

Motivations for Scandinavian Negative Indefinite Shift

Mykel Loren Brinkerhoff

1 Introduction

- (1) Negative Shifting (NegShift) is a process in the Scandinavian languages where a negative indefinite (NI) obligatorily shifts to a position outside of the VP.
 - a. Manden havde måske *ingenting* [_{VP} sagt t_o].
 man-the had probably nothing said
 ‘The man hadn’t said anything.’
 - b. Jeg har *ingen* *bøger* [_{VP} lånt børnene t_o].
 I have no books lent children-the
 ‘I haven’t lent the children any books.’
- (2) This process occurs to all NIs and is permissible from a large number of different contexts, depending on the variety and register (see Table 2).
- (3) This process bears some resemblance to Scandinavian Object Shift (OS), which is where a weak object pronoun shifts to a position outside of the verb phrase (Holmberg 1986, 1999).
 - a. Jag kyssade_v henne_o inte [_{VP} t_v t_o] Sw
 I kiss.PST her NEG
 ‘I didn’t kiss her.’
- (4) There has been some evidence that OS is prosodically driven (Erteschik-Shir 2005, Erteschik-Shir & Josefsson 2017, Erteschik-Shir, Josefsson & Köhnlein 2020, Brinkerhoff & Tengesdal 2021).
- (5) Despite similarities between NegShift and OS, NegShift doesn’t directly correlate to the accounts of OS.
- (6) Chiefly, a wider range of material is allowed to undergo NegShift, which includes both pronouns and full DPs, whereas only prosodically weak object pronouns are allowed to undergo OS.
- (7) However, not all NegShift is treated equal. Christensen (2005: 65f), speaking on Danish, claims that the “weight” of the NI plays a factor in whether or not NegShift occurs.
 - a. Jeg har [*intet* *nyt*]_o hørt t_o.
 I have nothing new heard
 ‘I haven’t heard anything new.’
 - b. *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.’

In this paper, I explore to what extent prosodic factors play in NegShift and claim that this weight sensitivity has similarities to Heavy NP Shift.

2 Distributional properties of NegShift versus OS

- (8) As mentioned above there are some similarities between OS and NegShift with them both operating on pronouns and moving them to a position outside of the VP.
- 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.’
- (9) However, NegShift also operates on full negative DPs and is not subject to Holmberg’s Generalization (Fox & Pesetsky 2005, Engels 2012)
- 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’
- (10) Additional evidence from Engels (2012) shows that NegShift is allowed out of a wider range of positions than OS, which are summarized in Table 2
- (11) In the following table ✓ indicates that NegShift occurs, * indicates that NegShift cannot occur, ? means that there was idiosyncratic variation

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

- (12) As seen in Table 2 we see a sharp contrast involving indirect objects
- (13) Christensen (2005) provides a clear and detailed summary of the interactions of NegShift and indirect objects. His summary is detailed below in Table 2.
- (14) 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’)

- (15) The sections on this table that are most interesting are those involving what Christensen calls Negative Quantifier Phrases, which is equivalent to NIs. However, this does conflate NI determiners and NI pronouns into a single category.
- (16) 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, (a), otherwise only the NegQP shifts, (b).
- 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’
- (17) If, however, the IO is a NegQP and the DO is a pronoun then the pronoun is blocked from shifting. This produces a freezing effect on OS (Christensen 2005: p. 164).
- 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)*
- (18) 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, (a).
- a. Object Shift cannot apply across a phonologically visible category asymmetrically c-commanding the object position except adjuncts (Holmberg 1999: p. 15).
- (19) Broekhuis (2020) does have some interesting discussion about the interaction of NegShift and pronominal OS.
- (20) Citing examples from Christensen (2005: 163ff), Broekhuis shows this pair of examples:
- a. i. Jeg lånte *hende(IO)* faktisk *ingen bøger(DO)*
 I lent her actually no books
 'I actually didn't lend her any books'
- ii. Jeg har *ingen bøger(DO)* lånt *hende(IO)*
 I have no books lend her
 'I didn't lend her any books'
- (21) In (20a), we see that when we have a negative object that it shifts to a position higher than the *vP* if it were to remain in-situ as it would be ungrammatical and would require the use of *ikke* 'not' and the NPI *nogen*.
- a. Jeg har *ikke* lånt *hende nogen bøger*.
 I have not lent her any books.
 'I haven't lent her any books.'
- (22) However, when the main verb has raised to *C*⁰ as in (20a-i) then the weak pronominal moves to a position higher than the adverb *faktisk* '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 and according to Broekhuis this is a universal fact.
- (23) 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 different movement operations' target is.

4 Prosodic restrictions on NegShift

- (24) 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.
- 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*]₀ hørt *t*₀.
 I have nothing new in case-DET heard
 'I haven't heard anything new about the case.'

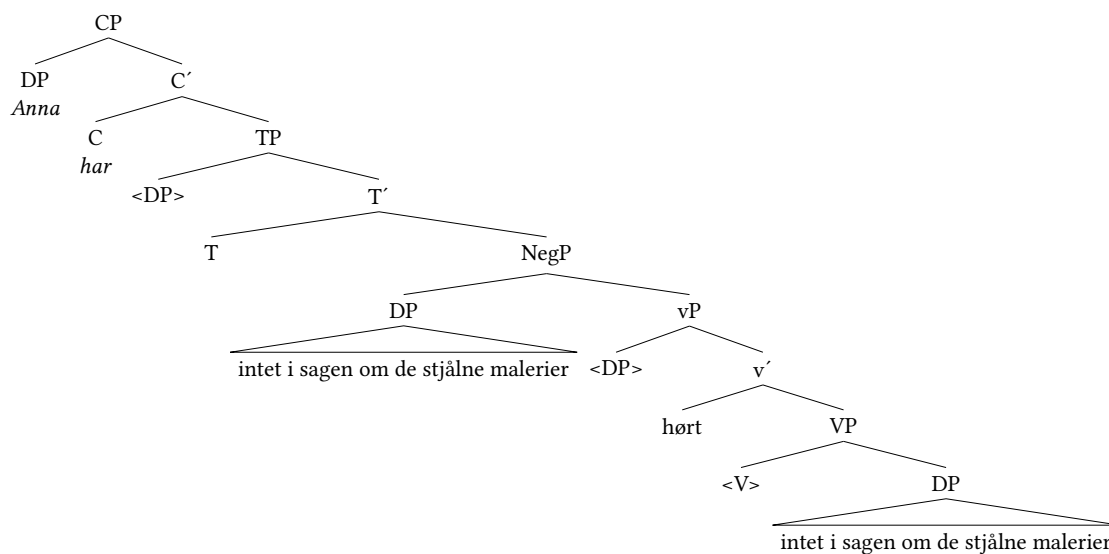
- d. *Jeg har [*intet nyt i sagen om de stjålne malerier*]_o hørt t_o.
 I have nothing new in case-DET about the stolen paintings heard
 ‘I haven’t heard anything new in the case about the stolen paintings.’
- (25) In those instances where the NI is too large one potential repair is to strand the PP while moving just the pronoun or using the negative particle *ikke* and a NPI.
- 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].
- (26) This same behavior has also been remarked upon by Penka (2011) for Swedish.
- 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.’

5 Copy and partial deletion account

- (27) One way to account for this behavior is following Zeijlstra 2011 account for the split-scope that these NIs introduce in Germanic languages.¹
- (28) 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.
- (29) 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.
- (30) 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.
- (31) He claims that the when we move items we copy them entirely and remerge them into the syntactic structure. This results in multiple copies of the item being in the syntactic structure. Following Fanselow & Cavar (2001) and Fanselow & Ćavar (2002) only at a later stage, after the syntactic structure has been spell-out, parts of the copy are removed in PF or LF. This could result in either a partial or complete deletion of any of these copied-elements at any location that they are found.
- (32) For example, we see this in the following syntactic structure.

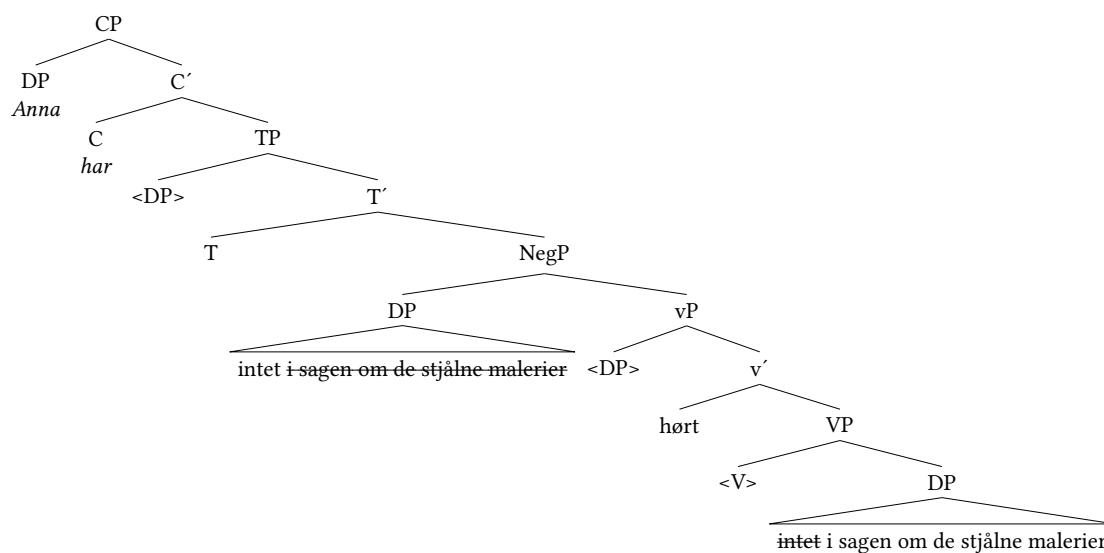
¹See Svenonius (2002) which shows that there is some differences in interpretation depending on if NegShift has occurred or not.

a.



- (33) At this point during PF, part of the higher copy is elided leaving only the NI pronoun. In the lower copy *intet* is deleted, resulting in the following structure.

a.



- (34) The question arises as to what the motivation is for determining what amount of material is deleted during this process. I propose that the solution is similar to Heavy NP Shift and can be modeled using Optimality Theory (Prince & Smolensky 2004) and making reference to the prosody of these constituents.

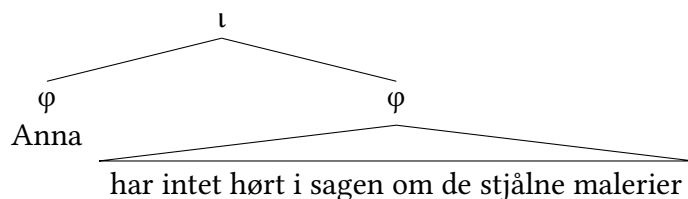
6 Prosodic motivations for Heavy NP Shift

- (35) According to Anttila, Adams & Speriosu (2010), prosody plays a supporting role in linearization and can be accounted for through OT style constraints on prosodic well-formedness.

- (36) Anttila, Adams & Speriosu are concerned with explaining the three way patterning that dative constructions have and how the different verbal arguments are linearized with respect to each other.
- (37) The three different constructions that are possible in dative constructions are:
- Double object constructions
 - Prepositional constructions
 - Heavy NP Shift constructions
- (38) Of crucial interest is how they explain Heavy NP Shift and what their criteria for determining weight.
- (39) Anttila, Adams & Speriosu (2010: p. 949) say that the “weight” of an NP is “a function of the number of lexically stressed words in [the constituent]”.
- (40) This means that the more lexical stresses a constituent has the heavier it is. This definition, crucially, leaves out functional items and pronouns because they lack lexical stress.
- (41) Using this definition for weight, we can explain the behavior Danish and Swedish as discussed in §1. This means that Danish and Swedish have an upper bound on the weight of the shifted element. In the case of Danish only elements of weight ≤ 1 are allowed to shift from their base generated position.
- (42) Swedish on the other hand has a greater weight allowance before it is treated as ungrammatical.

6.1 OT Account for Heavy NP Shift

- (43) Based on Anttila, Adams & Speriosu (2010), prosody plays a supporting role in linearization and can be accounted for through OT style constraints on prosodic well-formedness.
- (44) This can be accounted for using Match Theory (Selkirk 2009, 2011).
- (45) Following Myrberg (2013) and Myrberg & Riad (2013, 2015), I assume that the subject in Scandinavian languages forms its own phonological phrase, if it is not a pronoun, separate from the rest of the clause.
- Simplified prosodic structure for (33a)



- (46) Crucially, what we are concerned with the weight of the item shifting. This can be accounted for using a type of NoSHIFT (Bennett, Elfner & McCloskey 2016) which is sensitive to lexical stresses, following Anttila, Adams & Speriosu’s (2010) definition for phonological weight.

- (47) NoSHIFT(STRESS): Assign one violation for every lexical stress that is not in the same linear order as in the input.
- (48) This constraint operates by considering where a word bearing lexical stress is located in the input and whether it follows the same linear order as the input and assigns a violation for every lexical stress that is not in the same linear order.
- (49) If we take the input of (33a) this constraint should assign a violation for every item bearing lexical stress that has been relinearized.
- (50) Using OT we can model how this would behave with the input of (33a)

	MATCH(XP, φ)	MATCH(φ ,XP)	NoSHIFT(STRESS)
a. $\text{☞} (Anna_{\omega})_{\varphi}$ (har <i>intet</i> _{ω} hørt i sagen om de stjålne malerier) _{φ}	1	1	1
b. $\text{☞} (Anna_{\omega})_{\varphi}$ (har <i>intet nyt</i> _{ω} hørt i sagen om de stjålne malerier) _{φ}	1	1	1
c. $\text{⊖} (Anna_{\omega})_{\varphi}$ (har <i>intet nyt</i> _{ω} i <i>sagen</i> _{ω} hørt om de stjålne malerier) _{φ}	1	1	2!
d. $\text{⊖} (Anna_{\omega})_{\varphi}$ (har <i>intet i sagen</i> _{ω} om de stjålne malerier _{ω} hørt) _{φ}	1	1	

6.2 Alternative accounts

- (51) However this could also be something to do either the maximal or minimal prosodic word that is shifting. This comes down to the fact that Swedish tonal accents are associated with the maximal prosodic word while stress is associated with the minimal prosodic word (Myrberg & Riad 2013).
- (52) This is also the case in Danish where word stress is associated with the minimal prosodic word and Danish stød is associated with the maximal prosodic word (see discussion of stød placement in Kalivoda & Bellik 2018).

7 To be continued...

References

- Anttila, Arto, Matthew Adams & Michael Speriosu. 2010. The role of prosody in the English dative alternation. *Language and Cognitive Processes* 25(7-9). 946–981. <https://doi.org/10.1080/01690960903525481>.
- Bennett, Ryan, Emily Elfner & James McCloskey. 2016. Lightest to the Right: An Apparently Anomalous Displacement in Irish. *Linguistic Inquiry* 47(2). 169–234. https://doi.org/10.1162/LING_a_00209.
- Brinkerhoff, Mykel Loren & Eirik Tengesdal. 2021. MATCHING phrases in Norwegian object shift. In Ryan Bennett, Richard Bibbs, Mykel Loren Brinkerhoff, Max J. Kaplan, Stephanie Rich, Nicholas Van Handel & Maya Wax Cavallaro (eds.), *Supplemental Proceedings of the 2020 Annual Meetings on Phonology*. Washington, DC: Linguistic Society of America.
- 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*, 1st edn., 413–435. Cambridge University Press. <https://doi.org/10.1017/9781108378291.019>.

- Christensen, Ken Ramshøj. 2005. *Interfaces: Negation - Syntax - Brain*. Aarhus: University of Aarhus Ph.D. dissertation.
- Engels, Eva. 2011. Microvariation in object positions: Negative Shift in Scandinavian. *Nordic Journal of Linguistics* 34(2). 133–155. <https://doi.org/10.1017/S033258651100014X>.
- Engels, Eva. 2012. Scandinavian Negative Indefinites and Cyclic Linearization. *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>.
- Erteschik-Shir, Nomi, Gunlög Josefsson & Björn Köhnlein. 2020. Variation in Mainland Scandinavian Object Shift: A Prosodic Analysis. *Linguistic Inquiry*. 1–36. https://doi.org/10.1162/ling_a_00393.
- Fanselow, Gisbert & Damir Cavar. 2001. Remarks on the Economy of Pronunciation. In Gereon Müller & Wolfgang Sternefeld (eds.), *Competition in Syntax*. Berlin, Boston: DE GRUYTER. <https://doi.org/10.1515/9783110829068.107>.
- Fanselow, Gisbert & Damir Cavar. 2002. Distributed deletion. In Artemis Alexiadou (ed.), *Linguistik Aktuell/Linguistics Today*, vol. 49, 65–107. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/la.49.05fan>.
- 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. *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. *Linguistic Inquiry* 42(4). 595–629. https://doi.org/10.1162/LING_a_00062.
- Kalivoda, Nick & Jennifer Bellik. 2018. Prosodic recursion and pseudo-cyclicity in Danish compound stød. In Ryan Bennett, Andrew Angeles, Adrian Brasoveanu, Dhyana Buckley, Nick Kalivoda, Shigeto Kawahara, Grant McGuire & Jaye Padgett (eds.), *Hana-bana (花文)*: A Festschrift for Junko Ito and Armin Mester.
- Myrberg, Sara. 2013. Sisterhood in prosodic branching. *Phonology* 30(1). 73–124. <https://doi.org/10.1017/S0952675713000043>.
- Myrberg, Sara & Tomas Riad. 2013. The prosodic word in Swedish. In Eva Liina Asu-Garcia & Pärtel Lippus (eds.), *Nordic Prosody Proceedings of the XIth Conference, Tartu 2012*, 10. Frankfurt am Main, Berlin, Bern, Bruxelles, New York, Oxford, Wien: Peter Lang GmbH, Internationaler Verlag der Wissenschaften.
- Myrberg, Sara & Tomas Riad. 2015. The prosodic hierarchy of Swedish. *Nordic Journal of Linguistics* 38(2). 115–147. <https://doi.org/10.1017/S0332586515000177>.
- Penka, Doris. 2011. *Negative indefinites* (Oxford Studies in Theoretical Linguistics no. 32). Oxford ; New York: Oxford University Press. 264 pp. <https://doi.org/10.1093/acprof:oso/9780199567263.001.0001>.

- Prince, Alan & Paul Smolensky. 2004. *Optimality Theory: Constraint Interaction in Generative Grammar*. Oxford, UK: Blackwell Publishing Ltd. 1–289. <https://doi.org/10.1002/9780470759400>.
- Selkirk, Elisabeth. 2009. On Clause and intonational phrase in Japanese: The syntactic grounding of prosodic constituent structure. *Gengo Kenkyu* 2009(136). 35–73.
- Selkirk, Elisabeth. 2011. The Syntax-Phonology Interface. In *The Handbook of Phonological Theory*, 435–484. Oxford, UK: Wiley-Blackwell. <https://doi.org/10.1002/9781444343069.ch14>.
- Svenonius, Peter. 2002. Strains of negation in Norwegian. *Working papers in Scandinavian Syntax* 69. 121–146.
- Zeijlstra, Hedde. 2011. On the syntactically complex status of negative indefinites. *The Journal of Comparative Germanic Linguistics* 14(2). 111–138. <https://doi.org/10.1007/s10828-011-9043-2>.

Appendix

Cyclic Linearization

- (53) Cyclic Linearization is a theory that was developed by Fox & Pesetsky 2005 as a way to account for OS and Holmberg’s Generalization.
- (54) This theory works by stipulating that spell-out of the morpho-syntax is cyclic and order preserving, which means that as you spell-out each successive phase you need to ensure that whatever orders existed when that phase was spelled-out persist at the next phase’s ordering restrictions. This theory also had the benefit of accounting for when OS was allowed or not allowed to occur.
- (55) This proposal was extended by Fox & Pesetsky (2005) and Engels (2011, 2012) to account for quantifier movement (QM), which NegShift is a subset of.
- (56) Under this proposal QM is subject to an “Anti-Holmberg Effect” or an “Inverse Holmberg Effect”, which are identical in principle
 - a. Under Holmberg’s Generalization, OS can only apply if the verb has undergone movement from V to T to C.
 - b. 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.
- (57) In order to account for OS, Fox & Pesetsky propose that the during the spell-out of the VP phase the V is the leftmost element in its phase² and at which point the ordering restrictions are in place which state that the V must precede the O.

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 phase not the VP.

- (58) At this point the V moves to T and then to C at this point the object is free to move to a position higher because the order that existed at the VP phase continues to hold.
- (59) OS and string-vacuous Neg-Shift
- a. $[_{CP} S \underset{\downarrow}{V} \dots [_{NegP} \overset{\downarrow}{O} \text{adv} [_{VP} \underset{\downarrow}{t_v} t_o]]]$
- b. VP Ordering: $V > O$
 CP Ordering: $S > V, V > O, O > \text{adv}, \text{adv} > VP$
- (60) If the DO were to move instead of the IO this would now result in the DO being ordered before the IO at the spell-out at the CP phase. By moving the DO, we now introduce a mismatch between the ordering restrictions at the VP phase and the CP phase explaining why such utterances are ungrammatical.
- (61) 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 phase.
- a. $[_{CP} S \text{aux} \dots [_{NegP} \overset{\downarrow}{O} [_{VP} \underset{\downarrow}{t_o} V \underset{\downarrow}{t_o}]]]$
- b. VP Ordering: $O > V$
 CP Ordering: $S > V, \text{aux} > O, O > \text{adv}, \text{adv} > VP \rightarrow O > V$
- (62) The benefit of using Cyclic Linearization comes from being able to account for why certain orders are fixed throughout the entire derivation.