OBJECT SHIFT
OR OBJECT PLACEMENT IN GENERAL?

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Abstract

This paper addresses the phenomenon of pronominal object shift in Danish and Swedish and to what extent it is relevant to analyse object shift as an isolated choice between two positions. A corpus investigation reveals that there are distinct information dynamical strategies for the placement of pronominal objects in these languages. These strategies have not previously been discussed in connection with object shift and involve more positions than the IN SITU position and the SHIFTED position.

On the basis of this investigation, I argue that it is necessary to explore all positions for pronominal objects in order to analyse the underlying causes of objects appearing in the position traditionally referred to as SHIFTED.

1   Pronominal object shift

Pronominal object shift is – in brief – the possibility for pronominal objects to precede the sentence adverbial in Scandinavian languages, henceforth SHIFTED, whereas full NP objects must appear following the sentence adverbial, henceforth IN SITU.

In previous studies of object shift only these two positions are investigated, see e.g.: Holmberg (1986, 1999), Hellan & Platzack (1995), Josefsson (1992, 2003), Pedersen (1993) Sells (2001), Svenonius (2002), Vikner (1994, 1997, 2005), Andréasson (2008) and several others. In this paper, I show data that lead to the conclusion that all object positions must be investigated to fully analyse why pronominal objects appear preceding sentence adverbials, i.e. as SHIFTED.

The outline of the paper is as follows. In this this section a brief presentation is made of the notion of object shift and the role of the referent's accessibility. In section 2, I outline the problems with the method of previous studies, to investigate only two of all possible object position, and I present material, methods and results from the present investigation. Section 3 is a brief summary of the findings.

1.1   The nature of the object and information dynamics

Ever since Holmberg (1986) it has been well known that object shift has structural as well as information dynamical delimitations. One of the structural delimitations concerns the nature of the object. Pronominal objects, but not full NP objects, usually precede sentence adverbials in mainland Scandinavian languages. For an example of this, see (1), where the pronoun *den*, 'it', but not the full NP *boken*, 'the book', is licensed preceding the negation *inte*, 'not'.

(1) Agnes köpte {den inte /*boken   inte}. [SW]
     Agnes bought {it   not /*the book not}.
     'Agnes didn't buy the book/it.'

Another structural delimitation that Holmberg (1986) mentions is that object shift is not licensed in clauses where the lexical verb is not in V2, see (2a).

(2) a. *Agnes hade den inte köpt.   [SW]
          Agnes had it   not bought
          'Agnes had not bought it.'
     b. *I know that Agnes hade den inte köpt.   [SW]
          I know that Agnes had   it   not bought
          'I know that Agnes had not bought it.'

The information dynamical delimitation on object shift presented in previous studies is generally that only "non-stressed" pronominal objects shift. Pronouns with contrast interpretation and – in speech – contrastive stress, here marked with double apostrophes, must appear after sentence adverbials, see (3). In Swedish, it is not ungrammatical for an unstressed, non-contrasted pronoun to appear IN SITU, but in standard Danish unstressed pronouns following sentence adverbials is considered ungrammatical, see (4) (cf. Pedersen 1993). Unstressed pronouns are here marked with a subscribed zero. Marking for prosody will only be made when it is relevant for the analysis.

(3) Agnes$_i$ såg "David men han såg inte "henne$_i$. [SW]
     Agnes$_i$ så   "David men han så   ikke "hende$_i$. [DA]
     Agnes saw "David but he saw not "her
     'Agnes saw David, but he didn't see her.'

(4) Agnes såg boken,   men hon köpte {^{0}den inte /inte ^{0}den}. [SW]
     Agnes så bogen,   men hun købte {^{0}den ikke /*ikke ^{0}den}. [DA]
     Agnes saw the book but she bought {^{0}it   not/ *not ^{0}it}
     'Agnes saw the book, but she didn't buy it.'

These information dynamical restrictions have given rise to the analysis of object shift where an unstressed pronoun "escapes" 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).

   In this paper, I primarily discuss pronominal object shift and the data I present is from Swedish and Danish. There is, however, variation across Scandinavia, when it comes to the nature of the objects that shift. I will here only briefly mention Icelandic and the Swedish variety Övdalian. In Icelandic definite NPs too may appear preceding negation when the lexical verb is in V2 (the examples in (5) and (6) are from Vikner 2005).

(5) Af hverju las   Pétur *aldrei þessa bók*? [ICELANDIC]
what   read-PST Peter never this   book
'Why did Peter never read this book.'

(6) Af hverju las   Pétur *þessa bók   aldrei*? [ICELANDIC]
why   read-PST Peter this   book never
'Why did Peter never read this book?'

In Övdalian (the dialect of Älvdalen, Sweden), on the other hand, no objects shift (the examples in (7) are from from Garbacz 2010).

(7) a. An såg int mig. [ÖVDALIAN]
he saw not me
'He didn't see me.'

b. *An såg mig it. [ÖVDALIAN]
he saw me not
'He didn't see me.'

The different possibilities throughout Scandinavia referred to here may be illustrated as a scale from no object shift in Övdalian to definite NP object shift in Icelandic, see (8). I will briefly return to this scale in the next section.

(8)
Övdalian $\longrightarrow$	**Swedish** $\longrightarrow$	**Danish** $\longrightarrow$	**Icelandic**
no OS	*pronominal OS*	*pronominal OS*	*definite NP OS*
	(no OS)		

1.2 The type of antecedent and accessibility

In Andréasson (2008, 2009), I address the fact that the analyses presented in previous work on object shift seem to deal with only pronominal objects with NP antecedents, henceforth *pro*$_{NP}$, such as *den* in example (1) above, and overlook object pronouns with sentence antecedents, henceforth *det*$_{S}$. In these papers, I show that there is a significant difference in distribution for object *pro*$_{NP}$ and *det*$_{S}$,[1] and that this distributional difference may be linked to a difference in accessibility of the object referents. In the following, I will summarise the differences in distribution for *pro*$_{NP}$ and *det*$_{S}$ for the SHIFTED and IN SITU positions investigated in Andreasson (2008, 2009).

As mentioned above it is not ungrammatical for a non-contrasted object pronoun to appear IN SITU in Swedish. Nevertheless, non-contrasted *pro*$_{NP}$ IN SITU appear to be very rare in written Swedish (Andréasson 2008). The numbers in table 1 show that Swedish and Danish are very similar when it comes to the distribution of *pro*$_{NP}$ in relation to negation. All of the Danish *pro*$_{NP}$ in the IN SITU position where overtly contrasted, while about half of the Swedish *pro*$_{NP}$ IN SITU were not (Andréasson 2008).

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[1]Preliminary investigations show that object pronouns with VP antecedents, *det*$_{VP}$, show a similar distrubutional pattern as *det*$_{S}$ but here, as well as in Andréasson (2008, 2009) I deal primarily with *det*$_{S}$.

Swedish	shifted		in situ	
honom/henne	115	(91%)	12	(9%)
Danish	shifted		in situ	
ham/hende	325	(93%)	24	(7%)

TABLE 1: *Positions for pronominal objects with NP antecedents (*pro$_{NP}$*)*
'him'/'her' in relation to negation (Andréasson 2008)

Det$_S$ without contrast interpretation, as in (9), on the other hand appear IN SITU to a greater extent than the *pro*$_{NP}$ both in Swedish and – more surprisingly – in Danish, where non contrasted objects IN SITU are considered ungrammatical.

(9) – Agnes köpte boken. Förstod du inte det? [SW]
  – Agnes købte bogen. Førstod du ikke det? [DA]
   Agnes bought the book understood you not that
  'Agnes bought the book. Didn't you understand that?'

In non-declarative sentences, Andréasson (2008) shows that as many as 76% of the object pronouns with sentence or VP antecedents in Swedish and 81% in Danish appear IN SITU. In declarative sentences, only Swedish shows a difference in distribution with relation to the *pro*$_{NP}$; 25% of the object pronouns with sentence and VP antecedents appear IN SITU. For Swedish, a difference in distribution between sentences with factive and non-factive matrix verbs was also found. In sentences with a non-factive matrix verb, as many as 72% of the *det*$_S$ are IN SITU in Swedish. In sentences with a factive matrix verb, only 9% appear IN SITU.

In Danish only 6% of the object pronouns with sentence and VP antecedents appear IN SITU in declarative sentences, and all the Danish examples with *det*$_S$ IN SITU in Andréasson (2008) are sentences where the matrix verb is non-factive. Thus, for Danish, the numbers for declarative sentences seem to match those for *pro*$_{NP}$, in table 1 above. As we will see in section 2, this is not entirely true.

In Andréasson (2008, 2009), I present an analysis where it is not the type of antecedent per se that affects the difference in distribution between *det*$_S$ and *pro*$_{NP}$. Rather it is the cognitive status, or accessibility, that the referents of the object pronouns are assumed to have in the mind of the listener that lies behind the distribution. The analysis that elements with different levels of accessibility are placed in different syntactic positions relates to observations for English on choices between referring expressions (Gundel, Borthen and Fretheim 1999; Gundel, Hegarty and Borthen 2003).

The accessibility hierarchy of Gundel, Hedberg and Zacharski (1993), in Figure 1, is a model of how different levels of cognitive status are linked to nominal expressions in English. The more accessible a speaker assumes a referent to be in the listener's mind, the further to the left of this scale she may go when she chooses a suitable nominal expression.

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

FIGURE 1: *Givenness hierarchy, Gundel, Hedberg & Zacharski (1993)*

Gundel et al. (2003) show that when the antecedent is an NP, it is legitimate to use the pronoun *it*, the expression highest on the accessibility scale. When the antecedent instead is a non-factive clause or VP, reference must be made with the pronoun *that/this*, an expression further down on the scale (Gundel et al. 2003; Hegarty 2003). Example (10) below (from Gundel et al. 1999) illustrates that the pronoun *it* may refer to an NP, since this pronoun is not felicitous referring to the situation expressed by the entire clause *There was a snake on my desk*.

(10)   a.   There was [a snake]$_i$ on my desk. It$_i$ scared me.
        b.   [There was a snake on my desk.]$_j$ That$_j$ scared me.

In English the two highest levels of accessibility are linked to distinct word forms, the pronouns *it* and *this/that*. In Swedish,[2] this difference in accessibility is not expressed by different lexical items, but by a slight difference in pronunciation. When the antecedent is an NP, (11a), an unstressed *det*, here marked with a zero, and when the antecedent is a sentence, (11b), a slightly more stressed *det*. Please note that this slight difference in stress does not signal contrast.

(11)   a.   – Agnes har tydligen köpt   [ett nytt dataspel]$_i$.   [SW]
              Agnes has obviously bought a new computer game
              'Agnes obviously bought a new computer game.'

            – Ja, jag har faktiskt sett ^{0}det$_i$.
              yes I   have actually seen it
              'Yes, I actually saw it.'

        b.   [– Agnes har tydligen köpt   ett nytt dataspel]$_i$.   [SW]
              Agnes has obviously bought a   new computer game
              'Agnes obviously bought a new computer game.'

            – Ja, jag har faktiskt sett 'det.
              yes I   have actually seen that
              'Yes, I actually noticed that.'

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[2]Gundel, Borthen and Fretheim (1999) note that the choice between *it* and *that* in English correspond to a similar choice in Norwegian, between one deaccented and another, slightly more accented *det*. Discussions with native Danes give reason to believe that similar differences in stress are relevant for Danish as well.

As argued in Andréasson (2008, 2009) the distributional and phonological observations for det_S can not be explained as a difference in contrast, i.e. pronouns escaping from a focus domain. Instead the difference in stress signals two distinct levels of accessibility, and only pronouns where the antecedent has the highest level of accessibility are completely unstressed and hence licensed in the SHIFTED position. This matches the results for the pro_{NP} in table 1 and it also matches the Swedish results for det_S with factive and non-factive verbs in Andréasson (2008) summarised above.

It is well known that factive verbs trigger the presupposition that their complements have a truth value. In a sentence like (12a) below, the factive matrix verb *understand* triggers the presupposition that the speaker considers the statement *she saw me* to be true, and this presupposition remains also when the matrix verb is negated, see (12b).

(12)   a.   I understood that she saw me.
                PRESUPPOSITION: She saw me.
        b.   I didn't understand that she saw me.
                PRESUPPOSITION: She saw me.

Non-factive verbs on the other hand do not trigger any presupposition about the truth value of their complements. In (13) below, it is equally possible to follow up the statement *I thought that she saw me* with an affirming *...and she did* as with a negating *...but she didn't*.

(13)   I thought she saw me,
        a.   ... and she did.
        b.   ... but she didn't.

When the matrix verb is factive, the truth value of the proposition represented by the subordinate clause is presupposed and assumed to be known by the listener. In this case it is felicitous to use a linguistic form that signals the highest level of accessibility – in English *it*, and in Swedish and Danish an unstressed pronoun, *det*, preceding a negation. However, if the matrix verb is non-factive, the proposition of the subordinate clause does not have a presupposed truth value, and it is not felicitous to use the linguistic expression corresponding to the highest level of accessibility or realise the pronoun in a position where only accessible elements are licensed.[3]

Andréasson (2008, 2009) assumes that the syntactic position preceding the negation, SHIFTED, is linked to the highest level of accessibility both in Swedish and in Danish.

The situation in the varieties of Scandinavian mentioned in section 1.1 may be illustrated as in Figure 2, below, showing where the negation appears in relation

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[3]There are also other means of promoting a referent to the highest level of accessibility (Gundel et al. 1999). These have relevance for Swedish and Danish, and I refer to Andréasson (2008) for a presentation of them.

to different levels of cognitive status for the different languages or varieties. The different ACTVN features refer to the LFG-analysis of Andréasson (2008) and are a small development of the activation feature originally put forth by O'Connor (2006), where 0 corresponds to a referent that the speaker assumes to be cognitively fully accessible for the speaker, and with no need for further activation, i.e. *in focus* on the accessibility hierarchy.[4]

in focus	activated	familiar	identifiable	referential	type identifiable
it	*this/that/ this N*	*that N*	*the N*	*indefinite this N*	*a N*
ACTVN +0	ACTVN +1	ACTVN +2	ACTVN +3	ACTVN +4	ACTVN +5

Övdalian *int* 'not' *no OS*   **Swedish** *inte* 'not' *pronominal OS (no OS)*   **Danish** *ikke* 'not' *pronominal OS*   **Icelandic** *ekki* 'not' *definite NP OS*

FIGURE 2: *Givenness hierarchy and object placement in relation to negation in Scandinavian varieties*

Figure 2 illustrates the fact that in Övdalian no objects shift, and the negation must precede objects regardless of their cognitive status. For Icelandic the border is between ACTVN +3 and ACTVN +4 and for Swedish and Danish the negation appears preceding object pronouns that have ACTVN +1. As mentioned earlier, Swedish allows weak objects IN SITU even if this is rare, so in some respect Swedish may be seen as intermediate between standard Danish that allows no weak objects IN SITU and Övdalian that must have all objects IN SITU.

2   Investigating all positions

One of the problems that the investigation in Andréasson (2008) fails to solve is the seemingly large number of SHIFTED *det*$_S$ in declarative sentences with non-factive matrix verbs in Danish. As mentioned above, this investigation implied that as many as 94% of the *det*$_S$ are shifted in these sentences. Given that the pronominal

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[4]O'Connor (2006) makes use of a ±ACTVN feature, where the value "–" marks a situation where the speaker assumes that there is no need for extra lexicogrammatical marking to activate a referent in the listener's mind. This corresponds to the value 0 in this paper as well as in Andréasson (2008). Here, I use O'Connor's activation feature as a "place holder" for a future, more elaborate analysis of the architecture of the LFG i-structure than Andréasson (2008).

complements of non-factive verbs normally would represent information that is not presupposed, the numbers in the corpus investigation would point an analysis of Danish where also pronouns whose referents have a ACTVN +1 value are licensed in a SHIFTED position. As we shall see, this is nevertheless not the case.

The problem with the investigation in Andréasson (2008) and many other object shift studies lies in the method of investigation. As long as we see object shift as a binary choice between two positions, SHIFTED and IN SITU, we cannot explain the whole range of data.

In January 2008, Danish informants without any linguistic training[5] were asked to choose between the two word orders in example (14).

(14)   a.   Jeg tror det ikke. [DA]
                I   think that not
                'I don't think so.'
        b.   Jeg tror ikke det. [DA]
                I   think not that
                'I don't think so.'

For a speaker of Swedish the corresponding choice would be easy, all informants would choose the IN SITU word order in (14b) over the SHIFTED word order in (14a), which would correspond to the findings in the corpus study of Andréasson (2008). The Danish informants, however, did not choose the IN SITU word order. Neither did they choose the SHIFTED option. Instead, they simply refused to chose, and they stated that only a word order where the *det*$_S$ was in the initial position would be acceptable, see (15).

(15)   Det tror jeg ikke. [DA]
        that think I   not
        'I don't think so.'

The word order in (15) is also possible in Swedish, and in elicitation tests Swedish informants sometimes suggest this word order as an alternative to the IN SITU word order in declarative sentences. The Danish informants, however, stated that the initial position was the only choice in the declarative sentences with non-factive matrix verbs presented to them.

Interestingly, when presented with non-declarative sentences, where the initial position is not available, the IN SITU position, see (16), was the unmarked option also for the Danish informants. This corresponds very well to the findings of the corpus investigation in Andréasson (2008, 2009) where the IN SITU position is dominant both for Swedish and Danish in non-declarative sentences, see above.

(16)   a.   Hvorfor tror du ikke det? [DA]
                why   think you not that

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[5]This investigation was performed during a NORMS/ScanDiaSyn workshop in Western Jutland, January 2008. Other Danish informants also have the same intuition.

'Why don't you think so?'

    b.   Tror du ikke det? [DA]
           think you not   that
           'Don't you think so?'

Both corpus data and informants' judgements suggest that object pronouns with the same cognitive status seem to be linked to different syntactic positions in Swedish and Danish, and that it is necessary to investigate all possible positions for object pronouns to be able to decide if this is the case. In Figure 3, all positions for pronominal objects are presented.[6]
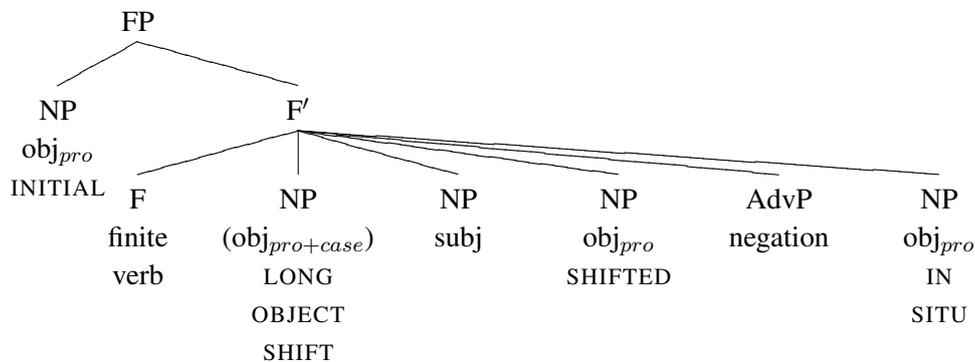
FIGURE 3: *Positions for pronominal objects in Swedish (phrase structure, see Börjars, Engdahl & Andréasson 2003; Andréasson 2007)*

In the following I will present data that strengthens the hypothesis that it may be infelicitous to investigate object shift as a choice between positions preceding and following the negation. The data instead points to the benefits of an analysis of object placement in general in the Scandinavian languages.

2.1 Methods of investigation

In Andréasson (2008), I followed the practice of previous studies and investigated object pronouns that were SHIFTED and IN SITU. I used two web corpora, for Danish the Korpus 2000[7] and for Swedish the GP04 corpus[8] and I used a search string that produces all occurrences of *det* immediately preceding or following the negation *inte/ikke*, 'not', i.e. *det inte/ikke* and *inte/ikke det*, 'it not'/'not it'.

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[6]The possibility for long object shift, where a pronominal object precedes the subject in the F′ domain, is not available for object pronouns that are not case marked and will not be further discussed in this paper.

[7]Korpus 2000 (<http://korpus.dsl.dk/korpus2000/engelsk_hovedside.php3?lang=dk>) consists of about 28 million words of mixed genres, and was collected during the years 1998–2000.

[8]GP04 (<http://spraakbanken.gu.se/konk/>) consists of 19 million words from the daily newspaper Göteborgs-Posten, i.e. the total edition for 2004.

The data presented in this paper are partial results from an ongoing corpus investigation where I aim to investigate all possible positions for *det*$_S$ and – initially – get quantitative data on word orders. However, *det* is one of the most common words in Swedish and Danish; it is not case marked, so the pronoun may represent either a subject or an object function, and there is a great deal of homonymy, since *det* is also the neuter form of the definite article in both languages. Because of this I have chosen not to include the word form *det* in the search strings. Instead I perform searches for verbs that take sentential complements, with a negation in the immediate following context. The search strings, VERB [0–10 intervening words], for the corpora used are presented in (17) below.

(17)   a.   Korpus Dk: [word="forstår|forstod"] []{0,10} [lemma="ikke"]
            b.   PAROLE: [word="förstår|förstod"] []{0,10} [word="inte"]

For the current investigation I have made use of two morphologically tagged web corpora, for Danish the KorpusDK[9] and for Swedish the PAROLE corpus.[10]

So far I have investigated declarative clauses, with the factive verbs *veta/vide* 'know', and *förstå/forstå* 'understand', and the non-factive verbs *tro* and *tycka/synes*, both with the meaning 'think'/'believe'. The corpus study presented is a total investigation for these very frequent verbs in combination with a negation in these large corpora, so the quantitative data can be considered highly reliable.

2.2   Results for declaratives with non-factive and factive matrix verbs

Table 2 presents the data for the non-factive matrix verbs *tro* and *tycka/synes*, both with the meaning 'think'/'believe'. Example (18) shows the word orders relevant for the table.

(18)   a.   INITIAL: Det tror/tycker jag inte. [SW]
                  that think   I   not
                  'I don't think so.'
            b.   SHIFTED: Jag tror/tycker det inte.
            c.   IN SITU: Jag tror/tycker inte det.

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[9]KorpusDK (<http://ordnet.dk/korpusdk>) consists of about 56 million words of mixed genres, and was collected during the years 1990–2000.

[10]PAROLE (<http://spraakbanken.gu.se/parole/>) consists of about 19.4 million words of mixed genres, and was collected during the years 1976–1997.

Swedish	initial		shifted		in situ	
tro	67		12		27	
tycka	68		1		11	
Total	135	(73%)	13	(7%)	38	(20%)
Danish	initial		shifted		in situ	
tro	153		56		0	
synes	104		12		0	
Total	257	(79%)	68	(21%)	0	(0%)

TABLE 2: *Positions for pronominal objects with non-factive matrix verbs* tro *and* tycka/synes *'believe, think'*

Table 2 shows that as many as 79% of the det_S with non-factive matrix verbs in Danish and 73% in Swedish appear in the initial position. When investigating all possible positions for object pronouns the SHIFTED position is therefore no longer dominant in Danish, as it seemed to be in Andréasson (2008). These numbers clearly reveal that an investigation of only the SHIFTED and the IN SITU position would indeed give a misleading picture.

Furthermore, the method where I searched for the verbs in combination with a negation, and not the pronoun *det*, gave an unexpected result, namely that I also got quantitative data for objects that are not realised as pronouns. It turns out that factive matrix verbs, but not non-factive, allow for object ellipsis, in table 2 called ZERO, and that Swedish and Danish differ as to what extent object pronouns are left out for these verbs.

Table 2 presents the data for the factive matrix verbs *veta/vide* 'know', and *förstå/forstå* 'understand'. Example (19) show the word orders relevant for the table.

(19) a. ZERO: Jag vet/förstår   inte. [SW]
              I   know/understand not
              'I don't know/understand.'
      b. INITIAL: Det vet/förstår   jag inte.
                   that know/understand I   not
                   'I don't know it.'
      c. SHIFTED: Jag vet/förstår det inte.
      d. IN SITU: Jag vet/förstår inte det.

Swedish	zero		initial		shifted		in situ	
veta	572		243		23		20	
förstå	57		25		11		3	
Total	629	(66%)	268	(28%)	34	(4%)	23	(2%)
Danish	zero		initial		shifted		in situ	
vide	11		210		133		1	
forstå	22		130		186		1	
Total	33	(4.5%)	340	(49%)	319	(46%)	2	(0.5%)

TABLE 3: *Positions for pronominal objects with factive matrix verbs* veta/vide *'know' and* förstå/forstå *'understand'*

The numbers in Table 2 show that in Swedish there are two main options for det_S with factive matrix verbs, namely to leave out the det_S entirely (66%) or to place it in the initial position (28%). For Danish, the two main options are the initial position (49%) and the shifted position (46%). This leads to the conclusion that instead of realising a factive det_S in the shifted position, Swedish seem to prefer not to realise it at all, a fact that strengthens the assumption that its referent is highly accessible.

To conclude, if we assume that most of the det_S with non-factive matrix verbs indeed have the ACTVN value +1 (not fully accessible) and that det_S with factive matrix verbs have the ACTVN value 0 (fully accessible) we may summarise the patterns for Swedish and Danish as follows.

ACTVN 0: Both in Swedish and in Danish, only objects with the ACTVN value 0 are licensed in the shifted position. However, Swedish does not make much use of this opportunity of shifting for the verbs investigated, but prefers to leave them out.[11] Objects with ACTVN 0 are also licensed in the initial position in both languages.

ACTVN +1: Objects with the ACTVN value +1 are licensed in the IN SITU position in Swedish. In Danish they are only licensed in this position if the initial position is not available, for example in questions. Objects with ACTVN +1 are also licensed in the initial position in both languages.

2.3   Towards an OT analysis

The quantitative data presented above show some strong distributional tendencies, and qualitative analyses must also be performed. We have been able to conclude that both Swedish and Danish allow det_S with ACTVN +1 (here det_S complements of non-factive matrix verbs) in the initial position, and that for Swedish the IN SITU

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[11]The zero realisation of objects is not included in Gundels et al. (1993) scale, but may be considered to be even higher on the accessibility scale than *it* or the unstressed personal pronouns in the Scandinavian languages.

position is another frequent option. I will not discuss here what factors decide when a *det*$_S$ in Swedish appears initially and when it appears IN SITU. Instead I will briefly address the fact that Danish has relatively more SHIFTED *det*$_S$ with non-factive matrix verbs, a position where only ACTVN +0 would be expected. One factor that may explain this is that Swedish and Danish seem to use different syntactic strategies for expressing contrast.

Many of the Danish sentences where an *det*$_S$ with ACTVN +1 is SHIFTED display a contrast on another element in the clause. Swedish informants report the same intuition when presented with corresponding Swedish word orders. Here we will only look at an example with subject contrast, see (20).

(20)   Hvis mureren   og arkitekten   fastholder, at   en udkradsning og
        if   the bricklayer and the architect maintains that a scraping   and
        efterfugning   er tilstrækkelig, skal De tage et skriftligt forbehold.
        following grouting is satisfactory   shall you take a written   reservation
        Jeg tror   det nemlig ikke. [DA]
        I   think it   namely not
        'If the bricklayer and the architect maintains that a scraping and a follow-
        ing grouting is satisfactory, you must put your reservations in writing. *I*
        am as a matter of fact not of that opinion.'

In (20), the opinions of the subject referent, the author *jeg*, diverge from those of *mureren og arkitekten* ('the bricklayer and the architect'), and *jeg* is interpreted as contrasted.

In Swedish, subject contrast is expressed syntactically and it would be preferred to use a word order with *det*$_S$ in the initial position and the subject pronoun following the negation, as in the construed sentence in example (21a). In Danish this S-ADVL < SUBJ word order is ungrammatical, see (21b).

(21)   a.   Det tror   nämligen inte jag. [SW]
              that think namely   not I
              'I$_{contrast}$ – as a matter of fact – don't think so.'
        b.   *Det tror   nemlig ikke jeg. [DA]
              that think namely not   I
              'I$_{contrast}$ – as a matter of fact – don't think so.'

In the Swedish sentence in (21a) the pronominal subject follows the sentence adverbial and it would be interpreted as contrasted without any other context. Andréasson (2007) presents an LFG-OT analysis of how information dynamical factors interact with structural patterns, and shows that pronominal subjects following sentence adverbials are always interpreted as focussed. The relevant OT constraints that reward a S-ADVL < SUBJ word order when the subject is contrasted are presented in (22).

(22)   Ranking: F-OP»RESP-I

    a.   F-OP: Align (information dynamic operator-R, Focus domain-L), i.e. put the right edge of an information dynamic operator next to the left edge of a focus domain.

    b.   RESP-I: The linear order of constituents respect the information principle: i.e. GROUND < SCENE < RHEME.

F-OP is an alignment constraint that requires a focus operator to be aligned with the left edge of a focus domain, and RESP-I is a faithfulness constraint that among other things requires elements with the informational status GROUND to precede rhematic elements. In a sentence like (21a) the subject may very well be part of the GROUND but the ranking where F-OP outranks RESP-I still makes the S-ADVL < SUBJ the most felicitous.

In Danish, where the S-ADVL < SUBJ word order is ungrammatical the ranking must be the opposite: RESP-I»F-OP. The Danish means of expressing focus syntactically may instead be to place contrasted elements initially, see (20) above, a position where grammatical discourse functions, GDFs, are known to be licensed, see (23) (cf. Börjars, Engdahl & Andréasson 2003; Andréasson 2007). A det_S with higher ACTVN value may then be demoted and realised as SHIFTED to avoid a contrast interpretation.

(23)   a.   FP   →   XP   F′
               ($\uparrow$GDF)=$\downarrow$ $\uparrow$=$\downarrow$

    b.   F′   →   F,   NP,   NP,   NP,   VP,   XP*
             $\uparrow$=$\downarrow$ ($\uparrow$SUBJ)=$\downarrow$ ($\uparrow$OBJ$_{ind}$)=$\downarrow$ ($\uparrow$OBJ$_{dir}$)=$\downarrow$ $\uparrow$=$\downarrow$ $\downarrow \in$ ($\uparrow$ADJ)

3   Summary and outlook

In this paper, I have shown that it is not enough to look at two positions, SHIFTED and IN SITU, when exploring the underlying causes of pronominal objects appearing preceding sentence adverbials in Scandinavian languages, the phenomenon called *object shift*. Both the initial position and the possibility of object ellipsis must be considered.

We have seen that object pronouns with sentence antecedents, det_S, that do not have the highest cognitive status generally appear initially both in Swedish and in Danish. In Swedish they also frequently appear IN SITU, a position that is an option in Danish, only when the initial position is blocked by another element, i.e. in questions. Det_S that have the highest level of cognitive status generally appear initially or SHIFTED in Danish. In Swedish they are left out or appear initially. We have also seen that there are signs that contrast on another element seems to overrule some of these generalisations.

This paper presents partial results from an ongoing investigation. Detailed qualitative analyses of the different word orders will be performed as well as elicitations with Swedish and Danish informants. Other classes of factive and non-

factive verbs will be investigated, as well as sentences with temporal and modal auxiliaries, *göra* ('do') and copular verbs, both in written and in speech corpora.

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