

# Pronominal object shift – not just a matter of shifting or not

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## Abstract

In this article, I give a status report and present data from an ongoing investigation of the underlying mechanisms of pronominal object shift in Danish and Swedish. I report data on the distribution of pronouns with clausal and VP antecedents, a category of pronouns that has not been thoroughly investigated in previous research on object shift. The data from written sources in these two languages show that in addition to the two positions normally discussed in accounts of this phenomenon, namely the shifted and the non-shifted, we have to consider all available options for placing objects, including the clause initial position. This is necessary in order to provide a comprehensive account of the causes underlying pronominal object shift in different frameworks.<sup>1</sup>

## 1 Introduction and outline

Pronominal object shift is a well established phenomenon in Scandinavian languages, and has attracted the interest of many linguists over the years, see e.g.: Holmberg (1986, 1999), Hellan & Platzack (1995), Josefsson (1992; 2003), Pedersen (1993) Sells (2001), Svenonius (2002), Vikner (1994, 1997, 2005) and Andréasson (2008).

With the exception of Andréasson (2008), all previous analyses of pronominal object shift have looked at the placement of object pronouns with NP antecedents. In this paper, I deal primarily with data involving pronouns with clauses and VPs as antecedents, and show that there is quite a robust difference in the distribution of these between Swedish and Danish. The paper does not explicitly aim to offer explanations for the phenomenon per se, although some outlines of possible analyses are presented.

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<sup>1</sup>I would like to thank the audience at the *NORMS/ScanDiaSyn Grand Meeting* in Älvdalen, August 2009, colleagues at *Grammatikseminariet* at the University of Gothenburg, Christer Platzack and Elisabet Engdahl for insightful comments and suggestions. A special thanks to Anna Donnellan for helping out with the English.

The outline of the paper is as follows. Section 2 is a brief summary of the phenomenon of object shift. Some background to the current investigation and a short note on the method are given in section 3, and in section 4 there are quantitative and qualitative data on pronominal object shift and on null objects in Danish and Swedish. Finally, section 5 contains some conclusions that can be drawn from the data and possible avenues for future research.

## 2 Pronominal object shift

Pronominal object shift may be described as a word order where unstressed pronominal objects, but not full NP objects or contrasted pronominal objects, appear before a sentence adverbial in the middle-field, see (1) below.<sup>2</sup> This phenomenon is frequent in Swedish, Danish and Norwegian.

- (1) Agnes köpte {den inte /\*boken inte}. [SW]  
 Agnes købte {den ikke /\*bogen ikke}. [DA]  
 Agnes bought {it not /the book not}  
 ‘Agnes did not buy it/the book.’

It is, however, only in sentences where the lexical verb is in the V2 position that pronominal object shift is licensed (cf. “Holmberg’s generalisation”, Holmberg 1986; 1999).<sup>3</sup> An example of this is given in (2) where the pronoun *den* cannot appear earlier than the non finite verb *köpt/købt* (‘bought’).

- (2) \*Agnes hade den inte köpt. [SW]  
 \*Agnes hade den ikke købt. [DA]  
 Agnes had it not bought  
 ‘Agnes had not bought it.’

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<sup>2</sup>In Icelandic, also full object shift is grammatical (cf. Vikner 2005), but this paper deals only with pronominal object shift in mainland Scandinavian.

<sup>3</sup>Object shift may occur in sentences with verb particles, depending on where an object is licenced in relation to a particle. In Swedish, objects follow the particle, and object shift is not possible. In Danish, objects precede particles, and object shift is possible.

- (i) Agnes läste inte upp den./ \*Agnes läste den inte upp. [SW]  
 \*Agnes læste ikke op den./ Agnes læste den ikke op. [DA]  
 Agnes read not up it/ Agnes read it not up  
 ‘Agnes did not read it out loud.’

I will henceforth call the word order where pronominal objects precede a sentence adverbial *shifted* and the word order where they follow a sentence adverbial *in situ*.

Another constraint on the placement of pronominal objects is that it is only so called weak, and hence in speech also unstressed, objects that shift. Whenever the object receives a contrast interpretation, as in (3) below, it is infelicitous to realise the pronoun in the shifted position.<sup>4</sup>

- (3) Agnes<sub>i</sub> såg David men han såg {inte henne<sub>i</sub> /#henne<sub>i</sub> inte}. [SW]  
 Agnes<sub>i</sub> så David men han så {ikke hende<sub>i</sub> /#hende<sub>i</sub> ikke}. [DA]  
 Agnes saw David but he saw {not her /her not}  
 ‘Agnes saw David, but he did not see her’

In Swedish, but not in standard Danish, it is also possible to have weak objects *in situ*, see (4).

- (4) Agnes såg boken, men hon köpte {<sup>0</sup>den inte /inte <sup>0</sup>den}. [SW]  
 Agnes så bogen, men hun købte {<sup>0</sup>den ikke /ikke <sup>0</sup>den}. [DA]  
 Agnes saw the book but she bought {it not /not it}  
 ‘Agnes saw the book, but she did not buy it.’

In example (4), there is no contrast between the object referent and any other set of items possible for Agnes to buy. Instead, it is the activity that is focussed,<sup>5</sup> and it is the verb that is contrasted, ‘she saw the book, but she didn’t buy it’. In these contexts, the object pronoun is unstressed in speech, and it is considered ungrammatical to place it in the *in situ* position in standard Danish (cf. Pedersen 1993).

### 3 The type of antecedent

Most accounts of pronominal object shift deal with pronominal objects with NP antecedents, henceforth *pro*<sub>NP</sub>, such as the ones in example (1)–(4) above. But we also need to consider pronominal objects with verb phrase antecedents, as *det*,

<sup>4</sup>The notation # in the examples signifies that a sentence is not ungrammatical, but it is infelicitous in the given context.

<sup>5</sup>*Focus* is here understood in the Rooth (1992) sense, where for example the stress on a lexical item (or its syntactic position) marks its relation to an alternate set, as for example in (4) where the contrast between *såg* and *köpte* shows that Agnes is part of the set of people seeing the book, but not of the set buying it.

in (5), henceforth called *det*<sub>VP</sub>, and clausal antecedents, as *det* in (6), henceforth *det*<sub>S</sub>.

- (5) Agnes ville [köpa boken,]<sub>i</sub> men hon gjorde *det*<sub>i</sub> inte. [SW]  
 Agnes ville [købe bogen,]<sub>i</sub> men hun gjorde *det*<sub>i</sub> ikke. [DA]  
 Agnes wanted buy the book but she did that not  
 ‘Agnes wanted to buy the book, but she didn’t.’
- (6) [Köpte Agnes boken?]<sub>j</sub> – *Det*<sub>j</sub> tror jag inte. [SW]  
 [Købte Agnes bogen?]<sub>j</sub> – *Det*<sub>j</sub> tror jeg ikke. [DA]  
 bought Agnes the book that think I not  
 ‘Did Agnes buy the book? – I don’t think so.’

One previous study has dealt with object shift of both *det*<sub>S</sub>/*det*<sub>VP</sub> and *pro*<sub>NP</sub>, i.e. Andréasson (2008), where I investigated only the shifted and the in situ position. The results of a small investigation of *pro*<sub>NP</sub> in Andréasson (2008) confirmed for both Swedish and Danish that very few *pro*<sub>NP</sub> appeared in situ, only 9% in the Swedish sample and 7% in the Danish. Surprisingly enough, this was not always the case for *det*<sub>S</sub>/*det*<sub>VP</sub>. In non-declarative clauses, the in situ position was dominant for *det*<sub>S</sub>/*det*<sub>VP</sub> in both languages. In Swedish, 76% of the *det*<sub>S</sub>/*det*<sub>VP</sub> were in situ in these sentences, and in Danish even more, 81%, were in situ, see example (7) below.

- (7) – 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 addition to the difference in distribution between *det*<sub>S</sub>/*det*<sub>VP</sub> and *pro*<sub>NP</sub>, the investigation in Andréasson (2008) also showed that there was a difference in quality; *det*<sub>S</sub>/*det*<sub>VP</sub> appearing in situ are not necessarily focussed in Danish. As mentioned above, the in situ position marks a focussed *pro*<sub>NP</sub> in standard Danish, and almost all Danish dialects. Nevertheless, there is no contrast relation between the referred action of *det* and an alternate set of actions, when *det*<sub>S</sub> appear in situ in examples like (7) above. The object pronouns do carry some stress in situ, but this stress does not mark any contrast relation, as does the stress assigned to *pro*<sub>NP</sub> appearing in situ.

Now, the question is: Why do these pronominal objects appear in situ when they are not contrasted? What quality do  $det_{VP}$  and  $det_S$  have that licenses them in situ in Danish?

### 3.1 The role of accessibility

One possible answer to the question on non-contrasted  $det_S$  and  $det_{VP}$  in situ may be that it is a matter of accessibility. If  $det_S$  and  $det_{VP}$  are cognitively less accessible and harder to process than  $pro_{NP}$ , their distributional properties may follow from this. This assumption, namely that elements with different levels of accessibility are placed in different syntactic positions, is based on observations for English by Gundel, Hegarty and Borthen (2003), on choices between referring expressions.

Gundel et al (2003) show that when the antecedent is an NP, it is always legitimate to use the pronoun *it*, the expression that is highest on the accessibility scale in the givenness hierarchy of Gundel, Hedberg and Zacharski (1993), see figure 1.

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 of Gundel, Hedberg & Zacharski (1993).*

When the antecedent is a non-factive clause or VP on the other hand, reference must be made with the pronoun *that/this*, an expression further down on the scale. Example (8) below, from Gundel et al (1999), illustrates that the pronoun *it* may refer to an NP, while it is not felicitous referring to the situation expressed by the previous clause.

- (8) a. There was [a snake]<sub>i</sub> on my desk. It<sub>i</sub> scared me.  
 b. [There was a snake on my desk.]<sub>j</sub> That<sub>j</sub> scared me.

Gundel, Borthen and Fretheim (1999) moreover propose that the choice between *it* and *that* in English correspond to a similar choice in Norwegian. In this language, the alternatives are not lexical items but one deaccented and another, slightly more accented *det*.

Gundel et al do not correlate their observations on the differences in stress in Norwegian with the syntactic positions for *det*, but their observations corresponds well to the stress patterns observed for shifted and in situ *det<sub>s</sub>* in Danish and Swedish. Thus it is reasonable to assume that only pronouns referring to fully accessible referents may shift. Furthermore, if an unstressed pronoun in Scandinavian languages marks the highest level of accessibility in the givenness hierarchy, this also accounts for the fact that unstressed *pro<sub>NP</sub>* normally shift both in Swedish and Danish.

Interestingly, the results of the investigation in Andréasson (2008) showed that for declarative sentences there was a difference in distribution for *det<sub>s</sub>* with non-factive matrix verbs in Swedish and Danish. In the Swedish sample, 72% of the *det<sub>s</sub>* in declarative sentences with a non-factive matrix verb (c.f. example (9) below) appeared in situ, which may be due to their being harder to process. In the Danish sample, on the other hand, only 6% of the *det<sub>s</sub>* in declarative sentences with a non-factive matrix verb appeared in situ.

- (9) Jag tror inte det. [SW]  
 ?Jeg tror ikke det. [DA]  
 I think not that  
 ‘I don’t think so.’

The Swedish/Danish difference observed gives rise to new questions: What is the story behind the non-factive declaratives in Danish? Why are declarative sentences like the one in (9) where the *det<sub>s</sub>* is in situ generally not good in Danish, when they seem to be preferred in Swedish? Given that *det<sub>s</sub>* and *det<sub>VP</sub>* in non-factive environments are cognitively less accessible than *pro<sub>NP</sub>*, we would expect them to appear in the in situ position also in Danish.

The answer to this question is that there is an even better word order option for this kind of object in declarative clauses in Danish, namely the initial position. We will see below that the first choice in Danish is to place *det<sub>s</sub>* in the initial position in declarative contexts.

As mentioned above my investigation in Andréasson (2008) concerns only the two word orders investigated in previous studies of object shift: in situ where the pronominal object follows the negation, and shifted, where the object precedes the negation. Object shift studies in general seem to build on the underlying assumption that the phenomenon should be described or explained as a binary choice between two positions, and that whenever an element appears

in the initial position in a clause it is an entirely different construction (*topicalisation*) unrelated to object shift.

Informants, on the other hand, do not accept this restriction to a binary choice. Consequently, Danish informants in Western Jutland<sup>6</sup> and Århus candidly rejected the restriction to shifted and in situ word orders, like those in (10).

- (10) Jeg tror {det ikke /ikke det}. [DA]  
 I think {it not /not it}  
 ‘I don’t think so.’

Instead the informants suggested as preferable in declarative clauses, a word order that was not even in the questionnaires presented to them, namely the word order where the *det<sub>s</sub>* is in the initial position, see example (11) below.

- (11) Det tror jeg ikke. [DA]  
 that think I not  
 ‘I don’t think so.’

Even when the interviewer insisted on them choosing only between the two positions assumed to be involved in object shift, the Danish informants maintained that none of these were really acceptable, if there were a possibility of placing the object initially in the clause.

Interestingly, when the initial position is not available – in non-declarative clauses where another element occupies the first position – the informants preferred *det<sub>s</sub>* in the in situ position. This corresponds to the results in Andréasson (2008) where I showed that Swedish and Danish have a similar distribution of *det<sub>s</sub>* in non-declarative clauses, see above.<sup>7</sup>

<sup>6</sup>NORMS/ScanDiaSyn fieldwork in Western Jutland, January 2008

<sup>7</sup>Paraphrasing, I’d like to mention that there were a few Danish declarative sentences where I, in the investigation reported in Andréasson (2008), found *det<sub>s</sub>* realised in situ. In all of these, there was another element that seemed to have first access to the initial position, like the sentence adverbial *selvfølgelig* in (i) and the conditional clause in (ii).

- (i) Kan en roman være racistisk? Nej, selvfølgelig kan den ikke det.  
 can a novel be racist no of course can it not that  
 ‘Is it possible for a novel to be racist. Of course not.’
- (ii) [...] at hvis vi ikke kunne få børn, så kunne vi ikke det.  
 that if we not could get children so could we not that  
 ‘that if we weren’t able to get children, we weren’t.’

In the following section, I present the methods of the current investigation.

### 3.2 Method and delimitations

The aim of the current investigation is to come as close to a complete investigation of the placement of *det<sub>s</sub>* in Swedish and Danish, as may be accomplished with the time and resources available. The word *det* is one of the most common words in both Swedish and Danish, and a search for this word in written corpora obviously generates an enormous amount of hits. The same word form is used as the definite article in neuter, as an expletive pronoun, and as a pronoun with NP, VP and clausal antecedents. Furthermore, there is no morphological marking on the pronoun to show if it is used to express an object function or not.

The corpora used for the investigation were the PAROLE corpus for Swedish (<http://spraakbanken.gu.se/parole/>) and the Korpus Dk for Danish (<http://ordnet.dk/korpusdk>). PAROLE consists of about 19 million words, while Korpus DK consists of about 56 million words.

In the part of the investigation described here, a comparison of the two verbs *tro* ('believe') and *förstå/förstå* [SW/DA] ('understand') is made. Both verbs have a cognition meaning, but where *förstå/förstå* by default takes factive complements that are implicated to be true, there is no such restriction for *tro* (on factivity, c.f. Hopper & Thompson 1973). Example (12) illustrates that it is equally possible to affirm or to deny a proposition expressed by the complement of the non-factive matrix verb *tro*.<sup>8</sup>

- (12) Jag trodde att hon såg mig,  
 Jeg troede att hun så mig,  
 I thought that she saw me  
 'I thought that she saw me,'  
 a. ... men det gjorde hon inte./  
 ... men det gjorde hun ikke.  
 but that did she not

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<sup>8</sup>Wiklund, Bentzen, Hrafnbjargarson and Hróarsdóttir (2009) have shown that there is reason to believe that there is a more fine-grained scale of factivity to take into consideration. In their scale, verbs meaning 'understand' take complements that fall into the category *semi-factives*, that "differ from truly factive complements in that they may lose their factivity in questions". For the purpose of this paper it is nevertheless sufficient to note that *förstå/förstå* take factive complements in declarative clauses.

- ‘...but she didn’t’
- b. ... och det gjorde hon.  
 ... og det gjorde hun.  
 and that did she  
 ‘...and she did.’

Example (13) shows that it is not possible to deny a proposition expressed by the complement of the factive matrix verb *förstå*/*forstå*.

- (13) Jag förstod att hon såg mig,  
 Jeg forstod at hun så mig,  
 I understood that she saw me  
 ‘I understood that she saw me,’
- a. #... men det gjorde hon inte.  
 #... men det gjorde hun ikke.  
 but that did she not  
 ‘...but she didn’t’
- b. ... och det gjorde hon.  
 ... og det gjorde hun.  
 and that did she  
 ‘...and she did.’

The homonymy of *det* combined with the fact that objects typically express new information, and hence are not commonly realised as pronouns, make occurrences of *det<sub>s</sub>* and *det<sub>vp</sub>* very rare among the numerous hits for *det*, even in searches in a morphologically tagged corpus. For this reason, I have instead conducted searches for finite lexical forms of verbs taking clausal complements, followed by negation, with 0–10 intervening words. See (14) for a simplified version of the search string.

- (14) [finite verb] 0–10 words [negation]

In theory, there may naturally be some relevant examples with more than ten words in between the verb and the negation, and these cases will not be found with the search string presented in (14). Nevertheless, this scenario is highly unlikely, since there were only a handful of hits with *det<sub>s</sub>* or *det<sub>vp</sub>* with more than one or two intervening words.

The searches for *tro* and *förstå*/*forstå*, with the string described in (14) above,

produced just over 10.000 hits. Of these only 741 turned out to be examples relevant to this investigation, i.e. hits with *det<sub>s</sub>*, and these were excerpted in context for investigation. In Swedish, there were 96 relevant hits for *förstå* and 105 for *tro*. In Danish, there were 335 for *forstå* and 205 for *tro*.

There is of course one disadvantage to this method of investigation, namely that it is a very time consuming way to get hold of the relevant examples. The advantages do however outweigh the disadvantages. With this search string, we get a sample with excellent comparability, since it generates all the occurrences of the investigated verbs in combination with a negation.<sup>9</sup> This makes it possible for us to draw conclusions about the relative frequency of the different word orders. Another great advantage is that the string also generates the hits where a *det<sub>s</sub>* is left out, see section 4.3.

#### 4 Why other positions must be taken into account

In this section, I present the results of the investigation of declarative sentences with *tro* and *förstå/forstå*, picked out from the Swedish and Danish corpora presented above with the help of the search string (14). I restrict myself to a discussion about declarative sentences, since it was shown in Andreasson (2008) that there are significant differences in distribution for Swedish and Danish in such sentences, see also the discussion above.

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<sup>9</sup>The KorpusDk interface allows only 5000 examples to be excerpted. For *tror/troede* there were 6616 hits. 5001 (Sic!) of these were excerpted and analysed. All Swedish hits, and all the hits for *forstå* were investigated.

#### 4.1 Distribution of $det_s$ in declarative sentences with non-factive and factive matrix verbs

Table 1 shows positions for  $det_s$  in declarative sentences with *tro* and *förstå/forstå* in the Swedish and Danish samples.

Swedish	1st position	shifted	in situ
<i>tro</i> (105)	64% (67)	10% (11)	26% (27)
<i>förstå</i> (39)	64% (25)	28% (11)	8% (3)
Danish	1st position	shifted	in situ
<i>tro</i> (205)	73% (149)	27% (56)	0% (0)
<i>forstå</i> (315)	40,5% (128)	59% (186)	0,5% (1)

TABLE 1: *Positions for  $det_s$  in declarative clauses*

Table 1 shows that significantly more  $det_s$  appear in situ in Swedish when the verb is the non-factive *tro* (26%). For the factive *förstå* a larger number of the  $det_s$  are instead shifted (28%). The percentage of  $det_s$  appearing in the first position, on the other hand, is the same for both verbs in Swedish (64%).

For Danish, table 1 confirms that there is another distributional pattern than in Swedish; the in situ position is apparently not an option when it is possible to place  $det_s$  in the initial position.<sup>10</sup> Hence, almost all occurrences of  $det_s$  in the Danish sample are in either the shifted or in the initial position. There are also more  $det_s$  in the first position when the matrix verb is the non-factive *tro* (73%) and more  $det_s$  in situ when the matrix verb is the factive *forstå* (59%).

For *tro*, the unmarked word order option in Danish seems to be to place  $det_s$  in the initial position in declarative clauses, while the shifted position seems to be slightly preferred for  $det_s$ , when the matrix verb is *forstå*. In Swedish, there seem to be two preferred positions for  $det_s$ . For *tro* it is the initial and the in situ

<sup>10</sup>As mentioned above, Andréasson (2008) shows that the in situ position for  $det_s$  is not only possible, but preferred for Danish in non-declarative clauses, where an wh-element obligatorily is in the initial position.

position and for *förstå* it is instead the initial and the shifted position that are the main options.

The quite robust differences in numbers in table 1 strengthens the hypothesis that pronominal complements of non-factive verbs have some quality that makes them less felicitous in the shifted position, both in Danish and in Swedish. It seems plausible that this difference in syntactic position in Swedish and Danish is related to the difference in choice of lexical item for pronominal reference of different accessibility in English in similar contexts (cf. Gundel, Borthen & Fretheim 1999; Gundel, Hegarty & Borthen 2003).

The numbers in table 1 also show that if we had only looked at the shifted and the non-shifted position, it would seem as if the strategy for Danish were to shift 100% of the *det<sub>s</sub>* in declarative sentences with the non-factive matrix verb *tro*. But when investigating all possible word order options for *det<sub>s</sub>*, it becomes clear that the strategy is rather to place the pronominal complement in the first position in these sentences (73%). And in sentences with the factive matrix verb *förstå*, more *det<sub>s</sub>* appear in the shifted position, where more accessible elements are licensed. This suggests that the possibly less accessible non-factive complements are not licensed in the shifted position, both in Danish and in Swedish.

In the following section we will take a closer look at some unexpected hits, where non-factive *det<sub>s</sub>* appears in the shifted position.

## 4.2 Shifted *det<sub>s</sub>* with a non-factive matrix verb

Even though the numbers in table 1 strongly supports explaining the distribution of *det<sub>s</sub>* in terms of differences in accessibility, there are 11 (10%) Swedish examples and 57 (27%) Danish examples where a *det<sub>s</sub>* complement of the verb *tro* is shifted. If these *det<sub>s</sub>* are indeed less accessible than factive *det<sub>s</sub>* (or *pro<sub>NP</sub>*), they should be infelicitous in the shifted position, where only weak, unaccented object pronouns appear both in Swedish and in Danish.

There are, however, ways for a non-factive *det<sub>s</sub>* to be legitimate in the shifted position. One way for *det<sub>s</sub>* to get promoted to the highest level of accessibility is when there has already been an intermediate pronominal reference, an NP, with the same clause as its antecedent (Gundel et al 2003). This is the case in the Danish example in (15) below.

- (15) – Du tør ikke gifte dig med mig, fordi [du er bange for, at jeg skal gøre det igen.]<sub>i</sub>  
 – Nej... nej... åh nej, Thyge.  
 ‘– You don’t dare to marry me, because you are afraid that I will do it again. – No... no... oh no, Thyge.’
- Du må ikke tro [det] <sub>i</sub> sagde hun klagende.  
 you must not think that said she moaning
- Jeg tror [det] <sub>i</sub> heller ikke.  
 I think it also not
- ‘– You mustn’t think that, she moaned. – I don’t, actually.’

In (15) the antecedent of the shifted *det<sub>s</sub>* in *Jeg tror det heller ikke* is the clause *du er bange for, at jeg skal gøre det igen*. In the clause intervening between the pronoun and its antecedent, there is a reference to the same antecedent with the pronoun *det*, i.e. a referential NP. Since this kind of intermediate reference with an NP promotes the referent to the highest level of accessibility (Gundel et al 2003), this should also license the *det<sub>s</sub>* in a shifted position.

However, examples with intervening pronominal references are rare in the sample. Much more frequent are cases where some more important condition overrides the accessibility principle, and licenses a deaccentuation of the pronoun, thus making it legitimate in the shifted position.<sup>11</sup> Contrastive focus on another element than the pronoun seems to be such a condition. It overrules the accessibility principle and licences a non-factive *det<sub>s</sub>* in the shifted position.<sup>12</sup>

For the Swedish sample this is the case in more than half of the *det<sub>s</sub>* that are shifted; in 6 out of 11 examples there is an overt or implicit contrast interpretation, see (16) and (17).

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<sup>11</sup>In an optimality theoretic account it would be natural to analyse such a condition as a constraint, ranked higher than constraints on placement of elements with different levels of accessibility.

<sup>12</sup>N.b. that example (15) above also contains a contrast, between modalities of the matrix verbs.

- (16) – Vad får er att tro att jag kan hjälpa er?  
 what get you to believe that I can help you  
 – Jag tror det inte. Jag bara hoppas det. [SW]  
 I believe it not I only hope it  
 ‘– What makes you believe that I can help you? – It’s not a matter of me believing it, I only hope for it.’
- (17) Om jag trodde det från början, när vi pratade om all vår  
 if i believed it from the beginning when we talked about all our  
 frihet, så trodde jag det inte mot slutet. [SW]  
 freedom so believed I it not towards the end  
 ‘If i believed it in the beginning, when we were talking about all our freedom, I did not believe it in the end.’

In (16) the contrast lies between the verb *tror* and the verb *hoppas* in the following sentence, and in (17) it is the two PPs *från början* and *mot slutet* that are contrasted.

There are a handful of sentences in the Swedish sample that do not readily fall into either of the above described categories. These examples all seem to come from translated sources, and I judge the shifted word order as infelicitous. One of these examples is presented in (18).

- (18) Om någon har varit där efter mig och sett vad jag har gjort är  
 If someone has been there after me and seen what I have done is  
 det illa, men jag tror det inte. [SW]  
 it bad but I think it not  
 ‘If someone has been there after me and seen what I’ve done, it’s bad.  
 But I don’t think so.’

In example (18) the clause *Om någon har varit där efter mig och sett vad jag har gjort* is the antecedent of the *det<sub>s</sub>*. In this sentence, I would have strongly preferred a word order with *det<sub>s</sub>* in situ: *Jag tror inte det*.

In the bigger Danish sample, there are 56 hits in the shifted position. As in the Swedish sample, about half of these contain a contrast on another element than the *det<sub>s</sub>* in the immediate context, see (19) and (20).

- (19) Om han bruger paryk, ved jeg ikke, men jeg tror det ikke. [DA]  
 if he uses wig know I not but I think it not  
 ‘I don’t know if he uses a wig, but I don’t think so.’
- (20) Nogle folk tror de får kræft på grund af luftforurening eller  
 some people think they get cancer on ground of air pollution or  
 kemikalier, men andre tror det ikke. [DA]  
 chemicals but others think it not  
 ‘Some people believe that they get cancer due to air pollution or chemicals, but others don’t think so.’

In (19), just as in (16) above, the verb is contrasted with another verb in the context. Here *tro* is related to the verb *ved* (‘knows’) in the preceding sentence. In (20), the subject *andre* (‘others’) is contrasted with the subject of the precedent sentence, *nogle folk* (‘some people’).

Example (21) below is taken from a subgroup of the Danish sentences with contrast.

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

In (21), the opinions of the subject referent, the author *jeg*, seem to diverge from those of *mureren og arkitekten* (‘the bricklayer and the architect’). In the Danish sample, I often find a shifted *det<sub>s</sub>* in what may be called “I beg to differ” contexts, with a lot of debate going on. In (21), the craftsmen are reported to maintain that a certain action is indeed satisfactory as a solution to a problem with a house, an opinion to which the author of the text raises objections. There is no clear cut contrast between the craftsmen’s maintaining and the author’s opinion, but there is nevertheless this “I beg to differ” contrast, leaving *jeg* with some degree of contrast interpretation, even though the main contrast intonation most likely must fall on the negation.

In Swedish, it would be preferred to use a word order with *det<sub>s</sub>* in the initial position and the subject pronoun following the negation (and the sentence adverbial), as in the construed sentences in example (22).

- (22) Det tror nämligen inte jag. [SW]  
 \*Det tror nemlig ikke jeg. [DA]  
 that think namely not I  
 ‘I am not of that opinion.’

This NEG>SUBJPRO word order in Swedish indicates that there is emphasis on the subject (cf. Telemann, Hellberg & Andersson 1999; Andréasson 2007) and the subject will be interpreted as focussed, even out of context. Interestingly, this word order option is not available in Danish.

Also in Swedish, a shifted *det<sub>s</sub>* may be felicitous in these “I beg to differ” contexts, even though there are no hits for this in the Swedish sample. The example in (23) is from a Google search.

- (23) Vi måste göra allt för att minska återfallsbrotten, frågan är om  
 we must do all for to diminish recidivism the question is if  
 detta är rätt sätt. Jag tror det nämligen inte.  
 this is right way I think it namely not  
 ‘We must make every effort to reduce recurrent crime; the question is if  
 this is the right way. I certainly don’t think so.’

Example (23), is from a political blog where there has been a long discussion on what to do about reducing recurrent crime. In the last lines of the last comment, the blog author draws up a scenario and poses the rhetorical question: Is this the right way? In the final sentence, he concludes with his own opinion; as for him, he does not think so. In spoken Swedish, some level of contrast intonation would fall on the subject pronoun in a clause like this, but the strongest focus accent would fall on the negation.

Examples like those in (21)–(23) support that one of the reasons for the higher frequency of shifted *det<sub>s</sub>* in Danish may be that there are different strategies for emphasising subjects in Swedish and Danish.

There are also a few hits in the Danish sample, where a *det<sub>s</sub>* is shifted without an intervening pronominal reference to the same antecedent, and with no contrast interpretation whatsoever, see (24).

- (24) – Du må aldrig mere tage en drink? – Jeg tror det ikke. Jeg stoler  
 you may never more take a drink I think it not I trust  
 ikke på, jeg kan administrere det. [DA]  
 not on I can administer it  
 ‘– You can never take a drink again? – I don’t think so. I don’t trust I  
 can handle it.’

These examples must be investigated further, but for the time being I will hold on to the assumption that cognitively less accessible pronominal objects are not shifted, unless some other condition licenses them in the shifted position.

So far we have discussed declarative clauses with the non-factive matrix verb *tro*. In the following section we return to the factive verb *förstå/forstå* and the possibility of leaving out *det<sub>s</sub>* altogether.

### 4.3 Null objects in *förstå/forstå* sentences

Table 1 showed that there were no more than 39 hits in the Swedish sample for the verb *förstå* (‘understand’) with *det<sub>s</sub>* and negation. Interestingly, there are in the sample also 57 sentences where *det<sub>s</sub>* is simply not phonetically realised at all, an option for the verb *förstå* in Swedish, and also for *forstå* in Danish, see (26) and (25).

- (25) Förgäves hade hon försökt tala med maken om äktenskapet –  
 in vain had she tried speak with the husband about the marriage  
 han förstod inte. [SW]  
 he understood not  
 ‘In vain, she had tried to talk to her husband about the marriage. He  
 didn’t understand.’
- (26) Hjernen rasede forvirret rundt i hans hoved. Han forstod  
 the brain rushed confusedly around in his head he understood  
 ikke. [DA]  
 not  
 ‘His brain was spinning in his head. He didn’t understand.’

One of the advantages with the method of investigation used in this paper is that it makes it possible not only to explore all possible positions for a *det<sub>s</sub>*, but also to excerpt all sentences where *det<sub>s</sub>* is not realised phonetically. Table 2 exhibits the distribution of *det<sub>s</sub>* including null objects.

Swedish	null object	1st position	shifted	in situ
<i>tro</i> (105)		64% (67)	10% (11)	26% (27)
<i>förstå</i> (96)	59% (57)	26% (25)	12% (11)	3% (3)
Danish	null object	1st position	shifted	in situ
<i>tro</i> (205)		73% (149)	27% (56)	0% (0)
<i>forstå</i> (335)	6% (20)	38% (128)	55,5% (186)	0,5% (1)

TABLE 2: *Positions for det<sub>s</sub>, including null objects*

Table 2 gives us an explanation to why there were seemingly so few instances of clausal *det* with Swedish *förstå* in table 1 above. Table 2 shows that Swedish seems to prefer to make these weak objects so light that they are not even realised as pronouns, but simply left out: *Jag förstår inte*. Danish, on the other hand, seems to prefer to realise *det<sub>s</sub>* in *forstå* sentences to a much greater extent, and it is the shifted position that is the most frequent: *Jeg forstår det ikke*.

## 5 Conclusion and outlook

In this paper, I have presented partial results from an ongoing corpus investigation that show that object pronouns with clausal antecedents, *det<sub>s</sub>* in non-factive and non-declarative environments do not shift as readily as *det<sub>s</sub>* in factive declarative environments. A likely explanation for this is that pronouns with clausal antecedents are cognitively harder to process in non-factive and non-declarative environments.

The data presented here are mainly quantitative. In order to find out more about the cognitive status of *det<sub>s</sub>* a more thorough qualitative investigation of the sentence types must be carried out. One possible avenue for such an investigation could be to carry out an ERP study of shifted and in situ *det<sub>s</sub>*, similar to the one performed for object shift of pronouns referring to NPs, *pro<sub>NP</sub>*, by Roll, Horne and Lindgren (2007). Nevertheless, the tendencies of this investigation so far are that the first option for Danish is to place *det<sub>s</sub>* in the initial position in

declarative sentences with a non-factive matrix verb. For Swedish, on the other hand, the in situ position is an equally good option. Another tendency is that Swedes seem to prefer to leave out *det<sub>s</sub>* in *förstå* sentences, rather than to realise it in the shifted position. For Danes, it is the shifted position that seems to be the unmarked alternative in *forstå* sentences.

We have thus seen that objects of the same type have distinct distributional patterns in Danish and in Swedish. The distribution includes both the initial position of the clause and the option of not realising the objects phonetically, null objects, but to different degrees. This leads to the conclusion that it is indeed necessary to investigate other options for object placement than merely the shifted and the in situ position, including the possibility of the object not being phonetically realised, if we want to learn more about the underlying causes for object placement and the phenomenon “object shift” – in a wider sense.

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