Sentential negation and negative concord
Zeijlstra, H.H.

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
8 A Theory of Negative Concord

In this chapter I will formulate my own theory of sentential negation and Negative Concord. From the previous chapters it follows that a theory of NC has to be based on three pillars: syntax, semantics and typology. The theory that I will propose is a syntax-semantics interface theory. Hence it will be based on the results of both the syntactic and the semantic analyses that have been put forward in the previous chapters. The typological results form the output of this theory, i.e. it should be predicted why certain languages do and others do not exhibit NC and why languages change with respect to that. Thus this theory of NC meets the following criteria:

- It should be syntactically adequate: the syntactic observations with respect to syntactic status and position of negative elements that have been formulated in chapters 5 and 6 should form the input for the theory.
- It should be semantically adequate: the observations from chapter 7, namely that n-words are neither negative quantifiers, nor NPI’s and that the licensing of n-words is a form of (syntactic) agreement, should form the input for the theory as well.
- It should be typologically adequate: the theory should explain all generalisations with respect to negation and NC that have been formulated on the basis of the empirical results in chapter 4 and 5, both diachronically and synchronically.

This chapter has been built up as follows: in section 8.1 I will formulate a set of hypotheses that forms the outline of my proposal, and I will show how the correct readings fall out naturally for the different types of languages that have been explored in chapter 5. In section 8.2 I will show how the problems that proved to be problematic for the analyses described in chapter 6 and 7 are solved within the approach that I propose, and how the typological distribution of NC languages is predicted by this analysis. Section 8.3 finally shows how the proposed theory for NC corresponds to language acquisition and language change (the Jespersen Cycle).

8.1 Proposal

The central idea behind this theory is that Universal Grammar allows for more than one way of expressing negation. The set of languages and varieties that have been under investigation manifested at least two different ways of expressing negation, which I tentatively call **syntactic negation** and **semantic negation**. These different ways are roughly defined as follows:263

---

263 Earlier versions of this proposal have been presented in Zeijlstra (2004a) and Zeijlstra (2004b).
(1) **Semantic negation:** every negative element corresponds 1:1 to a negative operator.

(2) **Syntactic negation:** negative elements mark the presence of a (c)overt negative operator.

This classification, which can be divided into several subclasses, forms the core of the proposal that is based on the analyses presented in the previous chapters on the syntax and semantics of negation.

It follows immediately from the definitions in (1)-(2) that the two ways of expressing negation correspond to the cross-linguistic variation with respect to NC. Languages that exhibit semantic negation, defined as in (1), do not allow a negative element to be assigned a non-negative reading, since every instance of morpho-phonological negation corresponds to a negative operator. As a consequence, these languages do not have n-words at their disposal, since n-words may receive non-negative readings. Therefore languages that express negation by means of semantic negation are Double Negation (DN) languages.

NC languages obviously violate the definition in (1) since not every negative element corresponds to a negative operator. NC languages fall under the category of syntactic negation. This means that negative elements are not necessarily the realisation of negative operators, but they may also mark the presence of a (c)overt negative operator. In the case of NC, this means that there is only one negative operator, and the other negative elements only mark the presence of this operator.

Note that this way of expressing negation opts for different subclasses: it can be the case that no overt negative element corresponds to a negative operator and that the negative operator, responsible for the negative semantics, is only covertly present. It is also possible that in a particular language some negative elements correspond to a negative operator (i.e. they are semantically negative), and other negative elements are non-negative, only marking the presence of a negative operator (i.e. being syntactically negative). I will argue that the first, strict version of (2) accounts for Strict NC, and that the second, less strict version accounts for Non-Strict NC languages.

In the following subsections I will show how this proposed mechanism works in detail: in 8.1.1 I will discuss how this mechanism predicts correct syntactic and semantic results for Strict NC languages; in 8.1.2 I will describe how this mechanism works for Non-Strict NC languages and in 8.1.3 I will discuss how this system works for DN languages.

### 8.1.1 Strict Negative Concord

The central hypothesis behind the assumption that NC languages express (sentential) negation by means of syntactic negation (2) is that negation in these languages
exhibits syntactic agreement that, in principle, does not differ from (syntactic) person or tense agreement.

In this subsection I discuss which consequences this view has for the interpretation of n-words and negative markers and for the syntactic structure of negative expressions. As has already been shown in chapter 7, n-words are non-negative indefinites that are syntactically marked for negation, i.e. they bear an uninterpretable [uNEG] feature, that at some point during the derivation needs to be checked against an overt or covert element that carries an interpretable [iNEG] feature. This feature checking is governed by the syntactic operation Agree. Thus NC is the realisation of an agreement relation between a negative operator and an n-word.

However, the assumption that n-words consist of a feature [uNEG] raises four major questions: (i) what is the status of the negative feature of the negative markers in Strict and Non-Strict NC languages; (ii) how is the negative operator introduced; (iii) what is the semantic representation of the negative operator Op_; and (iv) how does this mechanism allow for NC relations in which more than one n-word is involved?

The first question is about the semantic properties of negative markers in NC languages. The system proposed provides two different options, and we will see that both options are realised in natural language. The first option is that negative markers carry an uninterpretable [uNEG] feature, the other option is that negative markers carry an interpretable negative feature [iNEG]. I argue that negative markers in Non-Strict NC languages carry an [iNEG] feature, but that negative markers in Strict NC languages carry a [uNEG] feature.

Evidence that indicates that negative markers in Strict NC languages are semantically non-negative comes from the fact that in these languages negation scopes over quantifiers, like *much or many*, which dominate the negative marker, whereas this is excluded in Non-Strict NC languages.

\[(3)\]

\begin{align*}
\text{a. } & \text{Milan moc nejedl} & \text{Czech} \\
& \text{Milan much neg.eat.PERF.} \\
& \text{neg > much: ‘Milan hasn’t eaten much’} \\
& *\text{much > neg: ‘There is much that Milan hasn’t eaten’} \\
\text{b. } & \text{Molto non ha mangiato Gianni} & \text{Italian} \\
& \text{Much neg has eaten Gianni} \\
& *\text{neg > much: ‘Gianni hasn’t eaten much’} \\
& \text{much > neg: ‘There is much that Gianni hasn’t eaten’}
\end{align*}

Another piece of evidence is that in Strict NC languages, contrary to Non-Strict NC languages, the position of the negative operator is distinct from the position of the negative marker. For example non-subject NPI’s may occur to the left of the negative marker, whereas this is forbidden in Strict NC languages.
In (3)a and (4)a, the objects (OB’s) are under the scope of the negative operator $Op_-$, and in (3)b and (4) b they are not. In Non-Strict NC languages the negative marker may coincide with $Op_-$. This is not possible in Strict NC languages. The logical forms are therefore as in (5).

$$
\text{(5) a. } [\text{Neg}_P \quad Op_- \quad [\text{VP} \quad \text{OB} \quad \text{neg}_{[\text{iNEG}]} \quad \text{-V}]] \quad \text{Strict NC}
$$

$$
\text{(5) b. } [\text{XP} \quad \text{OB} \quad [\text{Neg}_P \quad \text{neg}_{[\text{iNEG}]} \quad \text{-V}]] \quad \text{Non-Strict NC}
$$

Hence negative markers in Strict NC languages are semantically non-negative and are therefore the phonological realisation of a [uNEG] feature.

The second question to be addressed concerns the presence of the negative operator. If negative elements in Strict-NC languages carry [uNEG], they cannot be interpreted as negative operators. Yet, a negative operator should be present in negative sentences, both for semantic reasons (otherwise these sentences would not be semantically negative) and for syntactic reasons (otherwise there is no element carrying [iNEG] that negative elements can check their [uNEG] features against). Hence n-words and negative markers need to participate in a feature checking relation with an (abstract) negative operator $Op_-$ that carries [iNEG]. This leads to the following question: why is the negative operator phonologically empty?

Generally the postulation of covert material is a theoretical last resort operation, as it is preferable to derive the semantics of a sentence without adopting abstract material. Still there are good arguments to assume the presence of an abstract negative operator: (i) the examples in (3) and (4) prove that the negative marker occupies a different position in the clause than $Op_-$; (ii) making the abstract negative operator overt would not change the semantics of negative expressions in Strict NC languages. In those cases the negative marker remains semantically non-negative and stands in an Agree relation with an overt negative operator. Although this alternative configuration does not contain covert material, its semantics is identical to the semantics of the configuration with $Op_-$ being phonologically absent. The presence of a negative operator (carrying [iNEG]) is already triggered by the presence of the negative marker carrying [uNEG]. This means that there is no need for speaker or hearer to include an overt negative operator, and hence for reasons of economy, a representation with a covert negative operator is the preferred one.

Note, however, that it is not impossible for a language to provide phonological content for the abstract negative operator. As we saw in 3.2.3, languages that express negation by means of a negative marker Neg° may include a second negative marker.
that eventually can be reinterpreted as the negative operator (along the lines of the Jespersen Cycle).\textsuperscript{264}

The third question concerns the semantics of the negative operator $Op_{\neg}$. I adopt the analysis proposed by Giannakidou (1997), following Heim (1982), that the negative operator is an adverbal operator that not only introduces negation at LF, but also binds all open variables under existential closure. Hence the meaning of the negative operator is:

\begin{equation}
[[Op_{\neg}]] = \neg(\exists)\textsuperscript{265}
\end{equation}

This means that all free variables that are introduced in $vP$ or below will be bound by the existential quantifier that is induced by $Op_{\neg}$. One variable that can be introduced in $vP$ is the event variable $e$ (7).

\begin{equation}
(7) \quad \text{Paul didn't arrive} \quad \neg\exists_e[\text{arrive}(e, p)]\textsuperscript{266}
\end{equation}

Other variables are introduced by indefinite DP arguments or indefinite adverbs. As I argued in chapter 7, n-words are indefinite elements that introduce a free variable. I follow Von Stechow (1993, 2004) that indefinite arguments or adverbs are of type $\langle e, t \rangle t$ which have a predicative but no quantificational nature. Hence the meanings of n-words are as in (8).

\begin{enumerate}
\item \text{(n-body)} $\lambda P.\text{Person}^*(x) \& P(x)$
\item \text{(n-thing)} $\lambda P.\text{Thing}^*(x) \& P(x)$
\item \text{(n-ever)} $\lambda P.\text{Time}^*(t) \& P(t)$
\item \text{(n-where)} $\lambda P.\text{Place}^*(p) \& P(p)$
\end{enumerate}

Note that $n$- (the n-word corresponding to no in English) is of type $\langle e, t \rangle, \langle e, t \rangle t$ (9), as it requires two predicates.

\begin{equation}
[[n-]] = \lambda P\lambda Q[P(x) \& Q(x)]
\end{equation}

Hence if one or more n-words are base-generated in $vP$, their free variables are unselectively bound by the same existential quantifier that is introduced by $Op_{\neg}$, leading to single negation readings without unbound variables. In a Strict NC

\textsuperscript{264} French *pas* is a good example of such a negative operator. Italian *mai* may be analysed in the same way.

\textsuperscript{265} The brackets indicate optionality. If there is no open variable, the negative operator will not introduce existential closure.

\textsuperscript{266} This reading is not complete yet. Other variables such as temporal or modal variables may be introduced later on and bound by an other existential quantifier. Otherwise the sentence means that 'Paul never arrived.' This fact supports the analysis stated in chapter 6.3 that said that in most languages NegP is dominated by TP, which arguably introduces temporal variables.
language such as Greek a sentence as (10) has a reading in which $x$ and $e$ are both bound by negation.

(10) $Dhen$ irthe KANENAS

Neg came n-body

'Nobody came’

$\neg 3_{e,x}.came^*(e, x)$

Later in this subsection I will show how these readings compositionally follow from the proposed syntactic structure.

The fourth question addresses NC relations between two or more elements containing [uNEG] features. As I concluded above, this is the case for every instance of Strict NC, since the n-words and negative markers carry a [uNEG] feature in these languages. I argue that these NC relationships are the result of multiple agreement (cf. Ura 1996 and Haraiwa 2000, 2001), i.e. the possibility that multiple elements with a [uF] feature check their features against one single element carrying [iF] (cf. also 2.1.3).

Chomsky (2001) argues that multiple Agree is illicit because it violates the Defective Intervention Constraint (9).

(11) $*\alpha > \beta > \gamma$, whereby $\alpha, \beta, \gamma$ match and $>$ is a c-command relation.

In (9) Agree($\alpha, \gamma$) is not allowed since $\beta$ is a matching goal and $\beta$ is inactive as a result of Agree with another probe. In the case, however, in which $\beta$ is not inactive yet (its feature has not been deleted yet in the derivation) this constraint also forbids a simultaneous feature checking relation between $\alpha$ and $\beta$ and $\alpha$ and $\gamma$.

(12) $*\alpha > \beta > \gamma$, whereby $\alpha, \beta, \gamma$ match and $>$ is a c-command relation.

The reason why (12) is ruled out is because the Defective Intervention Constraint is a representational condition (i.e. a filter). Since $\beta$ becomes inactive after Agree($\alpha, \beta$), Agree($\alpha, \gamma$) is ruled out according to (9).

Haraiwa (2000, 2001) argues, however, that the DIC in its present form is too strict to account for several empirical phenomena, such as multiple nominatives in Japanese (see also chapter 1.1.3) and he proposes to replace the representational DIC by a less powerful derivational DIC, that (i) forbids inactive goals to intervene in an Agree relation, but (ii) allows a probe to check for all possible goals in an ‘accessible’ domain. Hence, after merger of the probe, multiple elements may stand in an Agree relation with the probe.

This still rules out cases as in (9), but allows multiple feature checking as in (12), as long as $\beta$ is still active. I follow Haraiwa in assuming that the Defective Intervention
Constraint should be derivational, which allows multiple feature checking as a single syntactic operation as in (13):

\[(13) \quad \alpha \rightarrow \beta \rightarrow \gamma, \text{ whereby } \alpha \text{ is probe and } \beta, \gamma \text{ are matching goals for } \alpha \text{ and } \rightarrow \text{ is a c-command relation.}\]

Under these assumptions multiple Agree also applies to NC as multiple [uNEG] features can stand in an Agree relation with one negative operator [iNEG] as long as no intervening negative element has its [uNEG] feature checked at an earlier stage of the derivation.

To summarise, the analysis for Strict NC languages is as follows:

- Negative markers are the phonological realisation of a [uNEG] feature.
- N-words are semantically non-negative indefinites that carry a [uNEG] feature.
- Negation is introduced by a covert Negative operator \(Op\) in Spec,Neg P that carries an [iNEG] feature. \(Op\) does not only introduce a negation at LF, but also unselectively binds all free variables under existential closure.
- NC is the result of multiple Agree between \(Op\), the negative marker and any present n-words.
- The reason for the absence of an overt negative operator is functional: its phonological realisation would not contribute to the interpretation of the sentence.

Now I will illustrate how this analysis explains the correct semantics for six prototypical languages of the phases of the Jespersen Cycle: Czech (Phase I), Catalan (Phase II)\(^\text{267}\), Middle Dutch (Phase III), West Flemish (Phase IV), Bavarian (Phase V) and (substandard) English (Phase VI).

**Phase I: Czech**
Czech is a Strict NC language in which the negative marker forms a prefix on \(V_{fin}\) (8).

\[(14) \quad \begin{array}{l}
\text{Milan nevidí} \\
\text{Milan neg.sees} \\
\text{‘Milan doesn’t see’}
\end{array}\]

The negative marker in Czech is the realisation of a feature [uNEG] that needs to be eliminated at some point during the derivation. This feature [uNEG] projects a category Neg\(^\circ\). The specifier position of this projection, Spec,Neg P is filled by \(Op\), which carries [iNEG]. Hence feature checking takes place under spec-head agreement in Neg P, and [uNEG] is deleted.

\(^{267}\) Catalan exhibits two different dialects: one dialect that is a Non-Strict NC language and another dialect that shows Strict NC behaviour. Obviously the Strict NC variety will be analysed here.
The LF of (14) consists of the negative operator that induces a Boolean negation and existential closure of the event variable that is introduced by \( \nu^\sigma \).

In the case of NC constructions, things work in a similar fashion. In (17) the sentence does not only contain a negative marker, but also an n-word in object position. The meaning of the sentence has one negation only.

Both \( V_{\text{fin}} \) and the indefinite nikoho ‘n-body’ are marked for negation by means of an uninterpretable feature [uNEG]. The negative feature [uNEG] projects Neg\(^\circ\) and Op\(_\neg\) occupies Spec,NegP. Since Agree is subject to locality conditions that require the negative verb and the negative object to be in the same phase as the negative operator or on the phase edge of the lower phase, the object moves to a \( \nu P \) adjunct position, leading to the syntactic representation in (18).

Under Multiple Agree both negative elements are allowed to have their negative features checked against the same Op\(_\neg\) that is located in Spec,NegP. Hence no [uNEG] feature remains undeleted.

This syntactic representation leads to a single semantic negation, as the only semantically negative element is the abstract negative operator. According to the definitions in (8), nikoho ‘n-body’ is an indefinite that has no quantificational properties and introduces a free variable. This variable will be bound through existential closure under the negative operator, yielding an existential reading \( -\exists \) (cf. Heim 1982, 1983, Acquaviva 1995, Giannakidou 1997 for similar treatments).
Czech NC constructions with a subject n-word in postverbal position are similar to constructions with n-words in object or non-argument position (20).

(20) Nevolá nikdo.
    Neg-calls n-body
    ‘Nobody is calling’

The n-word, being base-generated in Spec,vP position, and Vₘᵣ both carry a [uNEG] feature that is deleted against Op⁺’s [iNEG] feature under multiple Agree (21). Since the uninterpretable features have been checked against the [iNEG] feature of Op⁺, the derivation converges at LF and will be interpreted as a single negation. The negative operator is in its turn responsible for the introduction of the negation in the semantic representation as well as for the binding of the variables e and u (22).

(21) [Neg⁺ Op⁻[iNEG][Neg⁰ nevolá[uNEG][vP nikdo[uNEG]]]]

(22) nevolā → call’(e, x)
    nikdo → λP.[person’(u) & P(u)]
    nikdo(nevolā) → λP.[person’(u) & P(u)] (λx. call’(e, x))
    = person’(u) & call’(e, u)
    Op⁻ → ¬∃
    Op⁻ (nikdo(nevolā)) → ¬∃[person’(u) & call’(e, u)]

As Czech is a Strict NC language, the reverse order of Vₘᵣ and the subject at surface structure is also grammatical with an NC reading. The underlying syntactic representations do not differ crucially. In (21) I proposed that Vₘᵣ moves along with
the verb to Neg°. I assume that \( V_{\text{fin}} \) in (23) remains at \( v^\circ \). Hence (23) has a syntactic structure as in (24).

(23) \( \text{Nikdo nevolá}. \)
    N-body neg-calls
    ‘Nobody is calling’

(24) \( \left[ \text{NegP Op}^\text{NEG} \left[ v^\circ \text{nikdo}^\text{NEG} \right] \left[ v^\circ \text{nevolá}^\text{NEG} \right] \right] \)

**Phase II: Catalan**

Catalan is an interesting language in the study of negation. First it exhibits regional variety with respect to being Strict or Non-Strict NC. Second, in several varieties of Catalan, a second negative marker \( \text{pas} \) (‘step’) can optionally be included in a negative expression. Hence it is a language in Jespersen Phase II. In this subsection I discuss the Strict NC variety of Catalan only.

In (25) negation is expressed by means of two negative markers.

(25) \( \text{No sera (pas) fácil} \)
    Neg will.3sg neg/step easy
    ‘It won’t be easy’

I adopt the standard assumption that \( \text{no} \) is base-generated in Neg° (Giannakidou & Quer 1995). This analysis is in line with the observation (see 6.4) that the negative marker blocks true negative imperatives in Catalan (cf. Grinstead 1998).

(26) \( *\text{¡No canta esa canción!} \)
    Neg sing.imp that song
    ‘Don’t sing that song’

I adopt that \( \text{pas} \), as in French, originates in a \( vP \) adjunct position. Furthermore I take \( \text{pas} \) to carry \( [u\text{NEG}] \) as it is optional, and it does not have to participate in the expression of negation.

Since preverbal negative markers carry \( [u\text{NEG}] \) in Strict NC languages, (25) has a syntactic representation with two elements that need to check their \( [u\text{NEG}] \) feature against the \( [i\text{NEG}] \) feature of the abstract \( \text{Op}^\text{NEG} \).

(27) \( \left[ \text{NegP Op}^-{\text{NEG}} \left[ \text{Neg}^\circ \text{No}^\text{NEG} \right] \right. \left. \text{sera } \left[ v^\circ \text{pas}^\text{NEG} \right] \text{fácil} \right] \)

In (28) we find an instance of NC in Catalan that has three negative elements: \( \text{no} \) and \( \text{pas} \) and an object n-word \( \text{ningú} \) ‘n-body’.

(28) \( \text{No vull pas acusar ningú} \)
    Neg want.1sg neg accuse n-body
    ‘I don’t want to accuse anyone (at all)’
Assuming that *ningu* is in a vP adjunct position at some point during the derivation as well as *pas* is, the NC reading follows immediately as a result of multiple agreement between the [iNEG] feature of the negative operator and the [uNEG] features of the three negative elements. As there is only one element carrying [iNEG], there is only one negation at LF.

\begin{equation}
\begin{array}{ll}
\text{(29)} & [\text{Neg}_P \text{Op}^\text{iNEG} [\text{Neg}^\text{\#} \text{No}[\text{uNEG}] \text{vull} [\text{vP pas}[\text{uNEG}] [\text{vP ningu}[\text{uNEG}] \text{accusar}]]]]
\end{array}
\end{equation}

**Phase III: Standard French**

Standard French is a prototypical Phase III language. It is both a Strict NC language (as the negative subject can be followed by the preverbal negative marker *ne*) and a Non-Strict NC language (since the negative subject cannot yield an NC reading if it is followed by *pas*). In this section, I will discuss Strict NC examples of French only.

Standard sentential negation in French (30) consists of the element *ne*, base-generated in Neg^\#, carrying [uNEG], and *pas*, base-generated in a vP adjunct position, moved to Spec,NegP, and carrying [iNEG]. Hence *ne*'s [uNEG] feature is deleted after checking against *pas*' [iNEG] feature, as in (31).

\begin{equation}
\begin{array}{ll}
\text{(30)} & \text{Jean ne mange pas}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{Jean neg eats neg}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{‘Jean doesn’t eat’}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{French}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{(31)} & [\text{Neg}_P \text{pas}[\text{iNEG}]; [\text{Neg}^\text{\#} \text{ne mange}[\text{uNEG}]] [\text{vP t}; \text{Jean }]]
\end{array}
\end{equation}

As *pas* carries [iNEG], it is an overt realisation of the negative operator. Hence *pas* translates as $\neg \exists$. Hence the negation and the existential quantifier introduced by *pas* bind the event variable, and sentential negation is yielded.

\begin{equation}
\begin{array}{ll}
\text{(32)} & \neg \exists_e \text{eat}^*(e, j)
\end{array}
\end{equation}

NC constructions in French do not allow the presence of *pas*. Given that *ne* and n-words in standard French carry [uNEG], the negative operator in Standard French needs to be realised covertly. Therefore (33) has a syntactic representation as in (34).

\begin{equation}
\begin{array}{ll}
\text{(33)} & \text{Jean ne mange rien (*pas)}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{Jean neg eats n-thing}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{‘Jean doesn’t eat anything’}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{French}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{ll}
\text{(34)} & [\text{Neg}_P \text{Op}^\text{iNEG} [\text{Neg}^\text{\#} \text{ne-mange}[\text{uNEG}]] [\text{vP rien}[\text{uNEG}]; \text{Jean } t]])
\end{array}
\end{equation}

The semantics follows immediately from (34). Op^\_ induces the negation, which binds all free variables under existential closure. The sentence obtains a reading as in (35).

\begin{equation}
\begin{array}{ll}
\text{(35)} & \neg \exists_{e,x} \text{eat}^*(e, j, x)
\end{array}
\end{equation}
Cases in which the subject in French precedes the negative marker *ne* are slightly more complicated, since the abstract negative operator and *personne* ‘n-body’ are both located to the left of *ne*, and Spec,NegP appears to be doubly filled. However, as *personne* has been base-generated at an earlier stage in the derivation in Spec,vP, it is licensed by the negative operator in Spec,NegP (37).

\[(36) \quad \text{Personne ne mange} \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \qua
(38). In (39) the negative operator still precedes all n-words, and hence all free variables remain bound.268

**Phase IV: West Flemish**

West Flemish is a Phase IV language, which means that the preverbal negative marker en is no longer obligatorily present to express sentential negation, and that the adverbal negative nie(t) is the main expression of sentential negation. As West Flemish is a Strict NC language (as has been shown in chapter 4), n-words may precede both negative markers, and still yield an NC reading. In light of the previous discussion this implies that both negative markers in West Flemish carry [uNEG]. Hence the way NC readings are composed in West Flemish does not differ significantly from the composition of NC readings in other languages, except for the fact that a vP adjunct position may be overtly filled with an element carrying [uNEG].

A simple negative sentence as in (40) contains one or two negative markers that are licensed by the abstract negative operator (41), yielding the interpretation (42).

(40)) ... . . da Valère nie (en) klaapt
... that Valère neg neg talks
‘... that Valère doesn’t talk’

(41) \([-\text{Neg}^\text{p} \text{Op^u[NEG]} [\text{vP nie[\text{uNEG}] Valère [v \text{-klaapt[\text{uNEG}]]]}]]

(42) \(\neg \exists_e[\text{Talk'}(e, v)]\)

This mechanism also applies if an n-word is included as in (43). Every negative element carries a [uNEG] feature that is checked against the negative operator, and every variable that is introduced (either the event variable introduced by \(v^o\), or the variable that is introduced by the n-word nieman ‘n-body’) is bound under negative existential closure that is applied by \(\text{Op^u}\) (44). Hence the reading of (43) is as (45).

(43) ... . . da Valère tegen nieman nie en klaapt
... that Valère neg neg talks
‘... that Valère doesn’t talk’

(44) \([-\text{Neg}^\text{p} \text{Op^u[NEG]} [[\text{PP tegen nieman[\text{uNEG}] [\text{vP niet[\text{uNEG}] Valère [v \text{-klaapt[\text{uNEG}]]]}]]]]

(45) \(\neg \exists_{e, x}[\text{Talk_to'}(e, v, x)]\)

---

268 This analysis in terms of compounding is a consequence of the fact that LF will interpret a sentence after every phase has been spelled out. In a model of the syntax-semantics interface that immediately interprets new-formed constructions, such an analysis is superfluous: the order \(\text{Op^u} \rightarrow \text{personne}\), would be sent to LF and syntactic change with respect to that order would not influence this interpretation.
Constructions in which a subject n-word precedes the negative markers _en_ and _nie_ (46) are accounted for by the fact that the abstract operator in Spec,NegP has dominated the subject n-word in Spec,vP. In order to move to a higher position in the clause, the subject n-word scrambles out of vP and forms a compound with the negative operator in order to fulfil the syntactic and semantic licensing conditions and an NC reading is rendered, similar to French (39).

(46)  ... _da niemani (nie) (en) klaapt_
     '... that Valère doesn't talk'

(47)  $\left[\text{NegP } Op_{\neg \text{[NEG]}} \left[\text{niemani\{nie\}\{en\}} \left[\text{vP nie\{nie\}} \text{Valère} \right]\right]\right]$

(48)  $\exists_{e,x} \left[\text{Talk to'}(e, x)\right]$

**Phase V: Bavarian**

Bavarian is a Strict NC language classified as a Jespersen Phase V language. The negative marker carries [uNEG] and n-words are non-quantificational indefinites that carry [uNEG] as well. Negation is expressed by means of an abstract negative operator $Op_{\neg \text{[NEG]}}$ that binds all free variables under existential closure (49)-(51).

(49)  ... _dass s'Maral an Hans ned hairadn woid_
     '... that Maral doesn't want to marry Hans'

(50)  $\left[\text{NegP } Op_{\neg \text{[NEG]}} \text{Neg}^o \left[\text{s'Maral\{an\} Hans\{ned\}} \left[\text{v}^o \right] \left[\text{VP hairadn}\right]\right]\right]$

(51)  $\exists_{e,m,h} \left[\text{Marry'}(e, m, h)\right]$

NC readings in Bavarian are derived in a similar fashion, where an additional n-word enters in a feature-checking relation with $Op_{\neg}$ as well, and its free variable is bound under existential closure.

(52)  _S'Maral woid koane ned hairadn_
     'Maral wants n-on e neg marry'

(53)  $\left[\text{NegP } Op_{\neg \text{[NEG]}} \text{Neg}^o \left[\text{s'Maral\{koane\} ned\{woid\}} \left[\text{v}^o \text{ woid}\right] \left[\text{VP hairadn}\right]\right]\right]$

(54)  $\exists_{e,x} \left[\text{Marry'}(e, m, x)\right]$

The same mechanism applies to NC constructions with an n-word in subject position.
One issue has remained unsolved so far. NC in Bavarian, West Flemish and the other Dutch NC varieties is not obligatory, i.e., the negative marker(s) may be absent in sentences that contain an n-word. Although one could argue in the case of West Flemish that the optionality of NC is due to the fact that the language changes from a Phase IV (NC) language to a Phase V language that lacks NC. However, such an analysis does not account for the fact that Bavarian does not exhibit obligatory NC either, as is illustrated in (55). The question is of course why in all other observed NC languages the n-word obligatorily needs to be accompanied by a preverbal negative marker, whereas this seems to be optional in Bavarian.

(55)  S'Maral woid koane hairadn  
    The.Maral wants n-one marry 
    ‘Maral doesn’t want to marry Hans’

Weiss (2002) relates this optionality to the fact that Bavarian allows scrambling. He argues that n-words need to move out of vP to NegP in order to establish feature checking relations with Neg^o (ned in Bavarian, non in Italian, according to Weiss) under spec head configuration.\(^{269}\) Weiss suggests that this movement is realised overtly, whereas this movement takes place in Romance languages after Spell-out. However, the assumption of post Spell-Out movement in Romance is stipulative, and it can be shown that this movement is unnecessary. The reason why NC is always obligatory in Romance languages (in sentences containing an n-word) is related to scope. Without the preverbal negative marker the n-word, could only be licensed inside vP by an abstract Op^-, in which it would yield a reading where negation is dominated by the existential quantifier that binds the event variable. Since n-words are indefinites and lack quantificational properties, n-words cannot raise out of vP as a result of QR either (whereas this is possible in DN languages, since negative terms are quantificational in those languages). Hence the additional preverbal negative marker is needed, because it is the only way to ensure that Op^- applies at a position higher than vP.

Since Bavarian and West Flemish allow scrambling, n-words move out of vP to a position between Op^-, and vP. Therefore the overt expression of the negative marker in a vP adjunct position is no longer needed, since the presence of Op^-, above vP (in NegP) has already been marked. This explains the possible absence of ned in Bavarian or nie in West Flemish negative expressions.

**Phase VI: (Substandard) English**

Finally, a brief remark about English, which I consider to be a Phase VI language. Most substandard varieties of English are NC varieties (cf. Labov 1966, Ladusaw 1992, Anderwalt 2002), which come about either as Strict NC languages (A-varieties in Ladusaw’s terms) or Non-Strict NC languages (B-varieties). This observation is in line with the analysis put forward in chapter 6.1 that negation in English is a syntactic category and hence yields a NegP in negative expressions. Hence substandard

\(^{269}\) Note that I take ned to be a negative specifier.
expressions such as (56) can be analyzed as multiple agreement of [uNEG] features against a single $O_p$. (57)-(58).

(56)  John didn’t do nothing
  ‘John didn’t do anything’

(57)  $[\text{NegP } O_p \cdot [\text{NEG}][\text{Neg'} n’ \cdot [\text{uNEG}]] ] \cdot [vP \cdot \text{do nothing } [\text{uNEG}]]$

(58)  $\neg \exists_{e,x} [\text{Do’(e, j, x)}]$

In all the examples above I have shown that Strict NC is the realisation of multiple agreement with negation. Furthermore I have argued that n-words, as well as $v^\circ$, introduce free variables, which have to be bound by existential closure. The negative operator, realised abstractly in strict NC languages, introduces this existential quantifier. Finally, I have shown that this mechanism applies in Jespersen Phase 1 to Phase VI languages, with minor variation with respect to the position of the negative adverb and the possibility for n-words to scramble out of $vP$.

**8.1.2 Non-Strict Negative Concord**

Now, I will discuss the difference between Strict and Non-Strict NC languages. As I argued in the previous subsection, this difference can be reduced to the status of the [NEG] feature of the negative marker. In Strict NC languages, the negative marker carries [uNEG] and needs to stand in a checking relation with $O_p$.

In Non-Strict NC languages however the negative marker carries [iNEG] and it is the realisation of the negative operator. Hence, the interpretation of a negative marker in a Non-Strict NC language, such as Italian *non*, is defined as in (59).

(59)  $[[\text{non}]] = \neg(\exists)^{270}$

In NC constructions in which all n-words occur to the right of the negative marker, the syntactic and semantic requirements are fulfilled in a similar fashion as in Strict NC languages.

(60)  *Non* ha telefonato a *nessuno*
    Not has called to n-body
    ‘He hasn’t called anybody’

(61)  $[\text{NegP } [\text{Neg'} \text{non } [\text{iNEG}]] ] \cdot [vP \cdot \text{ha telefonato a nessuno } [\text{uNEG}]]$

(62)  $\neg \exists_{e,x} [\text{Call’(e, j, x)}]$

---

270 Brackets read as optionality.
Things are different, however, in the case of an n-word in preverbal subject position. The subject n-word, being base-generated in Spec,vP has eliminated its [uNEG] feature after Agree with non, and its free variable is bound by the existential quantifier introduced by non (63)-(65).

(63) Non ha telefonato nessuno
    Neg has called n-body
    ‘Nobody called’

(64) [a Gianni [NegP [Neg P non][NEG]] [vP ha telefonato nessuno]]

(65) ¬∃_{e,x}[Call'(e, x, g)]

In this case the sentence is well-formed, as the n-word has its feature checked against [iNEG] and the variable introduced by nessuno is bound by the negative operator. The fact that this variable is bound implies that the indefinite nessuno is no longer allowed to move out of the domain that is introduced by the negative quantifier, i.e., out of the domain c-commanded by non. If the n-word raises out of this domain as in (66), it would have a variable as its argument that has been bound by a lower quantifier. Such constructions are illicit at LF (67).

(66) *Nessuno non ha telefonato
    N-body neg has called
    ‘Nobody called’

(67) *[TP [Person'(x) & Call'(e, x)] [NegP ¬∃_{e,x}]]

This analysis is supported by the fact that n-words are allowed to participate in NC relations if non is absent. In that case, the first n-word is licensed by the abstract negative operator Op^_, with which it forms a compound (68)-(70).

(68) Nessuno ha telefonato a nessuno
    Not has called to n-body
    ‘Nobody called anybody’

(69) [NegP [Op_¬[NEG]-Nessuno][uNEG]] [vP t; ha telefonato a nessuno]

(70) ¬∃_{e,x,y}[Person'(x) & Person'(y) & Call'(e, x, y)]

The examples above show that Non-Strict NC readings immediately follow as a consequence of the fact that negative markers in these languages carry [iNEG].

Another prediction that follows from this analysis is that negative markers in languages with more than one negative marker may vary with respect to the interpretability of their [NEG] feature. This prediction is born out, as is illustrated by
Standard French, a Phase III language. Standard French has two negative markers, *ne*[uNEG] and *pas*[iNEG]. In simple negative expressions *pas* moves out of its vP adjunct position to Spec,NegP and from there it takes scope over the entire vP (71). In NC constructions one n-word obligatorily raises to Spec,NegP to form a compound with *Op* that is base-generated in Spec,NegP (72).

(71) \[\begin{array}{l}
\text{TP Jean} [T^x [\text{ne mange}]] [\text{NegP pas} t_i] \\
\text{Jean neg eats n-thing}
\end{array}\]

‘John doesn’t eat anything’

(72) \[\begin{array}{l}
\text{TP Jean} [T^x [\text{ne mange}]] [\text{NegP rien} t_i] \\
\text{John neg eats n-thing}
\end{array}\]

‘John doesn’t eat anything’

If a subject n-word *personne* moves to Spec,NegP, it forms a compound with *Op* and establishes an NC relation (73). If *pas* is included in such a sentence, it cannot move to Spec,NegP (since it is occupied by *Op* that licenses *personne*). Hence *pas* has to remain in situ and the sentence yields a DN reading (74).

(73) \[\begin{array}{l}
\text{Personne ne mange} \\
\text{N-body neg eats}
\end{array}\]

‘Nobody eats’

(74) \[\begin{array}{l}
\text{Personne ne mange pas} \\
\text{N-body neg eats neg}
\end{array}\]

‘Nobody doesn’t eat’

A similar analysis holds for Romanian. Romanian has two distinct negative markers, *nu* for tensed and infinitival clauses and *ne* for other untensed clauses such as participles or gerunds. Romanian is a Strict NC language, since the subject n-word is allowed to occur to the left of *nu*. However, the behaviour of untensed negative clauses (participles or gerunds) is typically Non-Strict NC. This distinction follows immediately by assuming that *nu* carries [uNEG] and *ne* carries [iNEG].

(75) a. \[\begin{array}{l}
\text{Nimeni *(nu) vine}^{271} \\
\text{N-body neg comes}
\end{array}\]

‘Nobody comes’

b. \[\begin{array}{l}
\text{Nimic a *(nu) manca} \\
\text{N-thing to neg eat}
\end{array}\]

‘Nothing to eat’

---

*271* Data are from Teodorescu (2004).
To summarise, the distinction between Strict NC and Non-Strict NC languages follows immediately from the difference between [uNEG] and [iNEG] markers. Apart from this, the analysis for the construction, derivation and interpretation of Strict NC and Non-Strict NC expressions is identical.

### 8.1.3 Double Negation

In this subsection I will discuss the derivations and interpretations of multiple negative expressions in Double Negation languages. Double Negation languages express negation by means of semantic negation, which implies that every negative element is lexically negative. In minimalist terms these negative elements carry an interpretable negative feature [iNEG]. If every negative element carries a feature [iNEG], and there are no elements with uninterpretable negative features [uNEG], no syntactic operation with respect to negation is triggered. This means that the information about negation that has already been encoded in the lexicon enters the level of semantic representation without being subject to specific syntactic requirements.

From the generalisations of chapter 5 it follows that Double Negation languages can express negation only by means of a negative adverb, which has been base-generated in a vP-adjunct position. As a result of the fact that it is not needed to check negative features of the negative adverb, and there is no overt head Neg\(^0\) present that needs to have its uninterpretable [uNEG] features checked, movement of the negative adverb from a vP adjunct position to a Spec,NegP position is unmotivated and therefore ruled out under minimalist assumptions.

Given the fact that negative clauses in Double Negation languages do not exhibit movement to a position in a functional projection NegP, there is no ground to assume the presence of such a functional projection: Double Negation languages do not have a functional projection NegP, i.e., negation in such languages is not a syntactic category. In section 8.3, I will explain in detail how negation can be acquired as a syntactic category.

Under these assumptions the semantic representations of negative elements in Double Negation languages are straightforward: negative elements are already negative in their lexical semantic representation. Negative elements are either negative quantifiers
or negative markers. Negative Quantifiers are analysed as generalised quantifiers as in (77).

(77) \[ [[n-Q]] = \lambda P \exists x_\ldots [Q(x) \& P(x)] \]

The negative marker is the phonological realisation of the [iNEG] feature and translates as the negative operator \(-(\exists)\). For the very fact that it is an operator, the negative operator is able to bind free variables that have been introduced in an earlier stage in the derivation (such as event variables) unselectively.

The correct readings of single and multiple negative sentences in Double Negation languages such as Standard Dutch fall out naturally.

(78) Jan loopt niet
    Jan walks neg
    ‘John doesn’t walk’

The sentence in (78) contains a negative adverb only and yields sentential negation. During the derivation, after the merger of verb and subject, the negative adverb takes \(vP\) as its complement and negates the proposition, after which the subject moves out to Spec,TP. This stage of the derivation is represented in (79).

(79) \[ [TP Jan; [vP niet [\ldots t; loopt]]]] \]

This syntactic structure is interpreted as in (80), which corresponds to the negation of the proposition John walks.

(80) \[ \begin{array}{c}
    \exists e. \text{walk}'(e,j) \\
    \exists \, vP: \neg \text{walk}'(e,j) \\
    \neg \exists \, vP: \neg \text{walk}'(e,j) \\
    \text{niet} \\
    \text{DP: j} \\
    \text{v': } \lambda x. \text{walk}'(e,x) \\
    \text{Jan} \\
    \text{v: walk}'(x) \\
    \text{loopt}
\end{array} \]

In (81) the sentential negation is the result of the negative quantifier niemand ‘nobody’ that takes scope over the non-negative predicate, yielding the correct reading (83).

\[ ^{272} Q \in \{ \text{Person}', \text{Thing}', \ldots \} \]
\[ ^{273} \text{The dots indicate that the existential quantifier is also allowed to bind free variables that have remained unbound during the derivation.} \]
\[ ^{274} \text{Leaving out V2 effects and other phenomena irrelevant to the present discussion.} \]
Chapter 8 - A theory of Negative Concord

(81) *Niemand* loopt

Nobody walks
‘Nobody walks’

Standard Dutch

(82) \[ \lnot \exists \exists [\text{person'(x)} \& \text{walk'(e,x)}] \]

\[ \text{DP: } \lambda P.\exists \exists [\text{person'(x)} \& P(x)] \]

\[ \lambda \exists \exists \text{walk'(e,x)} \]

\[ \text{niemand} \]

\[ \lnot \exists \exists \text{walk'(e,x)} \]

\[ \text{loopt} \]

An example of Double Negation can be found in (84): the negative quantifier *niemand* ‘nobody’ is applied to a negative predicate, yielding a Double Negation reading as in (86). In this case the negative operator *niet* denies the predicate, and the negative quantifier *niemand* ‘nobody’ is applied to the negated predicate. As the subject has moved across the negative operator, lambda abstraction takes place after the predicate has been negated by *niet*.

(84) *Niemand* loopt *niet*

Nobody walks neg
‘Nobody doesn’t walk’ = ‘Everybody walks’

Standard Dutch

(85) \[ \text{TP: } \forall \exists [\text{person'(x)} \& \lnot \exists \exists \text{walk'(e,x)}] = \forall \exists [\text{person'(x)} \rightarrow \lnot \exists \exists \text{walk'(e,x)}] \]

\[ \text{DP: } \lambda P.\exists \exists [\text{person'(x)} \& P(x)] \]

\[ \lambda \exists \exists \text{walk'(e,x)} \]

\[ \text{niemand} \]

\[ \lnot \exists \exists \text{walk'(e,x)} \]

\[ \text{loopt} \]

Althouhg these semantic representations seem straightforward, it should be noted that the only possible negative elements are negative quantifiers and the negative adverb *niet*. Double Negation languages do not have an abstract negative operator. The main reason for this is that the presence of an abstract negative operator should be licensed by a syntactic licensing mechanism, namely a marker that does not contribute to the negative semantics of the sentence. Double Negation languages lack such markers by definition.
8.1.4 Concluding remarks

In this section it has been illustrated how the presented analysis of negation is able to explain the syntactic and semantic properties of multiple negative expressions. The analysis is based on the distinction between syntactic and semantic negation. The main difference between NC and DN languages is that in the first type of languages negation is expressed as a result of a feature checking relation between elements carrying [iNEG] and [uNEG]. Negation is the result of agreement between multiple [uNEG] features against a single negative operator Op_ carrying [iNEG]. Double Negation languages only have [iNEG] and due to the lack of [uNEG] features no negative projection is realised for syntactic agreement between negative elements.

I have argued that the distinction between Strict and Non-Strict NC languages can be reduced to the interpretability of the [NEG] feature of the negative marker: negative markers in Strict NC languages carry [iNEG]; negative markers in Non-Strict NC languages carry [uNEG].

In the following section I will discuss a number of the consequences of this analysis. First I will show that the analysis predicts the exact typological distribution one finds with respect to the syntactic status of the negative marker and the occurrence of NC. Second I will show how this analysis accounts for several of the problems with respect to NC that have been discussed in chapter 7.

8.2 Predictions and remaining questions

In this section, I will discuss the consequences of the analysis with respect to three different issues: (i) the typological distribution of NC languages; (ii) (syntactic) locality; and (iii) instances of n-words that appear to be interpreted negatively.

A discussion of the typological distribution is motivated by the necessity to explain the generalisation between the syntactic status of negative markers and the occurrence of NC that has been observed in chapter 5, and has been rephrased in syntactic terms in chapter 6. I argued in chapter 7 that other theories of NC failed to predict the correct typological distribution. In 8.2.1 I will show that the analysis presented here succeeds to predict this distribution correctly.

The second issue, syntactic locality, is concerned with the clause-boundness of NC. Clause-boundness was one of the major arguments for proposing a theory of NC in terms of syntactic agreement rather than a theory that takes n-words to be NPI's. In this subsection, I will argue that NC is indeed subject to locality, and is not allowed to violate island constraints. This prediction follows immediately from the theory of NC presented in 8.1.

In chapter 7 we saw that analyses that take n-words not to be inherently (i.e. semantically) negative need to account for instances in which n-words seem to acquire a negative reading without being licensed by an overt licensor. This is for
instance the case with fragmentary answers, n-words in conjunction or disjunction, or n-words that are dominated by the negative adverbial marker.

I will discuss the typological predictions in 8.2.1, the issue of locality in 8.2.2 and the instances of seemingly negative n-words in 8.2.3 and 8.2.4. Subsection 8.2.5 contains some concluding remarks.

8.2.1 The typological distribution of NC

In this subsection I will investigate the consequences for the typology of NC languages. Languages differ with respect to the way they express negation: sentential negation is either realised through syntactic negation, in which negation is expressed by means of agreement between a (co)vert negative operator and a number of morpho-phonologically negative elements that are marked for negation by a [uNEG] feature, or it is expressed by means of semantic negation, in which every negative element is semantically negative and corresponds to a negative operator.

This difference has some major consequences for the clausal structure of negative expressions in NC languages vis-à-vis DN languages. In NC languages, negative expressions need to have their [uNEG] feature checked against an element carrying [iNEG]. Following standard minimalist assumptions (Chomsky 1995, 2001, Bobaljik & Thrainsson 1996), feature checking of [F] involves a relation with a corresponding syntactic head F°. This means that all NC languages, as exemplified in section 8.1 (and also in chapter 6) require the presence of a functional category Neg, which heads a functional projection NegP. As has been shown in chapter 6, every negative marker, except negative adverbs in DN languages such as Dutch, are associated to one of the positions in NegP. Hence the prediction is that NC languages can have negative head markers, adverbial negative markers, or both. This prediction is born out as has been shown for Czech/Italian, Standard French and Bavarian respectively.

In DN languages, negation is expressed by means of semantic negation, which does not involve any syntactic requirements with respect to negation. Negation is not a syntactic category in these languages, and hence there is no functional projection NegP. As there is no negative head Neg° in these languages, there are no negative head markers, since these have to be associated with Neg°, which is absent in DN languages. The only position a negative marker can occupy in these languages is a specifier/adjunct position. Hence, contrary to NC languages, DN languages do not allow negative head markers. This prediction is born out: in the set of studied languages no language has been found that has a negative head marker, but does not exhibit NC.

Thus, the following classification of languages can be made:
(87) A typology of NC and DN languages

<table>
<thead>
<tr>
<th>Negative Marker</th>
<th>Negative Head</th>
<th>Negative Head + Negative Adverb</th>
<th>Negative Adverb</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC</td>
<td>Italian/Czech</td>
<td>Standard French</td>
<td>Bavarian</td>
</tr>
<tr>
<td>DN</td>
<td>∅</td>
<td>∅</td>
<td>Dutch</td>
</tr>
</tbody>
</table>

Note that the typology in (87) corresponds exactly to the empirical observation that all languages with a negative head marker are NC languages, but that not every language with an adverbiale negative marker only is a DN language. The following (unidirectional) implication holds.

(88) If a language has a negative marker that is a syntactic head, the language exhibits NC.

The analysis predicts correctly the observed distribution of NC languages with respect to the syntactic status of the negative marker.

8.2.2 Locality

Another major consequence of this analysis concerns the fact that NC should be subject to syntactic locality constraints. This means that NC relations cannot be established if two participating elements are in different syntactic domains.

A first consequence of the locality of NC is that it is clause-bound. This prediction is correct, as we see in (89). The fact that NC is clause bound only follows if n-words are taken to be syntactically marked for negation, and not NPI's. In the latter case NC would be predicted not to be clause-bound.

(89) Non ho detto che nessuno è arrivato
Neg say.1SG that n-body has.IND arrived
DN: ‘I don’t say that nobody has arrived’
*NC: ‘I don’t say that anybody has arrived’

The only two exceptions to this observation are instances of subjunctive clauses (cf. Haegeman 1995, Herburger 2001) (90) and neg raising (cf. Horn 1989) as (91).

(90) Non pretendo che nessuno dica niente
Neg ask.1SG that n-body says.SUBJ n-thing
‘I don’t ask that anybody says anything’

(91) Non credo che ha fatto niente
Neg believe.1SG that has.3sg n-thing
‘I believe that he didn’t do anything’
As I argued for in chapter 7.4, subjunctive clauses are not as complete clauses such as indicative clauses, but they lack material in the CP layer. Giorgi (2004) argues that subjunctives clauses do not block movement out of the clause. This is illustrated, for instance, by the fact that long distance anaphora in embedded clauses can only refer to main clause antecedents if they are in a subjunctive clause and not if they are in an indicative clause.\footnote{An exception is formed by cases in which no separate subjunctive form is available. In those cases Giorgi argues that the indicative and subjunctive forms are phonologically identical.} In (92) subordinate proprìe (‘his own’) can only refer to a main clause antecedent if the subordinate V\textsubscript{fin} clause is subjunctive.

(92) a. *Quel dittatore, ha detto che notiziari televisivi parleranno a lunghe delle proprie gesta
   The dictator has said that news.programs TV talk.FUR.IND at long of.the own deeds
   ‘The dictator said that the news programs will talk a lot about his own deeds’

 b. Quel dittatore, ha detto che notiziari televisivi parlino a lunghe delle proprie gesta
   The dictator has said that news.programs TV talk.FUT.SUBJ at long of.the own deeds
   ‘The dictator said that the news programs will talk a lot about his own deeds’

Giorgi accounts for these facts by assigning a different structure for subjunctive and indicative clauses. Indicative clauses are said to have a full CP layer, containing ForceP and FinP, whereas subjunctive clauses lack ForceP (cf. Rizzi 1997).

(93) a. [ForceP ... [FinP]] Indicatives
 b. [FinP] Subjunctives

The fact that subjunctive clauses are not islands with respect to syntactic operations accounts for the grammaticality of the NC reading of sentences such as (90). Both n-words carry a [\texttt{uNEG}] feature, and these features will be checked against non\texttt{[uNEG]} in the matrix clause.

(94) Non\texttt{[uNEG]} pretend\texttt{0} [FinP che nessuno\texttt{[uNEG]} dica niente\texttt{[uNEG]}]

The existence of Paratactic Negation (PN) is also explained by this mechanism as is illustrated by (95). Recall that in chapter 3 I analysed verbs or prepositions with a negative connotation as elements that are lexically decomposed in a negative and a non-negative part. E.g. doubt is decomposed in not be sure. In syntactic terms these elements carry an [\texttt{iNEG}] feature, and hence they can license n-words in subordinate clauses (96).
Dudo que el bebé esté mirando a nadie
I doubt that the baby is looking at anything

(96) \[[\text{ forcep } \text{ Dudo}[\text{ NEG }]} \ [\text{ finp } \text{ que el bebé esté mirando a nadie}]\] j

Paratactic Negation has been regarded as one of the major arguments in favour of an analysis of n-words in terms of NPI's. This is due to the fact that in most Downward Entailing (DE) contexts n-words can be licensed, even outside the clause. However, as I showed, this licensing is allowed by the fact that these subordinate clauses are subjunctive. This explains why DE contexts are able to license n-words in subjunctive clauses: subjunctive clauses express non-veridical propositions. Hence subjunctive clauses can be selected by DE matrix clauses, since all DE contexts are non-veridical (cf. Zwarts 1995). As subjunctives clauses do not block agreement relations, n-words can enter a feature checking relation with a DE element (carrying [iNEG]) in a higher clause.

The approach that NC is a form of syntactic agreement has been under attack by Giannakidou (1997), who shows that NC relations in Catalan and Greek are allowed to violate other island constraints, such as adjunct islands.

However, the minimal pair in (98) shows that this is due to the fact that the adjunct clause is subjunctive. Hence it does not count as a counterargument against the claim that NC is a form of syntactic agreement.

The other counterargument against NC being clause-bound is that NC is possible in so-called neg-raising structures. In these structures a negation in a matrix clause is interpreted in the subordinate clause, and may establish an NC relation with other n-words in this clause (cf. (91), repeated here as (99)).

Non credo che ha fatto niente
I believe that he didn’t do anything
Note that this sentence is interpreted as (100), in which the NC reading is predicted.

\[(100)\quad \text{Credo che non ha fatto niente} \quad \text{Italian}
\]
Believe.1sg that neg has.3sg n-thing
‘I believe that he didn’t do anything’

Neg raising is discussed at length in Horn (1989), who discusses different types of analyses: syntactic analyses that take neg raising to be a form of movement (Fillmore 1963, Lakoff 1969, Kiparsky & Kiparsky 1971) and pragmatic analyses that argue that neg raising is the result of certain pragmatic implicatures (Partee 1970).

I will not discuss these analyses in details, since the exact analysis is not relevant to the discussion here. I will restrict myself to showing that the behaviour of neg raising is in line with the analysis of NC presented here. I argue that NC is a result of feature checking of multiple negative elements in a proper syntactic domain. This means that the higher negative element in a neg raising construction is still associated with the position in the lower clause. The reading of (99) is identical to the reading of (100), because the position of non in (99) is associated to the position of non in (100).

This position is supported by the examples in (101) and (102). The reading of the neg raised construction in (101) is predicted to be identical to the one in (102), which is indeed the case. In (102) no NC reading is available (only a marginally accepted DN reading). The same holds for (101), where non cannot establish an NC relation with nessuno. The difference between (99)-(100) and (101)-(102) follows from the fact that non is related to the Neg° position in the lower clause. Only if syntactic agreement between the negative elements is possible there, NC is available if non is subject to neg raising.

\[(101)\quad \text{Non credo che nessuno ha telefonato} \quad \text{Italian}
\]
Neg believe.1sg that n-body has called
‘I believe that nobody called’
‘I don’t believe that nobody called’
‘I believe that nobody didn’t call’

\[(102)\quad \text{Credo che nessuno non ha telefonato} \quad \text{Italian}
\]
Neg believe.1sg that n-body has called
‘I believe that nobody called’
‘I believe that nobody didn’t call’

To conclude, NC obeys syntactic locality restrictions. The only two exceptions, subjunctive clauses and neg raising, have proven not to be counterarguments for this theory. These exceptions follow from my analysis by adopting independently motivated assumptions, such as locality differences between indicative and subjunctive clauses.
8.2.3 Sole n-words in NC languages

An often presented counterargument against analyses of NC that take n-words to be semantically non-negative is that one can find instances of n-words that appear to be inherently negative. Two different kinds of examples can be given: examples of single n-words that acquire a negative interpretation (without being licensed overtly), and examples of multiple negative constructions where the NC reading is not available. Examples of the first type are: fragmentary answers (103), n-words in coordinated structures (104), n-words in preverbal position in Non-Strict NC languages (105) and n-words that receive a vP-internal interpretation (i.e. an interpretation in which the negation is dominated by an existential quantifier that binds the event variable) (106).

(103) ¿A quién viste? ¡A nadie!
To who saw.2sg? N-body
‘Who did you see? Nobody’

(104) Me caso contigo o con nadie
I marry with you or with n-body
‘I marry you or nobody (else)’

(105) Nessuno ha telefonato
N-body has called
‘Nobody called’

(106) El bebé está mirando a nadie
The baby is looking at n-body
‘The baby is looking at nothing’

Examples of the second kind will be given in 8.2.4.

In this subsection I show that all these instances of seemingly negative n-words follow from my analysis, which takes n-words to be semantically non-negative elements. Several of these examples have already been discussed in chapter 7.2. Other examples have not been accounted for. In this subsection I will briefly discuss the examples in (103)-(106).

Giannakidou (2001) accounts for the acceptability of n-words in fragmentary answers in terms of ellipsis. She suggests that the grammaticality of examples as (103) is the result of PF movement of the n-word to a sentence-initial position, and that the rest of the sentence is deleted under ellipsis (107).

(107) [A nadie], [NegP no-viò t.]
To n-body neg saw.1sg
However, this analysis faces a serious problem: it does not account for the fact that NPI's cannot occur in fragmentary answers. Giannakidou argued that this is due to the fact that NPI's such as any-term cannot be emphasised. However, this restriction also holds for NPI's that can be emphasised, such as Spanish \textit{un alma} 'a single soul.'

(108) a. Who did you see? *Anybody!  
   b. ¿A quién viste? *¡A un alma!  
   'Who did you see? A single soul'

The examples in (108) cannot be explained by arguing that NPI's are required to be c-commanded by a negative marker at surface structure. The examples from Czech in (4), repeated as (109), show that NPI’’s can also be licensed to the left of the negative marker, as long as they are dominated by the abstract \textit{Op}. This is shown in (109), where \textit{Op\_} is triggered by the presence of \textit{ne}.

(109) \textit{Ani nahu jsem (tam) nevidel}.  
   Neg-even a-leg-ACC.SG I-am (there) neg-seen  
   'I haven’t been seeing anyone'

Hence the analysis by Giannakidou, who argues that an overt negative operator that is deleted under ellipsis licenses n-words, cannot account for the fact that NPI’s in fragmentary answers cannot be licensed, contrary to n-words. I argue that this fact follows from the analysis in which the negation is introduced by an abstract negative operator, which is included in the derivation to establish a feature checking relation with n-words. As NPI licensing is not a syntactic, but a semantic phenomenon, this agreement mechanism applies to n-words only, not to NPI’s. Elements with [uNEG] can trigger the presence of \textit{Op\_}, NPI’s cannot. Hence I argue that n-words in fragmentary answers are licensed by \textit{Op\_}, that is able to check their [uNEG] feature as in (110).

(110) \textit{[Op\_][uNEG][A nadie[uNEG]]\ldots} \textsuperscript{276}  
   'Nobody'

The question immediately arises why this negative operator is realised abstractly. The reason for this is straightforward: the overt negative operator is introduced if that is necessary for scopal reasons, otherwise it is left out. In (103) the scope is already clear from the position of \textit{a nadie} in the fragmentary answer.

This analysis also accounts for the acceptability of sole n-words in coordinated structure, e.g. after a disjunction as in (104). In chapter 7.2 I argued that these constructions are unvalid counterarguments against the claim that n-words are

\textsuperscript{276} The question whether this construction contains abstract material that has been deleted under ellipsis, or the semantics of the negative quantifier plus the negation are sufficient yield the proper interpretation is left aside.
sententially non-negative. Depending on the view on coordination (cf. Merchant 2003) two different explanations of these examples are possible: either the second disjunct contains a copy of the matrix clause (containing a negative marker carrying \[\text{NEG}\]) that is deleted under ellipsis, or the disjuncted n-word is licensed by \(Op\). 

(111) a. \[\text{[[Me caso contigo \| Op}^\text{\text{NEG}}\text{ con nadie}^{\text{\text{NEG}}}]]\]
   b. \[\text{[[Me caso contigo \| Op}^\text{\text{NEG}}\text{ con nadie}^{\text{\text{NEG}}}]]\]
   ‘I marry you or nobody’

The example in (105) addresses the question why in Non-Strict NC languages preverbal subject n-words occur in the clause without a negative marker. In 8.1.2 I explained in detail that this is related to the fact that an n-word cannot dominate the negative operator and that the preverbal negative marker in Non-Strict NC languages is the overt negative operator.

The example in (106), finally, also follows directly from the analysis. Herburger (2000) showed that n-words may occur solely in postverbal position, but that the interpretation of these constructions is different from sentential negation. The example, repeated below, has an interpretation as in (113).

(112) \text{El bebé está mirando a nadie}  \text{Spanish}
    The baby is looking at n-body
    ‘The baby is looking at nothing’

(113) \[\exists e[\text{look}^e \& \text{Agent}(e, b) \& \neg \exists x[\text{Person}^x \& \text{Patient}^x(e, x)]]\]

This interpretation follows immediately from the theory. The negative marker \textit{no} is absent in this sentence. This marker is included only if required for scope reasons, i.e. to express sentential negation. In this case, the n-word must be licensed by an immediately dominating abstract operator as in (114). Note that in this construction the negation is too low to bind the event variable (that is introduced at \(v^o\)). Hence the event variable will be bound under existential closure introduced by a different operator at a later stage.

(114) \[\text{El bebé [\(v^o\) está mirando \(Op_{\text{\text{NEG}}} [a \text{ nadie}^{\text{\text{NEG}}}]]\}]]\]

It follows that all instances of sole n-words in NC languages can be explained by this theory.

8.2.4 DN in NC languages

Another set of counterarguments against the analysis that n-words are semantically non-negative is formed by constructions consisting of multiple n-words that do not establish an NC relation with each other. Examples are n-words occurring in different
clauses (see 8.2.1), n-words followed by the negative adverbial marker in languages that exhibit overt scrambling (115), preverbal n-words followed by a negative marker in Non-Strict NC languages (116), and n-words in focus position (117).

(115)  
\[\ldots \text{da Valère nie ketent van niemand (en) is}^{277}\]  
\[\ldots \text{that Valère neg happy of n-body neg is}\]  
\[\ldots \text{that Valère is not happy with nobody}\]  
West Flemish

(116)  
\[\text{Nessuno non ha telefonato}\]  
\[\text{N-body neg has talked}\]  
\[\text{‘Nobody didn’t call’}\]  
Italian

(117)  
\[\text{No ho telefonato a NESSUNO!}\]  
\[\text{Neg have.1sg called to n-body}\]  
\[\text{‘I didn’t call nobody!’}\]  
Italian

The fact that NC relations obey locality conditions is discussed in detail in 8.2.1, and I will not repeat this discussion here.

Interesting examples are cases such as (115). In these cases the n-word is in a vP in situ position, but it cannot be licensed by the abstract negative operator that checks the [uNEG] feature of nie. This is the case in all NC languages that exhibit scrambling, such as West Flemish, Bavarian and the varieties of Dutch that have been discussed in chapter 4. In 8.1.1 I argued that, contrary to e.g. Romance languages, NC languages such as West Flemish and Bavarian need to overtly move n-words to a higher position (higher than vP) in order to participate in an NC relationship. This scrambling is motivated for scopal reasons, i.e. to express sentential negation: just as Romance languages mark sentential negation by means of a negative marker that indicates that $Op_-$ should be higher than vP, languages such as Bavarian and West Flemish move the n-words themselves to a position higher than vP in order to render sentential negation (i.e. binding the event variable by a negative operator). However, this movement is absent in (115), indicating the n-words may be licensed in situ, i.e. by an $Op_-$ that cannot check nie’s [uNEG] feature. Hence, in order to check nie’s [uNEG] feature a second $Op_-$ is introduced in the clause, yielding a DN reading.

(118)  
\[\ldots \text{da Valère [NegP} Op_--[\text{NEG]} [vP nie_{\text{[uNEG]}}] \text{ketent van}\]  
\[\text{[Op_--[\text{NEG]} [niemand_{\text{[uNEG]}} (en_{\text{[uNEG]}}) is]]}]\]  

The example in (116) appears to violate the condition that preverbal n-words may not be followed by a negative marker. However, this construction is marginally acceptable if the subject n-word is stressed; then it yields a DN reading. Again this follows from the fact that the negative operator non in Italian cannot license the subject n-word, as the negative operator needs to dominate n-words in order to

---

277 Taken from Haegeman (1995): 142.
establish NC relationships. However, if a second, abstract \( Op_\neg \) is introduced, e.g. in a focus position in the CP layer, this violation is repaired. Hence these sentences get a DN reading.

\[
(119) \quad [\text{FocP } Op_\neg[^{\text{[NEG]}]} \text{ nessuno}[^{\text{[NEG]}]} \text{ NegP non}[^{\text{[NEG]}]} \text{ ha telefonato}]]
\]

This analysis is supported by the fact that focus appears to be able to license n-words anyway, as is shown in the fourth example in (117). Assuming that the focused n-word has to move over the negative operator covertly, it can no longer be bound by the negative operator \( non \). Hence a second negative operator is included to license \( \text{NESSUNO} \), and a DN reading is yielded.

\[
(120) \quad [\text{FocP } Op_\neg[^{\text{[NEG]}]} \text{NESSUNO}[^{\text{[NEG]}]} \text{ NegP non}[^{\text{[NEG]}]} \text{ ha telefonato t_i}]]
\]

It has been shown that every instance of DN in NC languages follows from the theory that has been presented in 8.1. The checking requirements of negative elements trigger the presence of an abstract negative operator. If this negative operator is unable to check the [uNEG] features of all negative elements, a second \( Op_\neg \) is required to check these features. Hence the self-licensing mechanism allows DN constructions if licensing by a single \( Op_\neg \) is prohibited for syntactic or semantic reasons. Instances of DN in NC languages therefore do not count as counterarguments against the analysis that n-words are semantically non-negative.

### 8.2.5 Concluding remarks

In this section I showed that the typological classification that has been observed in chapter 5 follows from the theory of NC.

Second, the fact that NC is subject to syntactic locality also follows. I showed that counterarguments against this observation are the result of the fact that subjunctive clauses do not show the same blocking effects as indicative clauses, or the result of \( \text{neg raising} \).

Third, the assertion that n-words are semantically non-negative requires an explanation for instances of sole n-words that are interpreted negatively. I argued that the introduction of an abstract \( Op_\neg \) does not create higher scope, and should therefore be introduced as low as possible. From this requirement explanations for the grammaticality of sole n-words in fragmentary answers, coordinated structures, preverbal and postverbal position fall out naturally.

Finally I showed that this mechanism does not only predict instances of sole n-words, but also of multiple negative expressions that do not yield NC readings.
8.3 Learnability and language change

Although the analysis that I proposed correctly predicts the readings and acceptability of multiple negative expressions, two questions remain: (i) how does a speaker of a language know whether a language exhibits syntactic or semantic negation; and (ii) how does the diachronic development of the expression of sentential negation relate to the diachronic development of the interpretation of multiple negation. In this section I will address these questions.

In 8.3.1 I will present a learning mechanism that explains how a language learner knows whether (s)he has to express sentential negation by means of syntactic negation or semantic negation. In 8.3.2 I will describe the relation between NC and the Jespersen Cycle.

8.3.1 The acquisition of negation

My analysis of sentential negation and NC is flexible in the sense that it does not take negation as a universal syntactic category: several languages express negation by means of a syntactic feature checking mechanism, which enables negation to project; other languages have no syntactic category negation at their disposal, and negation does not project in these languages. Since the property of negation is subject to cross-linguistic variation, negation as a syntactic category cannot be taken as part of UG. Hence the fact that a language exhibits syntactic or semantic negation should be the result of first language (L1) acquisition.

The process of acquiring negation has been investigated and it will not be discussed here, since the questions of how, at what age and under which conditions children exactly acquire negation as a syntactic category do not relate directly to the discussion. In this subsection I will sketch the general principle behind this learning process.

The core of the mechanism is that negation is acquired as a syntactic category if and only if there is positive evidence for this syntactic category in the L1 input. If there is no positive evidence, the language learner will not acquire a syntactic category negation. The obvious question then is what forms the cue for such a syntactic category. In chapter 6 and 8 I argued that the negative projection was instantiated in order to establish a feature checking relation with negative elements carrying [uNEG]. If there are no [uNEG] features present, there is no need to assume the presence of functional head Neg° to check these features. Hence if there are no features [uNEG] present in the L1 input, there is no syntactic category negation. How does the L1 learner determine the interpretability of [NEG] features? The L1 input for the language learner consists of pairs of syntactic structures and
corresponding meanings. Now, a L1 learner of Dutch receives sentences in his input that correspond to negative meanings:

(121) a. Jan loopt niet
    Jan walks neg
    \( \neg \text{walk}'(j) \)

    b. Jan ziet niets
    Jan sees neg
    \( \neg \exists x. [\text{Thing}'(x) \& \text{see}'(j, x)] \)

    c. Niemand houdt van Marie
    N-body likes Mary
    \( \neg \exists x. [\text{Person}'(y) \& \text{like}'(y, m)] \)

Since all negative elements in (121) correspond to a negation in the semantics, the language learner will take these negative elements to be negative operators and they will be assigned [iNEG] only. The language learner has no trigger to assign one of these elements [uNEG] and therefore the language learner does not acquire [uNEG] features.

However, things are different in NC languages. Suppose that a similar set of sentences is offered to a L1 learner of Italian:

(122) a. Gianni non ha telefonato
    Gianni neg has called
    \( \neg \text{call}'(g) \)

    b. Gianni non ha telefonato a nessuno
    Gianni neg has called to n-body
    \( \neg \exists x. [\text{Person}'(x) \& \text{call}'(g, x)] \)

    c. Nessuno ha telefonato
    N-body has called
    \( \neg \exists x. [\text{Person}'(x) \& \text{call}'(x)] \)

In (122)a the language learner can still assign [iNEG] to non, since it corresponds to the negative operator. However, in (122)b, the L1 learner is confronted with two negative elements, that correspond to one negation only. Therefore only one of the two negative elements can carry [iNEG]. Given that non carries [iNEG], this implies that nessuno has to carry [uNEG]: it is an element that is morpho-phonologically marked for negation, but it does not contribute to the negative semantics of the sentence. Given that feature checking is always against a higher, c-commanding element, the analysis that non carries [uNEG] and nessuno [iNEG] is ruled out. Since the L1 takes n-words to carry [uNEG], and a sentence like (122)c does not consist of overt elements carrying [iNEG], the L1 learner also acquires the abstract negative operator \( Op_{-[\text{NEG}]} \).

In Strict NC languages such as Czech, things are slightly different. On the basis of (123)a, the L1 learner can assign [iNEG] to ne. From this it would follow that the n-word nikoho carries [uNEG]. However, this leads to a serious problem, since the feature checking relation for (123)c cannot be explained (nor the proper semantics of the NC reading). The only way to resolve this is to reinterpret ne as [uNEG] and to assume the presence of \( Op_{-[\text{NEG}]} \) in all sentences in (123).
The difference between Strict and Non-Strict NC languages then is that in Non-Strict NC languages, such as Italian or Spanish, constructions as in (123)c are not present in the L1 input, so that the negative marker remains [iNEG] in these languages during the L1 acquisition.

(123) a. Milan nevidi
   Milan neg.sees
b. Milan nevidi niko ho
   Milan neg.sees n-body
c. Nik do ne volá
   N-body neg.calls

By adopting this simple learning mechanism, one can abstractly describe how the language learner acquires the (un)interpretability of [NEG] features. If the language contains [uNEG] features, the L1 learner learns that such a language exhibits syntactic negation. If it does not contain the [uNEG] features, sentential negation is expressed by means of semantic negation.

Note that this input-output mechanism also accounts for diachronic change. If languages change with respect to the phonological strength or frequency of the presence of negative markers, the L1 learner may decide to assign different status to the [NEG] features. Hence, diachronic change along the lines of the Jespersen Cycle may trigger the occurrence or the disappearance of NC. This phenomenon I will explore in the following subsection.

8.3.2 NC and the Jespersen Cycle

In this subsection, I re-address the (uni-directional) relation between the Jespersen Cycle and NC. The overview presented in chapters 4 and 5 has shown that not all Jespersen Phase V languages are NC languages, whereas the other Phases consist of NC languages only. This classification falls out naturally: if a language lacks NC, it does not have a NegP at its disposal, and hence no position that may be associated with a negative head. The negative marker in DN languages can only occur in a vP adjunct position, and thus it is a syntactic phrase. As a consequence of this, all languages that have a negative marker X° are NC languages. The diachronic change of NC into DN or vice versa can thus only take place if a language develops from a Jespersen IV language into a Jespersen V language, or if a language develops from Jespersen Phase V into Phase VI. In this subsection I will discuss these changes in detail: the development of French from Phase IV to Phase V, and the development of English from Phase V to Phase VI.

Standard French is a Phase III language, but in Colloquial French the negative marker is almost completely gone. Hence the fact that Colloquial French still has an optional negative head marker is no longer a cue for French as an NC language. Therefore,
Colloquial French is open to a change from NC to DN. This follows from the learning mechanism presented in 8.3.1.

(124) a. Jean *ne* mange *rien*  
Jean neg eats n-thing  
‘John doesn’t eat anything’

b. Jean mange *rien*  
Jean eats n-thing  
‘John doesn’t eat anything’

In (124)a, a language learner is forced to assign [uNEG] to *rien*, but that is no longer the case in the second sentence. The sentence (124)b could be analysed as *rien* carrying [uNEG], licensed by an abstract *Op*... or as *rien* carrying [iNEG]. The only cue to distinguish between these two options is the frequency of constructions such as (125).

(125) *Personne dit rien*  
N-body says n-thing  
‘Nobody said anything’

A sufficient number of Negative Spread expressions such as (125) may form a cue to assign [uNEG] to n-words such as *rien*. It is therefore predicted that colloquial French can be divided in two different classes: NC Colloquial French and DN Colloquial French. This classification is indeed found in current French (cf. De Swart & Sag 2002). Speakers differ with respect to a NC or DN interpretation of sentences as in (125) and to many speakers they may even be ambiguous.

The fact that languages differ with respect to keeping NC properties after losing the preverbal negative marker is also illustrated in Dutch microvariation. Although most southern and northern varieties lack a preverbal negative marker *en/ne*, some varieties still exhibit NC, whereas others do not.

The reverse development has been reported for English, where, as discussed in chapter 3.3.3, the negative marker *n’t* gradually takes over the role of the main bearer of negation. The fact that *n’t* is an *X°* is a cue for the occurrence of NC. Although English is officially a DN language, many varieties of English are nowadays NC varieties. This is not only restricted to well known NC varieties, such as Black American English Also the majority of British English dialects exhibit NC (cf. Anderwald 2002).

Another argument that supports the analysis that English is underlyingly an NC language is the fact that English expresses sentential negation by using NPI’s for indefinite arguments or adverbal expressions. Although I have emphasised that the behaviour of English *any*-terms is crucially different from that of n-words, the surface forms of such expressions are more similar to Romance NC expressions than to the Dutch/German way of expressing such constructions. Moreover, the inclusion of *any*-
terms forms an indication for the hearer that the expression is negative, similar to the inclusion of n-words in NC languages. Although the sentences in (126) are both grammatical and truth-conditionally equivalent, (126)a is the preferred expression.

(126)  
a. I didn’t buy (any) sausages  
b. I bought no sausages  

The change in English with respect to the expression of sentential negation induces the occurrence of NC, as predicted by the theory of NC presented in this chapter.

8.4 Conclusion

In this chapter I have presented my theory of NC. As I put forward in the introduction of this chapter a theory of NC should be syntactically, semantically and typologically adequate. I conclude that the theory I presented meets these three criteria. It accounts for cross-linguistic variation with respect to the syntactic status and position of negative markers; it accounts for the fact that n-words do not behave as NPI’s or negative quantifiers, but as non-negative indefinites, which carry a formal feature [uNEG]. Finally, from this theory the typological classification of NC languages follows immediately. Hence it also meets the third criterion: typological adequacy.

The theory explains the difference between NC languages and DN languages by assuming that NC languages have grammaticalised negation: it has become part of their syntactic vocabulary. DN languages have not grammaticalised negation, which means that all available lexical information with respect to negation is directly interpreted at LF without giving rise to the syntactic operations Move or Agree. The difference between Strict and Non-Strict NC languages simply follows from the interpretational status of the negative marker itself.

An advantage of this theory is that the parameterisation in a particular language with respect to NC follows from the lexical properties of negative elements in that language. These lexical properties differ only with respect to their [NEG] feature values. The feature values (u/i) for [NEG] features are in their turn the result of L1 acquisition, driven by a simple input-output mechanism.

Moreover, several notorious problems with respect to NC, such as fragmentary answers, n-words that seem to introduce negation, or the clause-boundedness of NC have been explained.

Some questions remain open, or are left aside. I will discuss three of these questions. First, the exact differences in interpretation of sentences with a negative subject in preverbal or postverbal position have not been discussed in detail. Ladusaw (1994) argues that (127)a has a categorical reading and (127)b is thetic. Giannakidou (1999) argues that this categorical reading of nadie is the result of movement of the n-word to Spec,NegP. Giannakidou argues (following Ladusaw) that material in Spec,NegP
constitutes the restrictive clause of the negative operator, turning $Op_-$ into a tripartite quantifier. If Spec,NegP does not contain material other than $Op_-$, as is the case with postverbal *nadie* in (127) the n-word is part of the nucleus of $Op_-$ and therefore the negative operator is not a tripartitional quantifier (and thus unable to yield a categorical reading). Others (cf. Herburger 2000) argue that topicaisation of XP’s always turns the XP into a quantifier. Therefore no special account for the difference between thetic and categorical readings needs to be provided, as it is a mere consequence of subject topicalisation. I leave this issue aside for further research.

(127) a. *Nadie* vino
    b. *Non* vino *nadie*
        ‘Nobody came’

A second open question is the possibility of extraction of negation from a negative quantifier in DN languages. Penka & Von Stechow (2002) show that in expression such as (128) the negation dominates the deontic modal verb, whereas the existential part of the quantifier remains under the scope of the modal.

(128) Du muss *kein* Krawatte anziehen
    You must no ties put on
    ‘It is not obligatory that you wear a tie’

Penka & Von Stechow argue that all negative quantifiers are semantically non-negative, and should be licensed by an abstract negative operator. They argue that the difference between NC and DN languages can be reduced to the locality conditions of n-word licensing: DN languages have their n-words licensed immediately, whereas NC languages can have several n-words licensed by a single $Op_-$. However, this runs against the observation that only NC languages have an abstract negation at their disposal and predicts that there is no relation between the status of the negative marker and NC, as all languages exhibit a NegP. The interaction between negation and modality, an interesting, yet hardly explored terrain, therefore remains subject of future research.

Finally, the learning mechanism that I presented in 8.3.1 has been applied to negation only. Although this mechanism correctly describes the results of the acquisition of NC, it should be applied to other functional domains such as *Wh*, tense or agreement as well. In Zeijlstra (2004c) I propose a more general version of the mechanism in 8.3.1, showing that it also explains the typological classification of pro drop and V-to-I movement.