value.

A highly ranked constraint on the de-stressing of objects that appear in the shifted position is one way to prevent elements other than pronouns from shifting in mainland Scandinavian. All nominal elements except pronouns carry some kind of word stress.[27] This constraint must be ranked higher than –FOC < F-OP in mainland Scandinavian. In Icelandic such a prosodic constraint should be ranked low, at least lower than –FOC < F-OP and the other constraints discussed in this article. I will not attempt to include such a constraint in this analysis; instead I will leave this for future research.

5. CONCLUSION

To conclude, we have seen that accessibility is one key to pronominal object shift; if we take this ACTVN effect into account, it is possible to have a unified analysis of both mainland Scandinavian and Icelandic object shift. We have also seen that contrast on the pronominal object overrides the ACTVN effect, and so does contrast on other elements. Interestingly, these effects of contrast do not rule out the ACTVN effect altogether, but only do so to a certain degree. An OT analysis with one ranking of constraints for Swedish/Danish and another for Icelandic is one way to account for this.

There are several outstanding issues with object shift that must be addressed in a larger analysis. One example is the impact of de-stressing on shifted objects in Swedish and Danish mentioned above. Another is the fact that contrasted pronouns in Icelandic may appear in both the shifted and the in situ position. It must be settled whether there is some factor that decides this or if this is truly optional. A third example of outstanding issues is that the effect of information structure on object shift in Danish and Swedish has not yet been explored. These and other questions will require further research.

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NOTES

1. Holmberg (1999) and others also discuss examples where a non-finite lexical verb appears in the initial position: *Kysst har jag henne inte* 'kissed have I her not'. In these cases object shift is possible as well. I will not explore this, see instead Engels & Vikner (2013 this issue).
2. Examples in this paper are construed, unless otherwise indicated in the preceding text.
3. There are some varieties, for example the dialect Övdalian, where no kind of object shift is present (Garbacz 2010).
4. In this paper I focus on object shift. Hence I have chosen not to discuss other unstressed elements that shift in the languages discussed here, namely unstressed locative adverbs corresponding to *there* and *here* that may shift in Danish, and in some Swedish varieties (see Jørgensen 2000, Ørsnes 2013).
5. Thráinsson (2013) presents intriguing results from a corpus study that indicate that full NP object shift appears also in modern Faroese, contrary to what has been reported in the literature. In this paper I will only deal with Icelandic, and leave the Faroese full NP object shift for future research.
6. In this paper I expand on the findings in Andréasson (2008, 2009, 2010) on Swedish and Danish. For an analysis of object shift in Norwegian, see Anderssen & Bentzen (2012) and Bentzen et al. (2013).
7. In earlier work on object shift (see Andréasson 2008, 2009, 2010) I have made use of Gundel et al.'s (1993) Givenness Hierarchy. Gundel (2010) points out that the GH is to be seen not as presenting the lexical forms as markers of degree of accessibility, but rather as giving information about manner of accessibility. In this paper I will use a slightly different path.
8. For an easier comparison between the Accessibility Marking Hierarchy (Ariel 1991) and the Givenness Hierarchy (Gundel et al. 1993), I present the scale in reverse order compared to the presentation in Ariel (1991, 2001).
9. ACTVN as a cognitive status marker was introduced as a feature with a plus/minus value by O'Connor (2006), and elaborated on by Andréasson (2008) for the Lexical Functional Grammar d(iscourse)/i(nformation)-structure.
10. The marking ' here only represents the fact that the pronoun is not unstressed.
11. As mentioned above, variants of Swedish allow unstressed pronominal objects in situ. I will abstract from this here, but see Josefsson (2010) for discussion and analysis. There are also many pronominal objects that appear in the initial position, see Andréasson (2009, 2010) for discussion and analysis.
12. Swedish Parole corpus Språkbanken, http://spraakbanken.gu.se/swe/resurs/parole.
13. Danish corpus KorpusDk, http://ordnet.dk/korpusdk.
14. *Søstre på De syv Have 1: Den sorte vinge* by Camilla Wandahl (2012:11). In KorpusDk there is no clear example with contrast on the verb *tro*.
15. This approach was proposed for Swedish by Börjars, Engdahl & Andréasson (2003; see also Engdahl, Andréasson & Börjars 2004), and further developed in Andréasson (2007a, b). A similar proposal for Icelandic phrase structure has been put forward already by Dalrymple (2001:52), and served as inspiration for the model for Swedish.

16. The choice to call this projection FP instead of for example IP or CP – which are commonly assumed to accommodate so-called 'lexicalised' features, such as finiteness – is due to there being no reason for adopting two separate functional projections in Swedish in the not too hierarchical model (see Börjars et al. 2003, Engdahl et al. 2004, see also Sells 2001b for an analysis with CP and IP). Instead I follow Andréasson (2007a) and Börjars et al. (2003) in assuming that there is some type of functional projection in this position in the c-structure, called the FP, and focus on the analysis of word order variation in the F′ domain (see Bresnan 2001:100 on F).

17. In the constraints the ACTVN values will be expressed with subscribed numerals.

18. In the following, I will treat Swedish and Danish as one variety, and Icelandic as another. There are of course differences between Swedish and Danish when it comes to object shift (see Andréasson 2009, 2010), but the effects of contrast seem to be similar, so for the purpose of this paper this grouping is appropriate.

19. Both in Swedish and in Danish, the most frequent word order in declarative clauses with *tro* 'think' and a pronominal object is one where the object is in the initial position. For an analysis including the initial position, see Ørsnes (2013).

20. Both Thráinsson (2007) and Diesing (1997) also discuss how positions of object affect the specificity interpretation of the NP. I will leave for coming research how this fits into the present analysis.

21. Note that there is no one-to-one correspondence between old information and GROUND, or new information and RHEME. Also things that may be seen as 'old' may be part of the rhematic portion of a clause.

22. The i-structures in this paper include only attributes that are relevant to the discussed examples.

23. The ungrammaticality asterisk in (30a) and the question mark in (32b) are judgements from Thráinsson (2007:76).

24. Note that Engels' (2012:102ff.) use of FOCUS is based on the distinction focus vs. presupposition, and correlates with this paper's CONTRASTIVE FOCUS. This notions is distinct from Engels' (2012:142ff.) use of TOPIC and COMMENT, which correspond more to this paper's GROUND and RHEME.

25. However, note that the internal ranking for the ACTVN constraints in (21) shows that $ACTVN_0$-L should be ranked above $ACTVN_1$-L.

26. The ranking of –FOC < F-OP in relation to $ACTVN_0$-L is not clear, since both these constraints reward a shifted word order.

27. Some light adverbs, such as *här/her* 'here' and *där/der* 'there', also carry some kind of word stress, as mentioned earlier.

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