

Two Ways of Expressing Negation

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In this paper I will show that whenever a language has a negative marker that is a syntactic head, this language exhibits Negative Concord (NC); languages that only exhibit Double Negation lack a negative head. I will argue that this is a major argument in favour of an analysis of NC in terms of syntactic agreement, since it proves that only NC languages have a syntactic category Neg. Moreover, I argue that this implies that n-words in Negative Concord languages cannot be regarded as semantically negative and that not in every language the negative marker itself is the phonological realization of a negative operator.

1. Introduction

Negative Concord (NC) has been a problem for compositionality for a long time. In this paper I will show that the solution for NC can be found in the syntactic status of negative markers that participate in NC relations. The analysis of the status of negative markers provides a framework in which NC naturally falls out as a form of syntactic agreement. I will also argue that n-words in NC languages are semantically non-negative, and the combination of these two assumptions predicts the correct readings of multiple negative expressions, including those that raised problems for previous analyses of NC.

In section 2 I will discuss four different instances of Negative Concord, and I will argue that one particular instance (Emphatic Negation) does not count as Negative Concord proper.

In section 3, I will discuss the correspondence between Negative Concord and the syntactic status based on cross-linguistic variation. I will argue that Jespersen's (1917) original bidirectional generalization should be replaced by a unidirectional one.

In 4.1 I will present a syntactic analysis for negative markers and argue that only negative heads require the presence of a functional projection NegP, whereas negative adverbs are base-generated in a lower position in the clause and do not necessarily require the presence of such a NegP. The result of this analysis is that it is possible to connect NC to the presence of a NegP. In 4.2 I will argue that n-words are semantically non-negative, but that they are

semantically marked for negation and that this may also hold for negative markers in several NC languages. In 4.3 I will show that NC can be analyzed as multiple agreement between a negative operator and negative elements that are only marked for negation in the syntax.

2. Negative Concord

In this section I will introduce one of the two topics in this study of negation: Negative Concord. Negative Concord (NC) is the name for the phenomenon whereby multiple negative elements in the morpho-syntax only yield one negation in the semantics¹. Although many different subclasses of Negative Concord have been defined in the literature (cf. Den Besten 1989, Van der Wouden 1994, Giannakidou 2000 a .o.) I will restrict myself to four different instances of NC.

- (1) a. **Strict Negative Concord**: N-words are not allowed to occur by themselves, but have to be accompanied by a single negative marker.
- b. **Non-Strict Negative Concord (NSNC)**: N-words are not allowed to occur by themselves, but should be accompanied by a single negative marker, except when the n-word is in preverbal position. Then it never co-occurs with a negative marker.
- c. **Paratactic Negation (PN)**: a verb or preposition with a negative connotation in a main clause selects an n-word in its complement (clause), that does not contribute any negation of its own.
- d. **Emphatic Negation (EN)**: One negative element enforces another negative element.

Whereby the following definitions hold:

- (2) a. **Negative markers**: elements that denote that a sentence (or constituent) is under the scope of negation. Examples are French *ne* and *pas*², Italian *non*, Czech *ne-* and Dutch *niet*.
- b. **N-words**: elements that only under well-defined conditions are equivalent to a negative quantifier. Examples are French *rien* or *personne*, Italian *nessuno* or Czech *nikoho* (after Laka 1990).
- c. **Negative elements**: the set of negative markers, n-words and negative quantifiers

Examples of these four instances in (1) are in (3)-(6).

¹ Cf Van der Wouden (1994) and Giannakidou (1997, 2000) for definitions that are only slightly different.

² According to this definition *pas* is not an n-word, contrary to what is sometimes suggested. The reason for this is that *pas* only binds an event variable, and not variables that are introduced by indefinite expressions (cf. Zeijlstra 2004).

- (3) a. Milan *nikomu nevolá*.³ Czech
 Milan n-body neg-call
 NC: 'Milan doesn't call anybody'
- b. Dnes *nevolá nikdo*.
 Today neg-calls n-body
 NC: 'Today nobody is calling'
- c. Dnes *nikdo nevolá*.
 Today n-body neg-calls
 Strict NC: 'Today nobody is calling'
- (4) a. Gianni **(non) ha telefonato a nessuno* Italian
 Gianni neg has called to n-body
 NC: 'Gianni didn't call anybody'
- b. **(Non) ha telefonato nessuno*
 Neg has called n-body
 NC: 'Nobody called'
- c. *Nessuno (*non) ha telefonato*
 N-body neg has called
 Non-Strict NC: 'Nobody called'
- (5) a. J'ai *peur qu'il ne vient* French
 I am afraid that he neg comes
 PN: 'I am afraid that he comes'
- b. Il vient *sans personne*
 He comes without n-body
 PN: 'He comes without anybody'
- (6) a. Hij heeft nergens geen zin in Coll. Dutch⁴
 He has n-where no lust in
 'He doesn't feel like anything at all'
- b. Hij gaat nooit niet naar school
 He goes n-ever neg to school
 'He never ever goes to school'

In (3) we see that the negative marker *ne* is prefixed to the finite verb in all examples. In (4) the negative marker (which is not a prefix but a separate word), is only allowed in negative sentences, if it is not preceded by an *n*-word in subject position. Given that the negative marker can co-occur with a negative subject in a lower position, it is not due to the fact that the *nessuno* is a subject, but due to the position of *nessuno* in the clause in (4) that the inclusion of the negative marker is forbidden.

Whereas (3) and (4) are examples that denote the traditional notion of Negative Concord, the phenomenon in (5) is different, because the concord

³ For typographic reasons diacritics have been left out in all Czech examples.

⁴ EN is only available in informal and colloquial registers of Dutch. Standard Dutch only exhibits Double Negation readings.

NC.⁶ In the rest of this paper I will provide an analysis that accounts for Strict and Non-Strict Negative Concorde and for Paratactic Negation. I argue that Emphatic Negation constructions should be treated as idiomatic expressions that are lexically stored.

3. The syntactic status of Negative Markers

Languages vary diachronically with respect to the way they express sentential negation. In section 3.1, I describe this development that is known as Jespersen's Cycle (1917). Jespersen has already connected the phase of a particular language in this cycle to the occurrence of NC in this language and he formulated his observations in a bidirectional generalization. In section 3.2, I evaluate this generalization on the basis of a set of 30 languages. I show that Jespersen's generalization relation should be replaced by a unidirectional one.

3.1 Diachronic variation

Jespersen (1917) describes the development of negation as follows:

The history of negative expressions in various languages makes us witness the following curious fluctuation; the original negative adverb is first weakened, then found insufficient and therefore strengthened, generally through some additional word, and in its turn may be felt as the negative proper and may then in course of time be subject to the same development as the original word. [Jespersen 1917]

This development has been known as 'the Jespersen Cycle' and can be formalized as in (10). In (10) the diachronic development of the negation is described as a process, which takes place in several phases. Dutch negation underwent the Jespersen Cycle starting from Phase I or II (given the small amount of fragments of Old Dutch this is hard to say) until Phase V, which is the way in which Standard Dutch expresses sentential negation.

(10) *The Jespersen Cycle*

PHASE I	Negation is only expressed by an obligatory negative marker attached to V_{fin} .
PHASE II	Negation is expressed by an obligatory negative marker attached to V_{fin} and an optional negative adverb.
PHASE III	Negation is obligatorily expressed by both a negative adverb and a negative marker attached to V_{fin} .
PHASE IV	Negation is obligatorily expressed by a negative adverb and an optional extra negative marker attached to V_{fin} .

⁶ Emphatic Negation is also widely spread under English varieties. However, their distribution is freer and its occurrence is more frequent. I will take English as a language that substandardly allows for Negative Concord.

- PHASE V Negation is only expressed by an obligatorily negative adverb.
- PHASE VI The negative adverb becomes also available as a negative marker attached to V_{fin} . Negation is expressed by either one of them.
- PHASE VII=I Negation is only expressed by an obligatory negative marker attached to V_{fin} .

Jespersen argued that languages with negative markers that are attached on V_{fin} are NC languages, whereas languages that express sentential negation by means of a negative adverb exhibit Double Negation. Languages with both kind of negative markers exhibit both NC and Double Negation. This generalization has been adopted by Zanuttini (2001) and Rowlett (1998). However it turns out that not every language that has only a negative adverb also exhibits NC.

3.2 Cross-linguistic variation

The distinction between the different Jespersen Phases forms a proper tool to classify languages with respect to their way of expressing negation. This makes it possible to evaluate Jespersen's generalization for languages that can be classified in different Phases of the Jespersen Cycle. The following table shows the relation between the Jespersen Phase of language and the question whether the language exhibits NC, Double Negation (DN), or both.

(11) *Jespersen Cycle, Negative Concord and Double Negation*

<i>Variety/language</i>	<i>Jespersen Phase</i>	<i>NC</i>	<i>DN</i>
Italian	I	+	-
Spanish	I	+	-
Portuguese	I	+	-
Romanian	I	+	-
Polish	I	+	-
Czech	I	+	-
Slovenian	I	+	-
Bulgarian	I	+	-
Russian	I	+	-
Serbo-Croatian	I	+	-
Greek	I	+	-
Hungarian	I	+	-
Hebrew	I	+	-
Turkish	I	+	-
Berber	I	+	-
Catalan	II	+	-
Standard French	III	+	+
West Flemish	IV	+	+
Colloquial French	IV	+	+
Quebecois	V	+	?

- (14)a. Gianni *li* vuole vedere
 John him wants see
 'John wants to see him'
 b. *Gianni *li* vuole *non* vedere
 John him wants neg see
 'John wants not to see him'
- Italian

Another argument is presented by Merchant (2001), who shows that negative heads cannot form adjunctions with XP's like *why*.

- (15)a. *Giati dhen?
 b. *Perque non?
 c. *Pochemune?
 'Why neg'
- Greek⁸
 Italian
 Russian

The application of these tests to the negative markers that are attached to V_{fin} proves that all these markers are syntactic heads. Likewise, negative markers that do not block movement of other heads and that allow for *why* adjunction are not X° and therefore should be XP's. This is the case for all negative adverbs:

- (16)a. dat Jan *niet* naar huis gaat
 that John neg to home goes
 'that John doesn't go home'
 b. Jan gaat *niet* naar huis
 John goes neg to home
 'John doesn't go home'
- Dutch
- (17)a. om Jan *inte* köpte boken
 that John neg bought books
 'that John didn't buy books'
 b. Jan köpte *inte* boken
 John bought neg books
 'John didn't buy books'
- Swedish
- (18)a. Why *not*?
 b. Waarom *niet*?
 c. Hvervor *inte*?
 d. Pourquoi *pas*?
 'Why neg'
- English
 Dutch
 Swedish
 French

Now the new generalization can be reformulated in syntactic terms:

⁸ This test and these data are from Merchant (2001). The test shows that whenever the word for 'no' (as opposed to yes) is phonologically distinct from the negative marker, the 'why not' test distinguishes X° markers from XP markers. The XP may adjoin to another XP, not to an X° . The way of saying 'why not' in languages with a negative head marker is by using the respective word for 'no' (as in yes/no).

- (22) a. En lugar de intendar *nada* Spanish⁹
 Instead of trying n-thing
 'Instead of trying anything'
 b. Prohibieron que saliera *nadie*
 Forbade that went.out n-body
 'They forbade that anybody went out'

Examples like these, and the fact that even under polyadic quantification the loss of negation has not been explained from a compositional point of view, led to another approach that takes n-words to be non-negative NPI's that are licensed by some abstract negation that is triggered by their own presence (Laka 1990, Ladusaw 1992, Giannakidou 1997, 2000). However such an analysis fails to account for the occurrence of fragmentary answers, which are allowed for n-words, but are not allowed for NPI's 0. Moreover, n-words cannot be licensed by a negation in a higher clause, whereas NPI's can be licensed across clause boundary 0. Finally, n-words are allowed to occur in preverbal subject position, whereas this is not allowed for NPI's 0.

- (23) A *quién* viste? A *nadie* / *A un alma Spanish
 To whom saw? To n-body / to a single soul (NPI)
 'Who did you see? Nobody / a single soul'
- (24) *Dhen* lipame [_{CP} pu piglosa *KANENAN/*kanenan*] Greek
 Neg regret that hurt.1SG n-body / anybody
 'I don't regret that I hurt anybody'
- (25)a. *Nikdo* *neprisel* na *vecirek* Czech
 N-body neg-came to party
 'Nobody came to the party'
 b. **Petnik* by za to *nebyl* dan
 A.nickel.NPI would for it neg.be given
 'A nickel wouldn't be paid for it'

The dichotomy between inherently negative and NPI-like non-negative n-words seems too strong and the relation between the syntactic status of the negative marker and NC points in the direction of a treatment of NC in terms of syntactic agreement. Therefore, I argue that n-words are semantically non-negative, but syntactically negative. This means that n-words can be seen as semantically non-negative Heimian indefinites (cf. Heim 1982) that carry an uninterpretable [*u*NEG] feature that has to be eliminated in the course of the derivation (26) (cf. Ladusaw 1992, Giannakidou 1997 for similar proposals) by means of feature checking against an operator carrying an interpretable [*i*NEG] feature.

$$(26) \text{fn-P}_n = \lambda Q. [\mathbf{P}'(x) \ \& \ \mathbf{Q}(x)]_{[i\text{NEG}]}$$

⁹ Data from Herburger 2001

One question remains open: what is the semantic status of negative markers? Are they also non-negative markers of negation, or are they the phonological realization of negative operators? Given that all operators have to roof n-words, I argue that in languages in which n-words cannot precede the negative marker, the negative marker is the negative operator. These languages are the so-called Non-Strict NC languages, like Italian. In languages like Czech, in which n-words are allowed to occur in a position in front of the negative marker, the negative marker cannot be the negative operator itself and has to be semantically non-negative. The negative marker in these languages is nothing but the phonological realization of the [*u*NEG] feature.

4.3. Interpreting negative structures

Now we can explain NC from a syntactic point of view: NC is a form of agreement between a negative operator and non-negative elements such as n-words and in strict NC languages also negative markers. This checking of [*u*NEG] features can only take place if a NegP is present that contains a negative operator carrying [*i*NEG]. In those languages that lack NC, there are no n-words, but only true negative quantifiers, and since in those languages that negative marker is never roofed by an n-word (since n-words only exist in NC languages) the negative marker in a DN language is a negative operator itself. Since there are no [*u*NEG] features to eliminate, there is no NegP required to do so. Therefore NegP does not exist in DN languages. This explains why all languages with a negative head Neg^o are NC languages.

Hence there are two ways of expressing negation in natural language: semantic negation, whereby all negative elements are semantically negative; or syntactic negation, whereby negative elements are syntactically marked for negation, and these elements all check their [*u*NEG] feature against a single negative (c)overt operator.

Now I will explain how this analysis predicts correctly the readings of negative sentences in the different languages. As all negative elements are [*u*NEG] in Czech, negation is realized by a covert negative operator *Op*¬, hosted in Spec,NegP (27a). All negative elements check their [*u*NEG] feature against this operator that has an interpretable [*i*NEG] feature (27b). In case of n-words in preverbal subject position, *Op*¬ forms a compound with the n-word and this compound is a negative quantifier (27c).

- (27) a. Milan *nevidi* Czech
 Milan neg-sees
 'Milan does not see'
 [_{NegP} *Op*¬ Neg^o [_{vP} Milan *nevidi*_[uNEG]]]
- b. Milan *nevidi nikoho*
 Milan not-sees n-body
 'Milan does not see anyone'
 [_{NegP} *Op*¬ Neg^o [_{vP} Milan *nikoho*_[uNEG] *nevidi*_[uNEG]]]

- c. *Nikdo neprisel na vecirek*
 N-body neg-came to party
 ‘Nobody came to the party’
 $[\text{NegP } [Op_{\neg} + \text{Nikdo}_{[i\text{NEG}]}] \text{ ne}_{[u\text{NEG}]} \text{ prisel na vecirek}]$

In Italian, all n-words are licensed by the $[i\text{NEG}]$ of *non*, which is the negative operator (28a-b). In the case of movement of an n-word to a subject position, *non* can no longer license these n-words. Therefore an abstract operator is introduced that forms a compound with the highest n-word. Obviously, *non* cannot be included in this sentence, since then the sentence would contain two negative operators (28c).

- (28) a. Gianni *non* ha telefonato Italian
 G. neg has called
 ‘G. has not called’
 $[\text{Neg}^{\circ} \text{ non}_{[i\text{NEG}]} [\text{VP Gianni ha telefonato}]]$
 b. Gianni *non* telefonato a *nessuno*
 G. neg calls with nobody
 ‘G. doesn’t call with anybody’
 $[\text{Neg}^{\circ} \text{ non}_{[i\text{NEG}]} [\text{VP a nessuno}_{[u\text{NEG}]} \text{ Gianni telefonato}]]$
 c. *Nessuno* (**non*) ha telefonato a *nessuno*
 N-body has called to n-body
 ‘Nobody called anybody’
 $[\text{NegP } [Op_{\neg} + \text{Nessuno}_{[u\text{NEG}]}] [\text{VP ha telefonato a nessuno}_{[u\text{NEG}]}]]$

French expresses negation by means of an $[i\text{NEG}]$, phonologically realized by *pas*, that raises to SpecNegP, from which it takes scope (29a). In the case that another n-word is involved the negation comes from an abstract operator that forms a compound with the raised n-word (29b). However, if *pas* and *rien* co-occur in the sentence, the trace of *pas* precedes *rien* and therefore blocks the agreement relation between NegP and *rien*. Hence a second operator is needed to eliminate *rien*’s $[u\text{NEG}]$ feature and a DN reading is yielded (29c).

- (29) a. Jean *ne* mange *pas* French
 John neg eats neg
 ‘John doesn’t eat’
 $[\text{NegP } \text{pas}_{[i\text{NEG}]} \text{ Neg}^{\circ} [\text{VP } t_i \text{ Jean ne-mange}_{[u\text{NEG}]}]]$
 b. Jean *ne* mange *rien*
 John neg eats nothing
 ‘John doesn’t eat anything’
 $[\text{NegP } [Op_{\neg} + \text{rien}_{[u\text{NEG}]}] \text{ Neg}^{\circ} [\text{VP } t_i \text{ Jean ne-mange}_{[u\text{NEG}]} t_i]]$
 c. Jean *ne* mange *pas rien*
 John neg eats neg nothing
 ‘John doesn’t eat nothing’ = ‘John eats something’
 $[\text{NegP } \text{pas}_{[i\text{NEG}]} \text{ Neg}^{\circ} [\text{VP } t_i \text{ Jean ne-mange}_{[u\text{NEG}]} [\text{NegP } Op_{\neg} \text{ Neg}^{\circ} [\text{VP } \text{rien}_{[u\text{NEG}]}]]]]$

West Flemish is similar to French, except that the negative marker *nie* is [*u*NEG]. Hence negation is expressed by an abstract negative operator, that checks all [*u*NEG] features (30a-b). However, if *nie* intervenes between NegP and an n-word, locality constrictions (Chomsky 1999) block the NC relation between the negative operator and the n-word (30c). The only way to escape this is to move over *nie* to a position that falls within the same phase. Then the NC relation is allowed (30d).

- (30) a. (da) Valère *nie en-* eet West Flemish
 (that) V. neg neg-eats
 ‘(that) V. doesn't eat’
 [_{NegP} Op₋ Neg^o [_{VP} *nie*_[uNEG] Valère en-eet_[uNEG]]]
- b. (da) Valère *niets en-* eet
 (that) V. n-thing neg-eats
 ‘(that) V. doesn't eat anything’
 [_{NegP} Op₋ Neg^o [_{VP} *niets*_[uNEG] Valère en-eet_[uNEG]]]
- c. (da) Valère *nie niets en-* eet
 (that) V. neg n-thing neg-eats
 ‘(that) V. doesn't eat nothing’
 [_{NegP} Op₋ Neg^o [_{VP} *nie*_[uNEG] Valère [_{NegP} Op₋ Neg^o [_{VP} *niets*_[uNEG] en-eet_[uNEG]]]]]
- d. (da) Valère *niets nie en-* eet
 (that) V. n-thing neg neg-eats
 ‘(that) V. doesn't eat anything’
 [_{NegP} Op₋ Neg^o [_{VP} *niets*_[uNEG] *nie*_[uNEG] Valère en-eet_[uNEG]]]

In Bavarian, negation is also expressed by means of an abstract negative operator and all negative elements have a [*u*NEG] feature. Therefore all negative elements have to stand in a checking relation with NegP. In this respect Bavarian is similar to West Flemish (the only difference is that Bavarian lacks an optional negative head marker.)

- (31) a. S' Maral woid an Hans ned hairadn Bavarian
 The'Mary wanted the Hans neg marry
 ‘Mary didn't want to marry Hans’
 [_{NegP} Op₋ woid [an Hans [_{VP} ned_[uNEG] S'Maral hairadn]]]
- b. daß' ma koana ned furtgehd
 that me n-body neg leaves
 ‘that nobody is leaving’
 [_{NegP} Op₋ koana_[uNEG] ma [_{VP} ned_[uNEG] furtgehd]]]

Finally, in Dutch there is no NegP and negation is expressed semantically: every negative element corresponds to a negation in the semantics and in the case of two negative elements a DN reading is yielded.

- (32) a. (dat) Jan *niet* eet
 (that) John neg eats
 ‘(that) John doesn’t eat’
 [Jan [_{VP} niet_[iNEG] eet]]
 \neg eat(**j**)
- b. (dat) Jan *niets* eet
 (that) John not eats
 ‘(that) John eats nothing’
 [Jan [_{VP} [_{QP} niets_[iNEG]] eet]]
 $\neg \exists x.$ [eat(**j**,x)]
- c. (dat) Jan *niet niets* eet
 (that) John neg nothing eats
 ‘(that) John doesn’t eat nothing’
 [Jan [_{VP} niet_[iNEG] [_{QP} niets_[iNEG]] eet]]
 $\neg \neg \exists x.$ [eat(**j**,x)] $\leftrightarrow \exists x.$ [eat(**j**,x)]

Apart from these correct predictions, this analysis also accounts for the problems which have risen with respect to the other approaches of NC 0-0. Paratactic Negation can be analyzed as feature checking against a negative operator that is lexically decomposed into a negative operator (carrying [*i*NEG]) and a positive counterpart.

- (33) *Prohibieron que saliera nadie* Spanish
 Forbade that went.out n-body
 ‘They forbade that anybody went out’
 [vP prohibieron_[iNEG] [CP C^o_[uNEG] [saliera [_{VP} nadie_[uNEG]]]]]

Fragmentarian answers are accounted for by PF movement of the n-word after ellipsis of the entire sentence, containing a negation that checks the n-words [*u*NEG] feature. Since NPI’s have to be licensed at surface structure, PF movement of NPI’s is not allowed (cf. also Giannakidou 2000).

- (34) A quién viste? A *nadie* Spanish
 To whom saw-you? To n-body
 ‘Who did you see? Nobody’
 [_{FocP} nadie_[iNEG] [_{NegP} <no_[iNEG] vió a t_r>]]

Finally, the fact that NPI’s can be licensed by a negation in a higher clause and n-words cannot follow immediately from the clause-bounded conditions on feature checking (C counts as a phase boundary, cf. Chomsky (1999)), as the following example from Greek shows (taken from Giannakidou (2000)).

- (35) *<sub>[NegP Op_{neg} Dhen_[uNEG] lipame [_{VP} [_{CP} pu piglosa KANENAN_[uNEG]]]]]
 neg regret that hurt n-body</sub>

5. Conclusions

This analysis correctly predicts the interpretation of negative sentences in a large set of languages. Moreover it solves several problems which have been risen with respect to the former approaches of Negative Concord and it accounts for the differences between Strict and Non-Strict NC languages. The relation between the syntactic status of negative markers and the occurrence of NC is explained, and replaces the incorrect bidirectional relation that has been proposed by Jespersen (1917) and adopted by Haegeman & Zanuttini (1996) and Rowlett (1998).

References

- Chomsky, N. (1999). *Derivation by Phase*. The MIT Press, Cambridge, MA.
- De Swart, H. & I. Sag (2002). Negative concord in French. *Linguistics & Philosophy* 25, 373-415.
- Den Besten, H. (1989). *Studies in West Germanic Syntax*. PhD dissertation, University of Tilburg.
- Giannakidou, A. (1997). *The landscape of Polarity Items*. PhD dissertation, Rijksuniversiteit Groningen.
- Giannakidou, A. (2000). Negative ... Concord?. *Natural Language and Linguistic Theory* 18, 457-523.
- Haegeman, L. (1995). *The syntax of negation*. Cambridge Studies in Linguistics 75. Cambridge University Press, Cambridge.
- Haegeman, L. & Zanuttini, R. (1996). Negative concord in West Flemish. Belletti, A. & Rizzi, L. (eds), *Parameters and Functional Heads. Essays in Comparative Syntax*. Oxford University Press, Oxford, pp. 117-179.
- Heim, I. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. PhD dissertation, University of Massachusetts, Amherst. Published in 1989 by Garland, New York.
- Herburger, E. (2001). The negative concord puzzle revisited, *Natural Language Semantics* 9, pp. 289-333.
- Jespersen, O. (1917). *Negation in English and other languages*. A.F. Høst, Copenhagen.
- Kayne, R. (1989). Notes in English agreement, *CIEFL* 1, pp. 40-67.
- Laka, I. (1990). *Negation in syntax: on the nature of functional categories and projections*. PhD dissertation, MIT.
- Ladusaw, W. A. (1992). Expressing negation. Barker, C. & Dowty D. (eds.), *SALT II* Cornell Linguistic Circle, Ithaca, pp. 237-259.
- Merchant, J. (2001). *Why no(t)?*, Ms. University of Chicago.
- Pollock, J.-Y. (1989). Verb movement, Universal Grammar, and the structure of IP *Linguistic Inquiry* 20, pp. 365-424.
- Rowlett, P. (1998). *Sentential negation in French*. Oxford University Press, New York/Oxford.
- Travis, L. (1984). *Parameters and effects of word order variation*, Ph. D. dissertation, MIT.
- Ura, H. (1996). *Multiple feature checking*. PhD dissertation MIT.
- Van der Wouden, T. (1994). *Negative contexts*. PhD dissertation, Rijksuniversiteit Groningen.
- Zanuttini, R. (1991). *Syntactic properties of sentential negation*. PhD dissertation, University of Pennsylvania.
- Zanuttini, R. (2001). Sentential negation. Baltin, M. & C. Collins (eds.), *The Handbook of Contemporary Syntactic Theory*. Blackwell, Oxford pp. 511-535.
- Zeijlstra, H. (2004). *Sentential negation and negative concord*. PhD dissertation, University of Amsterdam.