

An investigation of Object Shift based on information structure*

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1. Introduction

Scandinavian has a movement phenomenon called Object Shift (OS), in which an object moves to a position higher than its original position (Holmberg 1986, 1999).

- (1) a. Jag kysste henne inte.
I kissed her not
'I didn't kiss her.'
- b. Jag kysste henne inte [_{VP} t_V t_O]
(Holmberg 1999:1,(1))

It is normally said that only weak pronouns (obligatorily or optionally) move in the Scandinavian languages other than Icelandic (2), whereas not only the weak pronouns but strong pronouns and full NPs shift in Icelandic (3).¹

- (2) Dom känner honom/*HONOM/*Gunnar alla. (Swe.)
they know him him Gunnar all
'They all know him/HIM/Gunnar.'
(Holmberg 1986:223,(193))
- (3) Jón keypti hann/HANN/bókina ekki. (Ice.)
Jón bought it it the-book not
'Jón didn't buy it/IT/the book.'
(Holmberg 1986:229,(205); 217,(172))

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¹ Nilsen (1997) claims that full noun phrase shift is not impossible in the Scandinavian languages other than Icelandic. I refer to the issue later.

It is claimed that OS is prevented when a category remains within VP:

- (4) Jag har (*henne) inte [_{VP} kysst (^{OK}henne)].
I have her not kissed her
'I haven't kissed her.'

Namely, it is claimed that OS can apply when no VP-internal category remains in VP (after main verb movement) (1), whereas OS cannot apply when some VP-internal category (the participle *kysst*) does not move (4) (Holmberg 1999, Chomsky 2001).

In this paper, making a detailed investigation of information structure of the environments in which OS applies/does not apply, I claim that inapplicability of OS is attributed to a phonological or information structural feature an object is assigned in certain contexts. In addition, I argue against the predominant view that OS applies to a definite object that is specific/defocused (Diesing 1997, Holmberg 1999, Broekhuis 2001, among others). I present two formulations of OS from both phonological and information structural perspectives. In Section 2 I summarize previous syntactic and semantic analyses on OS. In Section 3 I introduce information structure based on the literature. I investigate in which information structure(s) OS takes/does not take place. In Section 4 I discuss the result of the investigation. Based on the result that OS is prevented in specific contexts, I claim that inapplicability of OS may be attributed not to presence of a VP-internal category, but to a phonological or information structural feature the object is assigned in the contexts. In addition, I argue against the predominant view on OS so far, demonstrating that weak pronoun shift takes place not only when a moved pronoun is specific/defocused but when it is part of new information. In Section 5 I present two ways of formulating OS from both phonological and information structural perspectives. I provide accounts of OS under each formulation. I also discuss problems that arise in each of the formulations. In Section 6 I briefly conclude the paper.

2. Previous syntactic and semantic analyses on OS

Revising Holmberg's Generalization (1986) that OS is accompanied by main verb movement, Holmberg (1999:15) formulates the syntactic condition in which OS applies/does not apply² as follows: OS is blocked by a VP-internal, phonologically visible category asymmetrically c-commanding the object.

- (5) a. Jag har (*henne) inte [_{VP} kysst (^{OK}henne)].
I have her not kissed her
'I haven't kissed her.'
- b. Jag talade (*henne) inte [_{VP} t_V med (^{OK}henne)].
I spoke her not with her
'I didn't speak to her.'

² As the view on OS as movement for Case requirement that was widely assumed (e.g. Chomsky 1995) is rejected in Holmberg (1999), I do not refer to it here.

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- c. Jag gav (*den) inte [_{VP} t_V Elsa (^{OK}den)].
I gave it not Elsa it
'I didn't give it to Elsa.'
- d. Dom kastade (*mej) inte [_{VP} t_V ut (^{OK}mej)].
they threw me not out me
'They didn't throw me out.'
(Holmberg 1999:1-2,(1-2))

OS is blocked by a main verb (5a), a preposition (5b), an indirect object (5c), and a particle (5d), all of which stay within VP; the object must remain in situ in all the cases.

Based on Holmberg's claim, Chomsky (2001) formulates OS as follows: OS can optionally apply when all VP-internal categories other than the object move, on the assumption that an optional operation is allowed only if a new interpretation is produced; when a category remains in VP, on the other hand, OS does not apply. Specifically, when the VP-internal category is present as in (5), the construction in which OS applies cannot be generated. When no category other than the object remains in VP (after main verb movement) as in (1), OS can optionally apply. When OS does not apply, the object receives an interpretation in situ; v* can be assigned the EPP, which triggers OS, with the object receiving a new interpretation at the EPP position (Chomsky 2001:34-36).

Regarding semantic effects on OS, Diesing (1997) associates movement of a definite object with its familiar status in the discourse. According to the Mapping Hypothesis (Diesing 1992), an indefinite is bound by existential closure whose domain is VP, whereas a quantifier/operator moves and quantifies over a restriction whose domain is IP. A variable bound by existential closure is required to be new to the discourse. The definite, on the other hand, receives referential interpretation, and a variable introduced by the definite is old information and presupposed; this is incompatible with existential binding, which forces the definite to move out of the VP (Diesing 1997:378-379). A pronoun is essentially definite and introduces a familiar variable, that is, old information with respect to the discourse; therefore it must move out of the base position to escape inappropriate binding by existential closure (Diesing 1997:394). It is claimed that both weak pronoun shift in all the Scandinavian languages and full NP shift in Icelandic are movement for the definite phrases to take scope (Diesing 1997:412-413).

The view that the definite/specific object moves due to its defocused status has been predominant so far (e.g. Holmberg 1999, Chomsky 2001, Broekhuis 2001). Holmberg (1999:22) formulates as follows: 'Object Shift affects only nominal objects which are [-Foc]'. According to Chomsky (2001), OS is a movement to avoid a focus interpretation in situ.

Finally, I mention the cross-Scandinavian variation concerning application of OS, based on the literature (Holmberg 1986, 1999; Diesing 1997; Hellan and Platzack 1999; Josefsson 2003)³:

(6) Most Scandinavian:
[S V pron./***pron.**/(*)NP ... [VP t_V *pron./**pron.**/NP]]

Swedish:
[S V pron./***pron.**/(*)NP ... [VP t_V pron./**pron.**/NP]]

Icelandic:
[S V pron./**pron.**/NP ... [VP t_V *pron./**pron.**/NP]]

In most Scandinavian languages weak pronoun shift is obligatory; a strong pronoun and a full NP normally do not move. In Swedish the weak pronoun may or may not move, whereas the strong pronoun and the NP are normally not allowed to move.⁴ In Icelandic weak pronoun shift is obligatory; shift of the strong pronoun and the NP is optional.

3. Investigation of the environments in which OS applies/does not apply

3.1 Information structure

I introduce information structure based on the literature (Büring 1997, Kiss 1998, Lambrecht 1994, Vallduví and Engdahl 1996).

- (7) a. *Sentence-focus*:
What happens every day? – [_{Foc} John kisses me every day].
- b. *Predicate-focus*:
What did John always do? – He always [_{Foc} kissed me].
- c. *Verb-focus*:
What did John always do to Mary? – He always [_{Foc} kissed] her.
- d. *Contrastive verb-focus*:
Did you kiss Mary? – I didn't [_{Foc} KISS] her (, but [_{Foc} HELD] her tight).
- e. *Argument-focus*:
Who did John always see? – He always saw [_{Foc} me].
- f. *Contrastive argument-focus*:
Did you kiss Mary? – I didn't kiss [_{Foc} HER] (, but kissed [_{Foc} LUCY]).

³ Notations represent: S = subject; V = main verb; pron. = unstressed pronoun; **pron.** = stressed pronoun; and NP = noun phrase.

⁴ See Note 1.

g. *Contrastive topic:*

Did you kiss her and her sister?

– I kissed [_{Contr.Top} her SISTER], but I didn't kiss [_{Contr.Top} HER].

The terminologies, *sentence-focus*, *predicate-focus*, and *argument-focus* are from Lambrecht (1994). Sentence-focus (7a) contains only new information: nothing is presupposed in the question; the answer contains only new information (i.e. the whole answer sentence carries the focus). Predicate-focus (7b) is a topic-comment sentence type: the subject *John* is already presented in the question and carries a topic in the answer; the predicate, whose information is required to be provided, carries the focus in the answer. I separate (information) focus from contrastive (/identificational) focus, based on Kiss (1998). Identificational/contrastive focus represents exhaustive identification for a subset of the set given in the context; syntactically, it acts as a quantificational operator and binds a variable within its scope. Information focus, on the other hand, only signals non-presupposed information and is present in every sentence; it does not act as an operator (Kiss 1998:245-246). In *verb-focus* (7c), the information on the event that was carried out by *John* and *Mary* is required to be identified in the answer. In *contrastive verb-focus* (7d), exhaustive identification is made for a subset of the event set given in the context; the information on the event presented in the question is negated and corrected in the answer.⁵ *Argument-focus* (7e) requires one to provide in the answer an argument information corresponding to a *wh*-phrase and missing in the question. In *contrastive argument-focus* (7f), exhaustive identification is made for a subset of the argument set given in the context; the information on one of the participants of the event presented in the question is negated and corrected in the answer. *Contrastive-topic* is from Büring (1997). In contrastive topic (7g), a salient set of alternatives (the set consisting of *her* and *her sister* here) has already been provided in the context/question; each member of the set is denoted in the answer, being contrasted. I assume these seven types of information structure, hereafter.

3.2 The environments in which OS applies/does not apply

I investigate in which information structures OS takes/does not take place in Swedish. Sentence constructions relevant to OS are as follows:

- (8) a. Jag kysste henne inte.
I kissed her not
- b. Jag kysste inte henne/HENNE.
- c. Kysst har jag henne inte (bara hållit henne i handen).
kissed have I her not only held her by the hand
'I didn't KISS her (, but only HELD her by the hand).'
(Holmberg 1999:7,(11))

⁵ I set up (contrastive) verb-focus, as Swedish has a verb-focus construction, which I turn to in the next section.

(8a) is a construction in which OS takes place; (8b) is that in which OS does not apply; (8c) is *Verb-fronting* presented by Holmberg (1999), a verb-focus construction in which a past participle moves to the sentence-initial position and OS also applies.⁶ I investigate which construction(s) among (8a-c) can be appropriate as an answer sentence in each information structure of (7a-g) above. The results are as follows⁷:

- (9) a. *Sentence-focus*:
 What happened yesterday? – [_{Foc} John kissed me yesterday].
 i) Jan kysste mej igår.
 Jan kissed me yesterday
 ii) Jan kysste igår *mej/MEJ.
- b. *Predicate-focus*:
 What did John always do? – He always [_{Foc} kissed me].
 i) Han kysste mej alltid.
 he kissed me always
 ii) ?Han kysste alltid mej/MEJ.
- c. *Verb-focus*:
 What did John always do to Mary? – He always [_{Foc} kissed] her.
 i) Han kysste henne alltid.
 he kissed her always
 ii) Han kysste alltid henne (depending on dialectal variation).
 iii) ?Kysst har han henne alltid.
 kissed has he her always
- d. *Contrastive verb-focus*:
 Did you kiss Mary? – No, I didn't [_{Foc} KISS] her (, but [_{Foc} HELD] her tight).
 i) Jag kysste henne inte.
 I kissed her not
 ii) Jag kysste inte henne.
 iii) Kysst har jag henne inte.
 kissed has I her not
- e. *Argument-focus*:
 Who didn't you see yesterday? – I didn't see [_{Foc} her].
 i) *Jag såg henne inte.
 I saw her not

⁶ Holmberg (1999) calls the construction *Verb-Topicalization*. To lessen a gap between the terminology and the actual information structural effect that the construction has, I use a neutral term, *Verb-fronting*.

⁷ Judgment is made by Anders Holmberg (p.c.). Since the Verb-fronting construction is related to the contexts of verb-focus and contrastive verb-focus, I raise the results of judgment on the construction only in the two contexts. The construction is appropriate when the question contains a complex tense form 'Aux + Past Participle'. I presuppose a Swedish counterpart of 'what has John always done to Mary?' for the question of (9cii), and that of 'have you kissed Mary?' for that of (9diii).

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ii) Jag såg inte *henne/HENNE.

f. *Contrastive argument-focus:*

Did you kiss Mary? – No, I didn't kiss [_{Foc} HER] (, but kissed [_{Foc} LUCY]).

i) *Jag kysste henne inte.

I kissed her not

ii) Jag kysste inte HENNE.

g. *Contrastive topic:*

Did you kiss her and her sister?

– (I kissed [_{Contr.Top} her SISTER], but) I didn't kiss [_{Contr.Top} HER].

i) *Jag kysste henne inte.

I kissed her not

ii) Jag kysste inte *henne/HENNE.

OS can apply in sentence-focus (9a), predicate-focus (9b), verb-focus (9c), and contrastive verb-focus (9d); the latter two have Verb-fronting (9c-diii), in which OS can also take place. On the other hand, OS cannot apply in argument-focus (9e), contrastive argument-focus (9f), and contrastive topic (9g); only pronouns that remain in situ are allowed in these contexts. I summarize (in)applicability of OS in Swedish below:

(10) Applicability of OS (Swedish):

Applicable: Sentence-focus

Predicate-focus

Verb-focus

Contrastive verb-focus

Inapplicable: Argument-focus

Contrastive argument-focus

Contrastive topic

4. Nature of OS

I would like to consider the result of the investigation above. As stated in Section 2, the syntactic condition in which OS applies/does not apply is formulated in the way that OS is prevented when a VP-internal, phonologically visible category remains in VP (Holmberg 1999, Chomsky 2001). This implies that inapplicability of OS is attributed to presence of something within VP, not to a feature that an object itself has. In addition, on the assumption that after all VP-internal categories move, OS can optionally apply depending on difference in the positions at which the object receives interpretation (Chomsky 2001), two steps are involved in determining actual application of OS: first, it is checked whether all categories other than the object move out of VP; after it is confirmed that nothing other than the object remains in VP, it is secondly checked whether the object receives interpretation in situ or at v*'s EPP position. It will be desirable if application of OS is determined under one condition.

The investigation above shows that OS is prevented in the specific contexts, argument-focus (9e), contrastive argument-focus (9f), and contrastive topic (9g). This appears to me to suggest that application of OS depends on the contextual condition. I would like to claim that there may be possibility that inapplicability of OS is attributed

not to presence of something VP-internal, but to a feature an object itself is assigned in the specific contexts, which I turn to in the next section. This is a strong claim, though: it must be testified that (in)applicability of OS is independent of presence/absence of a VP-internal category. Specifically, an account must be provided for what prevents (5) from being generated, if presence of the VP-internal category is not a primary reason for inapplicability of OS, which I leave for future research.⁸ Though the problem is left for the time being, I make an attempt to determine (in)applicability and actual application of OS under one condition in the next section.

The semantic effect on OS that has widely been claimed is that the definite/specific object moves due to its defocused status, as stated in Section 2. This further implies a (tacit) assumption in the literature that an unmoved (pronominal) object carries the focus (e.g. Diesing 1997, Holmberg 1999, Broekhuis 2001, Chomsky 2001). This view applies to verb-focus (9c) and contrastive verb-focus (9d), in which the shifted object that is defocalized moves, and to argument-focus (9e) and contrastive argument-focus (9f), in which the object that is assigned the focus does not move.

The view does not appear to me to be applicable to sentence-focus (9a), predicate-focus (9b), and contrastive topic (9g), though. In sentence-focus and predicate-focus, a shifted object constitutes part of new information; therefore, the object does not appear to have [-Foc]. In contrastive topic, an object is already presented as a member of the salient set in the context; the object remains in situ, though it does not appear to be assigned [+Foc]. Namely, the investigation above shows that OS can apply both when a shifted object is defocalized (verb-focus and contrastive verb-focus) and when it constitutes part of focus (sentence-focus and predicate-focus); the investigation also shows that OS is prevented both when an unmoved object carries the focus (argument-focus and contrastive argument-focus) and when it is possibly not assigned [+Foc], but some other features (contrastive topic). It does not seem to me that the semantic effects on OS is so simple as claimed in the literature.

5. Two ways of formulating OS

5.1. Formulation from a phonological perspective

In this and the following subsections I present two ways of formulating OS. I would like to consider what property unshifted objects in argument-focus (9e), contrastive argument-focus (9f), and contrastive topic (9g) share. One sees that only stressed pronouns remain in situ in Swedish OS. Taking notice of the phonological prominence they carry, and also taking into consideration the fact that a stressed pronoun can move

⁸ Actually, the strong claim does seem to me to hold. In Scandinavian Double Object Construction in which a direct object is a negative phrase, passivization of the negative direct object is allowed only when an indirect object is shifted: (Swe.) *Ingenting blev (^{OK}Elsa) erbjuden* (*Elsa) ‘nothing was offered to Elsa’ (Anders Holmberg, p.c.); (Ice.) *Ekkert var (?Sveini) sagt* (*Sveini) ‘nothing was told to Svein’ (Halldór Sigurðsson, p.c.). The participle *erbjuden/sagt* not moving, the indirect object is shifted violating Holmberg’s Generalization. This indicates that presence of a VP-internal category may not so closely be related to inapplicability of OS.

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only in Icelandic, one way of formulating OS will be that (in)applicability of OS is attributed to a phonological feature [+Stress] an object is assigned in the contexts. Assume as follows:

- (11) Object Shift does not/can apply to an object that is assigned [+Stress].

See the cross-Scandinavian variation on OS again, which I repeat below:

- (12) Most Scandinavian:
[S V pron./***pron.**/^(*)NP ... [VP tv *pron./**pron.**/NP]]

Swedish:
[S V pron./***pron.**/^(*)NP ... [VP tv pron./**pron.**/NP]]

Icelandic:
[S V pron./**pron.**/NP ... [VP tv *pron./**pron.**/NP]]

In most Scandinavian languages including Swedish, a pronominal object that is assigned [+Stress] is prevented from moving; it can move in Icelandic due to the parametric variation. An NP that is assigned [+Stress] is prevented from shifting in the Scandinavian languages other than Icelandic; it can actually move in Icelandic, as I demonstrate in the next subsection, which case is allowed under (11) because of the parametric variation. It is predicted that an object pronoun will normally move if it is not assigned [+Stress]; this is tenable, leading to obligatoriness of weak pronoun shift in most Scandinavian languages. It is also predicted that an NP that is not assigned [+Stress] will in principle not be prevented from moving in Scandinavian. This is testified: shift of the NP is not only possible in Icelandic but it can also take place in the other Scandinavian languages, as claimed by Nilsen (1997).⁹

Two points are to be cautioned. First, weak pronoun shift in Swedish is optional, as illustrated in (9a-d) (also Josefsson 2003). An account should be provided for what factor allows a weak pronoun to remain in situ in Swedish.

Second, it has widely been assumed in the literature on OS that an unmoved, stressed (/strong) pronoun carries the focus, while a moved, unstressed (/weak) pronoun is a topic/has old information (e.g. Diesing 1997, Erteschik-Shir 2005). In other words, phonological property that the strong and weak pronouns receive respectively has tacitly been assumed to be matched with interpretation that each of them is assigned. Let us see, however, what kind of feature(s) the shifted and unshifted pronouns are assigned in each information structure, based on the investigation of Swedish OS (9) and the discussion in Section 4:

⁹ Josefsson (2003:203,ft.7) points out that the cases that Nilsen discusses are those in which an NP does not cross the sentential negation. Here, I just refer to possibility of full NP shift in the Scandinavian languages other than Icelandic.

- (13) Feature(s) assigned to the object (Swedish):
- | | | |
|------------------|----------------------------|----------------------------------------------|
| OS applicable: | Sentence-focus | [+Foc] |
| | Predicate-focus | [+Foc] |
| | Verb-focus | [-Foc] |
| | Contrastive verb-focus | [-Foc] |
| OS inapplicable: | Argument-focus | [+Foc] |
| | Contrastive argument-focus | [+Foc] and [+Contrastive] ¹⁰ |
| | Contrastive topic | [+Top/-Foc] and [+Contrastive] ¹¹ |

As shown above, the (moved) weak pronouns are not necessarily assigned [-Foc]. The (unshifted) strong pronouns are not necessarily assigned [+Foc], either. Namely, phonological property that the weak/strong pronouns have respectively (i.e. unstressed/stressed) does not always coincide with interpretation that each of them receives (i.e. [-Foc]/[+Foc]); phonological property does not exhaustively determine interpretation, as correctly suggested by Anders Holmberg (p.c.). It will be questioned whether the phonological feature that does not exhaustively fix interpretation can determine inapplicability of OS.

5.2 Formulation from an information structural perspective

Let us see (13) once again. No feature can be found that unshifted objects share in the contexts in which OS is prevented, argument-focus, contrastive argument-focus, and contrastive topic. It appears, however, that OS is prevented in Swedish *at least* in contrastive contexts: an object is never shifted in the contexts in Swedish. Recall here that Icelandic can shift not only weak pronouns but strong pronouns and full NPs. Let us see whether Icelandic OS can take place in the contrastive contexts.¹²

- (14) *Contrastive argument-focus*:
- a. Did you buy it? – I didn't buy IT (, but I bought THAT).
 – Ég keypti (^{OK}HANN) ekki (?HANN).
 I bought it not it
- b. Did you buy the book? – I didn't buy the BOOK (, but I bought the JOURNAL).
 – Ég keypti (^{OK}BÓKINA) ekki (^{OK}BÓKINA).
 I bought the-book not the-book
- (15) *Contrastive topic*:
- a. Did you buy it and that? – (I bought THAT, but) I didn't buy IT.
 – Ég keypti (^{OK}HANN) ekki (?HANN).

¹⁰ [+Contrastive] in contrastive argument-focus and contrastive topic is based on Kiss (1998:271).

¹¹ I tentatively notate the feature assigned to the object in contrastive topic as [+Top/-Foc] and [+Contrastive].

¹² Judgment is made by Halldór Sigurðsson (p.c.).

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- b. Did you buy the book and the journal?
– (I bought the JOURNAL, but) I didn't buy the BOOK.
– Ég keypti (^{OK}BÓKINA) ekki (^{OK}BÓKINA).

In both contrastive contexts, a strong pronoun and a full NP may or may not be shifted in Icelandic. It appears that in Icelandic an object moves not only when it is specific/defocused (Diesing 1997); it is allowed to move also in the contrastive contexts, in which OS is prevented in the other Scandinavian languages.¹³ Then, the other way of formulating OS will be that (in)applicability of OS is attributed to an information structural feature [+Contrastive] an object is assigned. Assume as follows:

- (16) Object Shift does not/can apply to an object that is assigned [+Contrastive].

Accounts of the cross-Scandinavian variation on OS will be as follows under formulation (16).¹⁴

- (17) Most Scandinavian:
[S V pron./***pron.**/*NP ... [VP t_V *pron./**pron.**/NP]]

Swedish:
[S V pron./***pron.**/*NP ... [VP t_V pron./**pron.**/NP]]

Icelandic:
[S V pron./**pron.**/NP ... [VP t_V *pron./**pron.**/NP]]

In most Scandinavian languages including Swedish, an object pronoun that is assigned [+Contrastive] is prevented from moving; it can move in Icelandic because of the parametric variation. An NP object that is assigned [+Contrastive] can move in Icelandic or is prevented from moving in the other Scandinavian languages, due to the parametric variation. It is predicted that a pronominal object will normally shift if it is not assigned [+Contrastive]. This is tenable, which accounts for obligatory weak pronoun shift in most Scandinavian languages. It is also predicted that an NP object that is not assigned [+Contrastive] will in principle not be prevented from moving in Scandinavian. This will be tenable: shift of the NP without the feature not only takes place in Icelandic, but it can also take place in the other Scandinavian languages, as claimed by Nilsen (1997).¹⁵

It was pointed out in the previous subsection that a problem arises of mismatch between phonological property shifted/unshifted objects are respectively assigned and interpretation each of them receives. A question was raised under formulation (11)

¹³ That the (definite) object that carries contrastive stress/focus may remain in situ is already pointed out in the literature (e.g. Diesing 1997).

¹⁴ I presuppose that contextual conditions are included in (17): I presuppose that in most Scandinavian languages, the cases in which a pronominal object moves imply sentence-focus, predicate-focus, verb-focus, and contrastive verb-focus, whereas those in which it remains in situ imply argument-focus, contrastive argument-focus, and contrastive topic, and so forth.

¹⁵ See Note 9.

whether the phonological feature [+Stress] that does not exhaustively fix interpretation can determine inapplicability of OS. The problem will not arise under formulation (16): interpretation of an object will be determined when the object is assigned [+Contrastive]. Namely, inapplicability of OS is directly associated with the interpretation the object is assigned under formulation (16).

I believe that formulation (16) covers nature of weak pronoun shift. It has long been claimed, for instance, that OS is not A-bar movement: as OS does not license parasitic gaps and is insensitive to Weak Crossover, OS does not have properties of an operator movement (e.g. Holmberg and Platzack 1995:146-147). In (13) a moved object carries [+Foc] as part of new information in sentence-focus and predicate-focus; it is assigned [-Foc] due to its defocalized status in (contrastive) verb-focus. Based on Kiss (1998), the [+Foc] the moved object is assigned in sentence-focus and predicate-focus is information focus since the object only marks new information, not identificational/contrastive focus whose holder takes scope and acts as a quantificational operator. The moved object that is assigned [-Foc] in (contrastive) verb-focus, not being a quantifier, does not bind a variable. Namely, the moved pronoun does not act as a quantificational operator, whether it is assigned (information) [+Foc] or [-Foc], which correctly accounts for why OS is not A-bar movement.¹⁶

Two points are to be cautioned. First, optionality of weak pronoun shift in Swedish is not provided a persuasive account in the same way as in the phonological formulation. Second, a pronominal object (and possibly an NP too) is surely prevented from moving in the context of argument-focus though it is not assigned [+Contrastive], as illustrated in (9e). That is, obligatory stay of the objects in the original positions in argument-focus is not appropriately accounted for under formulation (16), as pointed out by Anders Holmberg (p.c.).

6. Conclusion

In this paper I made a detailed investigation of information structure of the environments in which OS applies/does not apply. I claimed that inapplicability of OS may be attributed to a feature an object is assigned in specific contexts, not to presence of a VP-internal, phonologically visible category, unlike the literature (Holmberg 1999, Chomsky 2001). Demonstrating that weak pronoun shift takes place not only when a moved pronoun is specific/defocused but also when it constitutes part of new information, I argued against the predominant view in the literature that OS applies to a definite object that is specific/defocused (e.g. Diesing 1997). I presented two ways of formulating OS, a formulation from a phonological perspective (18a) and that from an information structural perspective (18b).

(18) a. Object Shift does not/can apply to an object that is assigned [+Stress].

¹⁶ It has also been claimed that OS is not A-movement, either: OS does not create new binding possibility (e.g. Holmberg and Platzack 1995). Though I suspect that the issue may be related to subject-orientedness of Scandinavian reflexives, as already pointed out by Holmberg and Platzack (1995:148-149,ft.6), I leave the issue for future research.

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(=11)

- b. Object Shift does not/can apply to an object that is assigned [+Contrastive].
(=16)

I pointed out that since phonological property shifted/unshifted objects are respectively assigned does not exhaustively determine interpretation each of them receives, a problem arises under formulation (18a) whether inapplicability of OS can be determined by the phonological feature that does not definitely fix interpretation. I claimed that the problem does not arise under formulation (18b), for since interpretation of an object is determined when it is assigned [+Contrastive], inapplicability of OS is directly associated with the interpretation the object receives. I argued that formulation (18b) will cover nature of weak pronoun shift too. I aimed to formulate OS under one condition, though there are some problematic points in the formulations.¹⁷

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¹⁷ Hellan and Platzack (1999:130) introduces a Scandinavian dialect, Älvdalsmålet, which does not have OS at all. This is problematic for both formulations: in the dialect OS will always be prevented, whether or not an object is assigned [+Stress] and whether or not the object is assigned [+Contrastive]. I leave the study of the dialect for future research.

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