Negative Objects, NEG-shift, and Cross-linguistic Microvariation

1 Negation

In all the Scandinavian languages, i.e. Danish (Da), Faroese (Fa), Finland Swedish (FS), Icelandic (Ic), Norwegian (No), and Swedish (Sw), negation of a clause with an indefinite object can be expressed with (some version of) the sentence medial adverb *ikke* ‘not’. The same is the case for English (En):

\[
\begin{align*}
\text{(1) a. Da: } & \text{Hun har ikke læst nogen bøger.} \\
\text{b. Fa: } & \text{Hon hevur ikki lisið nakrar bøkur.} \\
\text{c. FS: } & \text{Hon har inte läst några böcker.} \\
\text{d. Ic: } & \text{Hún hefur ekki lesið neinar bækur.} \\
\text{e. No: } & \text{Ho har ikkje lest nokon bøker.} \\
\text{f. Sw: } & \text{Hon har inte läst några böcker.} \\
\text{g. En: } & \text{She has not read any books.}
\end{align*}
\]

The same meaning (more or less) can be expressed with a negative object consisting of the negative indefinite quantifier/determiner *ingen* ‘no’ and an NP (cf. Koch Christensen 1986, 1987; Faarlund et al. 1997; Hansen 1977; Holmes & Hinchcliffe 1994; Jónsson 1996; Petersen et al. 1998; Rögnvaldsson 1987, and Svenonius 2002):

\[
\begin{align*}
\text{(2) a. Da: } & \text{Hun læste ingen bøger.} \\
\text{b. Fa: } & \text{Hon las ongar bökur.} \\
\text{c. FS: } & \text{Hon läste inga böcker.} \\
\text{d. Ic: } & \text{Hún las engar bækur.} \\
\text{e. No: } & \text{Ho las ingen bøker.} \\
\text{f. Sw: } & \text{Hon läste inga böcker.} \\
\text{g. En: } & \text{She read no books.}
\end{align*}
\]
In all the Scandinavian languages except Finland Swedish, the negative object must be outside VP to license sentential negation (as in (4)). I shall refer to this movement out of VP as Negative Shift or NEG-shift.

In main clauses with non-compound tense, i.e. with the main verb in V2 position, NEG-shift is string vacuous, as in (3), whereas in clauses with compound tense, NEG-shift moves the object across the main verb, as in (4)¹:

(3) Da: Han læste

He read no books

(4) Da: Han har

He has no books read

I assume the target of this operation to be spec-NEGP (see (7) below) and that NEG-shift is motivated by (a version of) the Negative Criterion, or NEG-criterion:

(5) **The NEG-criterion** (original)

Each NEG X° must be in spec-head relation with a NEG operator and vice versa.


The NEG-criterion is thus satisfied by filling spec-NEGP – either by direct insertion of the sentential negation (e.g. Da ikke) or by moving a negative object into it. Both operations will check the [NEG] feature on NEG°.

However, feature checking is not crucially dependent on a spec-head relation – it is but one possible checking configuration. Furthermore, in case of pied piping of a preposition (e.g. as in (25)b below: [PP P° [DP ingen NP]]), the negative object itself is not in spec-head relation with NEG°. I propose to revise the NEG-criterion to accommodate this:

(6) **The NEG-criterion** (revised)

The [NEG] feature must be checked on NEG°.

(See also Christensen 2003, section 3.2).

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).
Danish NEG-shift (e.g. *han har ingen bøger læst* as in (4) above) is illustrated in (7) below. The structure in (8) illustrates the English pattern with the negative object in situ (e.g. *he has read no books*).

(7) Danish:

(8) English:
2 The Data

2.1 Main Clauses

The languages initially fall into three groups.

**Group 1**

In Danish, Faroese, Icelandic, Norwegian, and Swedish, NEG-shift is obligatory. It takes place across the main verb in situ in sentences with auxiliary verbs, as the following examples show. These languages thus allow structures like both (3) and (4) above (as well as (1)):

(9) Da: a. *Vi har da set ingen fugle
    b. Vi har da ingen fugle set t₁

We have though no birds seen

(Hansen 1977: 58)

(10) Ic: a. *Jón hefur lesið engar bækur
    b. Jón hefur engar bækur, lesið t₁

Jón has no books read

(Rögnvaldsson 1987, (31))

(11) Fa: a. *Eg havi sæð ongan
    b. Eg havi ongan, sæð t₁

I have nobody seen

(Lockwood 2002: 125)

(12) No: a. *Studentene har lest ingen romaner
    b. Studentene har ingen romaner, lest t₁

The students have no novels read

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

(13) Sw: a. *Han hade sett ingenting
    b. Han hade ingenting sett t₁

He had nothing seen

(Platzack 1998: 134, (5:29))
Group 2
In colloquial Danish, Norwegian, and Swedish, grouped together as Scan2, NEG-shift can only apply in clauses without auxiliary verbs. 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; according to Faarlund et al. (1997: 884), NEG-shift in compound tense is stylistically marked, while Koch 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: (3) is grammatical, (4) is not (repeated here as (14)a and (14)c, respectively):

(14) Scan2: a. Han læste ingen bøger
   He read no books
b. *Han har læst ingen bøger
   He has no books read
c. *Han har ingen bøger læst t1

Group 3
Finland Swedish, unlike all the other Scandinavian languages, allows the negative object to license sentential negation in situ. NEG-shift never applies:

   I have nothing had to do with that case.
   (Hulthén 1947: 130)

The same is found in English. While Finland Swedish is a V2 language, in English the main verb never moves out of VP (or at least not high enough to have any empirical reflex relevant for the present matter2), regardless of the presence or absence of auxiliaries. Sentential negation is licensed either by not (as in (1)g above) or by the object in situ:

(16) En: a. Jack [vp received no letters]
   b. *Jack no letters [vp received t1]

(17) En: a. Jack has [vp received no letters]
   b. *Jack has no letters [vp received t1]

2 Possessive have may be an exception. In certain variations of English, it doesn’t take do-insertion as in Standard English but moves to a position preceding negation: I haven’t any money vs. I don’t have any money.
2.2 Embedded clauses

In the analysis below, I concentrate on main clauses as examples with embedded clauses would be completely parallel. In Scandinavian (except Icelandic), the finite verb remains in Vº in embedded clauses. In Scan2, NEG-shift cannot cross the verb, cf. (14) above, and embedded clauses are always constructed with *ikke…nogen* ‘not…any’:

(18) **Scan2:** a. *… at jeg ingen bøger₁ [VP havde læst t₁]*
    that I no books had read

    b. *… at jeg ingen bøger₁ [VP læste t₁]*
    that I no books read

    c. *… at jeg ikke [VP læste nogen bøger]*
    that I not read any books

In the other Mainland Scandinavian languages and Faroese, NEG-shift applies across the verb:

(19) **Da/Fa/No/Sw:** a. *… at jeg ingen bøger₁ [VP havde læst t₁]*
    that I no books had read

    b. *… at jeg ingen bøger₁ [VP læste t₁]*
    that I no books read

In Icelandic, the finite verb always moves to Iº above NEGP. In compound tense, the pattern is parallel to that in main clauses, as NEG-shift crosses the main verb but not the auxiliary. In non-compound tense, NEG-shift only crosses the trace of the verb as in main clauses:

(20) **Ic:** a. *… að ég hef v engar bækur₁ [VP t v leisið t₁]*
    that I have no books read

    b. *… að ég las v engar bækur₁ [VP t v t₁]*
    that I read no books

In Finland Swedish and English, NEG-shift never applies across the verb:

(21) **FS:** Som jag [VP hade ingen brådskaj], stannade jag kvar.
    As I had no hurry stayed I back
    (“As I was in no hurry, I stayed where I was”)

(22) **En:** a. *… that I did not [VP read any books]*

    b. *… that I [VP read no books]*
2.3 Prepositions
When the object is the complement of a preposition, the languages differ a bit further.

Group 1.a
In Faroese and Icelandic, the NEG-criterion is satisfied by preposition stranding. NEG-shift applies across the licensing preposition:

(23) Ic: a. Jón hefur ekki talað við neinn
    (Jón has not spoken to anyone)
    b. *Jón hefur talað við engan
    c. Jón hefur engan talað við
    (Jón has no-one spoken to)  
    (Jónsson 1996: 83, (105))

(24) Fa: a. Hon hevur ikki snakkað við nakran
    (She has not talked to anyone)
    b. *Hon hevur snakkað við ongan
    c. Hon hevur ongan snakkað við
    (Zakaris Hansen, p.c.)

Group 1.b
There seems to be a dialectal difference in the preferred repair strategy in Icelandic. According to Gunnar Hrafn Hrafnbjargarson and Jóhanna Barðdal (p.c.), pied piping is preferred. I refer to this dialect or variant as Icelandic2:

    (Jón has not spoken to anyone)
    b. *Jón hefur talað við engan
    c. Jón hefur við engan talað
    (Jón has with no-one spoken)

Group 1.c
In Danish, Norwegian, and Swedish, NEG-shift is blocked. In order to satisfy the NEG-criterion, lexical substitution (neutralisation) of ingen ‘no’ by ikke...nogen ‘not any’ is applied:

(26) Da: a. Jeg har ikke peget på nogen
    (I have not pointed at anyone)
    b. *Jeg har peget på ingen
    c. *Jeg har ingen peget på
    (I have no-one pointed at)
Recall that, in Scan2, *ingen* is not possible in clauses with auxiliary verbs. In fact, as with Group 1.c, *ingen* is not possible as the complement of a preposition either:

(29) **Scan2:**

a. Han læste ikke i nogen bøger  
   He read not in any books

b. *Han læste i ingen bøger
   He read no books

c. *Han har last i ingen bøger
   He has in no books read

d. *Han har ingen bøger last i

e. *Han har i ingen bøger last

Group 3

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

(30) **En:**

a. John has not talked to anyone

b. John has talked to no-one

c. *John has no-one talked to

(31) **FS:**

a. Jag hittade inte på någonting
   I found not on anything

b. Jag hittade på ingenting

(c) *Jag hittade ingenting på
   I found nothing on

(“I didn’t think of anything”)  
   (Hulthén 1944: 124)
2.4 Summary

The table below is a summary of the languages discussed and the various repair strategies applied in these languages to circumvent potential blocking effects on NEG-shift by the licensing verb or preposition.

(32) NEG-shift:

<table>
<thead>
<tr>
<th>Group</th>
<th>Language</th>
<th>NEG-shift</th>
<th>Across t_v</th>
<th>across Verb</th>
<th>across Preposition</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1.a]</td>
<td>Fa, Ic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Stranding</td>
<td>Free</td>
</tr>
<tr>
<td>[1.b]</td>
<td>Ice2</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>Pied piping</td>
<td></td>
</tr>
<tr>
<td>[1.c]</td>
<td>Da, No, Sw</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>Substitution</td>
<td></td>
</tr>
<tr>
<td>[2]</td>
<td>Scan2</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>Substitution</td>
<td></td>
</tr>
<tr>
<td>[3]</td>
<td>FS, En</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>NEG in situ</td>
<td>Blocked</td>
</tr>
</tbody>
</table>

This variation in NEG-shift and repair strategies lends itself to an Optimality-theoretic (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 universal violable constraints:

(33) NEGCRIT

The [NEG] feature must be checked on NEGº.

(34) STAY

Economy of derivation / *TRACE.
(In the tableaux below, only violations of STAY caused by NEG-shift are indicated.)

(35) V-LICENSE (V-LIC)

An object must be licensed under c-command by either its selecting Vº or the trace of this Vº. (Vikner’s 2001: 328 LICENSING)

(36) P-LICENSE (P-LIC)

An object must be licensed under c-command by either its selecting Pº or the trace of this Pº. (A subcase of Vikner’s 2001: 328 LICENSING)

“No preposition stranding”

(37) IDENTIO

The output elements (lexical material) must be identical to the input elements

“No substitution”
The minimal domain of $X$ is $X^0$, spec-XP, the complement of $X^0$, and elements adjoined to $X^0$ or XP. The minimal domain of $NEG^0$ is illustrated in (39) below (leaving head adjunction aside). The italicized elements ($I'$, $I^0$, UP, YP, and WP) are outside the minimal domain:

(39) The minimal domain of $NEG$:

Assuming that VP is a phase/barrier, a checking relation cannot be established between $NEG^0$ and the negative object in situ. Thus, $MINIMAL$ is not violated by VP-internal objects like e.g. *no-one in (30)b above – $NEGCRIT$ is.

I assume the input to consist of a lexical array (LA) plus a logical form (LF). In all the tableaux below, the input contains a version of *ingen/no. When the input contains *ikke/not, the ‘faithful’ candidates, i.e. (a1), (b1), (c1), and (d1), are always optimal as they violate neither IDENTIO nor any of the other constraints.

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3 Heck (2001) has argued for an analysis of pied piping along the same lines and $MINIMAL$ and P-LICENSE are (more or less) equivalent to his LOCALITY CONDITION ON CHECKING and PP-ISLAND, respectively.
4 OT Analysis

4.1 Faroese and Icelandic [Group 1.a]

(40) NEG-shift from VP
a. Across verb: Yes (The (a) competition in the tableau)
b. Across t\textsubscript{v}: Yes (The (b) competition)
c. \{\textsc{NEGcrit}, \textsc{IdentIO}\} → \{\textsc{V-license}, \textsc{Stay}\} (a & b → c)

(41) NEG-shift from PP
a. Across P: Yes (the (c) and (d) competitions)
b. \{\textsc{NEGcrit}, \textsc{IdentIO}, \textsc{Minimal}\} → \textsc{P-license} (a → b)

Tableau 1: Fa, Ic

<table>
<thead>
<tr>
<th>VP</th>
<th>Input: enga</th>
<th>NEG CRIT</th>
<th>IDENT IO</th>
<th>MINIMAL</th>
<th>P-LIC</th>
<th>V-LIC</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a1</td>
<td>S V\textsubscript{aux} [NEGP ekki [VP V neina NP]]</td>
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<td>!</td>
</tr>
<tr>
<td>a2</td>
<td>*S V\textsubscript{aux} [NEGP [VP V enga NP]]</td>
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<tr>
<td>a3</td>
<td>S V\textsubscript{aux} [NEGP enga NP [VP V t]]</td>
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<tr>
<td>b1</td>
<td>S V [NEGP ekki [VP t, neina NP]]</td>
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<td></td>
<td>!</td>
</tr>
<tr>
<td>b2</td>
<td>*S V [NEGP [VP t, enga NP]]</td>
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<td>!</td>
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<tr>
<td>b3</td>
<td>S V [NEGP enga NP [VP t, t]]</td>
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<td>!</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PP</th>
<th>Input: enga</th>
<th>NEG CRIT</th>
<th>IDENT IO</th>
<th>MINIMAL</th>
<th>P-LIC</th>
<th>V-LIC</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td>S V\textsubscript{aux} [NEGP ekki [VP V [PP P neinni NP]]]</td>
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<td></td>
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<td>!</td>
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<tr>
<td>c2</td>
<td>*S V\textsubscript{aux} [NEGP [VP V [PP P engri NP]]]</td>
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<td>!</td>
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<tr>
<td>c3</td>
<td>S V\textsubscript{aux} [NEGP engri NP [VP V [PP P t]]]</td>
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<tr>
<td>c4</td>
<td>*S V\textsubscript{aux} [NEGP P engri NP [VP V t]]</td>
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<td>!</td>
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<tr>
<td>d1</td>
<td>S V [NEGP ekki [VP t, [PP P neinni NP]]]</td>
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<td>!</td>
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<tr>
<td>d2</td>
<td>*S V [NEGP [VP t, [PP P engri NP]]]</td>
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<td>!</td>
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<tr>
<td>d3</td>
<td>S V [NEGP engri NP [VP t, [PP P t]]]</td>
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<tr>
<td>d4</td>
<td>*S V [NEGP P engri NP [VP t, t]]</td>
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</tbody>
</table>

In Faroese and Icelandic, NEG-shift applies across both verb and verb trace and no repair strategy is necessary. \textsc{V-license} and \textsc{Stay} are violated in order to satisfy \textsc{NEGcrit} and \textsc{IdentIO}, cf. candidates (a3) and (b3), and the relevant constraints are ranked as in (40)c.

No repair strategy is needed for PPs because NEG-shift applies across the licensing preposition. In (c3) and (d3), \textsc{P-license} (“no stranding”) is violated in order to satisfy \textsc{NEGcrit}, \textsc{IdentIO} (“no substitution”), and \textsc{Minimal} (“no pied piping”).
4.2 Icelandic2 [Group 1.b]

(42) NEG-shift from VP
a. Across verb: Yes
b. Across t;: Yes
c. \{NEGCRIT, IDENTIO\} » \{V-LICENSE, STAY\}

(43) NEG-shift from PP
a. Across P: No → Lexical Substitution: No → Pied piping: Yes
b. \{NEGCRIT, P-LICENSE, IDENTIO\} » MINIMAL

Tableau 2: Ice2

<table>
<thead>
<tr>
<th>VP</th>
<th>Input: enga</th>
<th>NEG</th>
<th>P- LIC</th>
<th>IDENT IO</th>
<th>MINIMAL</th>
<th>V- LIC</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a1</td>
<td>S V_aux [NEGP ekki [VP V neina NP]]</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>a2</td>
<td>*S V_aux [NEGP [VP V enga NP]]</td>
<td>*!</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a3</td>
<td>S V_aux [NEGP enga NP [VP V t]]</td>
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<td>*</td>
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<tr>
<td>b1</td>
<td>S V [NEGP ekki [VP t, neina NP]]</td>
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<td></td>
</tr>
<tr>
<td>b2</td>
<td>*S V [NEGP [VP t, enga NP]]</td>
<td>*!</td>
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<td></td>
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<tr>
<td>b3</td>
<td>S V [NEGP enga NP [VP t, t]]</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td>Input: enga</td>
<td>NEG</td>
<td>P- LIC</td>
<td>IDENT IO</td>
<td>MINIMAL</td>
<td>V- LIC</td>
<td>STAY</td>
</tr>
<tr>
<td>c1</td>
<td>S V_aux [NEGP ekki [VP V [PP P neinni NP]]]</td>
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<tr>
<td>c2</td>
<td>*S V_aux [NEGP [VP V [PP P engri NP]]]</td>
<td>*!</td>
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<tr>
<td>c3</td>
<td>*S V_aux [NEGP engri NP [VP V [PP P t]]]</td>
<td>*!</td>
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</tr>
<tr>
<td>c4</td>
<td>S V_aux [NEGP P engri NP [VP V t]]</td>
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<tr>
<td>d1</td>
<td>S V [NEGP ekki [VP t, [PP P neinni NP]]]</td>
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<tr>
<td>d2</td>
<td>*S V [NEGP [VP t, [PP P engri NP]]]</td>
<td>*!</td>
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<tr>
<td>d3</td>
<td>*S V [NEGP engri NP [VP t, [PP P t]]]</td>
<td>*!</td>
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<tr>
<td>d4</td>
<td>S V [NEGP P engri NP [VP t, t]]</td>
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</tbody>
</table>

In Icelandic2, as in Faroese and Icelandic, NEG-shift applies across both verb and verb trace and again the ranking is \{NEGCRIT, IDENTIO\} » \{V-LICENSE, STAY\} making candidates (a3) and (b3) optimal.

With PPs, the strategy is different. As stated in (43), NEG-shift cannot cross the licensing preposition (preposition stranding is out) and lexical substitution is not licensed. The solution is pied piping which violates MINIMAL, cf. candidates (c4) and (d4).

(44) a. Fa, Ic: NEGCRIT, IDENTIO, MINIMAL » P-LIC, V-LIC, STAY
b. Ice2: NEGCRIT, P-LIC, IDENTIO » MINIMAL, V-LIC, STAY
4.3 Danish, Norwegian, and Swedish [Group 1.c]

(45) NEG-shift from VP
   a. Across verb: Yes
   b. Across tv: Yes
   c. \{\text{NEG Crit, IDENTIO} \} \rightarrow \{\text{V-License, STAY}\}

(46) NEG-shift from PP
   a. Across P: No \rightarrow \text{Lexical Substitution}: Yes
   b. \{\text{NEG Crit, P-License, MINIMAL} \} \rightarrow \text{IDENTIO}

Tableau 3: Da, No, Sw

<table>
<thead>
<tr>
<th>VP</th>
<th>NEG Input: ingen</th>
<th>P-CRIT</th>
<th>P-LIC</th>
<th>MINIMAL</th>
<th>IDENTIO</th>
<th>V-LIC</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a1</td>
<td>S V_{aux} [\text{NEG} ikke [\text{VP V nogen NP}]]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a2</td>
<td>*S V_{aux} [\text{NEG} [\text{VP V ingen NP}]]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a3</td>
<td>S V_{aux} [\text{NEG ingen NP [VP V tv]}]</td>
<td></td>
<td></td>
<td></td>
<td>* *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b1</td>
<td>S V [\text{NEG ikke [VP tv nogen NP]}]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b2</td>
<td>*S V [\text{NEG [VP tv ingen NP]}]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b3</td>
<td>S V [\text{NEG ingen NP [VP tv t]}]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PP</th>
<th>NEG Input: ingen</th>
<th>P-CRIT</th>
<th>P-LIC</th>
<th>MINIMAL</th>
<th>IDENTIO</th>
<th>V-LIC</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td>S V_{aux} [\text{NEG ikke [VP V [PP P nogen NP]]}]</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c2</td>
<td>*S V_{aux} [\text{NEG [VP V [PP P ingen NP]]}]</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| c3 | *S V_{aux} [\text{NEG ingen NP [VP V [PP P t]]}] | | | | *! | | *
| c4 | *S V_{aux} [\text{NEG ingen NP [VP V t]}] | | | | *! | | *

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

NEG-shift cannot cross the licensing preposition but neither preposition stranding nor pied piping are possible due to the high ranking of P-License and MINIMAL. To satisfy \text{NEG Crit}, lexical substitution is applied violating IDENTIO and candidates (c1) and (d1) are optimal.

(47) a. Ice2: \text{NEG Crit, P-License, IDENTIO} \rightarrow \text{MINIMAL, V-License, STAY}
    b. Da, No, Sw: \text{NEG Crit, P-License, MINIMAL} \rightarrow \text{IDENTIO} \rightarrow \text{V-License, STAY}
4.4 Scan2 (colloquial Danish, Norwegian, Swedish) [Group 2]

(48) NEG-shift from VP
a. Across verb:  No  →  Lexical Substitution:  Yes
b. Across t:  Yes
c. \{NEGCRIT, V-LICENSE\} » IDENTIO » STAY

(49) NEG-shift from PP
a. Across P:  No  →  Lexical Substitution:  Yes
b. \{NEGCRIT, P-LICENSE, MINIMAL\} » IDENTIO

Tableau 4: Scan2

<table>
<thead>
<tr>
<th></th>
<th>VP Input: ingen</th>
<th>NEG-CRIT</th>
<th>P-LIC</th>
<th>MINIMAL</th>
<th>V-LIC</th>
<th>IDENTIO</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a1</td>
<td>S Vaux [NEGP ikke [VP V nogen NP]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a2</td>
<td>*S Vaux [NEGP [VP V ingen NP]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a3</td>
<td>*S Vaux [NEGP ingen NP [VP V t ]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b1</td>
<td>S V [NEGP ikke [VP t, nogen NP]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b2</td>
<td>*S V [NEGP [VP t, ingen NP]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b3</td>
<td>S V [NEGP ingen NP [VP V t ]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>PP Input: ingen</th>
<th>NEG-CRIT</th>
<th>P-LIC</th>
<th>MINIMAL</th>
<th>V-LIC</th>
<th>IDENTIO</th>
<th>STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td>S Vaux [NEGP ikke [VP V [PP P nogen NP]]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c2</td>
<td>*S Vaux [NEGP [VP V [PP P ingen NP]]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c3</td>
<td>*S Vaux [NEGP ingen NP [VP V [PP P t ]]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c4</td>
<td>*S Vaux [NEGP P ingen NP [VP V t ]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d1</td>
<td>S V [NEGP ikke [VP t, [PP P nogen NP]]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d2</td>
<td>*S V [NEGP [VP t, [PP P ingen NP]]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d3</td>
<td>*S V [NEGP ingen NP [VP t, [PP P t ]]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d4</td>
<td>*S V [NEGP P ingen NP [VP V t ]]</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Compared with the parameters for Danish, Norwegian, and Swedish in (45)c above, Scan2 differs by one setting: the answer in (48)a is No. NEG-shift cannot cross the verb and the repair strategy is lexical substitution. V-LICENSE is promoted to outrank IDENTIO, 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).

(50) a. Da, No, Sw:  NEGCRIT, P-LIC, MINIMAL  » IDENTIO » V-LIC,  STAY
b. Scan2:  NEGCRIT, P-LIC, MINIMAL, V-LIC  » IDENTIO » STAY
4.5 English and Finland Swedish [Group 3]

(51) NEG-shift from VP
   a. Across verb:  No → Lexical Substitution: No
   b. Across t:  No → Lexical Substitution: No
   c. \{IDENTIO, V-LICENSE, STAY\} → NEGCRIT

(52) NEG-shift from PP
   a. Across P:  No → Lexical Substitution: No → Pied piping: No
   b. \{P-LICENSE, IDENTIO, MINIMAL\} → NEGCRIT

Tableau 5: En, FS

<table>
<thead>
<tr>
<th>VP</th>
<th>Input: no/ingen</th>
<th>P-</th>
<th>MIN</th>
<th>V-</th>
<th>IDENT</th>
<th>ST</th>
<th>NEG</th>
<th>CRIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LIC</td>
<td>MAL</td>
<td>LIC</td>
<td>IO</td>
<td>AY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a1</td>
<td>S V aux [NEGP inte [VP V någon NP]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>a2</td>
<td>S V aux [NEGP [VP V ingen NP]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>a3</td>
<td>*S V aux [NEGP ingen NP [VP V t]]</td>
<td></td>
<td>!</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b1</td>
<td>S V [NEGP inte [VP t, någon NP]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>!</td>
<td>!</td>
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<tr>
<td>b2</td>
<td>S V [NEGP [VP t, ingen NP]]</td>
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<td>!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b3</td>
<td>*S V [NEGP ingen NP [VP t, t]]</td>
<td></td>
<td>!</td>
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<table>
<thead>
<tr>
<th>PP</th>
<th>Input: no/ingen</th>
<th>P-</th>
<th>MIN</th>
<th>V-</th>
<th>IDENT</th>
<th>ST</th>
<th>NEG</th>
<th>CRIT</th>
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<tr>
<td></td>
<td></td>
<td>LIC</td>
<td>MAL</td>
<td>LIC</td>
<td>IO</td>
<td>AY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c1</td>
<td>S V aux [NEGP inte [VP V [PP P någon NP]]]</td>
<td></td>
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<td></td>
<td></td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>c2</td>
<td>S V aux [NEGP [VP V [PP P ingen NP]]]</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>c3</td>
<td>*S V aux [NEGP ingen NP [VP V [PP P t]]]</td>
<td></td>
<td></td>
<td>!</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c4</td>
<td>*S V aux [NEGP ingen NP [VP V t]]</td>
<td></td>
<td>!</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d1</td>
<td>S V [NEGP inte [VP t, [PP P någon NP]]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>!</td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>d2</td>
<td>S V [NEGP [VP t, [PP P ingen NP]]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d3</td>
<td>*S V [NEGP ingen NP [VP t, [PP P t]]]</td>
<td></td>
<td>!</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d4</td>
<td>*S V [NEGP ingen NP [VP t, t]]</td>
<td></td>
<td>!</td>
<td>*</td>
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</tbody>
</table>

NEG-shift is blocked by the verb but lexical substitution is not allowed. Violations of IDENTIO and V-LICENSE are equally worse than violating NEGCRIT and (a2) is optimal. Because STAY outranks NEGCRIT, NEG-shift doesn’t take place across the verb trace in (b3).

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

(53) a. Scan2:  NEGCRIT, P-LIC, MINIMAL, V-LIC » IDENTIO » STAY
   b. En, FS:  P-LIC, MINIMAL, V-LIC, IDENTIO, STAY » NEGCRIT
In English, unlike Finland Swedish, the (b) and (d) competitions are actually not available because the main verb never leaves $V^o$. Because English has do-insertion, the (a) and (b) competitions are identical and so are (c) and (d).

5 Parametric Variation

The parametric variation in terms of constraint reranking can be illustrated in a box diagram, which makes it clear that this variation is rather minimal.

The differences between the languages are accounted for by movement a single constraint (i.e. reranking) plus differences in crucial constraint rankings (adding or removing ‘walls’ in the diagram).
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 English and the Scandinavian languages. English and Finland Swedish are much more conservative than the other languages, which license NEG-shift to varying degrees.

By treating the NEG-criterion as a violable constraint instead of an absolute principle in the analysis, the variation could be accounted for by minimal variation in the ranking of only six universal violable constraints.

If and only if NEGCRIT outranks STAY, the language has NEG-shift. The different preferences for pied piping, preposition stranding, or lexical substitution (neutralisation) can be derived from different rankings of P-LICENSE, MINIMAL, V-LICENSE, and IDENTIO.

7 References


PDF version from [http://www.hum.uit.no/a/svenonius/papers/Svenonius02NegWPSS.pdf](http://www.hum.uit.no/a/svenonius/papers/Svenonius02NegWPSS.pdf)

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