

Motivations for Scandinavian Negative Indefinite Shift

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1 Introduction

Negative Shifting (NegShift) is a process in the Scandinavian languages where a negative indefinite expression (NI) obligatorily shifts to a position outside of the VP. The Danish examples in (1) show that the NI pronoun *ingenting* 'nothing' and the complex DP *ingen bøger* 'no books' both shift across the verb into a position that is between the adverbials and the verb in the case of *ingenting* and between the auxiliary and the verb in the case of *ingen bøger*.

- (1) NegShift of pronouns and complex DPs
- Manden havde måske *ingenting* [_{VP} sagt t_o].
man-the had probably nothing said
'The man hadn't said anything.'
 - Jeg har *ingen bøger* [_{VP} lånt børnene t_o].
I have no books lent children-the
'I haven't lent the children any books.'

NegShift bears some resemblance to Scandinavian Object Shift (OS), which causes a weak pronoun to also shift to a position outside of the VP when the verb has raised for V2 (Holmberg 1986, 1999).

- (2) Jag kyssade_v henne_o inte [_{VP} t_v t_o] Sw
I kiss.PST her NEG
'I didn't kiss her.'

Interestingly, several authors have claimed that Scandinavian OS is driven and determined by prosodic factors (see *erteschik-shirVariationMainlandScandinavian2019*, Erteschik-Shir 2005, Erteschik-Shir & Josefsson 2017, Brinkerhoff & Tengesdal 2020 for some recent accounts). However, there are others that claim that OS is best accounted for as syntactic movement to satisfy PF, information structure, or some other syntactic requirement (Holmberg 1999, Thráinsson 2001, Bentzen, Anderssen & Waldmann 2013, Sichel & Toosarvandani 2020, and many others).

However, it is clear that not all instances of NegShift directly correlate to the accounts of OS. One of the chief reasons for this difference is due to the wider range of material that is allowed to undergo NegShift, which includes both pronouns and full DPs, whereas only prosodically weak object pronouns are allowed to undergo OS. Further discussion about the similarities and differences between OS and NegShift is found in §2. However, even though there are differences the one thing that could unite them is their shared movement of pronouns. There have been several claims that NegShift has a preference for shifting "lighter" NIs over "heavier" ones (Christensen 2005, Penka 2011). This has the effect that speakers prefer shifting pronouns and small DPs over more complex DPs, see §4 for a more detailed discussion.

The problem that I am focusing on for my qualifying paper is whether or not there is a prosodic motivation for NegShift in the Scandinavian languages given this claim made by Christensen (2005) and Penka (2011). The rest of this paper will discuss the properties of NegShift and OS and how I plan on solving the problem related to whether or not there is prosodic motivation for NegShift.

2 Distributional properties of NegShift versus OS

As mentioned above there are certain patterns that NegShift and OS share and differ in. Both OS and NegShift involve the movement of elements from their base position to a position that is to the left of the VP, as seen by the movement across negation/adverbials in the case of OS, (3a), and across the verb in the case of NegShift, (3b).

(3) Distributional similarities between OS and NegShift in Swedish.

- a. Jag kyssade_v henne_o inte [_{VP} t_v t_o]
 I kiss.PST her NEG
 'I didn't kiss her.'
- b. Jag har ingen_o [_{VP} kyssat t_o]
 I have no-one kiss.PST.PTCP
 'I haven't kissed anyone.'

Additionally, they are similar in that they both operate on pronouns, weak object pronouns for OS and NI pronouns for NegShift.

However, in terms of the differences between OS and NegShift, two main differences exist. First; NegShift applies to full negative DPs such as *inga böcker* 'no books' in addition to pronouns. There is, however, a restriction on the size of the moved NI (Christensen 2005, Penka 2011). Second; NegShift is *not* subject to Holmberg's Generalization but is instead subject to an "Anti-Holmberg Effect" where it can shift across phonological material, whereas OS is subject to Holmberg's Generalization.

Holmberg’s Generalization states that “[OS] cannot apply across a phonologically visible category asymmetrically c-commanding the object position except adjuncts” (Holmberg 1999: p. 15). This means that OS can only occur if there is no phonological material, except adjuncts, between its base position and the position to which it shifts. In contrast to OS, NegShift only applies if the verb has not moved out of the VP or if there is nothing between the raised verb and the base position of the NI (Fox & Pesetsky 2005, Engels 2012).

- (4) a. Verb in-situ NegShift
 Ég hef engan [_{VP} séð t_o]. Ic
 I have nobody seen
 ‘I haven’t seen anybody.’
 b. String vacuous NegShift
 Jag sa ingenting [_{VP} t_v t_o]. Sw
 I said nothing
 ‘I said nothing’

However, evidence collected and reported by Engels (2011, 2012) shows that this in fact more complicated and subject to greater variability than was previously thought. Engels found that NegShift was permissible from a greater number of contexts and was more likely to occur depending on the variety and register that was being used, which is summarized in Table 1 taken from Engels (2012). In Table 1, ✓ indicates that NegShift occurs, * indicates that NegShift cannot occur, ? means that there was idiosyncratic variation between speakers.

Table 1: Distribution of NegShift across Scandinavian languages. (WJ = West Jutlandic, Ic = Icelandic, Fa = Faroese, DaL = Danish Linguists, SwL = Swedish Linguists, Scan1 = literary/formal Mainland Scandinavian, Scan2 = colloquial Mainland Scandinavian and Norwegian)

NegShift across		WJ1	WJ2	Ic	Fa	DaL1	DaL2	SwL	Scan1	Scan2
String-vacuous		✓	✓	✓	✓	✓	✓	✓	✓	✓
Verb		✓	✓	✓	✓	✓	✓	✓	✓	*
IO	verb in situ	✓	✓	✓	✓	✓	✓	✓	✓	*
	verb moved	*	*	*	*	*	*	*	*	*
Preposition	verb in situ	✓	✓	✓	✓	?	?	*	*	*
	verb moved	✓	✓	?	*	*	*	*	*	*
Infinitive	verb in situ	✓	✓	✓	✓	✓	*	?	*	*
	verb moved	✓	*	*	✓	*	*	*	*	*

3 Interaction of NegShift and OS

One of the most interesting aspects from Table 1 is the sharp contrast as to whether or not NegShift can happen with an indirect object. From the table we see that all varieties, except Scandinavian 2 which is equivalent to Norwegian and some colloquial varieties, allow shifting across an indirect object if the verb remains in situ. If the verb has moved for V2 then there are no varieties that allow shifting across the indirect object.

Christensen (2005) reports on this behavior between NegShift and indirect objects and summarizes his findings in Table 2. In this table No⁺/Sw⁺ represent some varieties of Norwegian and Swedish respectively in contrast to more standard Norwegian (No) and Swedish (Sw), FS represent the Swedish variety which is spoken by Swedes in Finland.

Table 2: Summary of OS and NegShift according to Christensen (2005).

IO-DO	Ic	Da/Fa	No/Sw	No ⁺ /Sw ⁺	FS
Pron-Pron	+ +	+ +	% %	§ §	--
Pron-NegQP	+ +	+ +	+ +	+ +	--
NegQP-Pron	+ -	+ -	+ -	+ -	--
Pron-DP	+ %	+ -	% -	% -	--
DP-Pron	% -	--	--	--	--
DP-DP	% %	--	--	--	--
DP-NegQP	% %	--	--	--	--
NegQP-DP	+ -	+ -	+ -	+ -	--

(KEY: + = obligatory, - = blocked, % = optional, § = optional and ‘non-parallel’)

The sections on this table that are most interesting are those involving what Christensen calls Negative Quantifier Phrases (equivalent to NIs). However, this does conflate NI determiners and NI pronouns into a single category. According to Christensen, when the IO is a pronoun and the DO is a NegQP both obligatorily shift when the verb has been able to swift to C, (5a), otherwise only the NegQP shifts, (5b).

- (5) a. Jeg lånte *hende*(IO) faktisk *ingen bøger*(DO)
 I lent her actually no books
 ‘I actually didn’t lend her any books’
 b. Jeg har *ingen bøger*(DO) lånt *hende*(IO)
 I have no books lend her
 ‘I didn’t lend her any books’

If, however, the IO is a NegQP and the DO is a pronoun then the pronoun is blocked from shifting, produces a freezing effect on OS.

- (6) Freezing effects on OS
 a. Jeg lånte faktisk *ingen*(IO) *den*(DO)
 I lent actually no-one it
 ‘I actually lent it to no-one.’
 b. *Jeg lånte *den*(DO) faktisk *ingen*(IO)

This is actually a very important point for the question of the prosodic nature of the shifting. If we assume that these are moving to a position outside of the VP or are some sort of adjunct to VP then we would assume that OS should be allowed according to Holmberg’s Generalization.¹ However, this is not the case if we follow the logic from Holmberg’s Generalization. Holmberg’s Generalization requires that OS occur if there is not a phonologically visible category

¹See Thráinsson (2010) for discussion and debate about where negation is located in Scandinavian languages.

that asymmetrically c-commands the object's base position. Because OS is blocked, then Neg is a phonologically visible category that asymmetrically c-commands the object.

An additional case that is interesting is when both the indirect and direct objects are allowed to shift. Broekhuis (2020: 417f) observes that weak pronominal object shift behaves differently than full DP objects in what loci there are allowed to inhabit. In the case of weak pronominals they are required to appear outside of the νP if there is no intervening phonological material (i.e., Holmberg's Generalization Holmberg 1986, 1999). If both OS and NegShift were allowed to occur Broekhuis notes that they are subject to certain ordering restrictions. Citing examples from Christensen (2005: 163ff), Broekhuis shows the following pair of examples:

- (7) a. Jeg har <ingen bøger> lånt hende <*ingen bøger>.
 I have no books lent her
 'I haven't lent her any books
 b. Jeg lånte *henda* fraktisch *ingen* bøger.
 I lent her actually no books
 'I didn't actually lend her any books.'

In (7a), we see that when we have a negative object that it shifts to a position higher than the νP if it were to remain in-situ as it would be ungrammatical and would require the use of *ikke* 'not' and the negative polarity item *nogen* 'any'.

- (8) Jeg har *ikke* lånt hende *nogen* bøger.
 I have not lent her any books.
 'I haven't lent her any books.'

However, when the main verb has raised to C^0 as in (7b) then the weak pronominal moves to a position higher than the adverb *fraktisch* 'actually'. The negative object is not able to move to the similar position that is higher than the adverb. Additionally, this results in OS > NegShift which Broekhuis reports to a universal. This does help us see that that even though these two phenomena appear to be similar they are in fact slightly different, due to the differences in the where the two different movement operations' targets are.

4 Prosodic restrictions on NegShift

However, as noted earlier not all NegShift is treated equal. Christensen (2005: 65f), speaking on Danish, claims that the "weight" of the NI plays a crucial factor in whether or not NegShift occurs.

- (9) a. Jeg har *intet*₀ hørt *t*₀.
 I have nothing heard
 'I haven't heard anything.'
 b. Jeg har [*intet nyt*]₀ hørt *t*₀.
 I have nothing new heard
 'I haven't heard anything new'

- c. *Jeg har [*intet nyt i sagen*]_o hørt t_o.
 I have nothing new in case-DET heard
 ‘I haven’t heard anything new about the case.’
- d. *Jeg har [*intet nyt i sagen om de stjålne malerier*]_o hørt t_o.
 I have nothing new in case-DET about the stolen paintings heard
 ‘I haven’t heard anything new in the case about the stolen paintings.’

In those instances where the NI is too large one potential repair is to strand the PP while moving just the pronoun or using the negative particle *ikke* and a NPI.

- (10) a. Jeg har *intet*_i hørt t_i [_{PP} i sagen om de stjålne malerier].
 b. Jeg har *ikke* hørt [*noget* i sagen om de stjålne malerier].

This same behavior has also been remarked upon by Penka (2011) for Swedish.

- (11) a. Men mänskligheten har *ingenting*_o lärt sig t_o.
 but mankind-the have nothing taught themselves
 ‘But mankind haven’t taught themselves anything.’
- b. ? Vi hade *inga grottor*_o undersökt t_o.
 we have no caves explored
 ‘We haven’t explored any caves.’

My qualifying paper will explore whether or not there is indeed this preference for NegShift of pronouns by conducting a study on the Swedish Culturomics Gigaword Corpus (Eide, Tahmasebi & Borin 2016) and how this phenomenon might relate to prosodic analyses of OS such as those from *erteschik-shirVariationMainlandScandinavian2019* and Brinkerhoff & Tengesdal (2020) and the more syntactically motivated accounts using Cyclic Linearization (Fox & Pesetsky 2005, Engels 2012) or following Zeijlstra (2011) and Iatridou & Sichel’s (2011) accounts for NI movement.

5 Cyclic Linearization

Cyclic Linearization is a theory that was developed by Fox & Pesetsky 2005 as a way to account for OS and Holmberg’s Generalization. This theory works by stipulating that spell-out of the morphosyntax is cyclic and order preserving, which means that as you spell-out each successive spell-out domain you need to ensure that whatever orders existed when that domain was spelled-out persist at the next spell-out domain’s ordering restrictions. This theory also had the benefit of accounting for when OS was allowed or not allowed to occur.

This proposal was extended by Fox & Pesetsky (2005) and Engels (2011, 2012) to account for quantifier movement (QM), of which NegShift is a subset under their analyses. QM is subject to an “Anti-Holmberg Effect” or an “Inverse Holmberg Effect”. As previously discussed above Holmberg’s Generalization stipulates that OS can only apply if the verb has undergone movement from V-to-T-to-C. The Anti-Holmberg Effect explains that only when the verb remains in situ can we have QM, which is the result of the ordering operations between the different phases being in agreement.

In order to account for OS, Fox & Pesetsky propose that the during the spell-out of the VP spell-out domain the V is the leftmost element in its domain² and at which point the ordering restrictions are in place which state that the V must precede the O. At this point the V moves to T and then to C which results in the object being free to move to its higher position because the order that existed at the VP domain continues to hold at the CP spell-out domain.

(12) OS and string-vacuous Neg-Shift

- a. $[_{CP} S V \dots [_{NegP} \overbrace{O \text{ adv } [_{VP} t_v t_o]}]]]$
- b. VP Ordering: $V > O$
 CP Ordering: $S > V, V > O, O > \text{adv}, \text{adv} > VP$

In the case of NegShift, where it is able to shift across various phonological material, it is proposed that the NI first moves to the left edge of the VP before spell-out of that domain. Once that domain is spelled-out the NI is free to shift to its position outside of the VP, in the case of (13) this is to NegP.

(13) NegShift when V is in-situ.

- a. $[_{CP} S \text{ aux } \dots [_{NegP} \overbrace{O [_{VP} t_o V t_o]}]]]$
- b. VP Ordering: $O > V$
 CP Ordering: $S > V, \text{aux} > O, O > \text{adv}, \text{adv} > VP \rightarrow O > V$

6 Zeijlstra's (2011) copy theory of movement

Zeijlstra (2011) is interested in showing providing an analysis of the split-scope interpretation that exists for negative indefinites in Germanic languages. Split-scope is evident when modals and other auxiliaries are present and the negation scopes higher than the modal/auxiliary's scope where the indefinite resides. Zeijlstra assumes that this behavior is the result of the compositional status of negative indefinites similar to the claims made by Iatridou & Sichel (2011). Unlike Iatridou & Sichel, who simply claim that negation takes scope higher than the modal's scope and the indefinite scopes low, he claims that NIs are composed of a negative operator and an indefinite component. He further claims that the split-scope interpretation is the result of a copy-theory of movement where the indefinite interpretation is interpreted in the lower copy while the negative operator is interpreted in the higher copy after quantifier rising.

7 Next steps

As previously mentioned, I plan on investigating the prosodic nature of NegShift by conducting a corpus study on the Swedish Culturomics Gigaword Corpus (Eide, Tahmasebi & Borin 2016). This is to test the claims made by Christensen (2005) and Penka (2011) that the "weight" of the NI determines whether or not it is shifted. In order to accomplish this I have written with the help of an intern Python code that has allowed me to comb through this database extracting those

²The position of the V at the left-edge of the phase could be due to the movement of V to *v* in which case it is actually the *v*P that acts as the spell-out domain not the VP.

sentences that contain negative indefinites and sorting them into NI pronouns and NI DPs. I am currently writing more code that will allow me to determine the distribution of NegShift within these sentences. I, additionally, have been considering the different accounts that have been given for both OS and NegShift with an eye on seeing which account is able to provide the most sensible explanation for the shifting of “light” NIs to aid me in presenting my own theoretical analysis of the NegShift.

References

- Bentzen, Kristine, Merete Anderssen & Christian Waldmann. 2013. Object Shift in spoken Mainland Scandinavian: A corpus study of Danish, Norwegian, and Swedish. en. *Nordic Journal of Linguistics* 36(2). 115–151. <https://doi.org/10.1017/S0332586513000218>.
- Brinkerhoff, Mykel Loren & Eirik Tengedal. 2020. *MATCHING Phrases in Norwegian Object Shift*. Poster. Santa Cruz, CA.
- Broekhuis, Hans. 2020. The Unification of Object Shift and Object Scrambling. In Michael T. Putnam & B. Richard Page (eds.), *The Cambridge Handbook of Germanic Linguistics*, First, 413–435. Cambridge University Press. <https://doi.org/10.1017/9781108378291.019>.
- Christensen, Ken Ramshøj. 2005. *Interfaces: Negation - Syntax - Brain*. en. Aarhus: University of Aarhus Ph.D. Dissertation.
- Eide, Stian Rødven, Nina Tahmasebi & Lars Borin. 2016. The Swedish Culturomics Gigaword Corpus: A One Billion Word Swedish Reference Dataset for NLP. en. 5.
- Engels, Eva. 2011. Microvariation in object positions: Negative Shift in Scandinavian. en. *Nordic Journal of Linguistics* 34(2). 133–155. <https://doi.org/10.1017/S033258651100014X>.
- Engels, Eva. 2012. Scandinavian Negative Indefinites and Cyclic Linearization. en. *Syntax* 15(2). 109–141. <https://doi.org/10.1111/j.1467-9612.2011.00161.x>.
- Erteschik-Shir, Nomi. 2005. Sound Patterns of Syntax: Object Shift. *Theoretical Linguistics* 31(1-2). 47–93. <https://doi.org/10.1515/thli.2005.31.1-2.47>.
- Erteschik-Shir, Nomi & Gunlög Josefsson. 2017. Scandinavian Object Shift Is Phonology. In Laura R. Bailey & Michelle Sheehan (eds.), *Order and structure in syntax I: Word order and syntactic structure* (Open Generative Syntax 1), 99–115. Berlin: Language Science Press. <https://doi.org/10.5281/ZENODO.1117700>.
- Fox, Danny & David Pesetsky. 2005. Cyclic Linearization of Syntactic Structure. *Theoretical Linguistics* 31(1-2). 1–45. <https://doi.org/10.1515/thli.2005.31.1-2.1>.
- Holmberg, Anders. 1986. *Word order and syntactic features in the Scandinavian languages and English*. Stockholm, Sweden: University of Stockholm Doctoral Dissertation.
- Holmberg, Anders. 1999. Remarks on Holmberg’s Generalization. en. *Studia Linguistica* 53(1). 1–39. <https://doi.org/10.1111/1467-9582.00038>.
- Iatridou, Sabine & Ivy Sichel. 2011. Negative DPs, A-Movement, and Scope Diminishment. en. *Linguistic Inquiry* 42(4). 595–629. https://doi.org/10.1162/LING_a_00062.
- Penka, Doris. 2011. *Negative indefinites* (Oxford Studies in Theoretical Linguistics no. 32). Oxford ; New York: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199567263.001.0001>.
- Sichel, Ivy & Maziar Toosarvandani. 2020. The featural life of nominals. en.

- Thráinsson, Höskuldur. 2001. Object Shift and Scrambling. en. In Mark Baltin & Chris Collins (eds.), *The Handbook of Contemporary Syntactic Theory*, 148–202. Oxford, UK: Blackwell Publishers Ltd. <https://doi.org/10.1002/9780470756416.ch6>.
- Thráinsson, Höskuldur. 2010. *The syntax of Icelandic*. eng ice. 1. paperback ed (Cambridge syntax guides). Cambridge: Cambridge Univ. Press.
- Zeijlstra, Hedde. 2011. On the syntactically complex status of negative indefinites. en. *The Journal of Comparative Germanic Linguistics* 14(2). 111–138. <https://doi.org/10.1007/s10828-011-9043-2>.