

Sentential Negation & Indefinite Objects

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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), French (Fr), Biblical Hebrew (BH), and Modern Hebrew (He), but not for Dutch (Du) and German (Ge):

- (1)
- | | | | | | | |
|----|-----|------|------------|--------------|--------|------------------------|
| a. | Da: | Hun | har | <u>ikke</u> | læst | <u>nogen bøger.</u> |
| b. | Fa: | Hon | hefur | <u>ikki</u> | lisið | <u>nakrar bækur.</u> |
| c. | FS: | Hon | har | <u>inte</u> | läst | <u>några böcker.</u> |
| d. | Ic: | Hún | hefur | <u>ekki</u> | lesið | <u>neinar bækur.</u> |
| e. | No: | Ho | har | <u>ikkje</u> | lest | <u>nokon bøker.</u> |
| f. | Sw: | Hon | har | <u>inte</u> | läst | <u>några böcker.</u> |
| g. | En: | She | has | <u>not</u> | read | <u>any books.</u> |
| h. | Du: | * | | | | |
| i. | Ge: | * | | | | |
| j. | Fr: | Elle | <u>n'a</u> | <u>pas</u> | lu | <u>de livres.</u> |
| k. | BH: | | | <u>Lo'</u> | qara'h | <u>'et-kol-sfarim.</u> |
| l. | He: | Hi | | <u>lo</u> | qarah | <u>shum sfarim.</u> |

In most of these the languages, the same meaning (more or less) can be expressed with an NEGQP (negative quantifier phrase) object consisting of the negative indefinite quantifier *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). In Biblical and Modern Hebrew, however, this is not possible:

- (2)
- | | | | | |
|----|-----|------|--------|-------------------------|
| a. | Da: | Hun | læste | <u>ingen bøger.</u> |
| b. | Fa: | Hon | las | <u>ongar bækur.</u> |
| c. | FS: | Hon | läste | <u>inga böcker.</u> |
| d. | Ic: | Hún | las | <u>engar bækur.</u> |
| e. | No: | Ho | las | <u>ingen bøker.</u> |
| f. | Sw: | Hon | läste | <u>inga böcker.</u> |
| g. | En: | She | read | <u>no books.</u> |
| h. | Du: | Zij | las | <u>geen boeken.</u> |
| i. | Ge: | Sie | las | <u>keine Bücher.</u> |
| j. | Fr: | Elle | lisait | <u>aucun de livres.</u> |
| k. | He: | * | | |
| l. | BH: | * | | |

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:

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).

(3) Da: Han læste_v ingen bøger_i [VP t_v t_i]
 He read no books

(4) Da: Han har_v ingen bøger_i [VP t_v [VP læst t_i]]
 He has no books read

The movement of negative objects corresponds the placing of negative elements in the negation field in the ‘Diderichsonian’ field model (Danish *feltskema*, cf. Diderichsen 1946 and Hansen 1977):

(5) **Field Model:**

Initial	V _{finite}	Subject	Adv	Negation	V _{non-finite}	Object(s)	Adv
Han	læste	-	-	ikke	-	nogen bøger	-
Han	læste	-	-	ingen bøger	-	-	-
Han	har	-	-	ingen bøger	læst	-	-

The languages that have the construction in (2) differ when it comes to clauses with compound tense. In all the Scandinavian languages except Finland Swedish, the NEGQP 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.

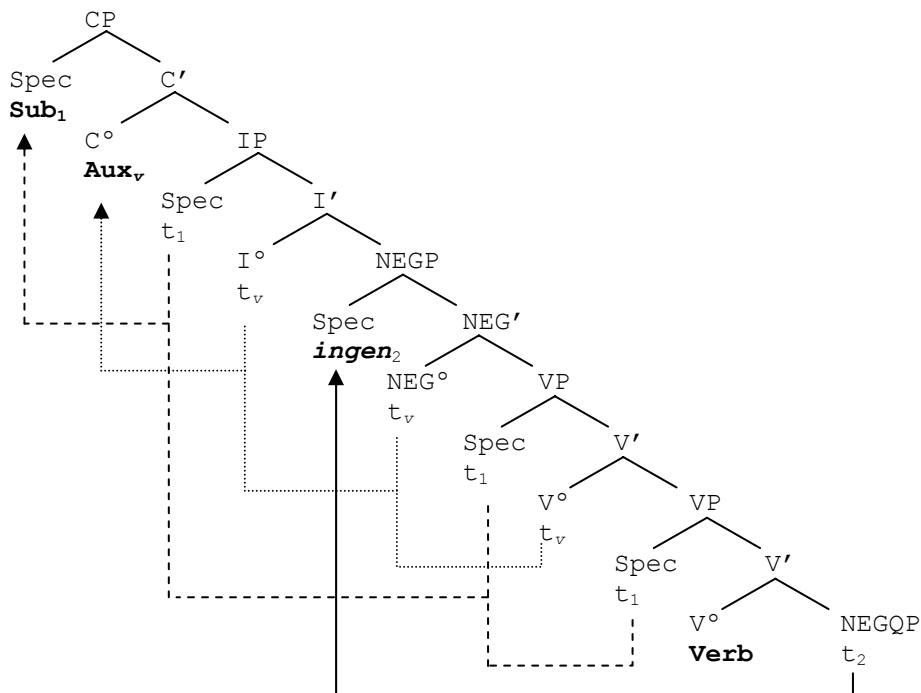
I assume the target of this operation to be spec-NEGP (see (7) below) and that NEG-shift is motivated by the Negative Criterion, or NEG-criterion:

(6) **The NEG-criterion**

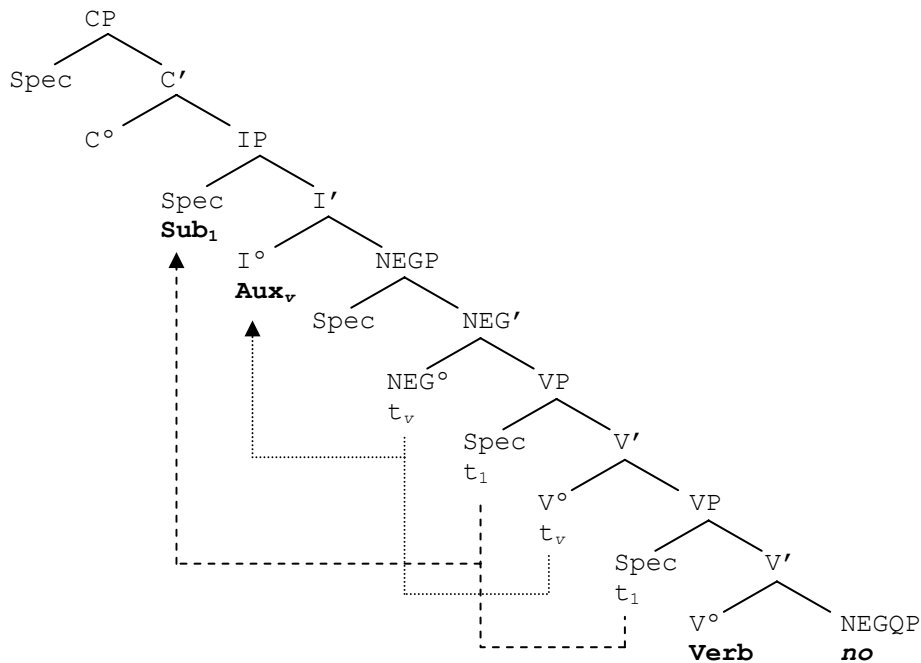
Each NEG X^o must be in spec-head relation with a NEG operator and vice versa.
 (cf. Haegeman & Zanuttini 1991: 244, Haegeman 1995: 106)

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 NEGQP (a noun phrase quantified by the negative indefinite quantifier Da *ingen*, cf. Sells 2000: 5). Both operations will check the [NEG] feature on NEG^o.

(7) Scandinavian (compound tense):



(8) English:



2 The Data

2.1 Germanic VO: English and the Scandinavian Languages

Before turning to some examples of non-Germanic languages and examples of OV word order, consider first English and the Scandinavian languages all of which are VO.

2.1.1 Main Clauses

The languages initially fall into four groups.

Group I

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 both constructions (3) and (4) above (as well as (1)):

- (9) Da: a. *Vi har da set ingen fugle
b. Vi har da ingen fugle set
We have though no birds seen (Hansen 1977: 58)

- (10) Ic: a. *Jón hefur lesið engar bækur
b. Jón hefur engar bækur lesið
Jón has no books read (Rögnvaldsson 1987, (31))

- (11) Fa: a. *Eg havi sæð ongan
b. Eg havi ongan sæð
I have nobody seen (Lockwood 2002: 125)

- (12) No: a. *Studentene har lest ingen romaner
b. Studentene har ingen romaner lest
The students have no novels read (Koch Christensen 1986: 1, (1) & (2))

- (13) Sw: a. *Han hade sett ingenting
b. Han hade ingenting sett
He had nothing seen (Platzack 1998: 134, (5:29))

2.1.2 Embedded clauses

I concentrate on main clauses and leave out examples with embedded clauses as the examples would be completely parallel. In Scandinavian (except Icelandic), the finite verb remains in V° 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 bøger [VP havde læst t]
 that I no books had read
- b. *... at jeg ingen bøger [VP læste t]
 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 bøger [VP havde læst t]
 that I no books had read
- b. ... at jeg ingen bøger [VP læste t]
 that I no books read

In Icelandic, the finite verb always moves to I° 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 bækur [VP t_v lesið t]
 that I have no books read
- b. ... að ég las_v engar bækur [VP t_v t]
 that I read no books

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

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

(Hulthén 1947: 130)

- (22) En: a. ... that I did not [VP read any books]
 b. ... that I [VP read no books]

2.1.3 Prepositions

When the object is the complement of a preposition, the languages differ a bit further.

Group I.a

In Danish, Norwegian, and Swedish, NEG-shift is blocked. In order to satisfy the NEG-criterion, a repair strategy is applied and for these languages it is lexical substitution (neutralisation) of *ingen* 'no' by *ikke...nogen* 'not any':

(23) 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

(24) No: a. Studentene leser ikke **om** noen svenske forfattere
The students read not about any Swedish writers

b. *Studentene leser **om** ingen sv. forfattere

c. *Studentene leser ingen sv. forfattere **om**
The students read no Sw. writers about

(Koch Christensen 1987: 6, (13) & (13)'; 4, (20))

(25) Sw: a. Han har inte pratad **med** någon
He has not talked with anyone

b. *Han har pratad **med** ingen

c. *Han har ingen pratad **med**
He has no-one talked with

(cf. Holmes & Hinchliffe 1994: 90)

Group I.b

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

(26) 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))

(27) 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**
She has no-one talked with

(Zakaris Hansen, p.c.)

Group I.c

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

- (28) Ice2: a. *Jón hefur talað **við engan**
b. Jón hefur **við engan** talað
Jón has with no-one spoken (Gunnar Hrafn Hrafnbjargarson, p.c.)

Group II

Recall that Scan2 only allows *ingen* in non-compound tense. In fact, *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 læst i ingen bøger
d. *Han har ingen bøger læst i
e. *Han har i ingen bøger læst
He has in no books read

Group III & IV

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)

It is, of course, logically possible that there could be 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. The opposite, however, *kein* 'no' but not *nicht einige* 'not any', is found in the Germanic OV languages, such as Dutch and German.

2.2 Germanic OV: Dutch & German

In Dutch and German non-compound tense, NEG-shift is string-vacuous in the same way as in all the Scandinavian languages (Dutch data due to Peter Bakker, p.c.):

(32) Du: Zij las geen boeken₁ [_{VP} t₁ t_v].³
She read no books

(33) Ge: Sie las_v keine Bücher₁ [_{VP} t₁ t_v].
She read no books

In compound tense, Dutch and German raise the question whether NEG-shift crosses the main verb or not because they are OV languages.

(34) Du: Zij heeft geen boeken₁ [_{VP} t₁ gelezen].
She has no books read

(35) Ge: Sie hat keine Bücher₁ [_{VP} t₁ gelesen].
She has no books read

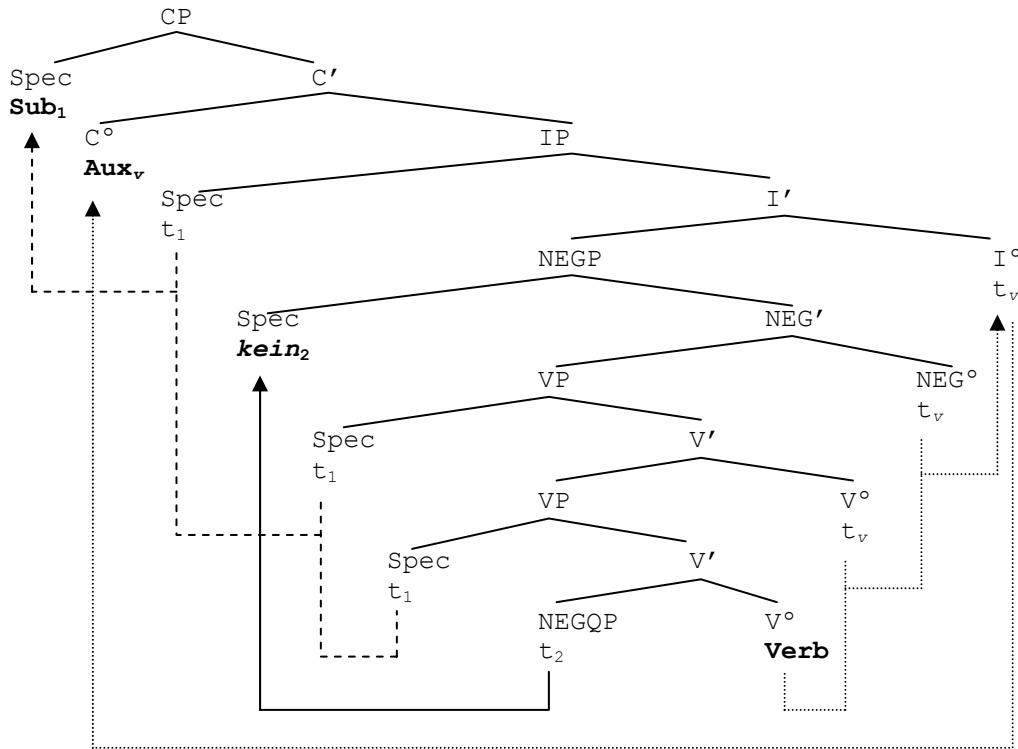
The question is what the relevant measure is: precedence or c-command. If precedence is the determining factor then NEG-shift doesn't cross the verb because both the base-position of the object and spec-NEGP linearly precede V°. On the other hand, if structure is to be considered, Dutch and German pattern like the Scandinavian languages (not Scan2) but with the difference that NEG-shift is also string-vacuous in compound tense. Below, I adopt the latter analysis.

The following syntactic tree illustrates the head-final structure of Dutch and German; compare it to the head-first structure of the Scandinavian languages in (7) above.

(As NEG° is not overtly realized in German and Dutch, NEGP may also have the same head-first linear order as CP, i.e. NEG° may be to the left of VP, as Haegeman (1995) argues for West Flemish, also a Germanic OV language.)

³ In Dutch, the non-compound past form seems to need a follow-up, such as "...but she did read some newspapers". To construct the past tense, the compound form is preferred.

(36) German:



When the NEGQP is the complement of a preposition, Dutch and German pattern with Ice2 (i.e. Group I.c) in having pied piping instead of stranding (again assuming string-vacuous movement):

- (37) Du: a. *Zij heeft geen boeken₁ [_{VP} [_{PP} **in** t₁] gelezen].
 b. Zij heeft [_{PP} **in** geen boeken]₁ [_{VP} t₁ gelezen].
She has in no books read
 “She hasn’t read in any books.”

- (38) Ge: a. *Sie hat keinen Büchern₁ [_{VP} [_{PP} **in** t₁] gelesen].
 b. Sie hat [_{PP} **in** keinen Büchern]₁ [_{VP} t₁ gelezen].
She has in no books read
 “She hasn’t read in any books.”

The Dutch *een paar* and the German *einige* cannot be used as Negative Polarity Items (NPIs); they are incompatible with a sentential NEG P and cannot mean ‘any’. Thus, *niet een paar* and *nicht einige* can never substitute for *geen* and *keine* or vice versa:

- (39) Du: a. *Zij heeft een paar boeken niet gelezen.
 b. *Zij heeft een paar boeken niet gelezen.
She has some books not read

Intended meaning: “She hasn’t read any books.” (= (34))

- (40) Ge: a. *Sie hat nicht einige Bücher gelesen.
 b. *Sie hat einige Bücher nicht gelesen.
She has some books not read

Intended meaning: “She hasn’t read any books.” (=35)

The examples are fully grammatical with meanings different from the ‘simple’ reading where the operator negates the clause, while this is not possible with *geen* and *keine*:

- (41) Du: a. Zij heeft niet een paar boeken gelezen, maar een paar kranten.
She has not some books read but some newspapers
 b. *Zij heeft geen boeken gelezen, maar een paar kranten.
She has no books read but some newspapers

Intended: “She didn’t read some books but she did read some newspapers.”

- (42) Du: a. Zij heeft een paar boeken niet gelezen, mar ik ga ze wel lezen.
She has some books not read but I go them will read
 b. *Zij heeft geen boeken gelezen, mar ik ga ze wel lezen.
She has no books read but I go them will read

Intended: “There are some books she didn’t read, but I’m going to read them.”

- (43) Ge: a. Sie hat nicht einige Bücher gelesen, sondern einige Zeitungen.
She has not some books read but some newspapers
 b. *Sie hat keine Bücher gelesen, sondern einige Zeitungen.
She has no books read but some newspapers

Intended: “She didn’t read some books, but she did read some newspapers.”

- (44) Ge: a. Sie hat einige Bücher nicht gelesen, aber ich werde sie lesen.
She has some books not read but I will them read
 b. *Sie hat keine Bücher gelesen, aber ich werde sie lesen.
She has no books read but I will them read

Intended: “There are some books she didn’t read, but I’m going to read them.”

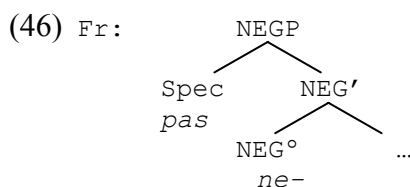
This suggests a difference between the two negative operators; *niet/kein* is a **syntactic** focus operator, while *geen/kein* is not; *geen/kein* is compatible with **phonological** focus (i.e. stress):

- (45) a. Du: *niet* [OP, NEG, FOC] focal negation
 Ge: *nicht*
 b. Du: *geen* [OP, NEG] sentential negation
 Ge: *kein*

The scope of *niet/nicht* is determined long-distance agreement in focus with VP, such that only what is inside VP is negated. (For different analysis of German negation within the Minimalist Program, see Kappus 2000.)

2.3 Romance VO and OV: French and Latin

French is a Romance language with SVO word order. Like Icelandic, French has V^o-to-I^o movement – the finite verb always moves to I^o above NEG^o. Like English, French is a non-V2 (or residual V2). The proclitic *ne* always precedes the finite verb (*ne* is prefixed to the verb regardless of orthography) while *pas* ‘not’ follows it.



The verb moves through NEG^o picking up *ne* on the way to I^o. As *pas* remains in spec-NEGP, the order of the two elements is reversed.

- (47) Fr: Pierre n'a pas voulu de cadeaux.
 Pierre NEG-has not wanted of presents
 “Pierre didn’t want any presents.” (Rowlett 1998:84, (63a))

Like English and Finland Swedish, French has a term for *ingen/no* that cannot undergo NEG-shift across the verb:

- (48) Fr: Je n'en ai trouvé aucun
 *Ie n'en ai aucun trouvé
 I NEG-of.them have none found
 “I haven’t found any.” (based on Confais 1978: 135)

Like Finland Swedish, French may have string-vacuous NEG-shift in non-compound tenses. The finite main verb moves to I^o, which is structurally higher than NEG^o, and the object NEGQP moves to spec-NEGP. This re-establishes the underlying word order in (46) above:

- (49) Fr: [_{IP} ils [_{ne} firent]_v [_{NEG} aucun genre de chute₁ t_v [_{VP} t_v t₁]]].
 they NEG made no kind of fall
 "They didn't fall in any way." (Rowlett 1998: 67, (33))

As noted above, this movement is assumed for purely theoretical reasons, and has no empirical reflex (compare (3) and (4) above).

The NEGQP is always in situ in constructions with auxiliaries – except *rien* 'nothing' which alone undergoes obligatory NEG-shift (*personne* 'no one', like *aucun* 'no', never shifts across the verb). Apart from this exception, French patterns with Finland Swedish (Group III).

- (50) Fr: *Pierre n'a mangé rien
 Pierre n'a rien mangé
 Pierre NEG-has nothing eaten (cf. Nølke 1997: 234)

When the object is the complement of a preposition, the NEGQP stays in situ – as in Finland Swedish:

- (51) Fr: Je n'ai pensé à rien
 *Je n'ai rien pensé à
 *Je n'ai à rien pensé
 I NEG-have on nothing thought (Confais 1978: 135)

- (52) Fr: a. Il n'a parlé d'aucun de ses livres
 b. *Il n'a aucun de ses livres parlé de
 c. *Il n'a d' aucun de ses livres parlé
 He NEG-has on none of his books talked
 "He didn't talk about any of his books." (Carl Vikner, p.c.)

Latin, from which French descends, is an SOV language. In Latin, sentential negation immediately precedes the verb:

- (53) *When no constituent or word is to be emphasized, the normal word order is such that the subject is sentence-initial and the verb is sentence-final. [...] Negation immediately precedes the word it negates [...] thus immediately preceding the main verb when a whole proposition is negated.* (Hyllested & Østergaard 1966: 192; my translation.)

- (54) La: Cursum tenere atque insulam capere non potuerant.
 Course.ACC to-hold and island.ACC to-take not had.could
 "They hadn't been able to keep the course and reach the island."
 (Hyllested & Østergaard 1966: 192)

Apart from the lack of a NEGQP, there are quite a lot of differences between (Modern and, even more so, Biblical) Hebrew and the Germanic languages. For example, Hebrew has no auxiliary verbs and aspect is inflected on the verb.

2.5 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 and preposition.

(60) NEG-shift:

Group	Language	NEG-shift		
		Across <i>t_v</i>	across Verb	across Preposition
I.c	Faroese, Icelandic	✓	✓	✓ P-stranding
I.b	Dutch, German, Ice2, Latin	✓	✓	✗ Pied piping
I.a	Danish, Norwegian, Swedish	✓	✓	✗ Substitution
II	Scan2	✓	✗ Substitution	✗ Substitution
III	Finland Swedish, French	(✓)	✗ NEG in situ	✗ NEG in situ
IV	English	(✗)	✗ NEG in situ	✗ NEG in situ
V	Biblical Hebrew, Modern Hebrew			

Biblical Hebrew and Modern Hebrew are incompatible with NEG-shift (hence the black field in the table) for the obvious reason that without a NEGQP, an analysis of NEG-shift does not apply. The difference between having a term corresponding to *ingen* and not having such a term is a lexical difference. The differences between the distributions of *ingen* within the clause are syntactic differences.

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:

- (61) **NEGCRT**
Each negative X^0 must be in spec-head relation with a negative operator and vice versa.
- (62) **STAY**
Economy of derivation / *TRACE.
In the tableaux below, only violations of STAY caused by NEG-shift are indicated.
- (63) **V-LICENSE (V-LIC)**
An object must be licensed by being c-commanded either by its selecting V^0 or the trace of this V^0 (Vikner's 2001: 328 LICENSING).
- (64) **P-LICENSE (P-LIC)**
An object must be licensed by being c-commanded either by its selecting P^0 or the trace of this P^0 (a subcase of Vikner's 2001: 328 LICENSING).
- (65) **IDENTIO**
The output elements (lexical material) must be identical to the input elements / *SUBSTITUTION.
- (66) **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 LOCALITY CONDITION ON CHECKING (2001: 1, (1)) and PP-ISLAND (2001: 2, (5)), respectively.

I assume the input to consist of the numeration in the sense of Chomsky (1995: 225) plus a logical form (LF). 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 as they do not violate IDENTIO or any of the other constraints.

4 OT Analysis

4.1 Danish, Norwegian, and Swedish

(67) NEG-shift from VP

- a. Across verb: *Yes* (The (a) competition in the tableau.)
 b. Across t_v : *Yes* (The (b) competition.)
 c. {NEGCrit, IDENTIO} » {V-LICENSE, STAY} (a & b → c)

(68) NEG-shift from PP (The (c) and (d) competitions.)

- a. Across P: *No* → Lexical Substitution: *Yes*
 b. {NEGCrit, P-LICENSE, MINIMAL} » IDENTIO (a → b)

Tableau 1: Da, No, Sw

	VP Input: <i>ingen</i>	NEG CRIT	P- LIC	MINI MAL	IDENT IO	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	IDENT IO	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. V-LICENSE and STAY are violated in order to satisfy NEGCrit and IDENTIO, cf. candidates (a3) and (b3), and the relevant constraints are ranked as in (67)c.

NEG-shift cannot cross the licensing preposition. To satisfy NEGCrit, lexical substitution is applied and IDENTIO is violated, cf. candidates (c1) and (d1). Neither preposition stranding nor pied piping are possible due to the higher ranking of P-LICENSE and MINIMAL.

4.2 Icelandic2 (and Latin)

(69) NEG-shift from VP

- a. Across verb: *Yes*
- b. Across t_v : *Yes*
- c. {NEGCRIT, IDENTIO} » {V-LICENSE, STAY}

(70) NEG-shift from PP

- a. Across P: *No* → Lexical Substitution: *No* → Pied piping: *Yes*
- b. {NEGCRIT, P-LICENSE, IDENTIO} » MINIMAL

Tableau 2: Ice2

	VP Input: <i>enga</i>	NEG CRIT	P- LIC	IDENT IO	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	IDENT IO	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, IDENTIO} » {V-LICENSE, STAY}. As before, the optimal candidates are (a3) and (b3).

With PPs, the strategy is different. As stated in (70), NEG-shift cannot cross the licensing preposition (preposition stranding is out) but lexical substitution is not an option. The solution is pied piping, cf. candidates (c4) and (d4), which violates MINIMAL. Percolation is preferred over violating P-LICENSE. Thus, the ranking is (70)b. Compared with (68)b, MINIMAL has been demoted and moved below IDENTIO.

- (71) a. Da, No, Sw: NEGCRIT, P-LIC, MINIMAL » IDENTIO » V-LIC, STAY
- └──────────────────┘
- b. Ice2: NEGCRIT, P-LIC, IDENTIO » MINIMAL, V-LIC, STAY

4.6 English

(81) NEG-shift from VP

- a. Across verb: *No* → Lexical Substitution: *No*
- b. Across t_v : (*No*) → Lexical Substitution: (*No*)
- c. {IDENTIO, V-LICENSE, STAY} » NEGCRIT

(82) NEG-shift from PP

- a. Across P: *No* → Lexical Substitution: *No* → Pied piping: *No*
- b. {P-LICENSE, IDENTIO, MINIMAL} » NEGCRIT

Tableau 6: English

	VP Input: <i>no</i>	P- LIC	V- LIC	MINI MAL	IDENT IO	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	MINI MAL	IDENT IO	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).

- (83) a. FS: P-LIC, V-LIC, MINIMAL, IDENTIO » NEGCRIT, STAY
- b. En: P-LIC, V-LIC, MINIMAL, IDENTIO » STAY, NEGCRIT

4.7 Dutch, German

(84) NEG-shift from VP

- a. Across verb: *Yes*
- b. Across t_v : *Yes*
- c. {NEGCrit, IDENTIO} » {V-LICENSE, STAY}

(85) NEG-shift from PP

- a. Across P: *No* → Lexical Substitution: *No* → Pied piping: *Yes*
- b. {NEGCrit, P-LICENSE, IDENTIO} » MINIMAL

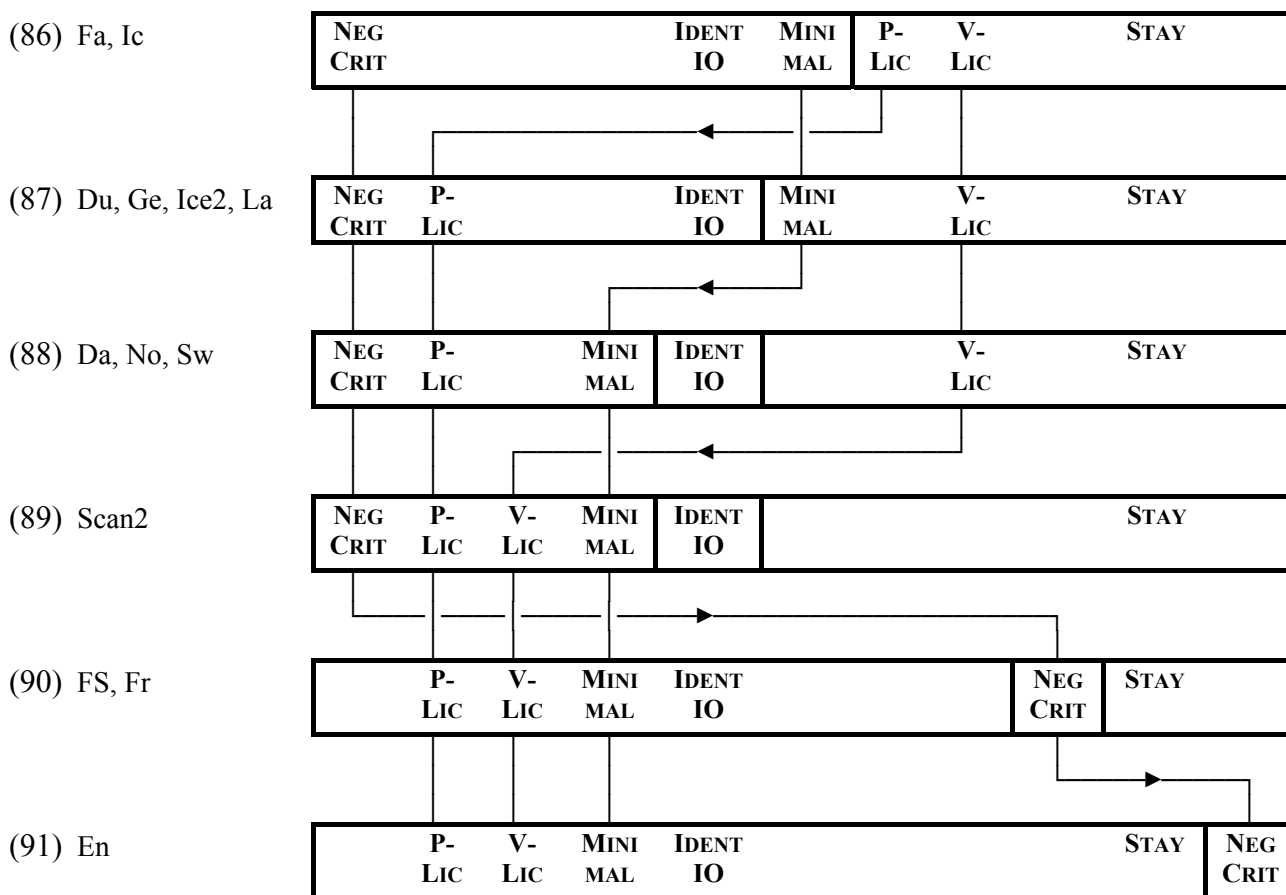
Tableau 7: Du, Ge

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

Because Dutch *een paar* and German *einige* cannot be NPIs, such candidates are shaded in the tableau. Apart from this, it is identical to Tableau 2 for Icelandic2.

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 typological variation in the licensing of sentential negation by NEG-shift across verbs and prepositions.

The set of languages cuts across other typological parameters. (a) Dutch and German, as well as Latin, are OV languages, whereas the Scandinavian languages, English, French, and Biblical and Modern Hebrew are VO. (b) Dutch, German, and the Scandinavian languages are all V2, whereas English, French, Latin, and the Hebrew languages are non-V2. (c) French and Icelandic have V^o-to-I^o whereas none of the other languages do. (d) Dutch, English, German, and the Scandinavian

languages are Germanic languages, French and Latin are Romance Languages, and Biblical and Modern Hebrew are Semitic languages.

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, IDENTIO, and NEGCRIT.

The languages could thus be divided into six groups. The difference between the groups could be accounted for by moving only one constraint in the hierarchy and changing crucial rankings between constraints (adding or removing ‘walls’ in the box diagram in (86)-(91)).

The relevant 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.

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 topicalization of *inte* ‘not’ (cf. Bergroth 1917: 168, §251; Christensen 2003).

Constructing a negative clause can be done in two ways: either with a NEGQP or with a ‘true’ negation in NEGP, i.e. *no* vs. *not*:

(92) Licensing of sentential negation:

	NEGQP	NEG
English, Danish, Faroese, Finland Swedish, Icelandic, Norwegian, Swedish, French, and Latin,	✓	✓
Dutch and German	✓	✗
Modern and Biblical Hebrew	✗	✓

In Hebrew, there is no negative indefinite quantifier corresponding to *ingen/kein/no* and sentential negation can only be constructed with e.g. *lo* ‘not’.

Any ranking of the constraints discussed here will account for Hebrew as the *lo*’ version (like *ikke/not*) doesn’t violate any of the constraints. Furthermore, there are no candidates with a NEGQP to compete with.

As far as I know, there is no Germanic language that has no NEGQP corresponding to *ingen/no/kein*. On the other hand, the Germanic languages are not the only languages that have a NEGQP that licenses sentential negation. This is also found in, e.g. the Romance languages French and Latin.

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