

NEG-shift and Repair Strategies: Pied Piping vs. Preposition Stranding.

1 NEG-shift

In (most of) the Scandinavian languages, indefinite negated objects with neutral stress must move out of VP to a sentence medial position to license sentence negation (cf. Hansen 1977, Petersen, Jacobsen, Hansen & Thráinsson 1998, Jónsson 1996, Rögnvaldsson 1987, Christensen 1986, 1987, Svenonius 2002, and Holmes & Hinchcliffe 1994). I shall refer to this movement as Negative Shift or NEG-shift.

In main clauses with non-compound tense, i.e. with the main verb in V2 position, it is string vacuous, as in (1), whereas in clauses with compound tense, NEG-shift moves the object across the main verb, as in (2)¹:

- (1) Da: Han læste_v sikkert ingen bøger_i [VP t_v t_i]
He read surely no books
- (2) Da: Han havde_v sikkert ingen bøger_i [VP t_v [VP læst t_i]]
He had surely no books read

I assume the target of this operation to be spec-NEGP and that NEG-shift is motivated by the Negative Criterion, or NEG-criterion:

(3) The NEG-criterion

Each NEG X⁰ must be in spec-head relation with a NEG operator and vice versa.
(cf. Haegeman & Zanuttini 1991: 244, Haegeman 1995: 106)

The NEG-criterion can thus be satisfied by filling spec-NEGP either by direct insertion of the sentential negation (Da/No *ikke*, Fa *ikki*, Ic *ekki*, Sw *inte*, En *not*) or by moving a NegQP (a noun phrase quantified by Da/No/Sw *ingen*, Fa *ongan*, Ic *engan*, or En *no*, cf. Sells 2000: 5). Both operations will check the [NEG] feature on NEG⁰.

¹ All example clauses are to be interpreted in the sense where they can take a negative tag, such as *and neither did she or but she did*. This rules out possible instances of trifling negation, cf. Svenonius (2002: 2).

2 The Data

As the following examples show, NEG-shift is obligatory in Danish, Icelandic, Faroese, Norwegian, and Icelandic:

- (4) Da: a. *Jeg har læst ingen bog
b. Jeg har ingen bog læst t
I have no book read

- (5) Ic: a. *Jón hefur lesið engar bækur
b. Jón hefur engar bækur lesið t
Jón have no books read

(Rögnvaldsson 1987, (31))

- (6) Fa: a. *Eg havi sæð ongan
b. Eg havi ongan sæð t
I have nobody seen

(Petersen et al. 1998: 187, footnote 4)

- (7) No: a. *Studentene har lest ingen romaner
b. Studentene har ingen romaner lest t
The students have no novels read

(Christensen 1986: 1, (1) & (2))

- (8) Sw: a. *Han har läst inga böcker
b. Han har inga böcker läst t
He has no books read

(due to Platzack. Vikner p.c.)

According to Svenonius (2002: 2), Norwegian NEG-shift in main clauses with compound tense is not possible in colloquial speech but it is found in literary or formal styles (though Christensen 1987 makes no such distinction). Holmes & Hinchcliffe (1994: 524) make the same claim for Swedish and the same is felt by some Danish speakers. In other words: (1) is grammatical, (2) is not. I shall refer to this common more restricted ‘dialect’ as Scan2:

- (9) Scan2: a. Han har ikke læst nogen bøger
He has not read any books
b. *Han har læst ingen bøger
c. *Han har ingen bøger læst
He has no books read

In English, NEG-shift is never possible and sentential negation is licensed either by *not* or by the object in situ:

- (10) En: a. I have not read any books
b. I have read no books
c. *I have no books read t

In fact, the same pattern is found a Scandinavian Language: Finland Swedish has no NEG-shift but unlike Scan2 (or any of the other Scandinavian languages), the *ingen* form is allowed in situ:

- (11) FS: Jag har haft ingenting att skaffa med den saken.
*Jag har ingenting haft att skaffa med den saken.
I have nothing had to do with that matter

(Hulthén 1947: 130)

- (18) Sw: a. Han har inte läst i några böcker
 He has *not* read in *any* *books*
- b. *Han har läst i inga böcker
- c. *Han har inga böcker läst i t
 He has *no* *books* read in

In Icelandic and Faroese, the NEG-criterion is satisfied by pied piping and NEG-shift applies to the whole PP instead:

- (19) Ic: a. *Jón hefur talað við engan
 b. Jón hefur við engan talað t
 Jón has with *no-one* spoken (Gunnar Hrafn Hrafnbjargarson, p.c.)

- (20) Fa: a. *Hon hefur snakka við ongan
 b. Hon hefur við ongan snakka t
 She has with *no-one* talked (Due to Thráinsson. Hrafnbjargarson, p.c.)

However, there may be a dialectal difference in the preferred repair strategy. As the following examples show, Jónsson (1996) and Rögnvaldsson (1989) both have NEG-shift across prepositions, i.e. preposition stranding:

- (21) Ice2: a. *Jón hefur talað við engan
 b. Jón hefur engan talað við t
 Jón has *no-one* spoken to (Jónsson 1996: 83, (105))

- (22) Ice2: a. *Jón hefur verið með engar augabrúnir
 b. Jón hefur engar augabrúnir verið með t
 Jón has *no* *eyebrows* been with
 (“John hasn’t had any eyebrows”) (Rögnvaldsson 1989: 9, (42a))

Finally, in English and Finland Swedish the negative object stays in-situ.

- (23) En: a. John has talked to no-one
 b. *John has no-one talked to t

- (24) FS: a. Jag hittade på ingenting
 b. *Jag hittade ingenting på t
 I found *nothing* on
 (“I didn’t think of anything”) (Hulthén 1944: 124)

As NEG-shift is object movement (at least the cases discussed here) the question arises whether Holmberg’s (1986: 165) famous generalisation on object shift is respected:

(25) **Holmberg’s Generalisation (HG)**

Object shift cannot move across the surface position of its case assigner and is therefore dependent on verb movement.

In examples (4) to (8) above, NEG-shift takes place across the main verb in V° which clearly shows that NEG-shift is not subject to HG in Danish, Faroese, Icelandic, Norwegian, and Swedish

In examples (9), (10), and (11) on the other hand, NEG-shift is not possible in such contexts which indicates that in Scan2, English, and Finland Swedish, NEG-shift is crucially dependent on (main) verb movement.

In Scan2 and (possibly) Finland Swedish, NEG-shift is only possible in main clauses with non-compound tense. In English, the verb never moves and therefore NEG-shift is never possible.

(26) The relationship between NEG-shift and Holmberg’s Generalisation:

	NEG-shift			Subject to HG
	Across t _v	across Verb	across Prep	
Ice2	✓	✓	✓ P-stranding	✗
Icelandic, Faroese	✓	✓	✗ Pied piping	✗
Danish, Norwegian, Swedish	✓	✓	✗ Substitution	✗
Scan2	✓	✗ Substitution	✗ Substitution	✓
Finland Swedish	(✓)	✗ NEG in situ	✗ NEG in situ	✓
English	✗?	✗ NEG in situ	✗ NEG in situ	✓

(As indicated with the question mark, in English it is actually not possible to tell whether NEG-shift can cross t_v as the main verb never moves.)

(27) A typology of NEG-shift:

+NEG-shift				-NEG-shift		
+across verb		-across verb (HG)		+lexical substitution	-lexical substitution	
+across preposition	-across preposition		+lexical substitution	-lexical substitution		
	+lexical substitution	-lexical substitution				
Preposition Stranding	<i>ingen</i> → <i>ikke</i>	Pied Piping	<i>ingen</i> → <i>ikke</i>	<i>ingen</i> in situ	<i>ingen</i> → <i>ikke</i>	<i>ingen</i> in situ
Ice2	Da, No, Sw	Fa, Ic	Scan2	FS	X	En

The logically possible language in (27) referred to as ‘X’ is a Germanic language that completely lacks a form of *ingen/no* but always constructs negation with a form of *ikke nogen/not any*. To my knowledge, this is not attested whereas the opposite, *kein* ‘no’ but not *nicht einige* ‘not any’, is found in the Germanic OV languages, such as Dutch and German. (For completeness, the tableau for language X is included as Appendix B on page 19 below.)

This variation in NEG-shift and repair strategies lends itself to an OT analysis. Consider next the list of relevant constraints before turning to the analysis itself.

3 Constraints

The variation in NEG-shift can be accounted for by different rankings of the following six constraints:

- (28) **NEGCRIT**
Each negative X° must be in spec-head relation with a negative operator and vice versa.
- (29) **STAY**
Economy of derivation / *TRACE.
In the tableaux below, only violations of STAY caused by NEG-shift are indicated.
- (30) **V-LICENSE (V-LIC)**
An object must be licensed by being c-commanded either by its selecting V° or the trace of this V° (Vikner's 2001: 328 LICENSING).
- (31) **P-LICENSE (P-LIC)**
An object must be licensed by being c-commanded either by its selecting P° or the trace of this P° (a subcase of Vikner's 2001: 328 LICENSING).
- (32) **FAITHLEX**
The lexical material of the input must surface in the output.
- (33) **MINIMAL**
Checking must take place within the minimal domain / *PERCOLATION / *PIED PIPING.

Heck (2001) has independently argued for an analysis of pied piping along the same lines and MINIMAL and P-LICENSE are (more or less) equivalent to his (2001: 1, (1)) LOCALITY CONDITION ON CHECKING (LCC) and PP-ISLAND (ibid: 2, (5)), respectively.

I assume the input to be the numeration in the sense of Chomsky (1995: 225). In all the tableaux below, the input contains a version of *ingen/no*. However, if the input is changed to *ikke/not*, the faithful candidates, i.e. (a1), (b1), (c1), and (d1), are always optimal.

4 OT Analysis

Danish, Norwegian, and Swedish

- (34) NEG-shift from VP
 a. Across verb: *Yes* (The (a) competition in the tableau.)
 b. Across t_v : *Yes* (The (b) competition.)
- (35) {NEGCRIT, FAITHLEX} » {V-LICENSE, STAY}
- (36) NEG-shift from PP (Competitions (c) and (d).)
 a. Across P: *No*
 i. ↳Lexical Substitution: *Yes*
- (37) {NEGCRIT, P-LICENSE, MINIMAL} » FAITHLEX

Tableau 1: Da, No, Sw

{NEGCRIT, P-LICENSE, MINIMAL} » FAITHLEX » {V-LICENSE, STAY}

	VP Input: <i>ingen</i>	NEG CRIT	P- LIC	MINI MAL	FAITH LEX	V- LIC	ST AY
a1	S V _{aux} [_{NEGP} <i>ikke</i> [_{VP} V <i>nogen</i> NP]]				*!		
a2	*S V _{aux} [_{NEGP} [_{VP} V <i>ingen</i> NP]]	*!					
☞ a3	S V _{aux} [_{NEGP} <i>ingen</i> NP [_{VP} V t]]					*	*
b1	S V [_{NEGP} <i>ikke</i> [_{VP} t_v <i>nogen</i> NP]]				*!		
b2	*S V [_{NEGP} [_{VP} t_v <i>ingen</i> NP]]	*!					
☞ b3	S V [_{NEGP} <i>ingen</i> NP [_{VP} t_v t]]						*
	PP Input: <i>ingen</i>	NEG CRIT	P- LIC	MINI MAL	FAITH LEX	V- LIC	ST AY
☞ c1	S V _{aux} [_{NEGP} <i>ikke</i> [_{VP} V [_{PP} P <i>nogen</i> NP]]]]				*		
c2	*S V _{aux} [_{NEGP} [_{VP} V [_{PP} P <i>ingen</i> NP]]]]	*!					
c3	*S V _{aux} [_{NEGP} <i>ingen</i> NP [_{VP} V [_{PP} P t]]]]				*!		*
c4	*S V _{aux} [_{NEGP} P <i>ingen</i> NP [_{VP} V t]]]]				*!	*	*
☞ d1	S V [_{NEGP} <i>ikke</i> [_{VP} t_v [_{PP} P <i>nogen</i> NP]]]]				*		
d2	*S V [_{NEGP} [_{VP} t_v [_{PP} P <i>ingen</i> NP]]]]	*!					
d3	*S V [_{NEGP} <i>ingen</i> NP [_{VP} t_v [_{PP} P t]]]]				*!		*
d4	*S V [_{NEGP} P <i>ingen</i> NP [_{VP} t_v t]]]]				*!		*

NEG-shift applies across both verb and t_v and no repair strategy is necessary (the answer is *Yes* in both (34)a and (34)b). V-LICENSE and STAY are violated in order to satisfy NEGCRIT and FAITHLEX, cf. candidates (a3) and (b3), and the relevant constraints are ranked as in (35).

As stated in (36)a, NEG-shift cannot cross the licensing preposition. NEGCRIT must be satisfied and the repair strategy in (36)a.i is lexical substitution, which violates FAITHLEX, cf. candidates (c1) and (d1). Neither preposition stranding nor pied piping are possible due to the higher ranking of P-LICENSE and MINIMAL.

Faroese and Icelandic

- (38) NEG-shift from VP
 a. Across verb: *Yes*
 b. Across t_v : *Yes*

(39) {NEGCRIT, FAITHLEX} » {V-LICENSE, STAY}

- (40) NEG-shift from PP
 a. Across P: *No*
 i. ↳Lexical Substitution: *No*
 ii. ↳Pied piping: *Yes*

(41) {NEGCRIT, P-LICENSE, FAITHLEX} » MINIMAL

Tableau 2: Fa, Ic

{NEGCRIT, P-LICENSE, FAITHLEX} » {MINIMAL, V-LICENSE, STAY}

	VP Input: <i>enga</i>	NEG CRIT	P- LIC	FAITH LEX	MINI MAL	V- LIC	ST AY
a1	S V _{aux} [NEGP <i>ekki</i> [VP V <i>neina</i> NP]]			*!			
a2	*S V _{aux} [NEGP [VP V <i>enga</i> NP]]	*!					
☞ a3	S V _{aux} [NEGP <i>enga</i> NP [VP V t]]					*	*
b1	S V [NEGP <i>ekki</i> [VP t_v <i>neina</i> NP]]			*!			
b2	*S V [NEGP [VP t_v <i>enga</i> NP]]	*!					
☞ b3	S V [NEGP <i>enga</i> NP [VP t_v t]]						*
	PP Input: <i>enga</i>	NEG CRIT	P- LIC	FAITH LEX	MINI MAL	V- LIC	ST AY
c1	S V _{aux} [NEGP <i>ekki</i> [VP V [PP P <i>neinni</i> NP]]]			*!			
c2	*S V _{aux} [NEGP [VP V [PP P <i>engri</i> NP]]]	*!					
c3	*S V _{aux} [NEGP <i>engri</i> NP [VP V [PP P t]]]			*!			*
☞ c4	S V _{aux} [NEGP P <i>engri</i> NP [VP V t]]				*	*	*
d1	S V [NEGP <i>ekki</i> [VP t_v [PP P <i>neinni</i> NP]]]			*!			
d2	*S V [NEGP [VP t_v [PP P <i>engri</i> NP]]]	*!					
d3	*S V [NEGP <i>engri</i> NP [VP t_v [PP P t]]]			*!			*
☞ d4	S V [NEGP P <i>engri</i> NP [VP t_v t]]				*		*

As in Da, No, and Sw, NEG-shift applies across both verb and verb trace and again the ranking is {NEGCRIT, FAITHLEX} » {V-LICENSE, STAY}. As before, the optimal candidates are (a3) and (b3).

With PPs, the strategy is different. As stated in (40)a, NEG-shift cannot cross the licensing preposition (preposition stranding is out) but lexical substitution is not an option, cf. (40)a.i. The solution in (40)a.ii is pied piping, cf. candidates (c4) and (d4), which violates MINIMAL. Percolation is preferred over violating P-LICENSE. Thus, the ranking is (41). Compared with (37), MINIMAL has been demoted and moved below FAITHLEX

Icelandic2

(42) NEG-shift from VP

- a. Across verb: *Yes*
- b. Across t_v : *Yes*

(43) {NEGCRIT, FAITHLEX} » {V-LICENSE, STAY}

(44) NEG-shift fromPP

- a. Across P: *Yes*

(45) {NEGCRIT, FAITHLEX, MINIMAL} » P-LICENSE

Tableau 3: Ice2

{NEGCRIT, FAITHLEX, MINIMAL} » {P-LICENSE, V-LICENSE, STAY}

	VP Input: <i>enga</i>	NEG CRIT	FAITH LEX	MINI MAL	P- LIC	V- LIC	ST AY
a1	S V _{aux} [NEGP <i>ekki</i> [VP V <i>neina</i> NP]]		*!				
a2	*S V _{aux} [NEGP [VP V <i>enga</i> NP]]	*!					
☞ a3	S V _{aux} [NEGP <i>enga</i> NP [VP V t]]					*	*
b1	S V [NEGP <i>ekki</i> [VP t _v <i>neina</i> NP]]		*!				
b2	*S V [NEGP [VP t _v <i>enga</i> NP]]	*!					
☞ b3	S V [NEGP <i>enga</i> NP [VP t _v t]]						*
	PP Input: <i>enga</i>	NEG CRIT	FAITH LEX	MINI MAL	P- LIC	V- LIC	ST AY
c1	S V _{aux} [NEGP <i>ekki</i> [VP V [PP P <i>neinni</i> NP]]]		*!				
c2	*S V _{aux} [NEGP [VP V [PP P <i>engri</i> NP]]]	*!					
☞ c3	S V _{aux} [NEGP <i>engri</i> NP [VP V [PP P t]]]				*		*
c4	*S V _{aux} [NEGP P <i>engri</i> NP [VP V t]]			*!		*	*
d1	S V [NEGP <i>ekki</i> [VP t _v [PP P <i>neinni</i> NP]]]		*!				
d2	*S V [NEGP [VP t _v [PP P <i>engri</i> NP]]]	*!					
☞ d3	S V [NEGP <i>engri</i> NP [VP t _v [PP P t]]]				*		*
d4	*S V [NEGP P <i>engri</i> NP [VP t _v t]]			*!			*

Again, NEG-shift from VP possible across both verb and verb trace and the optimal candidates in the (a) and (b) competitions are the same as in tableaux 1 and 2 above.

Icelandic2 is different with regards to NEG-shift from PPs. No repair strategy is needed, cf. (44)a, because NEG-shift can cross the preposition and the ranking is (45). P-LICENSE is violated in order to satisfy NEGCRIT, FAITHLEX (no lexical substitution), and MINIMAL (no percolation). So, MINIMAL is promoted again and is ranked with FAITHLEX, while P-LICENSE has been demoted and is now ranked below FAITHLEX.

The optimal candidates are (c3) and (d3), unlike Danish, Norwegian, and Swedish where the optimal candidates were (c1) and (d1) and Faroese and Icelandic where they were (c4) and (d4).

Scan2 (colloquial Danish, Norwegian, Swedish)

- (46) NEG-shift from VP
 a. Across verb: *No*
 i. ↳Lexical Substitution: *Yes*
 b. Across t_v : *Yes*

(47) {NEGCRIT, V-LICENSE} » FAITHLEX » STAY

- (48) NEG-shift from PP
 a. Across P: *No*
 i. ↳Lexical Substitution: *Yes*

(49) {NEGCRIT, P-LICENSE, MINIMAL} » FAITHLEX

Tableau 4: Scan2

{NEGCRIT, P-LICENSE, V-LICENSE, MINIMAL} » FAITHLEX » STAY

	VP Input: <i>ingen</i>	NEG CRIT	P- LIC	V- LIC	MINI MAL	FAITH LEX	ST AY
☞ a1	S V _{aux} [NEGP <i>ikke</i> [VP V <i>nogen</i> NP]]					*	
a2	*S V _{aux} [NEGP [VP V <i>ingen</i> NP]]	*!					
a3	*S V _{aux} [NEGP <i>ingen</i> NP [VP V t]]			*!			*
b1	S V [NEGP <i>ikke</i> [VP t _v <i>nogen</i> NP]]					*!	
b2	*S V [NEGP [VP t _v <i>ingen</i> NP]]	*!					
☞ b3	S V [NEGP <i>ingen</i> NP [VP t _v t]]						*
	PP Input: <i>ingen</i>	NEG CRIT	P- LIC	V- LIC	MINI MAL	FAITH LEX	ST AY
☞ c1	S V _{aux} [NEGP <i>ikke</i> [VP V [PP P <i>nogen</i> NP]]]					*	
c2	*S V _{aux} [NEGP [VP V [PP P <i>ingen</i> NP]]]	*!					
c3	*S V _{aux} [NEGP <i>ingen</i> NP [VP V [PP P t]]]			*!			*
c4	*S V _{aux} [NEGP P <i>ingen</i> NP [VP V t]]			*!	*		*
☞ d1	S V [NEGP <i>ikke</i> [VP t _v [PP P <i>nogen</i> NP]]]					*	
d2	*S V [NEGP [VP t _v [PP P <i>ingen</i> NP]]]	*!					
d3	*S V [NEGP <i>ingen</i> NP [VP t _v [PP P t]]]			*!			*
d4	*S V [NEGP P <i>ingen</i> NP [VP t _v t]]				*!		*

Compared with the parameters for Danish, Norwegian, and Swedish in (34) above, Scan2 differs by one setting: the answer in (46)a is *No*. NEG-shift cannot cross the verb and the repair strategy is lexical substitution. V-LICENSE is promoted to outrank FAITHLEX, which in turn is ranked above STAY to ensure that NEG-shift can cross the trace of the verb instead of allowing lexical substitution, compare (b1) and (b3).

Finland Swedish

(50) NEG-shift from VP

- a. Across verb: *No*
 i. ↳Lexical Substitution: *No*
 b. Across t_v : *Yes*

(51) {FAITHLEX, V-LICENSE} » NEGCRIT » STAY

(52) NEG-shift from PP

- a. Across P: *No*
 i. ↳Lexical Substitution: *No*
 ii. ↳Pied piping: *No*

(53) {P-LICENSE, FAITHLEX, MINIMAL} » NEGCRIT

Tableau 5: FS

{P-LICENSE, V-LICENSE, FAITHLEX, MINIMAL} » NEGCRIT » STAY

	VP Input: <i>ingen</i>	P- LIC	V- LIC	FAITH LEX	MINI MAL	NEG CRIT	ST AY
a1	S V _{aux} [NEGP <i>inte</i> [VP V <i>någon</i> NP]]			*!			
☞ a2	S V _{aux} [NEGP [VP V <i>ingen</i> NP]]					*	
a3	*S V _{aux} [NEGP <i>ingen</i> NP [VP V t]]			*!			*
b1	S V [NEGP <i>inte</i> [VP t _v <i>någon</i> NP]]			*!			
b2	*S V [NEGP [VP t _v <i>ingen</i> NP]]					*!	
☞ b3	S V [NEGP <i>ingen</i> NP [VP t _v t]]						*
	PP Input: <i>ingen</i>	P- LIC	V- LIC	FAITH LEX	MINI MAL	NEG CRIT	ST AY
c1	S V _{aux} [NEGP <i>inte</i> [VP V [PP P <i>någon</i> NP]]]]			*!			
☞ c2	S V _{aux} [NEGP [VP V [PP P <i>ingen</i> NP]]]]					*	
c3	*S V _{aux} [NEGP <i>ingen</i> NP [VP V [PP P t]]]]			*!			*
c4	*S V _{aux} [NEGP P <i>ingen</i> NP [VP V t]]]]			*!		*	*
d1	S V [NEGP <i>inte</i> [VP t _v [PP P <i>någon</i> NP]]]]			*!			
☞ d2	S V [NEGP [VP t _v [PP P <i>ingen</i> NP]]]]					*	
d3	*S V [NEGP <i>ingen</i> NP [VP t _v [PP P t]]]]			*!			*
d4	*S V [NEGP P <i>ingen</i> NP [VP t _v t]]]]					*!	*

As in Scan2, NEG-shift is blocked by the verb in (a3) but lexical substitution is not allowed as repair strategy. Violations of FAITHLEX and V-LICENSE are equally worse than violating NEGCRIT and (a2) is optimal. Because NEGCRIT outranks STAY, NEG-shift takes place across the verb trace in (b3).

The same goes for PPs. FAITHLEX, P-LICENSE, and MINIMAL all outrank NEGCRIT so both lexical substitution (c1)/(d1), NEG-shift (c3)/(d3), and pied piping (c4)/(d4) are out and the optimal solution is to have *ingen* in situ as in (c2)/(d2).

This is almost completely identical to English. The difference is the answers to (50)b and (54)b.

English

(54) NEG-shift from VP

- a. Across verb: *No*
 i. ↳Lexical Substitution: *No*
 b. Across t_v : (*No*)
 i. ↳Lexical Substitution: (*No*)

(55) {FAITHLEX, V-LICENSE, STAY} » NEGCRIT

(56) NEG-shift from PP

- a. Across P: *No*
 i. ↳Lexical Substitution: *No*
 ii. ↳Pied piping: *No*

(57) {P-LICENSE, FAITHLEX, MINIMAL} » NEGCRIT

Tableau 6: English

{P-LIC, V-LICENSE, FAITHLEX, MINIMAL, STAY} » NEGCRIT

	VP Input: <i>no</i>	P- LIC	V- LIC	FAITH LEX	MINI MAL	ST AY	NEG CRIT
a1	S V _{aux} [NEGP <i>not</i> [VP V <i>any</i> NP]]			*!			
☞ a2	S V _{aux} [NEGP [VP V <i>no</i> NP]]						*
a3	*S V _{aux} [NEGP <i>no</i> NP [VP V t]]		*!			*	
b1	*S V [NEGP <i>not</i> [VP t _v <i>any</i> NP]]			*			
b2	*S V [NEGP [VP t _v <i>no</i> NP]]						*
b3	*S V [NEGP <i>no</i> NP [VP t _v t]]					*	
	PP Input: <i>no</i>	P- LIC	V- LIC	FAITH LEX	MINI MAL	ST AY	NEG CRIT
c1	S V _{aux} [NEGP <i>not</i> [VP V [PP P <i>any</i> NP]]]			*!			
☞ c2	S V _{aux} [NEGP [VP V [PP P <i>no</i> NP]]]						*
c3	*S V _{aux} [NEGP <i>no</i> NP [VP V [PP P t]]]	*!				*	
c4	*S V _{aux} [NEGP P <i>no</i> NP [VP V t]]		*!		*	*	
d1	*S V [NEGP <i>not</i> [VP t _v [PP P <i>any</i> NP]]]			*			
d2	*S V [NEGP [VP t _v [PP P <i>no</i> NP]]]						*
d3	*S V [NEGP <i>no</i> NP [VP t _v [PP P t]]]	*				*	
d4	*S V [NEGP P <i>no</i> NP [VP t _v t]]				*	*	

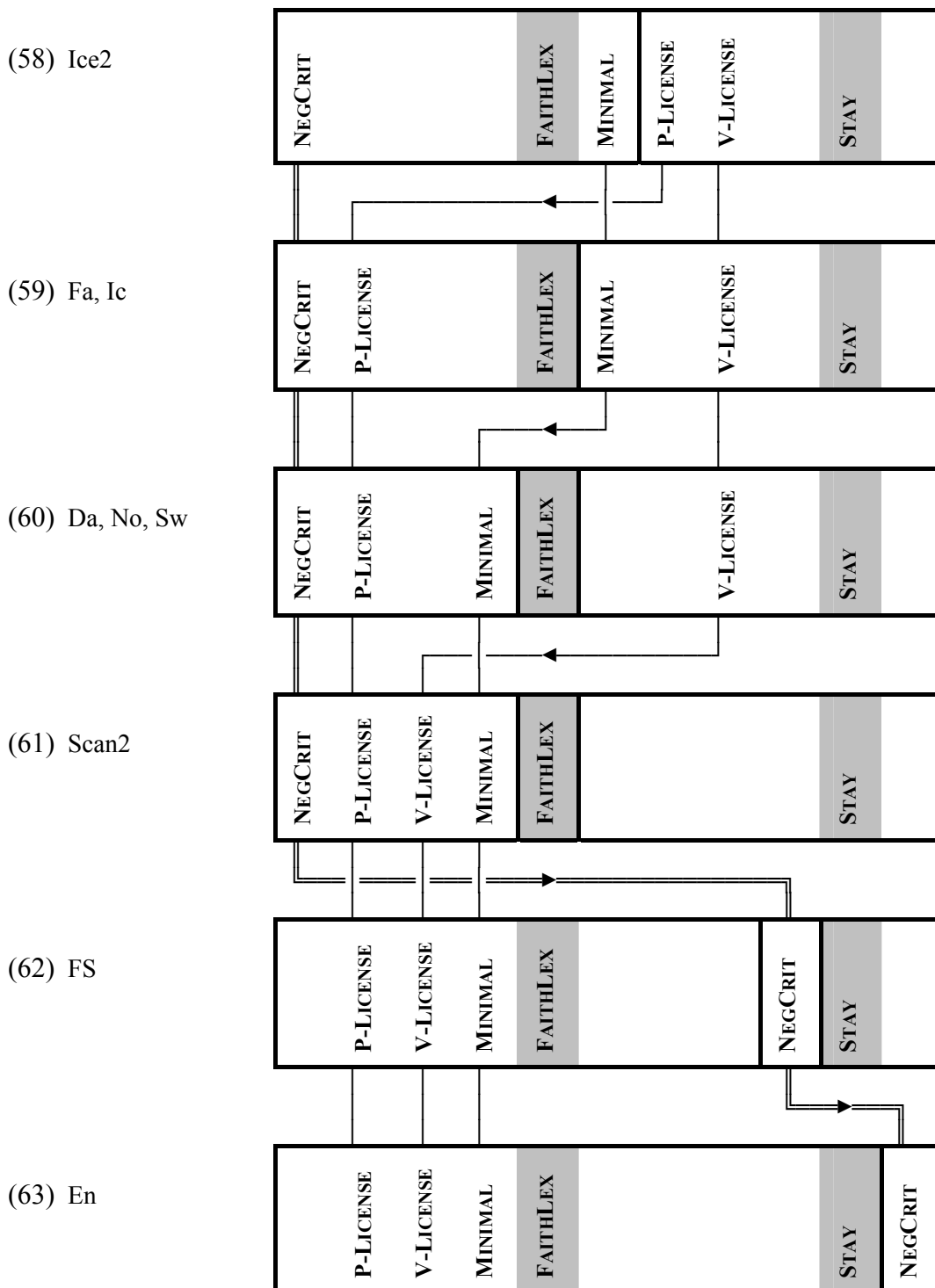
In English NEG-shift is never allowed and the *no*-phrase is always in situ. None of the other repair strategies are allowed.

Unlike Finland Swedish, the (b) and (d) competitions are not available because the main verb never leaves V°. Because English has *do*-insertion, the (a) and (b) competitions are identical and so are (c) and (d).

Therefore, the difference between English and Finland Swedish regarding NEG-shift, i.e. STAY » NEGCRIT versus NEGCRIT » STAY (with everything else outranking NEGCRIT in either case), has no empirical reflex (I return to this below).

5 Parametric Variation

The parametric variation in terms of constraint reranking can be illustrated in a box diagram a la Vikner (1999: 40, (40)). Note that in Ice2 in (58), the relative order of FAITHLEX and MINIMAL is not crucial but they both have to outrank P-LICENSE. MINIMAL could just as well be above (to the left of) FAITHLEX as in (60)-(63).



6 Conclusion

I have presented data that show an interesting variation in the licensing of sentential negation by NEG-shift across verbs and prepositions in the Scandinavian languages and English, the latter being much more conservative than the former.

By treating the NEG-criterion as a violable constraint instead of an absolute principle in the analysis above, the variation could be accounted for by minimal variation in the ranking of a set of universal violable constraints. If and only if NEGCRIT outranks STAY, the language has NEG-shift. The different preferences for pied piping, preposition stranding, lexical substitution (neutralisation), or neither (NEG in situ) can be derived from different rankings of MINIMAL, P-LICENSE, FAITHLEX, and NEGCRIT.

Finally, as has been noted throughout the text, the difference between English and Finland Swedish is strictly theoretical and has no empirical reflex. In English, the verb always blocks NEG-shift and in Finland Swedish, the movement (when theoretically possible) is string vacuous. This is of course a problem and further empirical investigation is needed to see whether the different ranking is crucial for Finland Swedish.

In fact, Finland Swedish seems to be a Scandinavian V2 version of English. According to Bergroth (1917: 171, §255; 172, §256; see also Hulthén 1944, 1947), Finland Swedish has neither (non-string-vacuous) NEG-shift nor pronominal OBJ-shift, both of which are characteristic of the Scandinavian languages. There are of course also differences, such as the V2 “parameter” and the fact that Finland Swedish (like the other Scandinavian languages except Danish) allows topicalisation of *inte* ‘not’ (cf. Bergroth 1917: 168, §251) which is not possible in English (and Danish). I hope to develop my analysis to encompass this in future work.

7 Appendix A: On the Violability of NEGCRIT, and Argument vs. Adjunct Asymmetry.

A violation of the NEG-criterion also violates a more general constraint such as the FEATURE CONDITION (FC), “strong features must be checked by overt movement” (Müller 2000: 5, (15)), which may be a part of GEN. The question is whether or not the NEG-criterion is a violable constraint or also part of GEN.

NEGCRIT is part of CON (violable):

- a) NEG can either be strong (Danish) or weak (English), and NEG-shift takes place at SS/Spell-Out and LF/after Spell-Out respectively; this assumption doesn't go very well conceptually with the different repair strategies for PPs in the Scandinavian languages.
- b) NEG is not necessarily checked in English due to the high ranking of STAY but is always checked in Danish; spec-NEGP is not licensed as a target of movement as it is in Danish, and NEGCRIT is violated.

This has been the assumption adopted above.

NEGCRIT is part of GEN (inviolable):

- c) NEG is always checked at SS/Spell-Out (i.e. [NEG] is a strong feature); the difference is one of late (non-overt expletive) operator insertion vs. movement (cf. e.g. Haegeman 1995: 185).

Under this assumption, in the analyses above NEGCRIT can be replaced by *INSERT:

(64) *INSERT

Output elements must have input correspondents. Late insertion is prohibited. This is the syntactic equivalent of the phonological constraint DEPIO: “no epenthesis” (cf. Kager 1999: 68, (32)).

The results remain the same, just with empty operator insertion in the structures without movement. However, this analysis cannot account for the pattern in *wh*-extraction, cf. (65) where (a)-(c) are argument extractions and (d)-(f) are adjunct extractions:

- (65) En:
- a. *_{[CP} OP did you [_{VP} talk [_{PP} to who]]]?
 - b. _{[CP} Who did you [_{VP} talk [_{PP} to t]]]?
 - c. [_{IP} [_{PP} To who] did you [_{VP} talk [_{PP} t]]]?
 - d. *_{[CP} OP did you [[_{VP} point] [_{PP} with what]]]?
 - e. _{[CP} What did you [[_{VP} point] [_{PP} with t]]]?
 - f. [_{IP} [_{PP} with what] did you [[_{VP} point] [_{PP} t]]]?

Insertion of an empty operator in spec-CP instead of *wh*-movement leads to ungrammaticality. This is illustrated in tableau 7:

Tableau 7: English

***Wh*-extraction from PP: argument vs. adjunct**

*		V-LIC	P-LIC	MINI-MAL	FAITH-LEX	STAY	*INSERT
☞ a1	*[CP OP V _{aux} [IP sub [VP V [PP P <i>wh</i>]]]]						*
⊖ a2	[CP <i>wh</i> V _{aux} [IP sub [VP V [PP P t]]]]		*!			*	
⊖ a3	[CP [PP P <i>wh</i>] V _{aux} [IP sub [VP V t]]]	*!		*		*	
☞ b1	*[CP OP V _{aux} [IP sub [VP [VP V obj] [PP P <i>wh</i>]]]]						*
⊖ b2	[CP <i>wh</i> V _{aux} [IP sub [VP [VP V obj] [PP P t]]]]		*!			*	
⊖ b3	[CP [PP P <i>wh</i>] V _{aux} [IP sub [VP [VP V obj] [PP t]]]]			*!		*	

This offers support for the analysis with NEGCRIT as a violable constraint and motivates the introduction of a constraint on *wh*-movement, i.e. the *Wh*-criterion (cf. e.g. Haegeman 1995: 94 and Müller 2001 and the references cited there):

(66) **WHCRIT**

Wh-elements must be in the domain of the C_[WH].

(*INSERT is still needed for independent reasons such as constraining expletives and *do*-insertion.)

This constraint is ranked such that:

(67) English: (FAITHLEX,) WHCRIT » {V-LIC, P-LIC, MINIMAL, STAY} » NEGCRIT

Still, something is missing to account for the optionality of pied piping in *wh*-questions. In the analyses above, the assumption has been that [NEG] is incompatible with PPs; only QPs (*ingen/no*) and ADVPs (*ikke/not*) can check [NEG]. Other features, such as [WH] and [TOPIC] can be checked by PPs as well as any other lexical category. So, the optionality could be explained as a difference between DP_[WH] (a2 and b2) and PP_[WH] (a3 and b3).

We are then in need of a constraint that makes e.g. (a2) lose when the [WH] feature is on the full PP, e.g. (a2), a constraint that prohibits the movement of only a part of an XP marked with feature [α] in order to check [α] on a head Y^o:

(68) **CONTIO**

No movement of (and checking by) a subpart ZP_[α] of an XP_[α]:

* ZP₁ ... [XP_[α] X^o t₁]

✓ [XP_[α] X^o ZP₁] ... t₁

This is the syntactic equivalent of the phonological correspondence constraint CONTIGUITY-IO (CONTIGIO) ‘no medial epenthesis or deletion of segments’ (Kager 1999: 250, (136)).

In the (a) competition in tableau 8, the [WH] feature is carried by the whole PP, whereas in the (b) competition only the DP has [WH]. Note that V-LICENSE and P-LICENSE must be crucially tied to make both candidates possible:

Tableau 8: English

Wh-extraction from PP

		WH CRIT	V- LIC	P- LIC	MINI MAL	CONT IO	ST AY
a1	[_{CP} <i>wh</i> V _{aux} [_{IP} sub [_{VP} V [_{PP} [_{WH}] P t]]]]			*		*!	*
a2	[_{CP} [_{PP} [_{WH}] P <i>wh</i>] V _{aux} [_{IP} sub [_{VP} V t]]]]		*				*
b1	[_{CP} <i>wh</i> V _{aux} [_{IP} sub [_{VP} V [_{PP} P t]]]]			*			*
b2	[_{CP} [_{PP} P <i>wh</i>] V _{aux} [_{IP} sub [_{VP} V t]]]]		*		*!		*

As the pattern is the same in both adjunct and argument extraction (cf. (65) above), I have only shown the competitions for argument extraction in the tableau.

In Danish, operator insertion is also ungrammatical in *wh*-questions but unlike English, pied piping is not possible with *wh*-movement and stranding is obligatory:

(69) Da: a. Jeg har [_{VP} snakket [_{PP} med Dronningen]].
I have talked with the.queen

b. Hvem har du [_{VP} snakket [_{PP} med t]]?
Who have you talked with?

c. *_{PP} Med hvem har du [_{VP} snakket [_{PP} t]]?
With who have you talked?

(70) Da: a. Jeg har [_{VP} spist suppen] [_{PP} med en ske].
I have eaten the.soup with a spoon

b. *Jeg har [_{PP} med en ske] [_{VP} spist suppen].

c. Hvad har du [_{VP} spist suppen] [_{PP} med t]? *What have you eaten the.soup with?*

d. *_{PP} Med hvad har du [_{VP} spist suppen] [_{PP} t]? *With what have you eaten the.soup?*

The pattern can be accounted for by the same constraints only ranked differently. In the tableau below, the (a) and (b) competitions are argument extractions and (c) and (d) are adjunct extractions. In (a) and (c) the [NEG] feature is carried by the PP:

Tableau 9: Danish

Wh-extraction from PP: argument vs. adjunct

		WH CRIT	MINI MAL	P- LIC	V- LIC	CONT IO	ST AY
a1	[_{CP} <i>wh</i> V _{aux} sub [_{VP} V [_{PP} [_{WH}] P t]]]]			*		*	*
a2	*[_{CP} [_{PP} [_{WH}] P <i>wh</i>] V _{aux} sub [_{VP} V t]]]]		*!		*		*
b1	[_{CP} <i>wh</i> V _{aux} sub [_{VP} V [_{PP} P t]]]]			*			*
b2	*[_{CP} [_{PP} P <i>wh</i>] V _{aux} sub [_{VP} V t]]]]		*!				*
c1	[_{CP} <i>wh</i> V _{aux} sub [[_{VP} V obj] [_{PP} [_{WH}] P t]]]]			*		*	*
c2	*[_{CP} [_{PP} [_{WH}] P <i>wh</i>] V _{aux} sub [[_{VP} V obj] [_{PP} t]]]]		*!				*
d1	[_{CP} <i>wh</i> V _{aux} sub [[_{VP} V obj] [_{PP} P t]]]]			*			*
d2	*[_{CP} [_{PP} P <i>wh</i>] V _{aux} sub [[_{VP} V obj] [_{PP} t]]]]		*!				*

But unfortunately, there is a problem, because stranding is not possible with all PPs:

- (71) a. Det her er [_{PP} under alle omstændigheder] lovligt
This here is under all circumstances legal
- b. Det her er lovligt [_{PP} under alle omstændigheder]
This here is legal under all circumstances
- c. *[Hvilke omstændigheder] er det her lovligt [_{PP} under t]?
which circumstances is this here legal under
- d. *[Hvilke omstændigheder] er [_{PP} under t] det her lovligt?
which circumstances is under this here legal
- e. [_{PP} Under hvilke omstændigheder] er det her lovligt t?
under which circumstances is this here legal

The contrast in grammaticality between (70) (d) and (71) (e) probably has something to do with the structural position of the PPs. In (70), the instrumental adverbial PP *med en ske* (with a spoon) is positioned low in the structure, cf. the ungrammaticality of (70) (b). In (71) on the other hand, the circumstantial adverbial PP is situated high in the structure. This difference is not captured by the current constraint ranking:

Tableau 10: Danish

		WH CRIT	MINI MAL	P- LIC	V- LIC	CONT IO	ST AY
⊗ 1	*[_{CP} <i>wh</i> V _{aux} [_{IP} sub [[_{PP} P t] [_{VP} V obj]]]]			*			*
⊕ 2	[_{CP} [_{PP} P <i>wh</i>] V _{aux} [_{IP} sub [t [_{VP} V obj]]]]		*!				*

At present, I have no solution to this problem.

Leaving that aside, the CONTIO solution argued for above also applies to topicalisation which is motivated by a high ranking TOPCRIT. The [TOP] feature can be carried by any lexical XP. Again, partial movement is ungrammatical (leaving aside the fact that the situation gets more complicated with less definite DPs):

- (72) Da: a. *_{[DP] Denne her bog}₁ kan man læse [_{PP} [_{TOP}] i t₁] ...
 b. [_{PP} [_{TOP}] I denne her bog]₁ kan man læse t₁ ...

- (73) Da: a. [_{DP} [_{TOP}] Denne her bog]₁ kan man læse [_{PP} i t₁] ...
 b. *<sub>[PP] I [_{DP} [_{TOP}] Denne her bog]₁ kan man læse t₁ ...
In this here book can one read</sub>

... at Jorden er flad
 ... that the Earth is flat

(“In this book, you can read that the Earth is flat”.)

Tableau 11: Danish

Topicalisation of PP vs. DP

		TOP CRIT	MINI MAL	P- LIC	V- LIC	CONT IO	ST AY
a2	*[_{CP} DP V _{aux} [_{IP} sub [_{VP} V [_{PP} _[TOPIC] P t]]]]			*!		*	*
a3	[_{CP} [_{PP} _[TOPIC] P DP] V _{aux} [_{IP} sub [_{VP} V t]]]				*		*
b2	[_{CP} DP _[TOPIC] V _{aux} [_{IP} sub [_{VP} V [_{PP} P t]]]]			*			*
b3	*[_{CP} [_{PP} P DP _[TOPIC]] V _{aux} [_{IP} sub [_{VP} V t]]]		*!				*

8 Appendix B: The Tableau for Language X

(74) NEG-shift from VP

- a. Across verb: *No*
 - i. ↳Lexical Substitution: *Yes*
- b. Across t_v: *No*
 - i. ↳Lexical Substitution: *Yes*

(75) {V-LICENSE, STAY} » NEGCRIT » FAITHLEX

(76) NEG-shift from PP

- a. Across P: *No*
 - i. ↳Lexical Substitution: *Yes*

(77) {P-LICENSE, NEGCRIT, MINIMAL} » FAITHLEX

Tableau 12: Language X

{P-LIC, V-LICENSE, MINIMAL, STAY} » NEGCRIT » FAITHLEX

	VP Input: <i>ingen</i>	P- LIC	V- LIC	MINI MAL	ST AY	NEG CRIT	FAITH LEX
a1	S V _{aux} [_{NEGP} <i>ikke</i> [_{VP} V [_{PP} P <i>nogen</i> NP]]]						*
a2	*S V _{aux} [_{NEGP} [_{VP} V [_{PP} P <i>ingen</i> NP]]]					*!	
a3	*S V _{aux} [_{NEGP} <i>ingen</i> NP [_{VP} V t]]		*!		*		
b1	S V [_{NEGP} <i>ikke</i> [_{VP} t _v [_{PP} P <i>nogen</i> NP]]]						*
b2	*S V [_{NEGP} [_{VP} t _v [_{PP} P <i>ingen</i> NP]]]					*!	
b3	*S V [_{NEGP} <i>ingen</i> NP [_{VP} t _v t]]				*!		
	PP Input: <i>ingen</i>	P- LIC	V- LIC	MINI MAL	ST AY	NEG CRIT	FAITH LEX
c1	S V _{aux} [_{NEGP} <i>ikke</i> [_{VP} V [_{PP} P <i>nogen</i> NP]]]						*
c2	*S V _{aux} [_{NEGP} [_{VP} V [_{PP} P <i>ingen</i> NP]]]					*!	
c3	*S V _{aux} [_{NEGP} <i>ingen</i> NP [_{VP} V [_{PP} P t]]]]	*!			*		
c4	*S V _{aux} [_{NEGP} P <i>ingen</i> NP [_{VP} V t]]		*!	*	*		
d1	S V [_{NEGP} <i>ikke</i> [_{VP} t _v [_{PP} P <i>nogen</i> NP]]]						*
d2	*S V [_{NEGP} [_{VP} t _v [_{PP} P <i>ingen</i> NP]]]					*!	
d3	*S V [_{NEGP} <i>ingen</i> NP [_{VP} t _v [_{PP} P t]]]]	*!			*		
d4	*S V [_{NEGP} P <i>ingen</i> NP [_{VP} t _v t]]			*!	*		

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