

Preposition stranding versus pied-piping: Negative Shift of prepositional complements in dialects of Faroese

Eva Engels
University of Aarhus, Denmark

Abstract:

In Faroese, Negative Shift of a prepositional complement is subject to variation across dialects, as well as to variation across speakers of the same dialect as regards preposition stranding and pied-piping. In particular, Negative Shift of a prepositional complement is possible for all speakers in the presence of a main verb *in situ*, stranding the preposition. Only if the main verb undergoes finite verb movement does dialectal and inter-speaker variation arise. In Icelandic, in contrast, the choice between preposition stranding and pied-piping during Negative Shift seems to be independent of verb position and to be lexically determined by the verb-preposition combination instead.

These asymmetries will be accounted for within Fox and Pesetsky's (2003, 2005) cyclic linearization model, which requires non-string-vacuous movement to proceed through the left edge of Spell-out domains, deriving cross-linguistic variation as to Negative Shift from differences in the availability of these left-edge positions. Thereby, pied-piping is considered a last resort strategy, possible only if the prepositional complement cannot undergo Negative Shift on its own due to the unavailability of the relevant left-edge position.

1 Introduction

The main focus of the paper is the distribution of negative prepositional complements in Faroese. Sentential negation must occur outside VP in Scandinavian, necessitating leftward movement of negative phrases, Negative Shift. As discussed in Section 2, there is a considerable amount of variation across the Scandinavian languages as to which constituents can be crossed by Negative Shift and whether or not crossing of a certain constituent depends on the presence of a main verb *in situ*. The observed facts suggest an analysis of Negative Shift within Fox and Pesetsky's (2003, 2005) cyclic linearization model. Under this approach, non-string-vacuous movement must proceed through intermediate positions at the left edges of Spell-out domains. Cross-linguistic variation as to the acceptability of Negative Shift may thus be accounted for by differences in the availability of these left-edge positions, which is considered to be determined by a mechanism of feature transmission.

Negative Shift of the complement of a preposition in Faroese displays variation across dialects and speakers as regards preposition stranding and pied-piping. Interestingly enough, variation is only found if the main verb

© 2009 Eva Engels.

Nordlyd 36.2: *NORMS Papers on Faroese*, 186–207. Edited by Peter Svenonius, Kristine Bentzen, Caroline Heycock, Jógvan í Lon Jacobsen, Janne Bondi Johannessen, Jeffrey K. Parrott, Tania E. Strahan, and Øystein Alexander Vangsnes
CASTL, Tromsø. <http://www.ub.uit.no/munin/nordlyd>

has undergone movement; in the presence of a main verb *in situ*, preposition stranding is obligatory. In Icelandic, in contrast, the choice between preposition stranding and pied-piping during Negative Shift is independent of verb position; instead, it seems to be lexically determined by the verb-preposition combination. Negative Shift of prepositional complements in Faroese and Icelandic will be accounted for within the cyclic linearization model in Section 3 and Section 4, respectively, thereby treating pied-piping as a last resort strategy: if possible at all, it is available only in case the negative DP cannot license sentential negation on its own due to the unavailability of the relevant left-edge position.

The main points of the paper are summarized in Section 5.

2 Negative Shift, cross-linguistic variation, and cyclic linearization

In the Scandinavian languages, there are two ways of formulating the negative sentence in (1): either with a negation marker and an indefinite quantifier as in (1a), or with a negative indefinite object as in (1b). The example in (1) illustrates this for Norwegian (No); the same alternation is found in the other Scandinavian languages.

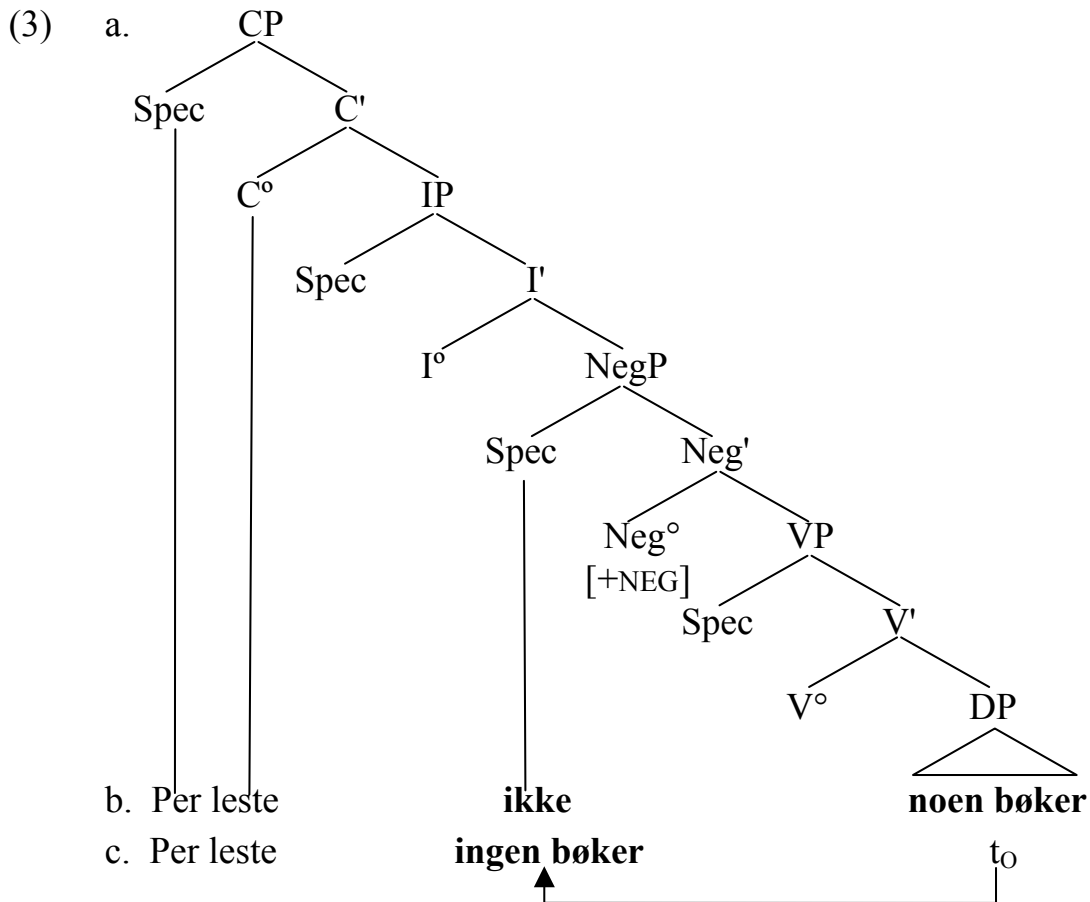
- (1) a. Per leste **ikke noen bøker**. No
Per read not any books
 'Per didn't read any books.'
- b. Per leste **ingen bøker**.
Per read no books
 'Per read no books.'

Sentential negation must be expressed outside VP in Scandinavian. A negative object cannot occur in its base position, following a non-finite main verb, as in (2).

- (2) a. Per har **ikke** [_{VP} lest **noen bøker**] No
Per has not read any books
 'Per hasn't read any books.'
- b. *Per har [_{VP} lest **ingen bøker**]
Per has read no books
 'Per has read no books.'

Given that a negative object cannot stay *in situ* as in (2b), the negative object in (1b) must have undergone leftward movement out of VP. This movement operation is referred to as Negative Shift, henceforth NegS (see K. K. Christensen 1986, 1987, Rögnvaldsson 1987, Jónsson 1996, Svenonius 2000, 2002, K. R. Christensen 2005). I will assume that NegS is triggered by the NEG-criterion, which requires a Spec-head relation for licensing of [+NEG] (Haegeman and Zanuttini 1991, Haegeman 1995). Thus, NegS is

taken to target the specifier position of NegP, as in (3). (Notice that the *ikke...noen* variant does not necessitate object movement; the negation marker *ikke* merged in SpecNegP licenses [+NEG].)



While string-vacuous Neg_S as illustrated in (3c) is possible in all Scandinavian varieties, there is a considerable amount of cross-linguistic variation as to non-string-vacuous Neg_S. In particular, varieties contrast in (a) which constituents may be crossed by Neg_S and (b) whether crossing of a certain constituent requires the presence of a main verb *in situ*. For instance, Neg_S across an intervening main verb does not seem to be possible in present-day No, whereas it is acceptable in the other Mainland Scandinavian languages (MSc), Danish (Da) and Swedish (Sw), as well as in the Insular Scandinavian languages (ISc), Icelandic (Ic) and Faroese (Fa); see the examples in (4).¹

¹ Non-string-vacuous Neg_S in MSc is usually claimed in the literature to be possible in formal styles but not in colloquial ones; see K. K. Christensen (1986), Faarlund et al. (1997), Svenonius (2000) on No, Holmes and Hinchliffe (2003) on Sw, and K. R. Christensen (2005) on Da. However, my Western Jutlandic informants judged Neg_S across a verb *in situ* as unmarked while the majority of my Norwegian informants do

- (4) a. *Jeg har ingenting sagt t₀. *No*
 b. Jeg har ingenting sagt t₀. *Da*
 c. Jag har ingenting sagt t₀. *Sw*
 d. Ég hef ekkert sagt t₀. *Ic*
 e. Eg havi einki sagt t₀. *Fa*
I have nothing said
 'I have said nothing.'

Recall that NegS cannot not take place: a negative object cannot occur *in situ* as shown in (2b), repeated here as (5a). In case NegS is blocked, the *ikke...noen* variant, which is always grammatical, must be used.

- (5) a. *Jeg har **sagt ingenting**. *No*
 b. *Jeg har **ingenting** sagt t₀.
I have nothing said
 'I have said nothing.'
 c. Jeg har **ikke** sagt noe.
I have not said anything
 'I haven't said anything.'

Moreover, NegS across certain constituents requires the presence of a verb *in situ* in some varieties. For example, my Danish informants, referred to as DaL,² marginally accepted NegS across a preposition only if the main verb occurred *in situ*; NegS just across the preposition was judged ungrammatical as shown in (6).

- (6) a. ?Jeg har **ingen** **peget** **på** t₀. *DaL*
I have nobody pointed at
 'I have pointed at nobody.'
 b. *Jeg pegede **ingen** t_v **på** t₀.
I pointed nobody at
 'I pointed at nobody.'

The contrast in (6) points to the conclusion that the intervening preposition itself does not block NegS, contrary to what has been proposed by, for example, K. R. Christensen (2005). NegS across the preposition is possible if it also crosses the verb (the Inverse Holmberg Effect).³ By the same

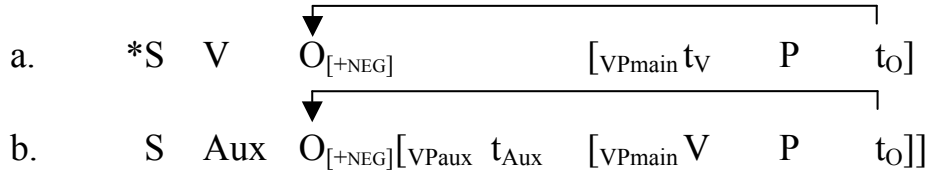
not consider it grammatical, not even in formal style. Potential differences in style will be disregarded here.

² As these informants are linguists at the University of Aarhus, who come from different regions of Denmark, they do not represent a dialect group.

³ Inverse Holmberg Effects were first observed by Rögnvaldsson (1987) for NegS across an indirect object in Ic.

reasoning, the starting position cannot be held responsible for the availability of Neg_S.

(7) **Inverse Holmberg Effect**



At first glance, the fact that an intervening main verb cancels out the blocking effect would seem to indicate that the acceptability of Neg_S depends on the object's target position relative to the main verb (see Svenonius 2000 for an analysis along these lines). However, apart from cross-linguistic variation, there is variation across constructions as to the availability of non-string-vacuous Neg_S and its dependence on verb position. For example, Western Jutlandic (WJ) differs from DaL in that the former permits Neg_S across a preposition, independent of verb position, as shown in (8).⁴ With regard to Neg_S out of an infinitival clause, however, some of the DaL and WJ speakers (DaL1 and WJ2) show an Inverse Holmberg Effect. In contrast, the other DaL speakers (DaL2) prohibit Neg_S out of an infinitival clause altogether, whereas the other WJ speakers (WJ1) permit it irrespective of verb position as in (9). See Engels (2009) for more details on the range of variation across the Scandinavian languages as to non-string-vacuous Neg_S.

- (8) a. Hun har **ingen** snakket med t_O
she has nobody spoken with
 'She has spoken with nobody.'
- b. Hun snakkede **ingen** t_V med t_O
she spoke nobody with
 'She spoke with nobody.'
- (9) a. Han har **ingen kager lovet** at købe t_O
he has no cakes promised to buy
 'He has promised to buy no cakes.'
- b. Han lovede **ingen kager** t_V at købe t_O
he promised no cakes to buy
 'He promised to buy no cakes.'

	WJ1	WJ2	DaL1	DaL2
(8) a.	✓	✓	?	?
(8) b.	✓	✓	*	*
(9) a.	✓	✓	✓	*
(9) b.	✓	*	*	*

There are not only contrasts across varieties, but also contrasts across constructions, as to whether or not Neg_S depends on the position of the matrix

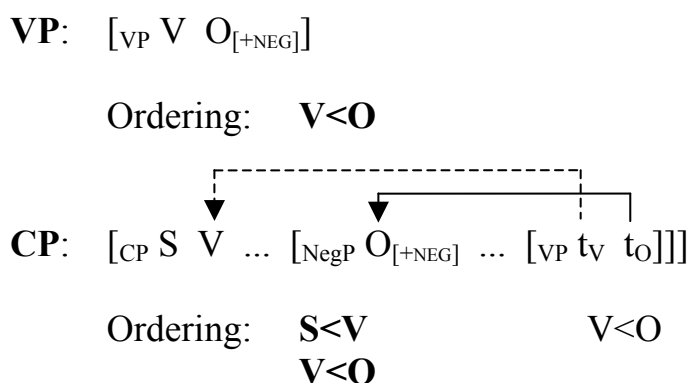
⁴ The WJ data was collected during the NORMS dialect workshop in Western Jutland, January 2008.

main verb. This fact points to the conclusion that the object's target position to the left/right of the verb cannot be decisive for the acceptability of NegS. Thus, neither the intervening constituents, nor the object's base or target position, can capture the observed variation as to non-string-vacuous NegS by themselves.

In Engels (2009), I put forward an approach to NegS in Scandinavian within Fox and Pesetsky's (2003, 2005) cyclic linearization model. Assuming that derivations proceed "bottom-to-top," Fox and Pesetsky (2003, 2005), henceforth F&P, suggest that the mapping between syntax and phonology (i.e., Spell-out) takes place at various points in the course of derivation, including at VP and at CP (on multiple Spell-out see also Uriagerika 1999 and Chomsky 2000, 2001). The material in the Spell-out domain D is thereby linearized. The crucial property of Spell-out is that it may only add information about the linearization of a newly constructed Spell-out domain to the information cumulatively produced by previous applications of Spell-out. Previously established linearization statements cannot be deleted, accounting for successive cyclic movement and order preservation effects.

(10) illustrates the derivation of string-vacuous NegS under the cyclic linearization approach. At Spell-out of VP, both the verb and its object occur in their base positions and the linearization statement $V < O$ (= verb precedes object) is established. When the derivation proceeds, the subject is merged, the negative object moves to SpecNegP, where it licenses [+NEG], and the main verb undergoes finite verb movement. At Spell-out of CP, the new ordering statements added (boldfaced) are consistent with the ones established at VP Spell-out. The relative ordering between verb and object is retained.

(10) **String-vacuous NegS in Sc, (1b)**



In contrast, NegS across a verb *in situ*, as in (11), leads to an ordering contradiction. At Spell-out of VP, the main verb precedes the object, $V < O$. If the negative object now undergoes NegS while the main verb remains *in*

situ, the ordering statement established at Spell-out of CP, O<V, does not match the previously established one; see the circled ordering statements in (11). NegS across a verb *in situ* is thus predicted to be blocked, as borne out in No, (4a). Instead, the *ikke...noen* variant must be used as in (5c); this does not involve object movement and thus does not give rise to any ordering contradictions, as illustrated in (12).

(11) **No NegS across a verb *in situ* in No, (4a)**

VP: [VP V O_[+NEG]]

Ordering: **V<O**

CP: *_{[CP S Aux ... [NegP O_[+NEG] ... [VP V t_O]]]}

Ordering: **S<Aux**
Aux<O
O<V

V<O

(12) ***Ikke...noen* variant, (5c)**

VP: [VP V O]

Ordering: **V<O**

CP: [_{CP S Aux ... [NegP *ikke* ... [VP V O]]]}

Ordering: **S<Aux** V<O
Aux<ikke
ikke<V

Though NegS across a verb *in situ* is ungrammatical in No, it is acceptable in the other MSc languages and in ISc; see the examples in (4) above. Under the cyclic linearization approach, non-string-vacuous movement must proceed successive cyclically through intermediate positions at the left edge of Spell-out domains. As illustrated in (13), the object moves to the edge of VP prior to Spell-out. Consequently, the ordering statement O<V is established at VP Spell-out. From this edge position, the object may then move to SpecNegP without giving rise to an ordering contradic-

tion at Spell-out of CP. The linearization statements added at CP Spell-out are consistent with the ones established at VP Spell-out.

(13) **NegS across a verb *in situ* in Da/Sw/Ic/Fa, (4b-e)**

VP: $[\text{VP } \overset{\downarrow}{\text{O}}_{[+\text{NEG}]} \text{ V } \text{t}_0]$

Ordering: **O<V**

CP: $[\text{CP } \text{S } \text{Aux } \dots [\text{NegP } \overset{\downarrow}{\text{O}}_{[+\text{NEG}]} \dots [\text{VP } \text{t}_0 \text{ V } \text{t}_0]]]$

Ordering: **S<Aux** O<V
Aux<O
O<V

Thus, cross-linguistic variation as to NegS across a verb *in situ* may be captured by differences in the availability of the edge of VP as intermediate landing site under the cyclic linearization approach; see Figure 1. More generally, since non-string-vacuous movement needs to proceed through the edge of Spell-out domains, variation as to the distribution of negative objects can be derived by contrasts in the availability of the relevant left-edge positions to NegS; see Engels (2009) for a detailed analysis.⁵

Figure 1

NegS		<i>Ic</i>	<i>Fa</i>	<i>WJ</i>	<i>Da</i>	<i>Sw</i>	<i>No</i>
across	∅ (= string-vacuous)	✓	✓	✓	✓	✓	✓
	V	✓	✓	✓	✓	✓	*
through edge of	∅ (= directly)	+	+	+	+	+	+
	V P	+	+	+	+	+	-

Finally, note that although NegS cannot cross a verb *in situ* in No, various types of A- and A'-movement—such as *wh*-movement, as in (14a), topicalization, as in (14b), passivization, as in (14c), and subject raising, as in (14d)—can do so.

⁵ In contrast to phase-based approaches, where the edge of a phase represents the only escape hatch for movement out of the phase (Chomsky 2000, 2001), movement need not proceed through the edge of a Spell-out domain and, in fact, cannot do so in string-vacuous cases under the cyclic linearization approach, as in (10). "Movement is possible from the non-edge of a relevant domain so long as the previously established linearization is not disrupted" (F&P 2003: 2).

- (14) a. **Hva** har du **solgt** t? *No*
what have you sold
 'What have you sold?'
- b. **Bøkene** har jeg **solgt** t.
books-the have I sold
 'I have sold the books.'
- c. I går ble **bøkene** **solgt** t.
yesterday were books-the sold
 'Yesterday the books were sold.'
- d. Etter min mening har **Pål** alltid **sett ut til** t
in my opinion has Paul always looked out to
 å være intelligent.
to be intelligent
 'In my opinion Paul always seemed to be intelligent.'

In terms of the cyclic linearization approach, these facts indicate that the availability of the edge of VP as intermediate position varies across movement operations. F&P state that their "proposals say nothing in themselves [...] about the circumstances under which movement to these left-edge positions is allowed or prohibited" (2005a: 39). Given that movement takes place for feature checking, let us assume that the attracting head may transmit an edge feature to V° , permitting movement via the edge of VP. The data above thus suggest that there are cross-linguistic contrasts as to which head may transmit an edge feature to V° .⁶ For instance, C° but not Neg° may transmit an edge feature to V° in No, while V° may receive an edge feature from both C° and Neg° in the other Scandinavian varieties. As a consequence, object movement to SpecCP may cross a verb *in situ* in No, whereas movement to SpecNegP cannot.

3 Neg_S of prepositional complements in Faroese

The data I collected during the NORMS dialect workshop on the Faroe Islands in August 2008 display a peculiarity as regards Neg_S of a prepositional complement. Informants were asked to give acceptability judgments on a scale from 1 (bad) to 5 (good) for various constructions involving negation. In the following, only sentences judged 4 and 5 were interpreted as grammatical. (The bracketed figures below represent the

⁶ Under the assumption that movement via the edge is required in case V° bears an edge feature, feature transmission must be optional (if possible at all): Neg_S must be able not to proceed via the edge of VP in string-vacuous cases; see (10) and fn. 5 above. That is, even in varieties in which Neg° is in principle able to transmit an edge feature to V° , feature transmission, and consequently, movement via the edge of VP need not take place, as indicated by \emptyset in Figure 2 below.

results under a less strict interpretation, where judgements between 3 and 5 were taken to be grammatical.)

All of the 34 informants included in the analysis⁷ accepted NegS across the preposition in the presence of a verb *in situ* as shown in (15a). Pied-piping the preposition as in (15b), in contrast, was judged ungrammatical. Likewise, leaving the negative object *in situ* was rejected by all but one informant as in (15c).

		<i>Fa</i>
(15) a.	Í dag hefur Petur ongan tosað við t _O	34/34 (34/34)
b.	Í dag hefur Petur við ongan tosað t _{PP}	0/34 (1/34)
c.	Í dag hefur Petur tosað við ongan <i>today has Peter spoken with nobody</i> 'Today Peter has spoken with nobody.'	1/34 (7/34)

In contrast, if the main verb undergoes finite verb movement, NegS of a prepositional complement is subject to variation across dialects as well as to variation across speakers of the same dialect (henceforth *inter-speaker variation*) as regards preposition stranding and pied-piping. This is illustrated in (16). In the dialect of Miðvágur (M), NegS just across the preposition, as in (16a), is possible (compare the WJ data in (8) above). In contrast, the vast majority of speakers from other places rejected preposition stranding with NegS in the absence of a verb *in situ*. However, about half of the speakers from Tórshavn (T) and Fuglafjørður (F) accepted NegS pied-piping the preposition, as in (16b).⁸ Finally, the speakers from Tvøroyri (Tv), Sandur (S) and Klaksvík (K) do not seem to permit NegS of

⁷ Some informants were excluded because their judgments strongly deviated from the ones of the other informants in the overall questionnaire (e.g., if they judged NegS across a verb *in situ* ungrammatical).

⁸ Actually, the sequence *preposition*<*negative object* in (16b) is structurally ambiguous between lack of NegS, as in (i)a, and string-vacuous NegS pied-piping the preposition, as in (i)b.

- (i) a. Í gjár tosaði_V Petur [_{NegP} [VP tv [PP **við ongan**]]]
 b. Í gjár tosaði_V Petur [_{NegP} **við ongan**_{PP} [VP tv t_{PP}]]
yesterday spoke Peter with nobody
 'Yesterday Peter spoke with nobody.'

Given that [+NEG] must be licensed overtly in Scandinavian, the sequence *preposition*<*negative object* must involve NegS pied-piping the preposition as in (i)b. This hypothesis is supported by the fact that a negative complement cannot follow the preposition in the presence of a verb *in situ*, as in (15c).

a prepositional complement at all, neither stranding the preposition nor pied-piping it. (Recall that a similar pattern was found in DaL, where NegS across a preposition was only permitted in the presence of a verb *in situ*.)

(16)

	M	T _v	S	K	T	F
a. Í gjár tosaði P ongan t _v við t _o	7/7 (7/7)	0/4 (0/4)	0/4 (2/4)	0/6 (2/6)	1/8 (1/8)	1/5 (1/5)
b. Í gjár tosaði P við ongan t _v t _{pp} <i>yesterday spoke P with nobody</i> 'Yesterday Peter spoke with nobody.'	2/7 (4/7)	1/4 (3/4)	1/4 (2/4)	0/6 (1/6)	4/8 (6/8)	3/5 (3/5)

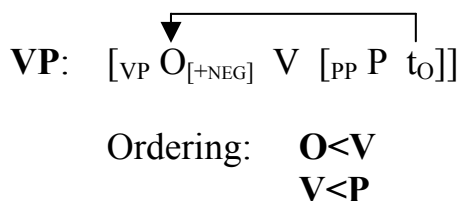
Summing up, NegS of a prepositional complement obligatorily strands the preposition in the presence of a main verb *in situ* in all Fa varieties under discussion. In contrast, if the main verb has undergone finite verb movement, there is dialectal and inter-speaker variation as to preposition stranding and pied-piping during NegS. These phenomena are even more surprising in view of the fact that pied-piping of a preposition seems generally acceptable under topicalization in Fa, whereas preposition stranding is more restricted in this case (see Lockwood 1977, Thráinsson et al. 2004).

The following sections aim at accounting for preposition stranding and pied-piping with NegS within the cyclic linearization model.

3.1 Preposition stranding

As illustrated in (15) above, NegS of a prepositional complement is generally possible in Fa in the presence of a main verb *in situ*, stranding the preposition. The same holds for DaL and WJ, as shown in (8) above. As laid out in Section 2, non-string-vacuous NegS must proceed through the left edge of the relevant Spell-out domains under the cyclic linearization approach. Thus, for the negative prepositional complement to be able to surface in a position to the left of the non-finite main verb, it must be linearized to the left of the verb at VP Spell-out. In other words, the prepositional complement must move through the left edge of VP. This is illustrated in (17) (to be revised in (19) below).

(17) **NegS stranding a preposition in WJ/DaL/Fa, main verb *in situ*, (8a)/(15a) (to be revised in (19) below)**



CP: [_{CP} S Aux ... [_{NegP} O_[+NEG] ... [_{VP} t_O V [_{PP} P t_O]]]]

Ordering: **S<Aux** **O<V**
 Aux<O **V<P**
 O<V

NegS just across a preposition, as found in M (16a) and WJ (8b), must not proceed through the edge of VP but through the edge of PP, giving rise to the ordering V<O<P at VP Spell-out as illustrated in (18). The finite main verb and negative object are thus expected to be able to undergo further leftward movement without yielding an ordering contradiction at CP Spell-out.

(18) **NegS just across P in WJ/M, main verb in C°**, (8b)/(16a)

PP: [_{PP} O_[+NEG] P t_O]

Ordering: **O<P**

VP: [_{VP} V [_{PP} O_[+NEG] P t_O]]

Ordering: **V<PP => V<O** **O<P**

CP: [_{CP} S V ... [_{NegP} O_[+NEG] ... [_{VP} t_V [_{PP} t_O P t_O]]]]

Ordering: **S<V** **V<O** **O<P**
 V<O
 O<P

Assuming that only the edges of Spell-out domains may serve as intermediate positions (i.e., that only heads of Spell-out domains may receive an edge feature), Engels (2009) considers PP to be a Spell-out domain as well (see Sabbagh 2007). As a consequence, all movement out of PP must proceed through the left edge of PP (see also Baltin 1978 and van Riemsdijk 1978). Thus, the derivation of NegS across preposition and verb in (17) must be revised slightly: the negative object moves through the edge of PP on its way to the edge of VP, as in (19).

- (19) **Neg_S stranding a preposition in WJ/DaL/Fa, main verb *in situ*, (8a)/(15a) (revised version of (17) above)**

PP: $\left[\begin{array}{c} \downarrow \\ \text{PP } O_{[+\text{NEG}]} \text{ P } t_O \end{array} \right]$

Ordering: **O<P**

VP: $\left[\begin{array}{c} \downarrow \\ \text{VP } O_{[+\text{NEG}]} \text{ V } \left[\begin{array}{c} \downarrow \\ \text{PP } t_O \text{ P } t_O \end{array} \right] \end{array} \right]$

Ordering: **O<V** O<P
V<P

CP: $\left[\begin{array}{c} \downarrow \\ \text{CP } S \text{ Aux } \dots \left[\begin{array}{c} \downarrow \\ \text{NegP } O_{[+\text{NEG}]} \dots \left[\begin{array}{c} \downarrow \\ \text{VP } t_O \text{ V } \left[\begin{array}{c} \downarrow \\ \text{PP } t_O \text{ P } t_O \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$

Ordering: **S<Aux** O<V O<P
Aux<O V<P
O<V

While preposition stranding is generally acceptable in Fa, DaL and WJ if the main verb stays *in situ*, Neg_S just across the preposition is much more restricted. It was accepted in M and WJ whereas the majority of speakers of other Fa dialects as well as DaL rejected it, as in (16a) and (8b) above. In the presence of a main verb *in situ*, Neg_S stranding a preposition involves intermediate movement from the edge of PP to the edge of VP as in (19). In contrast, if the main verb undergoes finite verb movement, the prepositional complement moves directly from the edge of PP to SpecNegP as in (18). This suggests that for those speakers who show an Inverse Holmberg Effect with Neg_S across a preposition, the edge of PP is available but only for movement to the edge of VP. In the present analysis, this can be accounted for by the assumption that feature transmission from Neg^o to P^o needs to be mediated by V^o. That is, Neg^o transmits an edge feature to V^o, which in turn transmits an edge feature to P^o. As a result, P^o may only bear an edge feature if V^o does so too, and consequently, movement via the edge of PP must continue to the edge of VP. (But note that Neg_S is not necessarily forced to proceed via the edge of VP otherwise--e.g., in string-vacuous cases like (10)--since feature transmission is considered to be optional; see fn. 6.) In contrast, in those varieties where Neg_S across a preposition does not depend on verb position (namely in M and WJ), Neg^o is apparently able to transmit an edge feature to P^o without V^o possessing one. Thus, movement via the edge of PP need not carry on to the edge of VP as shown

in (18) above, permitting NegS just across a preposition. See Engels (2009) for more details on the feature transmission mechanism.

In addition, note that NegS across a preposition is not possible at all in No. Irrespective of verb position, the negative complement cannot move out of PP, as in (20).

- (20) a. *Jeg har **ingen snakket med** t_0 . No
I have nobody spoken with
 'I have spoken with nobody.'
- b. *Jeg snakket **ingen** t_v **med** t_0 .
I spoke nobody with
 'I spoke with nobody.'

The pattern in (20) differs from the ones encountered so far, as it does not even permit NegS of the prepositional complement in the presence of a verb *in situ*. NegS across a preposition can be excluded altogether under the approach adopted here by the assumption that the edge of PP is not available as intermediate landing site in No at all. In other words, P° cannot receive an edge feature from Neg° .

Figure 2 illustrates the cross-linguistic variation as to the ability of Neg° to transmit an edge feature to P° , either directly or via V° .

Figure 2

NegS		<i>M/WJ</i>	<i>Tv/S/K/T/F/DaL</i>	<i>No</i>	
across	\emptyset (= string-vacuous)	✓	✓	✓	
	V	✓	✓	*	
	P	verb <i>in situ</i>	✓	✓	*
		verb moved	✓	*	*
feature transmission	\emptyset	+	+	+	
	V° from Neg°	+	+	-	
	P°	from V°	+	+	-
		from Neg°	+	-	-

3.2 Pied-piping

The previous section showed that most of the Fa dialects under consideration prohibit preposition stranding during NegS in the absence of a verb *in situ*. However, for half of the speakers of T and F, NegS of the prepositional complement does not seem to be excluded altogether in this case; licensing of [+NEG] may be ensured by NegS pied-piping the preposition, as in (16b). In the presence of a main verb *in situ*, in contrast, pied-piping during NegS is ungrammatical in Fa; preposition stranding is obligatory in

this case, as in (15). (21) illustrates the variation as to NegS pied-piping the preposition in the presence or absence of a verb *in situ*.

(21)

- a. Í dag hefur P **við ongan** **tosað** t_{PP}
today has P with nobody spoken
 'Today Peter has spoken with nobody.'

- b. Í gjár tosaði P **við ongan** t_V t_{PP}
yesterday spoke P with nobody
 'Today Peter spoke with nobody.'

M	T _V	S	K	T	F
0/7 (0/7)	0/4 (0/4)	0/4 (0/4)	0/6 (0/6)	0/8 (1/8)	0/5 (0/5)
2/7 (4/7)	1/4 (3/4)	1/4 (2/4)	0/6 (1/6)	4/8 (6/8)	3/5 (3/5)

Moreover, pied-piping a preposition during NegS is not possible in DaL, WJ and No.

- (22) a. *Jeg har **med ingen** **snakket** t_{PP} . *DaL/WJ/No*
I have with nobody spoken
 'I have spoken with nobody.'
- b. *Jeg snakkede **med ingen** t_V t_{PP} .
I spoke with nobody
 'I spoke with nobody.'

In contrast, four of my six Swedish informants judged the sequence *prepositions* < *negative object* as (marginally) acceptable in case the finite verb had undergone finite verb movement; preposition stranding was rejected in this case. Similar to Fa, pied-piping was judged ungrammatical in the presence of a verb *in situ*.⁹

- (23) a. *Denna veckan har Marie **med ingen** **pratad** t_{PP} . *Sw*
this week has Marie with nobody spoken
 'This week Marie has spoken with nobody.'
- b. (?)I går pratade Per **med ingen** t_V t_{PP} .

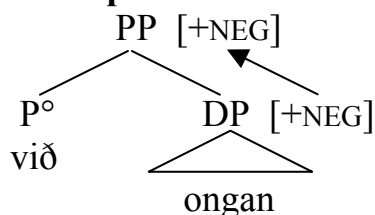
⁹ Likewise, pied-piping during *wh*-movement seems to be more readily available in Sw than in Da and No.

- (i) a. **Vem** har du pratad med t_O ? *Sw*
 b. **Med vem** har du pratad t_{PP} ?
with whom have you spoken
 'Who did you speak with?'
- (ii) a. **Hvem** har du snakket med t_O ? *Da/No*
 b. ***Med hvem** har du snakket t_{PP} ?
with whom have you spoken
 'Who did you speak with?'

- c. *I går pratade Per **ingen** tv **med** t₀.
yesterday spoke Per nobody with
 'Yesterday Per spoke with nobody.'

Assuming that feature checking is carried out in Spec-head configuration, pied-piping must involve feature percolation (see Chomsky 2001, K. R. Christensen 2005). Only if [+NEG] percolates up to PP can PP be attracted by Neg^o, satisfying the NEG-criterion.

(24) **Feature percolation**



The contrasts as to pied-piping during NegS of a prepositional complement suggest that feature percolation is subject to variation across varieties as well as to variation across speakers of the same variety represented by % below; see Figure 3.

Figure 3

NegS		<i>M/WJ</i>	<i>T/F/Sw</i>	<i>Tv/S/K/DaL</i>	<i>No</i>
across	∅ (= string-vac.)	✓	✓	✓	✓
	V	✓	✓	✓	*
	P <i>verb in situ</i>	✓	✓	✓	*
	<i>verb moved</i>	✓	*	*	*
pied-piping	P <i>verb in situ</i>	*	*	*	*
	<i>verb moved</i>	*	%	*	*
feature transmission	∅	+	+	+	+
	V ^o from Neg ^o	+	+	+	-
	P ^o from V ^o	+	+	+	-
	<i>from Neg^o</i>	+	-	-	-
feature percolation		-	±	-	-

Furthermore, the fact that pied-piping is strictly prohibited if the main verb stays *in situ* indicates that feature percolation is not freely available, even not for those speakers of T, F and Sw who permit it in the absence of a verb *in situ*. Feature percolation and pied-piping can be regarded as a last resort strategy which is only available in case [+NEG] cannot be licensed by the negative DP itself. Due to the inability of Neg^o to directly transmit an edge feature to P^o (ruling out direct movement of the object from the edge of PP to SpecNegP), NegS of the prepositional complement cannot take place just

across the preposition. In contrast, Neg^S pied-piping the preposition is string-vacuous; that is, it need not proceed through the edge of PP, as in (25). Hence, for those speakers who permit feature percolation, licensing of [+NEG] can be rescued by pied-piping.

(25) **Neg^S pied-piping P in T/F/Sw, main verb in C^o, (21b)/(23b)**

PP: [PP P O]_[+NEG]

Ordering: **P<O**

VP: [VP V [PP P O]_[+NEG]]

Ordering: **V<PP => V<P** P<O

CP: [CP S V ... [NegP [PP P O]_[+NEG] ... [VP t_V t_{PP}]]]

Ordering: **S<V** V<PP => V<P P<O
V<P
P<O
O<∅

Though Neg^o might not be able to transmit an edge feature to P^o directly in some Fa varieties, it is generally able to transmit an edge feature to P^o via V^o (see Figure 3 above). Thus, in the presence of a verb *in situ*, the prepositional complement may undergo Neg^S on its own, as in (19) above. Feature percolation and pied-piping are not necessary and, consequently, not permitted.

Notice that under the less strict definition of grammaticality, preposition stranding and pied-piping during Neg^S seem to be optional in the absence of a verb *in situ* for at least some speakers of M and S; see the bracketed figures in (16) above. Feature percolation and pied-piping thus cannot be regarded as a last resort strategy: the negative complement can undergo Neg^S alone (stranding the preposition). The fact that preposition stranding is obligatory in the presence of a verb *in situ* may then be accounted for by the assumption that feature percolation/pied-piping are restricted by economy considerations. Pied-piping is only possible in those cases where it results in string-vacuous Neg^S, i.e. in those cases where it spares intermediate movement altogether under the cyclic linearization approach. As illustrated in (25) above, Neg^S pied-piping the preposition retains the relative orderings of verb, preposition, and object if the main

verb undergoes finite verb movement. No intermediate movement to left-edge positions takes place. In contrast, if the verb stays *in situ*, NegS pied-piping the preposition would still have to proceed through the edge of VP as shown in (26).

(26) **No NegS pied-piping P, main verb *in situ*, (21a)/(23a)**

PP: [PP P O]_[+NEG]

Ordering: **P<O**

VP: [VP [PP P O]_[+NEG] V t_{PP}]



Ordering: **P<O** P<O
O<V

CP: [CP S Aux ... [NegP [PP P O]_[+NEG] ... [VP t_{PP} V t_{PP}]]]

Ordering: **S<Aux** P<O P<O
Aux<P O<V
P<O
O<V

It remains unclear why feature percolation/pied-piping should be restricted to cases where it results in string-vacuous movement. The hypothesis that a [+NEG] DP but not a [+NEG] PP can move through the edge of VP, permitting movement of a DP but not movement of a PP across a verb *in situ*, seems unwarranted.

The following section shows that NegS of a prepositional complement is not dependent on verb position in Ic. Instead, whether a preposition is stranded or pied-piped during NegS seems to be determined by the lexical verb-preposition combination.

4 Preposition stranding vs. pied-piping in Icelandic

According to Svenonius (2000), the choice between preposition stranding and pied-piping during clause-medial object movement depends on the verb-preposition combination in Ic, as exemplified by the contrast between (27)/(28) and (29)/(30). (Notice that the examples in (27) and (29) actually do not involve negative objects but non-negative quantified ones, which may optionally undergo quantifier movement in Ic.)

- (27) a. Hann hefur **ymsa** **talað við** t_O. Ic
 b. *?Hann hefur **við ymsa** **talað** t_{PP}.
he has with various spoken
 'He has spoken with many people.' (Svenonius 2000: 263)
- (28) a. ?Ég talaði **engan** t_V **við** t_O. Ic
 b. *?Ég talaði **við engan** t_V t_{PP}.
I spoke with nobody
 'I spoke with nobody.' (Svenonius 2000: 272)
- (29) a. *?Hann hefur ekki **neinum** **hlegið að** t_O. Ic
 b. Hann hefur ekki **að neinum hlegið** t_{PP}.
he has not at anybody laughed
 'He hasn't laughed at anybody.' (Svenonius 2000: 263)
- (30) a. *?Ég hlo **engum** t_V **að** t_O. Ic
 b. ?Ég hlo **að engum** t_V t_{PP}.
I laughed at nobody
 'I laughed at nobody.' (Svenonius 2000: 272/73)

As the above examples show, preposition stranding and pied-piping are independent of verb position in Ic; both may take place in the presence and absence of a verb *in situ*. Under the cyclic linearization approach adopted here, this can be accounted for by the assumption that the left edge of PP is available in some cases (i.e., Neg^o may transmit an edge feature to P^o either directly or via V^o), but not available in other cases (i.e., Neg^o cannot transmit an edge feature to P^o, neither directly nor via V^o), depending on the verb-preposition combination. Feature percolation and pied-piping may then again be considered a last resort strategy, accessible only in case the complement cannot license [+NEG] on its own due to the unavailability of the edge of PP as intermediate position. Neg_S pied-piping the preposition retains the base order of preposition and object and thus need not go through the edge of PP (see the derivations in (25) and (26) above). In contrast, if the edge of PP is available for Neg_S, licensing of [+NEG] can be carried out by the complement itself. Feature percolation and pied-piping are not necessary and, consequently, not permitted.¹⁰

Summing up, the choice between preposition stranding and pied-piping during Neg_S, which was shown to be subject to dialectal and inter-speaker

¹⁰ Alternatively, one might assume that feature percolation itself is dependent on verb-preposition combination. If the given verb-preposition combination induces feature percolation, PP is marked [+NEG] and thus must undergo Neg_S in satisfaction of the NEG-criterion. Otherwise, the [+NEG] DP complement undergoes Neg_S alone, stranding the preposition.

variation in Fa, is apparently lexically determined by the verb-preposition combination in Ic. Unlike in Fa, preposition stranding and pied-piping in Ic are not dependent on verb position. For both Fa and Ic, pied-piping was regarded as a repair strategy, accessible only in case the prepositional complement could not license [+NEG] on its own (i.e., stranding the preposition) due to the unavailability of the edge of PP for intermediate movement.

5 Conclusion

Preposition stranding and pied-piping during NegS of a prepositional complement was shown to be subject to dialectal and inter-speaker variation in Fa. Interestingly enough, this variation only emerges if the main verb undergoes finite verb movement; in the presence of a verb *in situ*, preposition stranding is obligatory during NegS.

The patterns observed in Fa were also found in other Scandinavian varieties (see Figure 3 above). For instance, like in M, NegS may move the complement just across the preposition in WJ. In contrast, at least some speakers of T, F and Sw permit preposition pied-piping during NegS if the main verb has undergone finite verb movement, whereas NegS of a prepositional complement cannot take place at all in this case in Tv, S, K and DaL, neither stranding the preposition nor pied-piping it.

Section 187 argued for a cyclic linearization approach to NegS in Scandinavian. Under this approach, non-string-vacuous movement is forced to proceed through the left edge of Spell-out domains. Contrasts as to the acceptability of NegS across a certain constituent in the presence/absence of a verb *in situ* may thus be derived by differences in the availability of the relevant edge positions, which are determined by a mechanism of feature transmission.

In particular, dialectal variation as to NegS just across a preposition in Fa was considered to reflect differences in the ability of Neg^o to directly transmit an edge feature to P^o, such that movement through the edge of PP may immediately proceed to SpecNegP. In contrast, feature transmission from Neg^o to P^o via V^o (requiring movement through the edge of PP to continue to the edge of VP) is generally possible in Fa, permitting preposition stranding in the presence of a verb *in situ* (Section 3.1). Pied-piping the preposition makes movement through the edge of PP unnecessary. Taking pied-piping to involve feature percolation, this mechanism is apparently also subject to dialectal and inter-speaker variation and, crucially, only available as a last resort strategy (if possible at all). Pied-piping may only take place in case the complement cannot license [+NEG] on its own; in other words, it is generally prohibited in the presence of a verb *in situ*, where licensing of [+NEG] can be carried out by the complement alone (Section 3.2).

Section 4 showed that feature percolation and pied-piping in Ic are not restricted in this way. Preposition stranding and pied-piping are both possible in the presence and absence of a verb *in situ*. Instead, the choice between them seems to depend on the lexical verb-preposition combinations, which were taken to affect the availability of the left edge of PP for intermediate movement. Like in Fa, pied-piping in Ic was regarded as a last resort strategy, available only if the given verb-preposition combination does not permit NegS to proceed through the edge of PP.

References

- Baltin, Mark. 1978. PP as a bounding node. In M. Stein (ed.), *Proceedings of the 8th regional meeting of the North East Linguistic Society*, 12–21. GLSA, Amherst.
- Chomsky, Noam. 2000. Minimalist inquiries. In Roger Martin, David Michaels, and Juan Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89–156. MIT Press, Cambridge, Mass.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, 1–52. MIT Press, Cambridge, Mass.
- Christensen, Kristi Koch. 1986. Norwegian *ingen*: A case of post-syntactic lexicalization. In Östen Dahl and Anders Holmberg (eds.), *Scandinavian Syntax*, 21–35. University of Stockholm, Institute of Linguistics.
- Christensen, Kristi Koch. 1987. Modern Norwegian *ingen* and the ghost of an Old Norse particle. In Robin Allan and Michael P. Barnes (eds.), *Proceeding of the Seventh Biennial Conference of Teachers of Scandinavian Studies in Great Britain and Northern Ireland*, 1–17. University College London, London.
- Christensen, Ken Ramshøj. 2005. *Interfaces: Negation – Syntax – Brain*, Ph.D. dissertation, University of Aarhus.
- Engels, Eva. 2009. Scandinavian negative indefinites and cyclic linearization, Ms., University of Aarhus.
- Faarlund, Jan Terje, Svein Lie and Kjell Ivar Vannebo. 1997. *Norsk referansegrammatikk*. Universitetsforlaget, Oslo.
- Fox, Danny and David Pesetsky. 2003. Cyclic linearization and the typology of movement. Ms., MIT.
- Fox, Danny and David Pesetsky. 2005. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31: 1–46.
- Haegeman, Liliane. 1995. *The Syntax of Negation*. Cambridge University Press, Cambridge, UK.
- Haegeman, Liliane and Raffaella Zanuttini. 1991. Negative heads and the Neg Criterion. *The Linguistic Review* 8: 233–251.
- Holmberg, Anders. 1986. *Word Order and Syntactic Features in the Scandinavian Languages and English*. Ph.D. dissertation, University of Stockholm.
- Holmberg, Anders. 1999. Remarks on Holmberg's generalization. *Studia Linguistica* 53: 1–39.
- Holmes, Philip and Ian Hinchcliffe. 2003. *Swedish: A Comprehensive Grammar*. Routledge, London.

- Jónsson, Johannes Gísli. 1996. *Clausal Architecture and Case in Icelandic*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Lockwood, William Burley. 1977. *An Introduction to Modern Faroese*. Føroya Skúlabókagrunnur, Tórshavn.
- van Riemsdijk, Henk. 1978. *A Case Study in Syntactic Markedness: The Binding Nature of Prepositional Phrase*. The Peter de Ridder Press, Lisse.
- Rögnvaldsson, Eirikur. 1987. OV word order in Icelandic. In Robin Allan and Michael P. Barnes (eds.), *Proceeding of the Seventh Biennial Conference of Teachers of Scandinavian Studies in Great Britain and Northern Ireland*, 33–49. University College London, London.
- Sabbagh, Joseph. 2007. Ordering and linearizing rightward movement. *Natural Language and Linguistic Theory* 25: 349–401.
- Svenonius, Peter. 2000. Quantifier movement in Icelandic. In Peter Svenonius (ed.), *The Derivation of VO and OV*, 255–292. John Benjamins, Amsterdam.
- Thráinsson, Höskuldur, Hjalmar P. Petersen, Jógvan í Lon Jacobsen and Zakaris Svabo Hansen. 2004. *Faroese – An Overview and Reference Grammar*. Føroya Fróðskaparfelag, Tórshavn.
- Uriagereka, Juan. 1999. Multiple spell-out. In Samuel David Epstein and Norbert Hornstein (eds.), *Working Minimalism*, 251–282. MIT Press, Cambridge, Mass.