

# 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

- a. Manden havde måske *ingenting* [<sub>VP</sub> sagt t<sub>o</sub> ].  
man-the had probably nothing said  
‘The man hadn’t said anything.’
- b. Jeg har *ingen bøger* [<sub>VP</sub> lånt børnene t<sub>o</sub> ].  
I have no books lent children-the  
‘I haven’t lent the children any books.’

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

- (2) Jag kyssade<sub>v</sub> henne<sub>o</sub> inte [<sub>VP</sub> t<sub>v</sub> t<sub>o</sub> ]  
I kiss.PST her NEG  
‘I didn’t kiss her.’

Sw

Interestingly, several authors have claimed that Scandinavian OS is driven and determined by prosodic factors (see Erteschik-Shir 2005, Erteschik-Shir & Josefsson 2017, Erteschik-Shir, Josefsson & Köhnlein 2020, Brinkerhoff & Tengedal 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, among 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 §?? 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<sub>v</sub> henne<sub>o</sub> inte [<sub>VP</sub> t<sub>v</sub> t<sub>o</sub> ]  
     I   kiss.PST   her       NEG  
     ‘I didn’t kiss her.’
- b. Jag har ingen<sub>o</sub> [<sub>VP</sub> kyssat       t<sub>o</sub> ]  
     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. 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 [<sub>VP</sub> séð t<sub>o</sub> ].Ic  
       I   have nobody    seen  
       ‘I haven’t seen anybody.’
- b. String vacuous NegShift  
       Jag sa ingenting [<sub>VP</sub> t<sub>v</sub> t<sub>o</sub> ].Sw  
       I   said nothing  
       ‘I said nothing’

We can be confident that movement is occurring in (4b) because of the interaction of the NI and certain low aspectual adverbials. As discussed in Nilsen (1997) adverbs are allowed to appear below negation in Norwegian in the exact same order Cinque (1999) observed for Italian. Svenonius (2002) further remarks that we can see this interaction between negation and low adverbs like *tidlig* ‘early’.

- (5) a. Fænsene har *på intet tidspunkt tidlig* slått av TV'en.  
the.fans have on no time early turned off the.TV  
‘The fans have at no time turned the TV off early’
- b. \* Fænsene har *tidlig på intet tidspunkt* slått av TV'en.  
the.fans have early on no time turned off the.TV

Based on these observations Svenonius (2002) claims that movement is required to achieve sentential negation. However, further evidence is required to determine for sure if we actually are observing movement.

In returning to NegShift, evidence collected and reported by Engels (2011, 2012) shows that NegShift is 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 Comparison 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<sup>+</sup>/Sw<sup>+</sup> 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.

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

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

IO-DO	Ic	Da/Fa	No/Sw	No <sup>+</sup> /Sw <sup>+</sup>	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’)

DO is a NegQP both obligatorily shift when the verb has been able to swift to C, (6a), otherwise only the NegQP shifts, (6b).

- (6) 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, producing a freezing effect on OS.

- (7) 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.<sup>1</sup> 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 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.<sup>2</sup>

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 *vP* if there is no intervening phonological material (i.e., Holmberg’s Generalization Holmberg 1986, 1999). If both OS and NegShift were allowed

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

<sup>2</sup>Another possibility is that we are concerned with the

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:

- (8) 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* faktisk *ingen* bøger.  
       I lent her actually no books  
       ‘I didn’t actually lend her any books.’

In (8a), 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 negative polarity item *nogen* ‘any’.

- (9) 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*<sup>0</sup> as in (8b) 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 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.

- (10) a. Jeg har *intet*<sub>o</sub> hørt *t*<sub>o</sub>.  
       I have nothing heard  
       ‘I haven’t heard anything.’  
       b. Jeg har [*intet nyt*]<sub>o</sub> hørt *t*<sub>o</sub>.  
       I have nothing new heard  
       ‘I haven’t heard anything new’  
       c. \*Jeg har [*intet nyt i sagen*]<sub>o</sub> hørt *t*<sub>o</sub>.  
       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*]<sub>o</sub> hørt *t*<sub>o</sub>.  
       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.

- (11) a. Jeg har *intet*<sub>i</sub> hørt *t*<sub>i</sub> [<sub>PP</sub> i sagen om de stjalne malerier ].  
 b. Jeg har *ikke* hørt [ *noget* i sagen om de stjalne malerier ].

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

- (12) a. Men mänskligheten har *ingenting*<sub>o</sub> lärt sig *t*<sub>o</sub>.  
 but mankind-the have nothing taught themselves  
 ‘But mankind haven’t taught themselves anything.’  
 b. ? Vi hade *inga grottor*<sub>o</sub> undersökt *t*<sub>o</sub>.  
 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-Shir, Josefsson & Köhnlein (2020) 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.

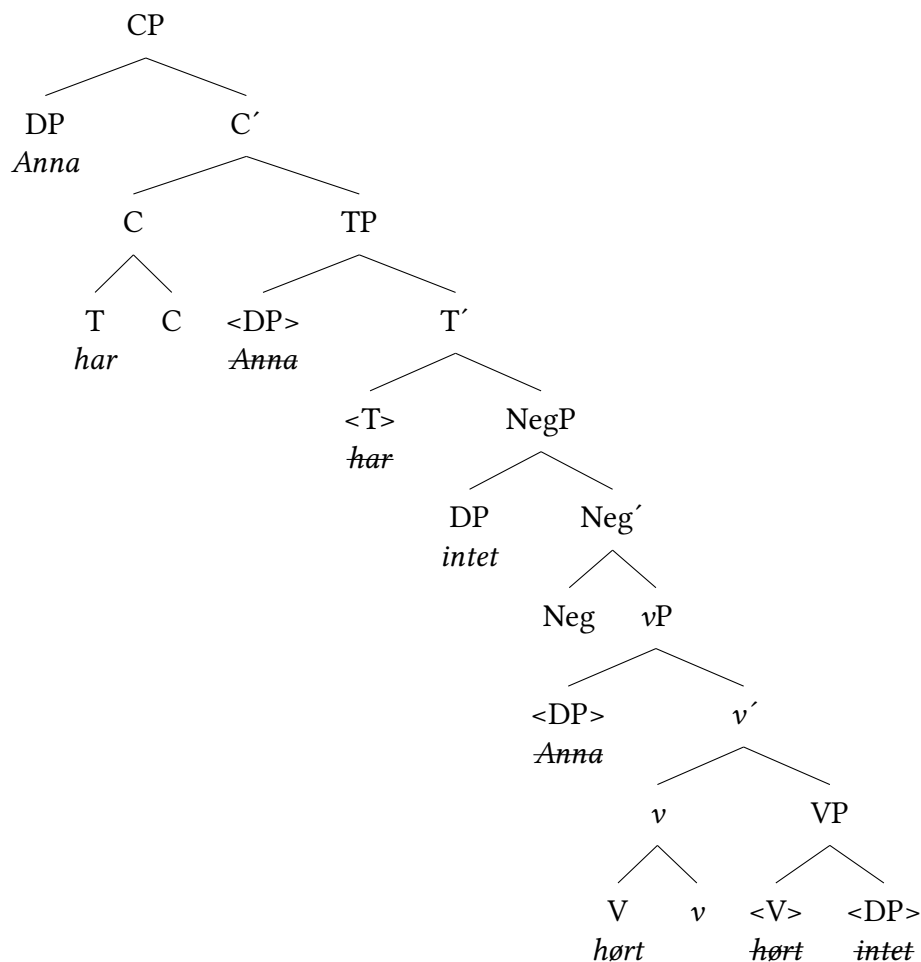
## 5 Zeijlstra’s (2011) copy theory of movement

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). He claims that NIs are composed of a negative operator and an indefinite component and that the split-scope interpretation is the result of a copy-theory of movement (Chomsky 2015).

Following Chomsky movement is not a unique operation that literally moves one element to position higher in the syntax. Instead movement is similar the product of copying a constituent and then remerging it into the syntactic hierarchy. This then results in two or more instances of the constituent, as seen in the syntactic structure for (13).

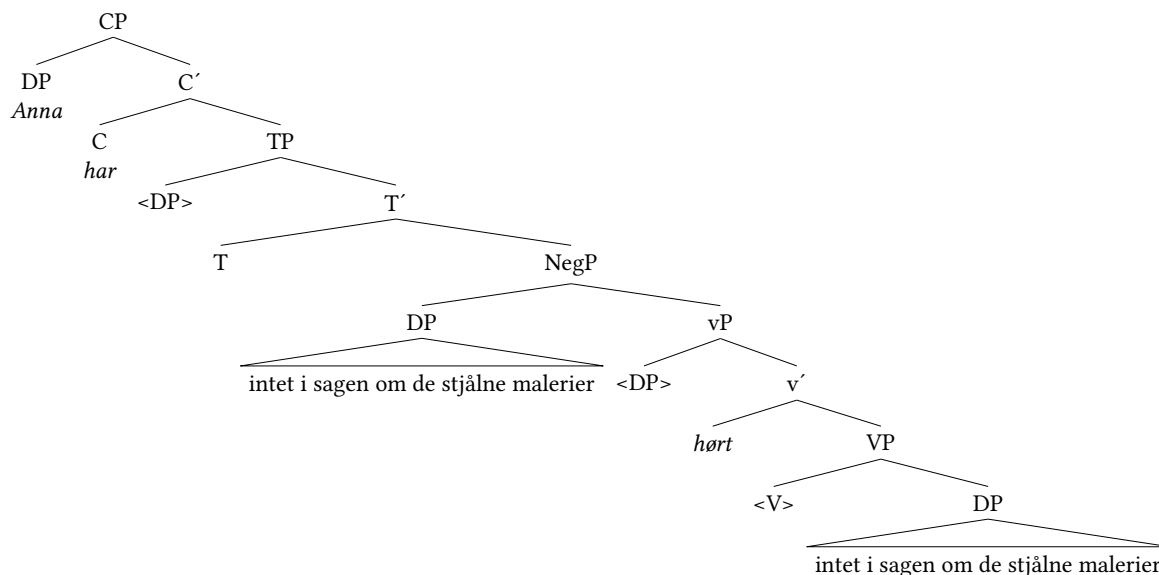
We see as we proceed along the derivation that the verb is first copied and then merged with *v* leaving behind a complete copy of itself in its base-generated position. This operation of copying and then remerging is then continued until we arrive at spell-out. According to Chomsky (2015), only the highest copy will be pronounced at PF, this is represented by the lower copies having a strike through them.

(13) Derivation of *Anna har intet hørt*.

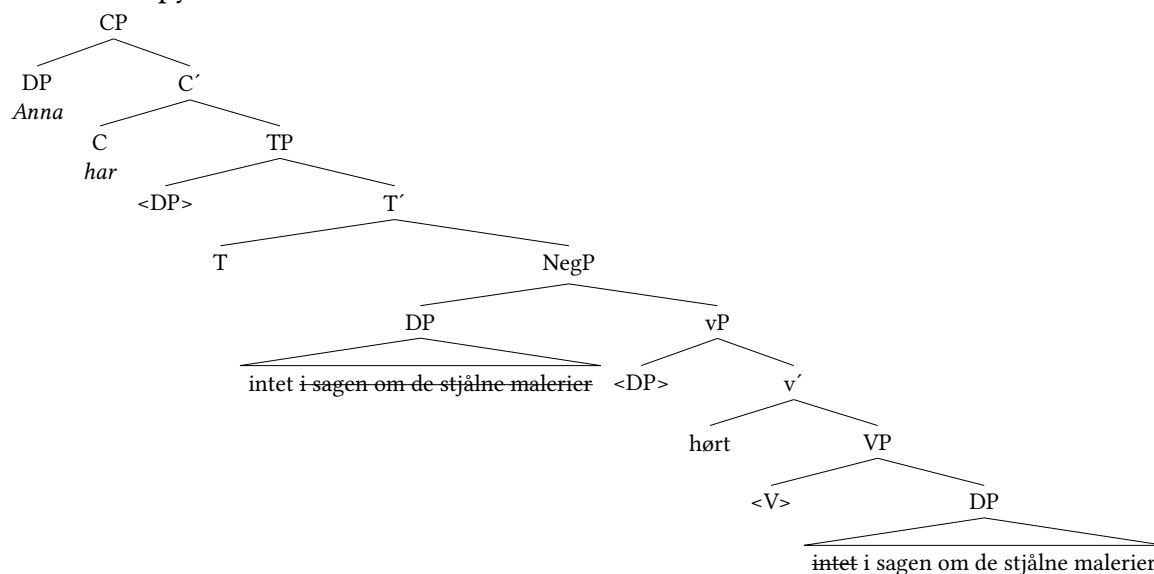


If we assume that Zeijlstra (2011) is correct in that negative indefinites exist in their base-generated position and in this higher copy because of feature-checking and for interpretation at LF then we expect that the higher copy is the only one that is ever pronounced. However, the facts discussed in §4 present a problem. As discussed above Danish allows for only a

(14) For example, we see this in the following syntactic structure.



- (15) At this point during PF, part of the higher copy is deleted leaving only the NI pronoun. In the lower copy *intet* is deleted.



## 6 Cyclic Linearization account

An alternative to the theory presented aCyclic 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 domain<sup>3</sup> 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.

(16) OS and string-vacuous Neg-Shift

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

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 (17) this is to NegP.

(17) NegShift when V is in-situ.

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

## 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 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.

<sup>3</sup>The 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  $vP$  that acts as the spell-out domain not the VP.

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