Sentential negation and negative concord
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7 The meaning of n-words

In this chapter I will address a question that has occupied a central position in the study of Negative Concord: the semantic status of n-words. In the following three sections I will discuss the question whether n-words are inherently negative or not. The central problem becomes clear in the following sentences (taken from Herberger 2001):

(1)  
No vino
Neg came.3sg
‘He didn’t come’

(2)  
Nadie vino
N-body came
‘Nobody came’

(3)  
No vino nadie
Neg came n-body
‘Nobody came’

In (1) the negation is introduced by the negative marker no. Given that the negative marker no is the actual negative operator \(^{232}\), the minimal pair in (2)-(3) raises a problem for the semantic representation of n-words. From (2) it would follow that the n-word nadie ‘n-body’ is semantically negative, as it is the only element in the sentence that is responsible for the semantic negation. However, from (3) it would follow that nadie is semantically non-negative, since the meaning of the sentence contains only one negation, that is introduced by no ‘neg’.

In the literature three different approaches have been formulated to solve this problem. The first approach, *Factorisation and Absorption* (Zanuttini 1991, Haegeman 1995, Haegeman & Zanuttini 1996, De Swart & Sag 2002), says that all n-words are semantically negative and through some semantic process, all the negations melt together into one negative quantifier. The second approach takes the opposite perspective and says that all n-words are non-negative NPI’s (Laka 1990, Ladusaw 1992, Giannakidou 1997, 2000) that are licensed by either an overt or a covert negation. Finally, it has been suggested that n-words are ambiguous between a negative and a nonnegative interpretation. Zwarts & Van der Wouden (1993) and Van der Wouden (1994a, 1997) argue that n-words are configurationally ambiguous between semantically negative and non-negative terms. Herberger (2001) argues that n-words are even lexically ambiguous between the two readings.

\(^{232}\) In chapter 8 I will thoroughly analyse the interpretability of negative markers and conclude that this assumption is correct.
In this chapter I will evaluate all three approaches and describe the problems each approach faces. I will argue that the approach that says that n-words are semantically non-negative accounts most adequately for the empirical facts, but that, contrary to what has dominantly been suggested in the literature within this perspective, this approach needs to be implemented in a syntactic framework that takes NC to be the result of syntactic agreement with respect to sentential negation. I will argue that n-words should not be treated as NPI’s.

In this chapter I will discuss and evaluate the current literature on the issue and I will conclude that n-words are neither negative quantifiers, nor non-negative NPI’s. As an alternative I will propose that n-words are non-negative indefinites that are syntactically marked for negation by means of a [uNEG] feature. In chapter 8 I will elaborate this hypothesis and present my own theory of NC.

Apart from the question whether n-words are semantically negative or non-negative, I will also address the quantificational status of n-words: I will argue that n-words should be treated as non-quantificational indefinites that introduce a free variable, which needs to be bound by a higher existential quantifier.

In section 7.1 I will discuss the first approach that says that all n-words are negative quantifiers. In section 7.2 I will describe the second approach that considers n-words to be non-negative. In section 7.3 I will discuss the ambiguity hypotheses. In section 7.4 I will address the quantificational status of n-words and 7.5 will contain the final evaluation and conclusions.

### 7.1 N-words as Negative Quantifiers

In this section, I will discuss the first of the three approaches that have been dominating the literature for the last decade, which says that all n-words are semantically negative. In 7.1.1 I will discuss Haegeman & Zanuttini’s (1991, 1996) analysis in terms of factorisation and in 7.1.2 I will discuss De Swart & Sag’s (2002) implementation in a polyadic framework. I will demonstrate that both positions in the debate on the semantic status of n-words do not hold.

#### 7.1.1 Factorisation and negative absorption

In this subsection I will first discuss and evaluate an approach to account for the semantics of NC that stems back to Zanuttini’s original hypothesis from 1991 and is adopted in Haegeman & Zanuttini (1991), Haegeman (1995) and Haegeman & Zanuttini (1996). Haegeman and Zanuttini argue that the expression of Wh and negation is governed by similar syntactic and semantic mechanisms. Haegeman (1995) lists several empirical arguments that suggest a similar syntactic treatment of
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\(Wh\) and negation. First both \(Wh\) and negation trigger subject-auxiliary inversion as is seen in (4).

(4)  
a. \emph{Never} would I do that  
b. What did you do?

Second, both \(Wh\) and negation are able to license NPI's such as English \emph{any}-terms, as in (5):

(5)  
a. John doesn't see anybody  
b. Who saw anybody?

Third, both \(Wh\) and negation introduce so-called inner islands effects (6), in which an intervening operator in A-bar position prohibits movement out of an A-bar position.

(6)  
a. 1. [Bill is here], as they know \(t_i\)  
   2. *[Bill is here], as they don't know \(t_i\)  
b. 1. Why\(_i\) did you think that they will fire Bill \(t_i\)  
   2. *Why\(_i\), did you wonder whether they will fire Bill \(t_i\)

A fourth correspondence between negation and \(Wh\) according to Haegeman and Zanuttini is the similarity between readings of multiple \(Wh\)-expressions and NC. Expressions containing multiple \(Wh\)-terms are interpreted as a single question at LF. Hence the two \(Wh\)-terms (each binding a separate variable) form together one \(Wh\)-operator that binds two variables as is shown in (7). The answers to such a question consist of one or more pairs of persons and things:

(7)  
Who read what? John read the NY Times; Mary read the Washington Post.

\[Wh,Wh_x[do^*(x, y)] \rightarrow Wh_{x,y}[do^*(x, y)]\]

Higginbotham & May (1981) and May (1989) provide a formal description of \(Wh\)-elements in terms of polyadic quantification by arguing that \(Wh\)-terms are unary quantifiers that in the same projection turn into \(n\)-ary quantifiers, binding \(n\) variables. Polyadic quantification can take place after a process of \emph{factorisation}. Factorisation is the process, which describes what happens when two quantifying elements raise to the same projection under QR in order to turn from \(n\) monadic quantifiers into one \(n\)-ary polyadic quantifier. In the case of \(Wh\), polyadic quantification takes place after factorisation, whereby the interrogative operator of the second \(Wh\)-element is transmitted into the first \(Wh\)-operator.

Haegeman & Zanuttini (1991) argue that factorisation only takes place if all \(Wh\)-elements stand in a proper syntactic configuration, i.e. spec head agreement within a particular functional projection (CP (or IntP in Rizzi 1997 terms)). This means that factorisation is syntactically driven. This syntactic motivation requires the presence of

\(^{233}\) These examples are originally from Ross 1983, cited in Rizzi 1990 and Haegeman 1995.

\(^{234}\) \(Wh_x\) reads as 'For which x'; \(Wh_{x,y}\) reads as 'For which pair \(<x,y>\)'.
syntactic features of Wh-terms that drive movement to CP. Rizzi (1991, 1996) formalised this syntactic requirement by arguing that all Wh-elements obey the Wh-criterion.

(8) **Wh-Criterion:**
   a. A Wh operator must be in Spec-head configuration with X°[Wh]
   b. An X°[Wh] must be in Spec-head configuration with a Wh operator

Zanuttini (1991) takes NC to be similar to polyadic quantification of Wh-terms. Thus she extends this notion of polyadic Wh quantification to the field of negation and proposes a notion of Negative Absorption, which she defines as in (9).

(9) \[ (\forall x \neg)(\forall y \neg)(\forall z \neg) = [\forall x, y, z] \neg \]

She takes n-words to be unary negative quantifiers, and NC to be the result of a process of factorisation and absorption. Hence the interpretation of (10) is equivalent to the formation of the pair-list reading in (7)b.

(10) *Nessuno* ha telefonato a *nessuno*

N-body has called to n-body
‘Nobody called anybody’
\[ \forall x, y(\neg call(x, y)) \]

In a similar fashion she describes Negative Absorption between a single n-word and a negative operator as in (11).

(11) \[ (\forall x \neg) \neg = [\forall x] \neg \]

If negative factorisation and absorption are similar to resumption of Wh quantifiers, negative factorisation and absorption can only take place under spec head configuration as well. Hence Rizzi’s Wh criterion has to be extended with respect to negation. Haegeman & Zanuttini therefore introduce the so-called **NEG-Criterion**, formalised as in (12).

(12) **NEG-Criterion**
   a. A NEG-operator must be in Spec-head configuration with X°[NEG]
   b. An X°[NEG] must be in Spec-head configuration with a NEG-operator

   Whereby the following definitions hold:
   - **NEG-operator**: a negative phrase in scope position
   - **Scope position**: left-peripheral A’-position [Spec,XP] or [YP,XP].

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235 The round brackets indicate optionality.

236 Resumption of quantifiers refers to the creation of one n-ary quantifier out of a sequence of n unary quantifiers.
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This NEG-criterion triggers the movement of every n-word to a specifier or adjunct position of NegP. Note that this position cannot be the lowest specifier position as this position is occupied by the negative operator \( \sim \) itself. The fact that the negative operator occupies a specifier position follows from the NEG-Criterion: in the case of single sentential negation without n-words the NEG-Criterion still applies and therefore the negative head marker is forced to be in spec head configuration with the negative operator. In Italian e.g. the negative head marker *non is thus accompanied by a negative operator in Spec,NegP. Evidence for this assumption follows from example (13) where the negation blocks A-Bar movement of an adjunct in a lower clause to a Spec,CP position in a higher clause.

(13) a. Perche\(_i\), ha detto che Gianni e partito \(t_1\) 
    Why did you say John left?
    'Why did you say John left?'

b. \(*\)Perche\(_i\) [NegP Op\(\sim\) non ha detto [CP che Gianni e partito \(t_1\)].]
    Why didn't you say John left?
    'Why didn't you say John left?'

In earlier work on the application of the NEG criterion (Zanuttini 1991, Haegeman & Zanuttini 1991), languages were assumed to vary cross-linguistically with respect to the moment of application of the NEG criterion: the NEG criterion applies at surface structure in West Flemish, and at LF in Romance languages. Therefore n-words are moved to the left of the negative marker *nie in West Flemish before Spell Out, whereas in languages like Italian movement over *non is postponed (14).

(14) a. S-Structure  dat [NegP niemand, niet [Neg\(^e\) [t, en belt]]]  West Flemish
    that n-body neg neg calls
    'that nobody calls'

b. 1. S-Structure  [NegP e [Neg\(^e\) non [ha telefonato nessuno]]]  Italian
    that nobody has called
    'that nobody has called'

b2. LF
    [NegP nessuno, [Neg\(^e\) non [ha telefonato \(t_1\).]]]
    n-body neg has called
    'that nobody has called'

Later, Haegeman (1995) replaces this assumption of cross-linguistic variation in the moment of application of the NEG-criterion by the assumption that all languages apply the NEG-criterion at surface structure. This is due to her adoption of a representational framework (cf. Brody 1995), in which the notion of movement is replaced by the notion of CHAIN. The NEG-criterion is applied to negative CHAIN's that are either headed by an abstract operator with the phonological content in foot position (e.g. Italian), or have the entire n-word in their head position (e.g. West Flemish) (15).

(15) a.  [NegP Op\(\sim\)1 [Neg\(^e\) non [ha telefonato nessuno]]]  Italian
b. \( \ldots \text{dat } [\text{Neg} \, \text{niemand, niet } [\text{Neg} \, [\text{t}, \text{ en belt}]]] \)  
   West Flemish

Note that for successful factorisation \( n \)-words are forced to move to a position to the left of the negative operator. This is in line with Zanuttini’s assumption that \( n \)-words are universal quantifiers: if \( n \)-words are negative existential quantifiers, they could not occur to the left of the negative operator \( \neg \) since no negative absorption could take place. Hence Zanuttini proposes semantic representation as in (16) for \( n \)-words:

(16) \( [[\text{Nessuno}]] = \lambda P. \forall x[\text{person}\#(x) \to \neg P(x)]\)

This analysis of \( n \)-words faces several problems. I will list them briefly, and then discuss every problem in detail.

- Several important differences can be found between the syntax and semantics of \( Wh \) and negation.
- It remains unexplained why the Law of Double Negation does not apply.
- \( n \)-words do not only lose their negation after factorisation with another \( n \)-word, but they are also allowed to have a non-negative reading in other contexts.
- The analysis does not correspond to the unidirectional generalisation between negative head markers and NC.

Several important differences can be found between the syntax and semantics of \( Wh \) and negation.

Haegeman & Zanuttini’s account relies on the syntactic and semantic similarities between \( Wh \) and negation. Hence if \( Wh \) and negation appear to be fundamentally different, the analysis loses ground. Therefore the three syntactic similarities ((4)-(6)) that Haegeman put forward as arguments in favour of similar treatment of \( Wh \) and negation should be evaluated. It turns out that these similarities are not as straightforward as Haegeman and Zanuttini take them to be.

Although the similarity between subject-auxiliary inversion under \( Wh \) and negation seems striking, it has been under attack by Giannakidou (1997) who presented three counterarguments against this observation:

(i) Giannakidou (1997) argues that languages like Spanish, Greek and French do not exhibit inversion after negative fronting. This result is not surprising given that negative inversion under NegP only takes place if the verb is overtly marked for negation, i.e. if it carries a negative feature. Then the distribution with respect to negative inversion follows immediately from the results of chapter 6. In languages like West Flemish or English it does; in languages like Spanish, French or Greek the negative feature is not realised on V_{fin} but on the negative marker base-generated in Neg°. This accounts for the fact why not all languages with \( Wh \)-inversion also have
NEG inversion. Moreover, not every language exhibits *Wh-inversion. *Wh-inversion only takes place if the verb is marked for *Wh, i.e. if it carries a *Wh-feature. The similarity between *Wh- and negative inversion is thus reduced to the fact that both *Wh and negation may trigger inversion effects. Note that triggering of inversion effects is not restricted to these two phenomena. Topic and focus are also known to trigger inversion effects.

(ii) Giannakidou also claims that inversion after negative fronting is stylistically marked, whereas inversion under *Wh fronting is not. But this is due to the fact that Spec,CP is not the natural landing site for n-words, whereas it is for *Wh-elements. Movement from Spec,NegP to Spec,CP is only motivated by topicalisation, which in general triggers stylistic effects. The subject-auxiliary inversion is then the result of the application of the NEG criterion after topicalisation: the n-word in Spec,CP should be in spec head configuration with C°[Neg].

(iii) Giannakidou postulates that inversion is only triggered by sentential negation, and not by constituent negation, which is, according to her, not in line with Haegeman’s claim:

(17) a. Not many years ago Paul was in love with Lucy
b. *Not many years ago was Paul in love with Lucy

But this is in fact a prediction that follows from the NEG-criterion: inversion effects are the result of the fact that a verb is marked for negation. Since (17) is an example of constituent negation, the verb cannot be marked for negation. Hence the NEG-criterion cannot apply on sentential level. If the NEG criterion applies, one should adopt a syntactic structure as in (18) where the NEG criterion is fulfilled within the adverbialex constituent, licensing an abstract Neg°:

(18) [TP [NegP Not many years ago Neg°] [TP Paul was in love with Lucy]]

Hence Giannakidou’s counterarguments against Haegeman’s (1995) claim that *Wh and negation exhibit large similarity with respect to their syntactic properties are convincing in the sense that the syntactic behaviour of *Wh and negation as discussed above, should be treated as distinct phenomena. The syntactic similarity is a consequence of the fact that both negation and *Wh can be subject to feature checking requirements in particular groups of languages. Hence, the fact that *Wh-elements can be factorised is a result of *Wh-movement that is triggered by means of feature checking. Factorisation of negative elements can be supported by the fact that *Wh elements can also be factorised.

The question is then whether the examples in (5) (NPI licensing) and (6) (island effects) legitimise a similar syntactic or semantic analysis of negation and *Wh. It has been shown that licensing of any-terms is related to the non-veridical nature of NPI licensers (Giannakidou 1999). Since negation and *Wh are non-veridical, they are able

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237 Under the assumption that the temporal adjunct is a TP adjunct.
to license NPI’s. The class of non-veridical elements is however not restricted to Wh and negation. As a consequence, the fact that both Wh and negation are able to license NPI’s does not legitimise a similar treatment of multiple Wh and multiple negation.

The same holds for the island effects in (6). It is well-known that negation and Wh are not the only linguistic phenomena, which introduce islands. Moreover, the cross-linguistic uniformity of these island effects suggests that semantic constraints are involved. It has been argued by Szabolcsi & Zwarts (1993) and Honcoop (1998) that these islands are the result of downward entailing properties of introducers of islands. Recall that all downward entailment elements are non-veridical. Again it is the fact that both Wh and negation are non-veridical, which is responsible for the island effects, and hence a special similar treatment of multiple negation and multiple Wh cannot be supported on these grounds.

In sum, although Wh and negation share syntactic and semantic properties, such as inversion effects, the ability to license NPI’s and certain island effects, these properties are not necessarily restricted to Wh and negation. Inversion effects can be seen as an effect of a mechanism of feature checking and the licensing of NPI’s; the island effects are related to the non-veridical properties that Wh and negation share. Feature-checking mechanisms do not necessarily result in polyadic quantification (they may only lead to factorisation) and neither does non-veridicality. Hence the similarities between Wh and negation do not legitimise an analysis of NC in terms of polyadic quantification.

Apart from the differences that are mentioned above, two other differences between polyadic Wh quantification and NC are crucial for the proper evaluation of Zanuttini and Haegeman’s proposals. First, polyadic quantification is supposed to create LF’s that cannot be yielded without polyadic quantification. The reading in (19) is not equivalent to a LF with a monadic Wh-operator and an indefinite or existential quantifier. However, in the case of negation in NC languages, the LF’s (20) are equivalent.

\[
(19) \quad a. \quad \text{Who read which book} \quad \text{Wh}_{x,y}[\text{person'}(x) \& \text{book'}(y) \& \text{read'}(x,y)] \iff \\
\quad b. \quad \text{Who read a book} \quad \text{Wh}_x \exists_y[\text{person'}(x) \& \text{book'}(y) \& \text{read'}(x,y)]
\]

\[
(20) \quad \text{Nessuno ha telefonato a nessuno} \quad \text{Italian} \\
\text{N-body has called to n-body} \\
\text{‘Nobody called anybody’} \\
\text{\(\neg \exists_{x,y}[\text{person'}(x) \& \text{person'}(y) \& \text{call'}(x, y)]\)} \iff \\
\text{\(\neg \exists x \exists y[\text{person'}(x) \& \text{person'}(y) \& \text{call'}(x, y)]\)}
\]

Second, NC is clause bound (21)a whereas the formation of polyadic Wh-elements is not (21)b:
A second argument against Haegeman’s and Zanuttini’s solution is that the comparison between multiple Wh and multiple negation is inadequate with respect to two facts: (i) contrary to the formation of a polyadic Wh-quantifier, the formation of a polyadic negative quantifier is subject to cross-linguistic variation; (ii) it remains unexplained why the Law of Double Negation does not always apply. Note that one of the central arguments in favour of Haegeman’s and Zanuttini’s analysis was the resemblance with multiple Wh. However, interrogatives cross-linguistically give rise to LF’s that contain only one Wh-operator binding multiple variables. If the comparison between multiple Wh and multiple negation is correct, the expectation is that multiple negation always gives rise to NC readings, in which the two negative quantifiers have formed one polyadic quantifier. But NC only occurs in a subset of the set of languages.

The fact that the formation of polyadic negative quantifiers is blocked in several natural languages is the result of the Law of Double Negation (LDN). This law cancels to negative quantifiers out against each other. However, if the semantic properties of negative quantifiers are cross-linguistically identical, as Haegeman and Zanuttini suggest, LDN is expected to apply to all languages. The fact that negative quantifiers seem to obey this law in only a subset of the set of languages is a clear indication that n-words are semantically different from negative quantifiers in DN languages. Hence, the fact that multiple Wh allows the formation of polyadic quantification does not guarantee that this holds for other categories as well.

**N-words do not only lose their negation after factorisation with another n-word, but they are also allowed to have a non-negative reading in other contexts**

As has been shown in chapter 3, it is possible to license the presence of n-words by other elements than negation. This means that it is not possible to factorise the negation of the n-word with a higher negation. However, n-words cannot occur in every environment: the class of elements that licenses n-words is broader than the class of negative elements and seems to be a subset of the class of NPI-licensors. Herburger (2001) (citing Bosque 1980) lists a series of examples from Spanish, of which a sample is demonstrated in (22)-(24).
(22) a. Pedro compró el terreno sin contarselo a nadie.  

Pedro bought the land without telling to n-body  

‘Peter bought the land without telling anybody’

b. Antes de hacer nada, debes lavarles las manos  

Before of do n-thing, must.2SG wash.CL the hands  

‘Before doing anything, you should wash your hands’

(23) a. Dudo que vayan a encontrar nada.  

Doubt.1SG that will.3PL.SUBJ find n-thing  

‘I doubt they will find anything’

b. Prohibieron que saliera nadie.  

Forbade.3PL that went.out.3SG.SUBJ n-body  

‘They forbade anybody to go out’

(24) a. Es la última vez que te digo nada.  

Is the ultimate time that you tell.1SG n-thing  

‘This is the last time I tell you anything’

b. Juan ha llegado más tarde que nunca.  

Juan has arrived more late than n-ever  

‘Juan has arrived later than ever’

The examples in (22)-(24) are examples of Paratactic Negation, where prepositions (22) or verbs (23) with a negative connotation are able to license n-words that are in a subordinate (clause) position. The examples in (24) are similar to the previous ones: última ‘last’ in (24)a is an adjective with a negative connotation and although comparatives might not seem to have a negative connotation, they can easily be paraphrased by means of a negative sentence: sentence (24)b is interpreted as ‘Guan has never arrived as late as now.’ Although these examples are from Spanish, this phenomenon is widespread under NC languages (e.g. cf. Giannakidou 1997 for Greek). However, not every language exhibits the same pattern: Serbo-Croatian for example allows the licensing of n-words in before clauses, but Polish does not. It can be argued for that these licensors are in fact lexically decomposed into a negative operator and a non-negative element. English doubt would then have the lexical representation of ‘not be sure.’ In chapter 8 I will argue that this provides indeed a possible account for Paratactic Negation, but this solution does not help Zanuttini, since Zanuttini treats n-words as universal quantifiers, and universal quantifiers cannot raise out of the clause (Szabolcsi 1997, Giannakidou 2000). The quantificational status of n-words will be the subject of section 7.4.

The analysis does not correspond to the uni-directional generalisation between negative head markers and NC.

A final argument against Haegeman & Zanuttini’s analysis is that in its present form it does not explain why the occurrence of NC is uni-directionally related to the syntactic status of NC. According to Haegeman & Zanuttini (1996) the NEG-criterion applies universally and hence whether a negative marker is overtly or covertly present does not matter. However, note that a framework in which NegP is only realised when there are [uNEG] features present, is in line with the NEG criterion approach. According to Haegeman & Zanuttini, NC is only possible as a result of factorisation under NegP, and only languages with a Neg° position can host a negative head marker. This could explain why negative head markers occur only in NC languages. Hence the feature-checking mechanism that seems to underlie NC should be implemented in a syntactic framework that allows a flexible availability of functional projections.

### 7.1.2 NC as resumption of negative quantifiers

De Swart & Sag (2002) argue that Zanuttini’s original notion of negative factorisation and absorption still suffers from a lack of compositionality and is an ad hoc mechanism that serves no other goal than to account for NC effects. Although Zanuttini’s analysis relies crucially on the similarity between the semantics of multiple Wh and negation, De Swart & Sag argue that her analysis lacks a proper framework from which negative absorption immediately follows. Hence De Swart & Sag incorporate NC in the polyadic framework that has been developed to account for the fact that multiple Wh-terms are interpreted as a single interrogative operator. They focus on examples in Romance languages (mainly French), but claim that their approach of NC can in principle be extended to any language.

Sentences in (substandard) French and (substandard) English containing two n-words are ambiguous between an NC and a Double Negation reading.

(25) a. *Personne (n’) a rien fait* 
   N-body (neg) has n-thing done 
   NC: ‘Nobody did anything’ 
   DN: ‘Nobody did nothing’ 

b. *Nobody did nothing* 
   NC: ‘Nobody did anything’ 
   DN: ‘Nobody did nothing’ 

Rather than accounting for these multiple readings in terms of structural or lexical ambiguity, De Swart & Sag argue that the ambiguity follows from two different mechanisms of quantification: (i) iteration of multiple monadic quantifiers and (ii) quantifier resumption.

Binary resumption is defined as follows: if two ‘similar’ quantifiers both bind variables of a subset of a domain of discourse E, the resumptive quantifier binds pair
variables that are members of a subset of \( E^2 \). Extending this to \( n \)-ary quantifiers, \( n \)-ary resumption is defined as follows:

\[
Q'_E A_1, A_2, \ldots, A_k (R) = Q_{E^k} A_1 \times A_2 \times \cdots \times A_k (R),
\]

whereby \( A_1, A_2, \ldots, A_k \subseteq E \) and \( A_1 \times A_2 \times \ldots \times A_k \subseteq E^k \).

Assuming that quantifier resumption is optional, both readings can be achieved.

\[
\begin{align*}
(26) & \quad [\text{NO}_{E}^{\text{HUMAN}}, \text{NO}_{E}^{\text{THING}}] (\text{DO}) \Leftrightarrow \\
& \quad \exists x \exists y [\text{Person}(x) \land \text{Thing}(y) \land \text{Do}(x, y)] \\
\end{align*}
\]

De Swart & Sag show that NC readings are in fact comparable to resumptive readings since NC relations can be modified by "sauf" except clauses, a standard diagnostic test for resumptive readings.

\[
(27) & \quad \text{Personne n’a parlé a personne, sauf Marie a son frère.}^{241}
\]

French

N-body has talked to n-body, except Marie to her brother

‘Nobody talked to anybody, except Mary to her brother’

The question then arises why the preferred reading in English is Double Negation, whereas in French it is NC. According to De Swart & Sag this has however nothing to do with the language system itself, but is a matter of language use. De Swart & Sag relate this outcome to the position of a language in the Jespersen Cycle and argue that languages vary with respect to the DN vs. NC interpretation of multiple negative expressions along the lines of the Jespersen Cycle\(^{242}\).

Two issues remain open for De Swart & Sag: (i) their treatment of the negative operator and (ii) the occurrence of Paratactic Negation (PN). Since their approach of resumption of negative quantifiers already yields a single negation in semantics, the contribution of the negative operator seems to be semantically vacuous. Their solution to this problem is to assume that negation is an operator that does not bind a variable. Being a zero quantifier, it participates in the resumptive quantification of negative quantifiers without changing the argument structure of the sentence\(^{243}\). The only condition for participation in the concord relation is that the zero operator shares some

\(^{241}\) Taken from De Swart & Sag (2002): 388.

\(^{242}\) Note that this is only partially true. Jespersen Phase I-IV languages are all NC languages, but only some Phase V languages are DN languages. Hence, not every language exhibits diachronic variation with respect to NC, e.g. Yiddish has remained an NC language.

\(^{243}\) The term 0 quantifier falls back to Lindström (1996) characterization of quantifier types. Functions from \( \text{Pow}(E) \) to truth values are defined as quantifiers of type \( <1> \). Functions from \( \text{Pow}(E) \) to a quantifier type \( <1> \) are \( <1,1> \). Functions from propositions to truth values can be seen as functions not binding any variable and therefore as \( <0> \) quantifiers.
property with the other negative quantifiers. De Swart & Sag argue that this property
is the semantic anti-additive feature that both negative quantifiers and the negative
operator have in common.\textsuperscript{244} The analysis of negative operators as zero quantifiers
can be extended to other negative elements, such as prepositions like without. De
Swart & Sag take French sans ‘without’ to be a propositional modifier, similar to the
negative operator, that due to its anti-additive properties is allowed to participate in
the quantifier retrieval.\textsuperscript{245}

This implementation of NC in a polyadic quantification framework has one major
theoretical advantage: rather than to account for NC in a syntactic way (through the
NEG Criterion) and a semantic way (by means of factorisation and absorption) De
Swart & Sag need only a semantic mechanism to derive the proper semantics.

Another advantage is that polyadic quantification has been motivated independently
(not only to derive pair-list readings, but also with respect to quantifiers binding a
reflexive pronoun), whereas negative absorption is a mechanism that has only been
stipulated to account for NC.

The absence of any underlying syntactic constraints raises two major consequences
for a theory of NC: (i) how to account for the locality effects, such as clause
boundedness of NC relations; and (ii) how to account for cross-linguistic variation of
the possibility of NC.

De Swart & Sag answer the first question by adopting Reinhart’s (1997) and Winter’s
(1997) observation that the scope of NP quantifiers is always clause bound and since
they treat n-words as inherently negative quantifiers, clause boundedness of NC
follows from general constraints on QR. Note that this analysis forces De Swart &
Sag to account for resumption of multiple Wh terms without analysing these Wh
elements as quantifiers, but as indefinites. The quantificational nature of n-words will
be discussed in section 7.4.

The other consequence of a strict semantic analysis for NC is that they have to explain
the cross-linguistic variation with respect to the occurrence of NC. De Swart & Sag
relate NC to the Jespersen Cycle, by arguing that NC is the result of reinterpretation
of indefinite expressions such as Early French personne ‘anybody’ as inherently
negative elements. French used to be a Double Negation language in which indefinites
enforce the single expression of negation. As single negative readings can be the
result of only one negative operator, or of resumption of multiple negative elements,
indefinite non-negative elements such as personne are reanalysed as negative
quantifiers participating in an NC reading. Hence De Swart & Sag argue that, whereas
languages have both NC and DN readings available for multiple negative expressions,
languages vary diachronically with respect to the preferred reading.

\textsuperscript{244} An exception is made for French pas and English not that in most varieties do not seem to
participate in the concord relationship. De Swart & Sag argue that these adverbia
d modifiers are verbal complements, that due to some lexical constraint have to remain intact in the quantifier storage and can
therefore not be subject to quantifier retrieval. Languages vary with respect to this lexical constraint.

\textsuperscript{245} The assumption that sans ‘without’ is a prepositional modifier is motivated by the fact that sans
selects infinitival verbal complements, e.g. sans dire rien ‘without saying anything’.
Although the absence of a syntactic basis in this theory may lead to an increase in its theoretical power, it also leads to a series of empirical problems. Partly this may be the case because this approach is still programmatic in nature, and not every issue has been carefully dealt with, but other problems are a direct consequence of the predictions that have been made within this framework. In short, De Swart & Sag's approach faces the following problems:

- The assumption that NC is the result of resumptive quantification vis à vis iteration of monadic quantifiers is weakly motivated.
- Several syntactic and semantic constraints on NC do not follow from the theory.
- The analysis does not correspond with the generalisation between negative heads and NC.

The assumption that NC is the result of resumptive quantification vis à vis iteration of monadic quantifiers is weakly motivated.

The fact that it is possible to account for NC in terms of polyadic quantification does not legitimise such an analysis. An argument against De Swart & Sag's analysis is that the negative resumptive quantifier is reducible to an iteration of monadic quantifiers. This would be an argument in favour of analyses that take n-words to be non-negative existential quantifiers.

\[
\text{(29)} \quad [\text{NO}_E^{\text{HUMAN,THING}}] (\text{DO}) \iff \\
[\text{NO}_G^{\text{HUMAN\times THING}}] (\text{DO}) \iff \\
\exists x \exists y [\text{Person}(x) \& \text{Thing}(y) \& \text{Do}(x, y)] \iff \\
[\text{NO}_E^{\text{HUMAN}}, \text{SOME}_G^{\text{HUMAN}}] (\text{DO})
\]

Resumptive quantification is generally motivated by the fact that these readings cannot be reduced to iterations of monadic quantifiers, as is the case with resumptive negative quantifiers. This criticism also holds for Zanuttini's analysis. De Swart and Sag provide four counterarguments against this position, arguing that their analysis is indeed well motivated.

The first counterargument put forward by De Swart & Sag concerns the fact that language in some cases 'does go beyond the Frege boundary' and that polyadic quantification has been well motivated for a wide range of facts (cf. Keenan & Westerståhl 1997). Although it is certainly true (contrary to Haegeman & Zanuttini's proposals) that this proposal is embedded in a larger and independently motivated framework, it still does not follow why NC should be treated as an instance of polyadic quantification. Each instance of polyadic quantification should be well motivated and the fact that other complex constructions should be analysed in terms of resumption does not motivate a polyadic quantification account of NC.
Chapter 7 - The meaning of n-words

The second counterargument that De Swart & Sag present concerns the fact that NC readings can be modified by *except* phrases (28). However, this test cannot be applied in all cases of alleged polyadic constructions. Some polyadic constructions cannot be modified by an *except* phrase, as in (30).

(30) *Personne ne veut parler a personne, sauf Jean au diable*  
French  
N-body neg wants talks to n-body, except Jean to.the devil  
‘Nobody wants to talk to anybody, except John to the devil’

In this example the resumptive quantifier in the matrix clause only refers to pairs of variables that obey a De Re reading, since the second negative quantifier *personne* has scoped over the modal verb *veut* ‘want’. The interpretation of the resumptive reading of (30) reads as ‘there is no pair <x, y> such that x wants to talk to y, but there is a pair <Jean, le diable> of which the first member wants to talk to the second member.’ This interpretation presupposes the existences of the devil, whereas (30) can be uttered felicitously with a De Dicto reading for *le diable*. So modification by *sauf* is not a proper criterion to motivate resumptive quantification.

Third, they argue that other instances of non-reducible polyadic constructions can be translated into first-order logic, e.g. reflexive pronouns that are bound by a quantificational subject.

(31) Every boy likes himself  
\([\text{EVERY}^{\text{BOY}}, \text{SELF}] (\text{LIKE})\)  
\(\forall x[\text{like}(x, x)]\)

The resumptive quantifier in (31) cannot be reduced to an iteration of monadic quantifiers, but can be translated by a reading that only consists of a monadic quantifier. However, it remains unclear whether (31) is a proper example of resumptive quantification, since the *except* phrase cannot modify pairs of variables that are bound by the polyadic quantifier. De Swart & Sag argue that modification by *except* phrases forms one of the major diagnostics to determine polyadic constructions. (32) is an indication that the reflexive variable is bound by a monadic quantifier rather than resumptive quantifier.

(32) Every boy likes himself, (*except John himself*)

Fourth, De Swart & Sag argue that the translation of a resumptive negative quantifier into an iteration of monadic quantification is only possible if n-words are treated as existential quantifiers (29). Since May (1989) argues that (at least) English *no-one* cannot be an existential quantifier, this would be an argument against reducing English resumptive NC readings into iterations of monadic quantifiers. This is however untrue. Reducibility into monadic quantifiers can also be the case if all n-words are treated as universal negative quantifiers:
Hence I argue that the four counterarguments that De Swart & Sag provide against the position that resumptive NC readings can be reduced to iterations of monadic quantifiers and that such an analysis is to be preferred, are not well motivated.

**Several syntactic and semantic constraints on NC do not follow from the theory.**

Another argument against De Swart & Sag’s approach concerns the fact that it does not account for a number of syntactic and semantic constraints that govern NC. Before discussing these constraints, it should be acknowledged that they do not claim to have answers for all these questions since their account is essentially programmatic in nature. Their main aim is to show that NC fits in a polyadic framework, but such a theory may require additional machinery to account for every restriction. I will discuss three properties of NC that remain unexplained within this approach. First, this approach should account for the clause boundedness of NC relations. De Swart & Sag argue that quantifier retrieval is constrained to clauses and that finite verbs are required to have an empty quantifier store. This covers the clause boundedness of standard NC relations, but De Swart & Sag stipulate that this claim does not hold for subjunctive verbs with negative quantifiers in their store. This assumption has been made to account for several PN effects, but is not independently motivated. In fact, as I will discuss in section 7.4, subjunctives generally do not allow for QR across the clause. E.g. verbs such as *believe* are known to select subjunctive clauses cross-linguistically, but these quantifiers cannot raise out of the subjunctive clause.

\[(34)\] John believed that he bought every book  
\[*\forall x.([book^*(x)] \rightarrow \text{believe}^*(j, \text{buy}^*(j, x)))]

Another argument concerns the possible interference with an NC relation by the negative marker. De Swart & Sag propose a lexical constraint on the possibility for negative adverbs to participate in NC relations. French *ne*, Middle Dutch *en/ne* or the Slavic negative markers are allowed to establish an NC relation, French *pas* or English *not* are not. However, there is third class of negative markers that, depending on their position in the syntactic clause, may or may not participate in an NC relation. Good examples are West Flemish *nie* or Italian *non*. West Flemish *nie* is allowed to be in an NC relation, but any n-word that is c-commanded by *nie* yields a Double Negation reading (35). The opposite is the case with Italian *non*, which introduces Double Negation if it is c-commanded by an n-word (36).
De Swart & Sag do not present an explanation for this phenomenon.

A third argument against De Swart & Sag’s approach is the status of NC and Double Negation cross-linguistically. According to De Swart & Sag the linguistic competence allows for both readings cross-linguistically. The fact that one reading is preferred over the other is the result of factors that play a role in language use. The question is whether such a strict claim holds.

First there are Double Negation languages that completely disallow NC-like readings, including Emphatic Negation readings (see 3.3.4). Examples of these languages are Swedish and Norwegian. By arguing that multiple negative expressions in these languages do have underlying NC readings, that are unavailable for reasons of language use, this theory of NC overgeneralises. The ambiguity between an NC and a Double Negation reading is less straightforward than the authors assume. Probably this is due to the range of their empirical domain. Contrary to what the title of their paper ‘Negative Concord in Romance’ suggests, it is mainly about English and French. I have already shown in chapter 5 that both languages occupy an unstable position in the Jespersen Cycle: French, since the increasing absence of the preverbal negative marker makes it a candidate to change from an NC language into a Double Negation language (Phase IV to Phase V); English, since it is on its way of becoming a Phase I language and allows NC in almost all its substandard varieties. Therefore ambiguity seems plausible in these languages, but this is not a universal property of languages.

Second, the proposed link between the preferred reading and the Jespersen Cycle is not empirically motivated. De Swart & Sag suggest that languages with a preverbal negative marker allow indefinite expressions (NPI’s) to emphasise the negation and that these NPI’s can be reinterpreted as negative quantifiers, changing the language from a Double Negation reading into an NC language. However, although this might have been the case for French, this is certainly not the case in many other languages where negation was emphasised by the presence of an n-word that already had a negative connotation. The Middle Dutch n-word *niemen* ‘n-body’ stems from *ne iemen* ‘neg somebody’. The origin of n-words is generally not a non-negative...
indefinite, but rather a combination of a negative marker and a negative expression. Hence NC cannot simply be taken to be the result of reanalyzing NPI’s as negative quantifiers.

The analysis does not correspond with the generalisation between negative heads and NC.

Finally, De Swart & Sag’s approach is incompatible with the generalisation described in chapter 5, which links preverbal negative markers unidirectionally to NC. Rather than to develop a theory that accounts for this correlation and to develop a strictly semantic theory about NC as a result of resumptive quantification, it seems more plausible to develop a theory that explains NC on the basis of its empirically well-grounded syntactic constraints. Given the syntactic nature of the constraints on NC, I argue that a syntactic approach is to be preferred.

7.1.3 Concluding remarks

To conclude this section, I briefly summarise the main conclusions: I argue that Zanuttini and Haegeman’s assumption to treat n-words in a similar fashion as Wh terms is not well motivated, and that analyses based on this assumption face problems. First, the motivation to analyse n-words as negative quantifiers was because of its resemblance with Wh. However, closer examination of this correspondence turned out that there are serious differences between multiple negation and multiple Wh constructions: NC is clause bound, multiple Wh is not, multiple Wh cannot be reduced to a single Wh operator and an existential quantifier, NC constructions can. Second, these analyses fail to explain why languages differ cross-linguistically with respect to the occurrence of NC. Especially the question why some languages would and others would not allow polyadic quantification of negative quantifiers remains unanswered. Third, n-words may have a non-negative reading in many downward entailment contexts, which cannot be accounted for easily in this framework. Finally, the uni-directional relation between negative heads NC is not predicted by these analyses, although the original proposal of the NEG criterion left space for such a correspondence.

On the basis of the discussion that I have presented in this section, I conclude that n-words should not be taken as negative quantifiers. In the next chapter I discuss the opposite view that takes n-words to be non-negative.
7.2  N-words as non-negative

Opposing the view that n-words are inherently, i.e. semantically negative, the approach that has been introduced by Laka (1990) and that was further elaborated by Ladusaw (1992) consists of a view in which n-words are semantically non-negative. The central question within this approach is not how the disappearance of negation can be explained without losing compositionality, but how to account for the negation in the semantics of NC sentences. If n-words do not contribute to the negative semantics of a sentence, how can the interpretation of a sentence like (37) contain a negation at all?

(37)  Nessuno ha parlato con nessuno  
Italian  
N-body has talked with n-body  
‘Nobody talked to anybody’

In this section I will first discuss Ladusaw’s (1992) position and then Giannakidou’s (2000) theory on NC. Giannakidou’s proposal can be thought of as a semantic radicalisation of Ladusaw’s original theory, which is partly due to her different perspective on NPI licensing.

7.2.1  N-words as non-negative indefinites

Ladusaw argues that Zanuttini’s (1991) syntactic account of NC lacks a proper semantic basis, which he tries to provide. His central idea is that n-words in NC languages are non-negative indefinites in the sense of Heim (1982), and do not have any quantificational force of their own, but only contribute an unbound variable and a descriptive context. This implies that all n-words need to be roofed (i.e. unselectively bound) by a negative operator. This is essentially synonymous to saying that n-words are equivalent to indefinite NPI’s such as any-terms. The difference is that n-words have a more restricted distribution than any-terms, e.g. because the first category may only be licensed by anti-additive operators and the latter may also occur in other non-veridical contexts. Hence Ladusaw treats n-words on a par with NPI’s occupying the opposite position in the debate about the semantic nature of n-words. As n-words do not have any negative force of their own, two questions immediately arise: (i) where does the negation come from in NC sentences that contain only n-words; (ii) what licenses these NPI’s?

In sentences like Italian (38) the answer immediately follows. There is an anti-additive negative operator non ‘neg’ that is responsible for the expression of negation and that licenses present n-words. Additional evidence for this analysis comes from the fact that no n-word is allowed to precede the negative marker in Italian.
A problem for this analysis is however formed by sentences like (37), in which an overt anti-additive operator is absent. Ladusaw accounts for this problem by arguing that the negative operator does not necessarily have to be lexically present, but can also be configurationally present, i.e. by introducing some additional structure, such as a negative phrase NegP. The crucial question is then what licenses the introduction of this extra configurational material, since abstract structure cannot be introduced ‘willy nilly.’ The answer to this question is that the presence of n-words licenses the abstract negative operator, which in its turn licenses the n-words (self-licensing in Ladusaw’s terms). Hence, contrary to standard NPI’s such as any-terms, n-words may license themselves.

Ladusaw provides an analysis in terms of GPSG and GB in order to show that this mechanism of self-licensing does not suffer from circularity. A crucial observation for this is that sentential negation in NC languages is either expressed by a negative marker in preverbal position or by an n-word that precedes the verb. Sentences in which both are lacking are generally ill-formed in NC languages, or give rise to constituent negation at most.

Ladusaw proposes that n-words can only be licensed if either the specifier position or the head position (or in some languages both positions) of NegP are filled. In the case of a negative operator this is done by assigning the negative operator a Neg° position; in the case of an absent negative operator one of the n-words moves to a Spec,NegP position and thus licenses the presence of NegP, which in its turn licenses all n-words.

Ladusaw’s position is essentially programmatic in the sense that his proposal is not fully embedded in a syntactic or semantic framework. In order to be evaluated it needs to be implemented in an appropriate syntactic or semantic framework. As Ladusaw’s proposal relies crucially on the similarity between n-words and NPI’s, the choice for...
adopting a proper framework to implement his ideas depends on the treatment of NPI’s like English any-terms. The problem is however that the behaviour of n-words is crucially different from that of ‘standard NPI’s’. This means that a theory that treats n-words as NPI’s needs some additional machinery to account for the differences between the two kinds of terms. A theory that analyses n-words in different terms than NPI’s needs to explain the large similarity between the two classes. An example of the first type of theory is Giannakidou (2000). This will be discussed in the next subsection. A proper implementation of Ladusaw’s program in syntactic terms will form the core of my own explanation for NC to be discussed in chapter 8 (cf. also Acquaviva 1995, Giannakidou 1997 for implementation in a syntactic framework).

Problems for Ladusaw’s proposal that are related to the similarities between n-words and NPI’s will be discussed in the subsequent subsection. Now I will describe some other problems related to Ladusaw’s position that challenge the alleged non-negativity of n-words in general.

Obviously, cases in which n-words do exhibit negative behaviour are problematic for this approach. Contexts, in which n-words seem to be inherently negative, form counterarguments against Ladusaw’s approach. I will discuss three such contexts.

- N-words in fragmentary answers, disjunction and coordinated structures.
- Instances of event-bound n-words.
- N-words in preverbal position.

* N-words in fragmentary answers disjunction and coordinated structures *

Fragmentary answers form a challenge for the non-negativity approach, since n-words are allowed to occur in fragmentary answers, contrary to NPI’s:

(42) ¿Quién vino? Nadie / *Un alma

Who came? N-body / a single soul

‘Who came? Nobody / a single soul’

The n-word occurring in the short answer in (42) is allowed, whereas the NPI is not. Zanuttini (1991) and Herburger (2001) suggest that this kind of example indicates that n-words do in fact express negation themselves. The only way out for the non-negativity approach is to argue that n-words do in fact license themselves in this context as well and that some abstract structure is responsible for licensing the negation.

The problem then is how to account for the fact that n-words are allowed to license themselves, whereas an NPI with similar semantic contents is not. Hence these examples do not contradict the non-negativity approach, but they are a problem for
analyses that take n-words and NPI on a par. I will continue the discussion of this problem in 7.2.2.

The same holds for other elliptic structures such as VP conjunctions or disjunctions, as the example in (43) shows.

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

Disjunction is always based on coordination of two similar projections. As the latter part of the disjunction in (43) is a PP, containing a DP nadie, this would, according to Herburger (2001), be an example in which the n-word cannot be licensed by some additional abstract structural feature [NEG] in the second clause, nor in the first clause (as the first clause is not under the scope of negation). Hence the n-word should be semantically negative in this case.

However, the debate about conjunctions, disjunctions and coordination contains more pluriformity than Herburger suggests. coordinations generally have the surface structure in (44). Hence, two possible underlying structures may apply: a structure in which the two YP’s are coordinated and a structure in which XP is part of a coordinated ZP and ZP₂ is deleted under ellipsis with the exception of YP.

(44)  XP YP₁ Op YP₂

(45)  a.  [XP [YP₁ Op YP₂]]
    b.  [[ZP₁ XP YP₁] Op [ZP₂ X P YP₂]]

The question is then of course what licenses the ellipsis in the structure in (45)b. The standard answer refers to identity with the first XP but in a sense this is the weakest approach to the licensing question. A stronger answer could be: any material of which the (covert) presence is also triggered by the (syntactic) context licenses the ellipsis. The latter strategy may account for the structure in (46)b. The presence of nadie requires a negative marker in the second TP, which is deleted under ellipsis. The deletion of the second verb takes place under identity, the deletion of the negative marker by the n-word that, by its appearance in postverbal position, marks the presence of its licenser. Note that this is a reformulation of Ladusaw’s principle of self-licensing.

(46)  a.  [TP Me caso [pp contigo] o [pp con nadie]]
    b.  [TP Me [T caso [pp contigo]] o [T [NegP no caso [pp con nadie]]]]

Hence, Herburger’s argument does hold only under the assumption that underlying structures like (46)b are not allowed. However, she does not provide grounds to legitimate this assumption. Note again, that the analysis in (46)b distinguishes between n-words and NPI’s, as the sentence cannot be paraphrased by a English
translation consisting of *any*-terms, or a Spanish variation with *un alma* ‘a single soul.’

(47)  a. *I marry you or anyone*  
     b. *Me caso contigo o con un alma*  

Thus the first series of arguments by Herburger against Ladusaw’s position are proven insufficient as long as n-words are treated distinctly from standard NPI’s.

**Instances of event-bound n-words**

The second argument is based on the possibility of n-words occurring in postverbal position. Without being licensed by a negative marker or an n-word in preverbal position, they still seem to express negation by themselves. An example from Spanish (again by Herburger) is given in (48).

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

In these cases the n-word is interpreted as negative in postverbal position without a negative marker in preverbal position. Apparently n-words may occur by themselves without being licensed. However the reading of (48) differs from an NC reading in which there is a preverbal negative marker *no*. The only reading (48) may get is a reading in which the existential quantifier binding the event variable scopes over the negation.

(49)  $\exists e[\text{Look}'(e) \& \text{Agent}(\text{baby}, e) \& \neg \exists x.[\text{Thing}'(x) \& \text{Theme}(x, e)]]$

This explains why there is no preverbal negative marker in (48): in the case of a preverbal negative marker the negation would scope over the quantifier that binds the event variable and the sentence would get a different reading. Still, this argument does not provide evidence against the non-negative approach. It is not excluded that inside the vP a silent negation is active. This silent negation may be licensed by the n-word. The question is then why the silent negation may not have phonological contents.

One could argue that this negation is not spelled out, since there is no need to do so. The presence of the n-word in object position already triggers the presence of a NegP, so this does not have to be made visible. The reason why in general the negative marker has to be visible is for scope reasons. Contrary to (48) the sentence (50) (with an NC reading) expresses sentential negation. Without the negative marker self-licensing still requires an abstract negation to be included. As this abstract negation will be included in a position as low as possible, a sentential negation reading is ruled out, since the negation is located inside vP and sentential negation is the result of a negative operator that scopes over the entire vP in order to bind the event variable that
has been introduced by \( \nu \). The negative head is banned from being spelled out in lower position, because there is no need to do so, and hence it is ruled out under minimalist assumptions.

(50) El bebé no este mirando a nadie

The baby neg is looking at n-body
‘The baby isn’t looking at anything’

_N-words in preverbal position_

The final argument given by Herburger is why preverbal n-words seem to express negation by themselves in preverbal position (cf. (51)).

(51) Nadie (*no) vino\(^{247}\) Spanish

N-body neg came
‘Nobody came’

As have already demonstrated in chapter 3, this is not a general property of NC languages, but a property of Non-Strict NC languages such as Spanish and Italian. Most NC languages, such as Czech, do not have this property and require the presence of a preverbal negative marker.

(52) a. Nikdo nevolá Czech

N-body neg.calls
‘Nobody is calling’

b. *Nikdo volá

N-body calls
‘Nobody is calling’

The fact that the preverbal negative marker is not visible is not an argument against the Ladusaw approach. At most it is an argument against an analysis of Non-Strict NC languages in terms of non-negative n-words. I will show in the following chapter that the distinction between Strict and Non-Strict NC is the result of the syntactic/semantic properties of the negative marker in these languages and I will present an account of the facts in (51) there.

As long as n-words are not confused with NPI’s, arguments against Ladusaw’s approach do not hold, but additional syntactic accounts may be required. We saw that such syntactic accounts can be motivated on independent grounds.

\(^{247}\) This sentence can be well-formed if the subject is focussed. In that case the sentence yields a Double Negation reading.
7.2.2 N-words as Affective Items

In the previous subsection it became clear that Ladusaw's original approach left space for different interpretations. NC can be regarded as some form of syntactic agreement, or as a special instance of negative polarity. Whereas in the previous subsection I emphasised that n-words are crucially different from NPI's, in this subsection I will discuss an analysis put forward by Giannakidou (2000) that considers n-words as polarity items. Although her data are primarily from Greek, her analysis applies also to other languages, such as Catalan, Polish or Hungarian.

Giannakidou's account of NC is an application of her treatment of Affective Items. AI's form a superset of the set of NPI's and consist of all elements that can only be uttered felicitously in a particular semantic context C. According to this definition, n-words are AI's, since they cannot occur in every context. Hence constructions involving n-words are by definition instances of AI's licensed by a proper licenser.

Giannakidou distinguishes two different paradigms of n-words in Greek: emphasised and non- emphasised n-words. These series differ with respect to the number of contexts that can license them. Emphasised n-words can be licensed by negation, or prepositions like without or before. Unemphasised n-words can also be licensed in all non-veridical contexts, including interrogatives, imperatives, etc. The behaviour of unemphasised n-words is similar to that of English any-terms, whereas emphasised n-words exhibit almost the same behaviour as standard n-words in NC languages. Therefore I consider the elements that Giannakidou refers to as unemphasised n-words to be indefinite AI's that need to be licensed by a non-veridical context. However, note that unemphasised elements (similar to English any-terms) fall out of the definition of n-words as has been formulated in subsection 3.1.2 (repeated in (28)) since they cannot introduce a negative context themselves.

(53) An n-word is an indefinite or quantifying element that only under certain well-defined conditions introduces a negative context.

There is no context available in which the unemphasised element introduces a negative context: unemphasised n-words, contrary to standard n-words, are not allowed to precede the negative marker dhen (54) and they are not allowed to occur in fragmentary answers (55), whereas their emphasised counterparts are able do do so. Moreover, Giannakidou observes that unemphasised n-words can be licensed in non-negative non-veridical contexts (56). Emphasised n-words are only allowed to occur in anti-veridical contexts, i.e. when they are licensed by a negative element (57).

(54) KANENAS/*Kanenas dhen ipe TIPOTA Greek
N-body/anybody neg says n-thing
'Nobody says anything'
(55) Ti idhes? TIPOTA/*tipota
   Greek
   What saw.2sg? N-thing/anything
   ‘What did you see? Nothing. Anything’

(56) a. Pijes {pote/*POTE} sto Parisi?
   Greek
   Went.2SG ever/n-ever to Paris?
   ‘Did you ever go to Paris’

   b. Elpizo na emine {kanena/*KANENA} komati
   Hope.1sg SUBJ left.3sg any/n-piece
   ‘I hope there is any piece left’

(57) a. I Theodora *(dhen)
    enekrine {kanena/KANENA} sxedhio
    The Theodora neg approved any/n-plan
    ‘Theodora didn’t approve any plan’

   b. *(xoris) na dhi {kanenan/KANENAN}
    without SUBJ see.3SG anybody/n-body
    ‘without seeing anybody’

Since Giannakidou’s unemphasised n-words do not count as n-words under the definitions of section 3.1 and do not behave like standard n-words, I will only refer to emphasised n-words (in Giannakidou’s terms) as n-words. Giannakidou’s unemphasised n-words will be treated as general AI’s such as English any-terms.

Giannakidou accounts for the differences between emphasised and non-emphasised n-words in Greek by arguing that this is due to the quantificational nature of emphasised n-words: unemphasised n-words are mere indefinites, which have no quantificational force of their own, whereas emphasised n-words should be considered as quantificational. It is known that quantifiers cannot scope out of their clause. Giannakidou takes the fact that NC is clause-bound as a central argument for the quantificational nature of Greek (emphasised) n-words, since their locality restrictions are similar to those of quantifiers.²⁴⁹

The assumption that (emphatic) n-words are non-negative quantifiers enables Giannakidou to present a compositional analysis of NC. She argues that n-words are universal quantifiers that take scope over negation at LF. The semantics of KANENAS ‘n-body’ is thus as in (58). This yields the correct readings for the NC sentences, cf. (59).

(58) [[KANENAS]] = λP∀y[Person(y) → P(y)]

²⁴⁸ Examples (54)-(57) are taken from Giannakidou 1998:467.
²⁴⁹ I will discuss the issue of the quantificational nature of n-words in section 7.4.
(59)  *Dhen* irthe KANENAS

Neg came n-body
‘Nobody came’

(60)  \[ \lambda P \forall y [\text{Person}(y) \rightarrow P(y)](\lambda x_1 \neg \text{came}(x_1)) = \forall y [\text{Person}(y) \rightarrow \neg \text{came}(y)] \]

If the assumption that Greek emphatic n-words are non-negative universal quantifiers that have to scope over a negation is correct, then the correct interpretation follows. However, it is unclear why this assumption holds. The assumption that n-words are non-negative universal quantifiers is twofold: first it argues that n-words are non-negative NPI’s; second it takes n-words to be universal quantifiers. I will discuss the quantificational nature in section 7.5. In this subsection I will address the question whether Greek n-words are NPI’s and discuss several problems that this analysis faces.

The assumption that Greek emphatic n-words are non-negative NPI’s is problematic for the following reasons:

- The analysis fails to explain why emphatic n-words cannot be licensed outside the clause.
- The question why universal quantifiers exhibit AI/NPI-like behaviour remains unanswered.
- The nature of licensing of emphatic n-words remains unexplained.

\[ \text{Taken from Giannakidou 2000: 501.} \]
The ungrammaticality of fragmentary answers containing unemphasised n-words remains unexplained.

The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained.

The analysis fails to explain why emphatic n-words cannot be licensed outside the clause

The first three problems address the three general questions that dominate any theory of AI/NPI licensing: respectively the licenser question, the licensee question, and the licensing question. For the sake of clarity I will repeat these three questions from chapter 3:

The **licenser question** is essential for the determination of what counts as a negative context, since it addresses the question what conditions a proper NPI-licenser needs to fulfil. The **licensee question** seeks an answer to the question why certain elements are only allowed to occur in particular contexts, and what distinguishes them from polarity-insensitive elements. […] The **licensing question** addresses the question of the relation between licenser and its licensee and its answer consists of the conditions for such a relation to be allowed (generally answered in terms of c-command). [Taken from 3.1.2]

The first problem addresses the question why n-words being NPI's cannot be licensed outside the clause. According to Giannakidou NPI's can only be licensed by an anti-veridical context, i.e. a context with the following property:

(61) If $Op(p) \to \neg p$ is logically valid, $Op$ is anti-veridical

Suppose we have the following context C:

(62) C: It is not the case that $p$, whereby $p$ is a proposition

In this case $p$ is in an anti-veridical context since the first clause is an anti-veridical operator. Suppose $p$ is 'John reads a book.' Then 'It is not the case that John reads a book' $\to \neg p$. In this case it is to be expected that $Op$ can license both the unemphasised and the emphasised Greek n-words (Giannakidou's terms). However, as we saw, only the unemphasised n-words can be licensed by this context (63). Giannakidou argues that this is due to the quantificational nature of emphasised n-words: n-words have to be originated in a proper context, but given the fact that they are subject to Quantifier Raising they have to scope over the negation. As is known from the literature QR is clause-bound. However, this does not mean that quantifiers are blind for the semantic properties of the clause that dominates their own clause. The observation that emphasised n-words are non-negative quantifiers does not explain why they are only allowed in negative (anti-veridical) contexts. It remains an open question why the n-word in (63) cannot be assigned a non-negative universal reading in the subordinate clause 'It is not the case that everybody came'
Chapter 7 - The meaning of n-words

(63)  *Dhen alithévi pu irte KANENAS
      Greek
      Neg true that came n-body
      'It is not true that everybody came'

One could argue that it does not necessarily have to be the case that polarity items are
dominated by a proper operator, but that it would also be sufficient if they dominate
such an operator. Take e.g. sentence (64):

(64)  John didn't see anyone
      \[ \neg \exists x[\text{person}'(x) \& \text{see}(j, x)] \]
      \[ \forall x[\text{person}'(x) \rightarrow \neg \text{see}(j, x)] \]

The two logical representations in (64) are truth-conditionally identical. Hence one
cannot argue on the basis of these examples that anyone is an existential quantifier: it
could also be a universal quantifier that due to its polarity properties needs to
dominate a negative operator. However, introducing an extra quantifier in these
sentences illustrates that for English only the first representation can be the correct
one.

(65)  The IRS rarely audits anyone
      \[ \forall \rightarrow \quad \forall \leftarrow \quad \exists \rightarrow \]
      It is usually not the case that there is someone whom the IRS audits
      *Everyone is such that it is usually the case that the IRS doesn't audit him

The first reading follows from the construal in which the NPI is treated as an
existential quantifier, the second reading derives from the analysis of anyone in terms
of a universal quantifier. Given that the second reading does not represent the
meaning of the sentence in (65), NPI's are treated as existential quantifiers or
indefinites.

This observation is supported by Linebarger's (1987) immediate scope constraint.
NPI's should always be immediately dominated by a downward entailing (DE)
operator, in other words: no non-DE operator is allowed to intervene. For example in
(66) the intervening determiner the blocks the licensing of any. Similarly in (67) only
readings in which every does not intervene between the negation and any are
allowed.251

(66)  *I didn't meet the man who gave me any present

(67)  Mary didn't wear any earrings at every party
      \[ \neg \rightarrow \forall \rightarrow \forall \]
      \[ \forall \rightarrow \rightarrow \forall \rightarrow \forall \]
      \[ *\rightarrow \forall \rightarrow \forall \]

251 Examples from Guerzoni (to appear).
Richter & Sailer (1998) take these constraints as evidence that NPI licensing is a form of variable binding, and therefore argue that NPI's should be treated as indefinites. If the variable introduced by any is not bound by a DE operator, but by a non-DE operator, then licensing is illicit. Giannakidou argues that the immediate scope constraint is not a priori connected to NPI's being indefinites. However, her analysis of NPI's as universal quantifiers does not offer an explanation for the effects in (66)-(67), whereas the indefinite approach does.

Thus the assumption that Greek n-words are non-negative quantificational NPI's is problematic and forms an extra argument in favour of analyses that take NC to be a form of syntactic agreeent.

*The question why universal quantifiers exhibit AI/NPI-like behaviour remains unanswered*

A second argument against Giannakidou's analysis of NC in terms of NPI licensing is the fact that it fails to address the licensee question. It has often been assumed that it is in fact the indefinite/minimiser status of NPI's that is the source of their context dependency (Kadmon & Landman 1993, Krifka 1995). In these analyses it is shown that NPI's indicate minimal amounts, and that sentences containing NPI's can therefore only be felicitous in DE contexts. The assumption that Greek n-words are universal quantifiers fails to account for the fact why the following sentence is ungrammatical, or semantically/pragmatically unfelicitous.

(68) *Ire KANENAS
Came n-body
'Everybody came'

Reasoning that this is not well-formed because it is an NPI is circular, as it is the ungrammaticality of examples such as (68) that the NPI account is based on. The fact that n-words only occur in anti-veridical contexts is descriptively adequate, but lacks explanatory motivation. A theory that also explains why NPI's are not allowed to occur outside non-veridical contexts is therefore to be preferred.

*The nature of licensing of emphatic n-words remains unexplained*

Third, as we saw in chapter 5, Greek is a Strict NC language and accepts cases in which the (emphasised) n-word occurs in preverbal position preceding the negative marker dhen.
(69)  *KANENAS dhen irte
     N-body neg came
     ‘Nobody came’

Normally AI/NPI licensing does not allow for these constructions, since the negative marker is required to c-command the NPI both at s-structure and LF. This is also the case in English:

(70)  *Anybody doesn’t come

The fact that the example in (69) is well formed is then incompatible with an analysis in terms of NPI’s, although cases in which NPI’s dominate the negation do exist, e.g. Dutch NPI verbs.

(71)  Jan hoef niet schoon te maken
     Jan needs neg clean to make
     ‘John doesn’t need to clean’

However, in these cases the negation still scopes over the NPI verb and the verb is base-generated in a position below the negation. The fact that the finite verb moves over the negation is probably a result of PF movement (cf. Chomsky 1995).

Although the example in (70) is not in line with a general approach of n-words in terms of NPI’s, it is not a valid counterargument against Giannakidou’s proposal of NC, as she allows for universal quantifier NPI’s that due to their quantificational properties raise to a position that dominates the negative operator. However, the argument that some NPI’s are allowed to occur in a position that is forbidden for weaker AI’s is problematic. The sole argument Giannakidou provides to show that Greek n-words are NPI’s, is that Greek n-words occur in contexts that are a subset of contexts in which AI’s are licensed. This is not problematic, since it is known from the literature (Van der Wouden 1994a, Zwarts 1998) that some AI’s require stronger licensing conditions than others. However it is problematic that Greek emphatic NPI’s are also allowed in contexts that do not allow other NPI’s, such as the context in (70).

(72)  KANENAS/*Kanenas dhen ipe TIPOTA
     N-body/anybody neg says n-thing
     ‘Nobody says anything’

The argument that Greek n-words are quantifiers and are therefore forced to raise to a position to the left of the negative marker violates Giannakidou’s account of AI’s as being context sensitive. Apparently there is a particular subclass of AI’s that is allowed to occupy positions that are forbidden for all other AI’s. The only way to save Giannakidou’s approach of n-words in terms of AI’s is to broaden the definition of AI’s to such an extent that n-words fit in. Such a step can only be maintained if there is independent motivation to do so. This evidence is lacking. The only motivation to
allow for certain AI’s to participate in constructions as (72) is to account for these constructions. Hence the argument that Greek n-words are NPI’s is circular.

The ungrammaticality of fragmentary answers containing unemphasised n-words remains unexplained

The fourth argument concerns a similar problem: fragmentary answers raise problems for the approach that n-words are non-negative. However, Giannakidou provides an elegant solution: n-words in fragmentary answers are the result of ellipsis. Before ellipsis, the sentence contains an overt negation that is responsible for the licensing of the NPI. Hence fragmentary answers as in (73) are created in a three-step process: first the non-elliptical sentence is produced, then the n-word moves to a Topic/focus position, and finally the rest of the sentence is deleted under ellipsis (74):

(73) Ti idhes? TIPOTA
    What saw.2sg? N-thing

(74) a. [NegP Dhen [IP idhes TIPOTA]]
    b. [NegP TIPOTA, dhen [IP idhes t]]
    c. [NegP TIPOTA, dhen [IP idhes t]]

The question is now: what excludes the presence of a fragmentary answer like (75)?

(75) Ti idhes? *Tipota
    [Dhen idhes tipota]

If n-words are AI’s and if they are allowed in these contexts, more AI’s should in principle be allowed to occur in fragmentary answers (without an overt licenser). This is not the case. The argument that this might be due to the fact that Greek emphatic n-words are universal and not existential quantifiers does not help, since there is no ban on existential quantifiers in fragmentary answers:

(76) What would you like for your birthday? All donkeys! / A donkey!

Thus Giannakidou’s analysis requires an additional explanation. She argues that only unaccented material may be subject of deletion under ellipsis. In the case of non-emphatic n-words in Greek the negative marker needs to be stressed and can therefore not be deleted. However, this does not hold for the ban on NPI’s that can be stressed occurring in fragmentary answers, such as English any-terms or Spanish un alma (77).

(77) *UN ALMA no vino
    A soul neg came
    ‘A single soul didn’t come’
These elements are not allowed in fragmentary answers either. Giannakidou links this to the ban on NPI’s preceding negation at surface structure and claims that if an NPI is subject of a c-command constraint, then ellipsis is not allowed. However, this is not true, since Dutch NPI verbs are free to occur to the left of the negation at surface structure (as shown in (71)), but are forbidden in fragmentary answers.

(78) Waar droom je over? *(Niet) hoeven schoonmaken
    Where do you dream PRT? Neg need clean
    ‘What are you dreaming of? Not needing to clean’

Hence I take the ban on NPI’s in fragmentary contexts as an argument against a similar treatment of NPI’s and n-words.

The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained

Finally, the analysis of n-words as Al’s is not related to the syntactic status of the negative marker. This means that adopting this position in the debate on the semantic status of n-words requires an additional theory for the unidirectional relation between the syntactic status of a negative marker and the occurrence of NC. It stands to reason that a theory from which this generalisation follows is superior.

Giannakidou addresses two questions with respect to the semantic status of n-words: (i) what are the quantificational properties of n-words and (ii) what is the negative content of n-words. Her answer to the latter question is that n-words are semantically non-negative. However, this analysis does not legitimise the conclusion that n-words are Al’s. Al’s share several properties that n-words lack and vice versa and should be treated as different entities.

7.2.3 Concluding remarks

In this section I discussed the view that n-words are semantically non-negative. Although the conclusion that n-words are Al’s is proven to be wrong, the approach that n-words are semantically non-negative is still tenable. In the next chapter I argue that this is in fact the correct assumption to be made. As the licensing conditions of n-words are crucially different from context dependency licensing, as is the case with Al’s/NPI’s, I will propose a different mechanism that is responsible for the licensing of n-words, namely feature checking. This implies that NC should be considered a form of syntactic agreement. Note that syntactic agreement, like the treatment of n-words as Al’s, follows from Ladusaw’s programmatic approach of treating n-words as semantically non-negative.
I argue that the perspective that NC is the result of syntactic agreement with respect to negation does not only yield solutions to problems that have been discussed in the previous sections, but also that this correctly predicts the typological generalisations, which have been formulated in chapter 4 and 5.

### 7.3 The ambiguity approach of n-words

In this section I will evaluate an approach that tries to overcome the problems with the analyses discussed in 7.1 and 7.2. Most of the problems, which arise from analyses that treat n-words as semantically negative or semantically non-negative is that n-words seem to exhibit both kinds of behaviour. The occurrence of n-words in non-negative, downward entailing contexts with an existential reading is problematic for an analysis that treats n-words as negative quantifiers. On the hand, the occurrence of n-words in fragmentary answers is problematic for theories that treat n-words as semantically non-negative. Both Van der Woude (1994a) and Herburger (2001) therefore suggest that n-words are ambiguous between negative quantifiers and NPI's. In the following two subsections I will briefly discuss these theories and conclude that these theories face both empirical and conceptual problems.

#### 7.3.1 Context-sensitive ambiguity

Van der Woude & Zwarts (1993) and Van der Woude (1994a) propose a context-sensitive semantics that takes lexical elements to be systematically ambiguous between two (or more) readings depending on the context they appear in. This semantic framework has been proposed for independent reasons by Keenan (1974), Partee (1984) and Pustejovsky (1989). Partee argues that adjectival polysemy (like the different interpretations of *red* in (79)) should be accounted for by adopting a disjunctive meaning form as in (80).

\[(79)\]
\[
\begin{align*}
\text{a. Red grapefruit} \\
\text{b. Red army} \\
\text{c. Red carpet}
\end{align*}
\]

\[(80)\]
\[f(x) = \_ \text{if } P_1(x), \_ \text{if } P_2(x), \ldots, \_ \text{if otherwise}\]

Van der Woude and Zwarts take the meaning of n-words to be the outcome of such a meaning function, following an original hypothesis by Longobardi (1991) who argues that n-words are systematically ambiguous between negative universal quantifiers and positive existential quantifiers. Hence Van der Woude and Zwart take n-words to be positive existentials in the proper negative context (depending on the specific properties of a language Downward Entailing, or anti-additive) and as universal negative contexts in all other contexts.
The meaning of n-words as the result of context-sensitive semantics

<table>
<thead>
<tr>
<th>Context</th>
<th>DE/AA</th>
<th>Otherwise</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-words</td>
<td>$\exists$</td>
<td>$\forall \neg / \neg \exists$</td>
</tr>
</tbody>
</table>

As has been described in 3.3.3, Van der Wouden distinguishes between Negative Spread and Negative Doubling. Negative Spread does not involve a specific negative marker and therefore the context sensitivity of n-words is responsible for the NC Reading in Negative Spread constructions such as (82).

(82) *Nessuno* ha telefonato a *nessuno*  
N-body called to n-body  
‘Nobody called anybody’  
$\forall \neg \exists$

In this case the NC reading follows naturally: the first n-word is not in a negative context and therefore it gets interpreted as a negative quantifier and thus it introduces a negative context. The second n-word therefore is in a negative context and gets interpreted as a positive existential.

Cases of Negative Doubling are more complex: as an example Van der Wouden describes the situation in Afrikaans, which he considers to be a strict Negative Doubling language in the sense that an NC relation does not have more than two members.\(^{253}\)

In the case of Negative Doubling in Afrikaans, the negative marker *nie* (henceforward *nie1*) (83)a or an n-word (83)b is followed by a second (optional) negative marker *nie* (*nie2*).

(83) a. Ek het hom *nie* gesien *nie*\(^{254}\)  
I have him neg seen neg  
‘I haven’t seen him’

b. *Niemand* het dit gesien *nie*  
N-body has this seen neg  
‘Nobody saw this’

Van der Wouden argues that n-words in Afrikaans are semantically negative, since the occurrence of multiple n-words in an NC chain yields Double Negation readings. This led Van der Wouden and Zwarts to assume that the negative marker is subject to context-sensitive ambiguity: in non-negative contexts the negative marker is a negative operator function that reverses truth-conditions; in negative contexts it is an NPI that represents an identity function that conserves truth conditions.

\(^{252}\) DE: Downward Entailing; AA: Anti-Additive.

\(^{253}\) Recall that it became clear from the discussion in 3.3.3 on Afrikaans that this view is no longer tenable.

\(^{254}\) From Van der Wouden (1994): 100.
The meaning of Afrikaans *nie* as the result of context-sensitive semantics

<table>
<thead>
<tr>
<th>Context:</th>
<th>Negative</th>
<th>Non-negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-words</td>
<td>\texttt{\textit{I}}(1 \rightarrow 1; 0 \rightarrow 0)</td>
<td>\texttt{\textit{\neg}}(1 \rightarrow 0; 0 \rightarrow 1)</td>
</tr>
</tbody>
</table>

Van der Wouden (1994a) argues that this treatment is similar to the treatment of many NPI's, such as *any* or idiomatic NPI's. Contrary to other kinds of NPI's these NPI's are allowed to occur in non-negative contexts, but they lose their particular reading in these contexts. In (85) *any* behaves like an indefinite under negation, but in non-negative contexts it is a free-choice element, that behaves like a universal quantifier. In (86) the negative sentence gives rise to an idiomatic reading, whereas the positive sentence is interpreted non-idiomatically.

\[\text{Context: N-word s s Negativ e e} \quad \text{Non-negativ e e} \rightarrow \text{\neg} \rightarrow \text{0} \rightarrow \text{0} \rightarrow \text{1}\]

(85) a. John didn't see anybody
\[\neg \exists x[\text{person}'(x) \& \text{see}'(j, x)]\]

b. Anybody saw John
\[\forall x[\text{person}'(x) \rightarrow \text{see}'(x, j)]\]

(86) a. Eddy didn't lift a finger when the old lady got beaten
b. Eddy lifted a finger and the whole orchestra started to play\footnote{From Van der Wouden (1994): 100.}

Van der Wouden & Zwarts sketch a context-sensitive semantics of both negative markers and n-words, and provide elaborate analyses for languages such as Italian and Catalan. Van der Wouden argues that Italian only exhibits Negative Spread, which means that the negative marker is (always) the realisation of the negative operator. This implies that n-words in Italian are context sensitive, whereas the negative marker is always negative. The typical pattern for Non-Strict NC languages that forbid instances of NC consisting of a preverbal negative marker preceded by an n-word ((87)c) follows from this approach.

(87) a. \textit{Nessuno} ha telefonato a \textit{nessuno} (=\text{(82)})
\begin{align*}
\text{N-body called to} & \quad \text{n-body} \\
\text{‘Nobody called} & \quad \text{anybody’} \\
\forall & \quad \exists
\end{align*}

b. \textit{Non} ha telefonato a \textit{nessuno}
\begin{align*}
\text{Neg called.3SG to} & \quad \text{n-body} \\
\text{‘He} & \quad \text{didn’t call} \\
\neg & \quad \exists
\end{align*}

\textit{Nessuno non} ha telefonato a \textit{nessuno}
\begin{align*}
\text{N-body neg called to} & \quad \text{n-body} \\
\text{‘Nobody did not call} & \quad \text{anybody’} \\
\forall & \quad \neg
\end{align*}
Chapter 7 - The meaning of n-words

Strict NC languages allow NC readings in sentences such as (88). Van der Wouden accounts for this by arguing that Catalan exhibits a combination of Negative Spread and Negative Doubling.

(88) Res (no) functiona
    N-thing neg works
    ‘Nothing works’
    \[ \forall \neg I \]

Still, the approach by Van der Wouden & Zwarts (1993) faces several problems that I will list briefly below and that I clarify thereafter.

- The analysis cannot explain the clause-boundedness of NC.
- The analysis does not explain why n-words in many languages cannot occur by themselves in non-elliptic sentences.
- The analysis cannot explain why n-words can sometimes have negative readings within a negative context.
- Lexical underspecification is in general not expected to lead to possible contradictory meanings.
- Unless contextual ambiguity is proven to be the correct option, a theory that can explain NC without relying on ambiguity is superior to a theory that is based on ambiguity.
- The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained.

The analysis cannot explain the clause-boundedness of NC

First, the clause-boundedness of NC relations does not follow from Van der Wouden’s (1994a) analysis. In fact Van der Wouden tries to prove the opposite, namely that NC relations can be realised between two clauses, by arguing that Paratactic Negation is possible in all studied NC languages. However, this does not explain why standard NC has to be clause bounded. Negative Contexts are not restricted to single clauses, and if an n-word is in a clause that is dominated by a clause containing a negative context, then an additional analysis is needed to explain why, contrary to standard NPI licensing, NC relations between the higher negation and the lower n-words are forbidden.

The analysis does not explain why n-words in many languages cannot occur by themselves in non-elliptic sentences

Another argument against Van der Wouden’s analysis is that it does not explain why NC is obligatory. If a sentence contains a postverbal n-word in a non-negative context (i.e. not preceded by any negative element), the sentence is predicted to be
grammatical as the n-word will be interpreted as a negative universal quantifier, which may scope over the entire predicate.

(89) *Ha telefonato a nessuno. 
Has.3sg called to n-body
‘He called nobody’
∀¬

Van der Wouden only says about the absence of this construction that there is some domain of Negative Doubling that excludes the sentence’s topic position. Hence the postverbal negative quantifier cannot scope over the entire clause and instead it triggers Negative Doubling by introducing a negative marker non (in topic position) that in its turn forms a negative context in which the n-word switches from negative quantifier to positive existential. However this way of reasoning is stipulative, since the only motivation to assume such an adaptation of the theory is to account for the unwellformedness of constructions such as (89). Moreover, the notion of a domain of Doubling and the motivation to leave out the topic position from the scope of a negative quantifier (in postverbal position) remain unclear and unsupported by independent evidence.

The analysis cannot explain why n-words can sometimes have negative readings within a negative context

Moreover, the treatments of n-words in negative context in a context-sensitive framework leads to the prediction that n-words in negative contexts may not be interpreted as negative quantifiers. However, Herburger (2001) shows examples from Spanish in which n-words following a negative marker are ambiguous between an NC reading and a DN reading.

(90) El bebé no está mirando a nadie.256
The baby neg is looking at n-body
NC: ‘The baby is not looking at anybody’
DN: ‘The baby is not looking at nobody’

The second reading in (90) is not a standard instance of DN, as the negative quantifier cannot scope over the existential quantifier that binds the event variable. The DN reading of (90) is thus equivalent to (91).

(91) ¬∃e[look’(e) & Agent(b, e) & ¬∃x[Person(x) & Patient(x, e)]]

One may argue that the second reading is marked, whereas the first (NC) reading is the preferred one, but this is due to the fact that situations in which the second reading is salient are rather odd. However these situations are conceivable (as in the case of a

256 Taken from Herburger (2001): 306.
baby that is staring) and in such a situation (90) under the reading of (91) is not unusual.

Finally, as Herburger observes, the (pragmatically marked) reading in which each n-word is assigned a negative reading is not restricted to postverbal positions. Constructions with two preverbal n-words are also possible in Spanish.

(92)  *Nadie nunca volvió a Cuba* 257

N-body n-ever returned to Cuba
NC: ‘Nobody ever returned to Cuba’
DN: ‘Nobody never returned to Cuba’

Although *nadia* ‘n-body’ introduces a negative context, *nunca* ‘n-ever’ is still able to get a negative reading too. In a context-sensitive framework this is not expected. Note furthermore, that *nunca* is not in topic position and (92) does not exhibit Negative Doubling (i.e. the negative marker is absent), as would be predicted by Zwarts & Van der Wouden’s approach.

The previous arguments showed that a context-sensitive framework gives rise to predictions about possible readings of n-words that seem to be too strict. Apparently in some negative contexts n-words may keep their negativity. This phenomenon is not restricted to the negativity of n-words, but also in the case of idiomatic NPI’s. The idiomatic expression *to lift a finger* (86) is only available in negative contexts. However, it is not the case that the literal reading is not only available in non-negative contexts, but also in negative contexts.

(93)  Eddy used to be an Arab thief. Now he cannot lift a finger anymore.

Hence the literal meaning remains always available, whereas the metaphorical reading is only available in particular contexts.

*Lexical underspecification is in general not expected to lead to possible contradictory meanings*

Another argument against Van der Wouden & Zwart’s analysis in terms of context-sensitive semantics concerns the validity of the accounts in terms of underspecification of meanings of lexical elements. Intuitively there is a difference between the polysemy of *red* in different contexts and the difference between a negative operator and the identity operator. Van der Wouden argues that it is not the difference between the possible meanings of a certain lexical element, but that the correspondences are the crucial factor. E.g. the different kinds of *red* all denote properties (of nouns) and the difference between free choice *any* (∀) and the indefinite *any* (∃) is in fact a shift between two possible kinds of quantifiers. The

257 Taken from Herburger (2001): 306.
same holds for the difference between negative quantifiers ($\forall \neg / -\exists$) and positive existentials ($\exists$): the meaning shifts along the line of the complement axis in the classical square of opposition (cf. Aristotle, Horn 1989, Van der Wouden 1994a).

(94) **Square of opposition**

<table>
<thead>
<tr>
<th>All ($\forall$)</th>
<th>Some ($\exists$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ($\forall \neg \lor -\exists$)</td>
<td>Not all ($-\forall \lor -\exists$)</td>
</tr>
</tbody>
</table>

The same holds for the meaning shift of the negative marker: the only two non-trivial operators that map truth-values to truth-values are the identity function and the negative operator. Hence a meaning shift between those two is to be expected, according to Van der Wouden.

However this position has been under attack. The ambiguity of *any* was an argument in favour of this form of context-sensitive semantics. However, many scholars have argued that free-choice *any* is different from universal quantification and, moreover, a single representation can be given for *any* such that it gives rise to the correct readings in both negative and non-negative constructions (Aloni 2003, Giannakidou 2002, Chierchia 2004). For conceptual reasons a single representation for n-words is preferred over an ambiguity analysis.

Unless contextual ambiguity is proven to be the correct option, a theory that can explain NC without relying on ambiguity is superior to a theory that is based on ambiguity.

Ambiguity analyses are in some sense a theoretical last-resort, i.e. from a conceptual point of view, analyses, which cover the same facts without assuming ambiguity are preferred over theories that posit ambiguity. This implies that theories that use ambiguity require independent evidence or motivation for this ambiguity. In the case of this analysis, the motivation follows from the analysis of the ambiguity of *any* and from accounts of the polysemy of adjectives and verbs. However this motivation turns out not to be firm enough to build a theory upon, and moreover the theory itself faces some important problems.

*The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained*

Finally, Van der Wouden & Zwart’s analysis does not connect NC to the syntactic status of the negative marker. Hence, this theory requires an additional syntactic theory to account for the distribution of NC languages. In chapter 8 I will show that a

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258 The term ‘non-trivial’ is due to Van der Wouden. One could argue however, that the Identity function is the most trivial function as the application of this function does not contribute to the semantics of a sentence. Moreover, it is unclear why functions that map all truth values to either 0 or 1, are trivial, as they do provide semantic contribution.
theory of NC in terms of syntactic agreement predicts this distribution of NC and DN languages.

7.3.2 Lexical ambiguity

A final approach to be described in this chapter is Herburger's account for NC in terms of lexical ambiguity. Herburger argues that theories that do not describe NC in terms of ambiguity may seem conceptually superior, but that there are two arguments to analyse NC as a result of lexical ambiguity: (i) other theories face serious problems that are either unsolvable or require additional mechanisms that make them unattractive; and (ii) that this ambiguity is not stipulated but motivated: it is a reflection of an intermediate phase in the Jespersen Cycle.

Herburger's analysis is primarily based on two observations: (i) the fact that n-words in NC languages sometimes express negation by themselves, and sometimes behave like NPI's; and (ii) that these possible meanings are not in complementary distribution (as exemplified in 7.3.1). The fact that n-words are sometimes ambiguous between negative quantifiers and non-negative NPI's in the same constructions led Herburger to assume that n-words are lexically ambiguous and that in most cases some filter blocks one of the two readings. Such a framework requires two different filters on n-words: one filter that blocks the NPI reading; and one filter that blocks the negative quantifier reading.

The first filter that blocks the non-negative NPI readings is straightforward: an n-word can only have an NPI reading if it is in a proper negative (i.e. anti-additive or downward entailing) context. The absence of such a context blocks the NPI reading. The second filter is less straightforward. Herburger postulates that negative quantifiers in NC languages are not allowed to move across the quantifier that binds the event variable. As a result of this filter n-words always keep their negative quantifier reading, but constructions in which the negative quantifier in postverbal position receives a negative quantifier interpretation are pragmatically marked. Herburger provides examples such as (95) (similar to the example in (90)) in which a postverbal n-word still receives a negative reading. In these kinds of examples the negative quantifier does not scope over the existential quantifier that binds the event variable, yielding an LF such as (96).

(95) El bebé no está mirando a nadie
The baby neg is looking at n-body
DN: 'The baby is not looking at nobody'

(96) ∃e[look'(e) & Agent(b, e) & ¬∃x[Person(x) & Patient(x, e)]]

Although these sentences are completely grammatical, their usage is restricted for pragmatic reasons. The sentence in (95) (with reading (96)) can only be uttered
felicitously in rather odd situations. Therefore the reading with the non-negative n-word is the preferred one.

Now the preverbal-postverbal distinction immediately falls out: n-words in preverbal position are not licensed by negation, and therefore they are interpreted as negative quantifiers. N-words in postverbal position can either be licensed by a preverbal n-word or a negative marker and in these cases they receive a non-negative NPI reading. In the (rare) cases that postverbal n-words are not licensed by a negative element, they are interpreted as negative quantifiers, which are not allowed to scope over the quantifier binding the event.

Herburger acknowledges that (lexical) ambiguity should not be proposed without proper motivation. She relates the property of a language to have lexical ambiguous n-words at its disposal as a reflection of an intermediate phase in the Jespersen Cycle. She follows Ladusaw (1993) in his analysis that during the cyclic development of negation, minimizing indefinites first become NPI’s and later negative quantifiers. Take for example the diachronic change of meaning of the French word personne. In Old French this word meant ‘person’ and could be used as a minimizing element, mostly in negative sentences.

(97) a. I didn’t talk
    b. I didn’t talk to a (single) person

Later, in Middle French, personne only became available in negative sentences and therefore got reinterpreted as an NPI. Standard French still exhibits this use of personne, as is demonstrated in (98).

(98) Je n’ai vu personne
    I neg.have seen n-body
    ‘I didn’t see anybody’

Finally in Colloquial French the preverbal negative marker ne is almost completely gone, and personne is allowed to be the only negative element in a negative sentence, as is shown in (99). Hence personne behaves like a negative quantifier.

(99) J’ai vu personne
    I have seen nobody
    ‘I saw nobody’

Herburger argues that Non-Strict NC languages like Spanish can be seen as intermediate stages between Middle French and Colloquial French varieties. In these intermediate phases n-words are sometimes, mostly in preverbal position, interpreted as negative quantifiers and in other cases postverbally as NPI’s. Given the fact that n-words show a diachronic meaning shift, ambiguity of n-words is then a side effect of this meaning shift in which both meanings are available.
Still some problems remain open under this analysis:

- The ban on postverbal negation scoping over the event quantifier remains unmotivated.
- Preverbal n-words in negative contexts do not get an NPI reading.
- The diachronic meaning shift between NPI’s and lexical ambiguous n-words is unclear.
- The analysis faces problems when applied to Strict NC languages.
- The question as to why no disambiguating mechanism rules out lexically ambiguous n-words is still open.
- The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained.

**The ban on postverbal negation scoping over the event quantifier remains unmotivated**

The first argument is straightforward and acknowledged by Herburger herself. It is unclear why, unlike in Dutch or English, negative quantifiers in Spanish are not allowed to scope over the event quantifier, yielding propositional negation. Moreover, in the languages she discusses (primarily Spanish) no other examples of blocking by event quantifiers of quantificational terms are provided.

**Preverbal n-words in negative contexts do not get an NPI reading**

The second argument is an argument that holds for all analyses of n-words in terms of NPI’s, namely the ban on NC interpretations of preverbal n-words if the dominating clause contains a negative context. In Herburger’s analysis the NC reading is predicted to be well-formed in sentence (100), since the preverbal n-word is in a negative context. Note that this argument does not hold against Herburger’s analysis only, but is a general argument against all analyses of n-words in terms of NPI’s.

(100) *No se da el caso de que nadie viaje a Francia*

Neg SE give the case of that n-body travels to France

*‘It is not the case that anybody goes to France’*

‘It is not the case that nobody goes to France’

Herburger counters this argument by arguing that NC can be licensed outside the clause, as in the cases of Paratactic Negation. She even shows an example in which an entire clause intervenes between the negatively connotated verb *doubt* and the clause containing an n-word.
(101) Dudo [que él haya dicho [que Maria le debiera ningun dinero]]

Spanish

Doubt.1SG that he has.SUBJ said that Maria him owed.SUBJ n- money

'I doubt that he said that Mary owned him any money'

However, this sentence contain two subjunctives, and subjunctives seem to be able to license lower n-words (as was shown in 3.3.3). Therefore, this argument no longer holds if the subjunctive in the intervening clause is mandatory. This is indeed the case.

(102) *Dudo que él ha dicho que Maria le debiera ningun dinero

Spanish

Doubt.1SG that he has.IND said that Maria him owed.SUBJ n- money

'I doubt that he said that Maria owned him any money'

The diachronic meaning shift between NPI's and lexical ambiguous n-words is unclear

The third argument concerns the motivation for lexical ambiguous n-words along the lines of the Jespersen Cycle. Herburger assumes a meaning shift that takes n-words first to be NPI's, later on these elements are ambiguous between NPI's and negative quantifiers and finally n-words become sole negative quantifiers.

(103) \[\text{NPI's} \rightarrow \text{NPI's Neg Quantifiers} \rightarrow \text{Neg Quantifiers}\]

The meaning shift in (103) suggests the presence of a phase in the Jespersen Cycle in which n-words are NPI's and cannot receive a negative quantifier interpretation. This observation is incorrect. Older phases of Italian and Spanish were Strict NC languages that did not allow preverbal n-words without a preverbal negative marker:

(104) Que a myo Cid Ruy Diaz, que nadi no diessen posada

11th Cent. Spanish

That to my Lord Ruy Diaz that n-body neg give lodging

'That nobody gave lodging to my lord Ruy Diaz'

As is well known, Strict NC languages give rise to fragmentary answers, single n-words in coordination, etc. Hence, one cannot analyse these kinds of n-words in Spanish in the first phase of the Jespersen Cycle as sole NPI's, since this phase of Spanish does not only allow for NPI readings of n-words, but also for Negative Quantifier-like interpretations. Herburger's motivation for lexical ambiguity by considering the meaning shift along the line of the Jespersen Cycle is only valid if n-words never occur without an extra negative marker. However in those cases n-words never introduce a negative context and as a result fall outside the definition for n-words. Hence they are no n-words and for that reason these languages should not be
considered NC languages. Therefore the independent motivation for assuming lexical ambiguity is ungrounded.

The analysis faces problems when applied to Strict NC languages

The fourth argument concerns the treatment of Strict NC languages. Herburger discusses the case of Catalan, which allows for an overt negative marker following preverbal n-words. This raises an open question how the (single) negativity of sentences like (105) can be accounted for.

(105) $Res$ no functiona
N-thing neg works
‘Nothing works’

(106) *Gaires coses no functionen
Many.NPI things neg work
‘Many things don’t work’

Two analyses are possible: (i) the negative marker *no* is allowed to license the NPI-version of *res*. But this analysis does not explain why (106) is ruled out; (ii) the negative marker is lexically ambiguous between a semantically empty NPI and a negative operator. However, this analysis is in contradiction with Herburger’s motivation for ambiguity: if this were true, preverbal n-words in Old Spanish could also acquire a negative quantifier reading and this runs against her claim that all n-words in Old Spanish are NPI’s. Moreover, the ambiguity of the negative marker is not independently motivated.

The question as to why no disambiguating mechanism rules out lexically ambiguous n-words is still open

Even if the lexical ambiguity could be motivated by correspondences with other phenomena such as the Jespersen Cycle, lexical ambiguity of n-words is not expected to the extent that their possible readings are opposite. Generally, one would expect two diverging meanings of a single lexical item to result in two phonologically different lexical items, each corresponding to one particular meaning. A good illustration of this mechanism is the development of the word for ‘cock’ in Southern French. This used to be *gallus* in French, but due to phonological change, it was pronounced as *gat*, which was identical to the word for ‘cat’. As soon as the phonological string *gat* could refer to a cock and cat, the word *faisan* immediately replaced the word for cock, and *gat* could only mean ‘cat’. This illustrates that languages try to reduce the amount of lexical ambiguity (Elffers 1995) and that lexical ambiguity between two opposite meanings seems unlikely.
The unidirectional relation between the syntactic status of the negative marker and the occurrence of NC remains unexplained.

Finally, Herburger's analysis does not explain why the syntactic status of n-words is uni-directionally related to NC. Herburger relates the occurrence of NC to the Jespersen Cycle. However, this would lead to a bi-directional generalisation, as in her analysis all Phase V languages are expected to be non-NC languages. This prediction is incorrect however, since several Phase V languages, such as Bavarian or Quebecois, exhibit NC.

7.3.3 Concluding remarks

In this section I have discussed and evaluated two theories that provide an account for the semantics of n-words in terms of ambiguity. In both cases I argued that these theories fail to explain several empirical facts. The general empirical argument is that even in the perspective of lexical or contextual ambiguity, the behaviour of seemingly non-negative n-words is crucially different from that of standard NPI's. Hence these theories lack an explanation of the differences in distribution between NPI's such as any-terms and non-negative n-words.

Moreover, both theories suffer not only from empirical problems, but also from conceptual problems. The ambiguity hypothesis is not well motivated on independent grounds. Both Van der Wouden and Zwart's comparison to the ambiguity between NPI any and free-choice any, and Herburger's motivation along the lines of the Jespersen Cycle were proven to be not solid.

7.4 On the quantificational status of n-words

If follows from the discussion in sections 7.1-7.3 that n-words should be considered as non-negative elements that are syntactically marked for negation, i.e. they carry an uninterpretable [uNEG] feature that needs to be checked against a semantically negative operator carrying [iNEG]. Hence, as I will explain in detail in chapter 8, NC is the result of syntactic agreement between negative elements and a (c)overt negative operator, and no longer poses a problem for compositionality.

A final question that has not been addressed yet, the quantificational status of these non-negative elements. Are n-words indefinites or quantifiers, and if they are quantifiers are they universal or existential quantifiers?

In this section, I briefly address this question and argue that there is strong evidence that n-words are in fact non-quantificational, and that arguments that n-words are (universal) quantifiers are not as straightforward as they seem to be.
7.4.1 N-words as indefinites

The main difference between indefinites and quantifiers is that the first lack quantificational force, whereas quantifiers do. Indefinites introduce a free variable that needs to be bound by existential closure that is applied either on text or sentential level, or by an adverbial operator. This means that non-negative indefinites have two different licensing requirements: they need to be bound by an element carrying [iNEG] (in order to have their [uNEG] feature deleted) and by existential closure to have their free variable bound.

Giannakidou (2002) argues that the latter requirement is problematic for n-words. She presents data from Greek in which both an adverb, a negation and an N-word occur.

(107) Sixna, ota o Janis ine thimomenos

dhen milai me KANENAN

Greek

Usually, when John is upset neg talks to n-body

USUALLY,[John is upset in s][¬∃x(Person(x, s) & Talk(John, x, s))]

Giannakidou argues that if n-words were indefinites, they should be able to be bound by the Q-adverb sixna (‘usually’), contrary to fact. However, recall that n-words are subject to two binding requirements. They should be bound by a negative operator for syntactic reasons and by an adverbial operator in order to bind its variable. This leads to two possibilities. Either they are first dominated by the Q-adverb where the negation outscopes this adverb and the Q-adverb binds their variable under existential closure before the negative operator checks the n-words [uNEG] feature, or they are bound by negation first. Since negation is an adverbial operator too, it can introduce existential closure and the n-word is bound by negation, yielding the reading in (107). The question why the sentence obtains the latter and not the first interpretation is related to scope marking conditions. Note that dhen, being a negative marker, denotes the scope of the negation. If negation had to outscope the adverb, this would be manifested at surface structure. Hence contrary to what Giannakidou suggests this example is in line with n-words being indefinite.

The fact that licensing conditions of n-words are related to the scope marking of the negative marker also addresses another problem that Herburger posed against the non-negativity approach, namely contexts in which an n-word acquires a negative reading in postverbal position without being licensed by a negative marker, and yielding an event-bound negative reading, as shown in (108) (repeated from (48)).

(108) El bébé este mirando a nadie

The baby is looking at n-body

∃e[Look(e) & Agent(baby, e) & ¬∃x.[Thing(x) & Theme(x, e)]]

Herburger argued that these constructions show that n-words in postverbal position can behave like negative quantifiers, but this analysis immediately raises the question why the negative quantifier cannot undergo QR. This problem is solved if the n-word is taken to be an indefinite. Indefinites cannot undergo QR, and hence if a higher negative operator does not license the negation, the only available reading is the event-bound reading. Applying a (syntactic) self-licensing mechanism, as Ladusaw (1992) suggested, n-words are licensed as low as possible by an abstract negative operator. Only if for scopal reasons (e.g. to express sentential negation) the negation must be licensed by a higher negation an overt negative marker is introduced in a position preceding $\nu^0$. Hence in (108) the indefinite cannot exhibit QR to a higher position itself, since it is not quantificational, but a negative operator, either envisaged in a higher position or immediately dominating the n-word, can license it.

Another argument in favour of an indefinite approach is locality. NC is known to be clause-bound except for PN. NC parallels QR in this respect. Giannakidou takes this as an argument in favour of a quantificational approach. However, under the proposed feature checking mechanism clause-boundness is already the result of the syntactic constraints concerning feature checking (which is subject to locality). Therefore, the clause-boundness does not support a quantificational analysis.

Moreover, in many instances of PN an NC relation crosses the clause boundary. All these examples share the property that the lower clauses contain a subjunctive verb. Subjunctives are known to allow feature checking across the clause (cf. Giorgi 2004) and hence the existence of such examples (as the minimal pair in (109) shows) is a major argument in favour of the indefinite approach.

\[(109)\]
\[
a. \quad \ast \text{No vindrà perquè ha fet res amb ningú} \quad \text{Catalan}
\]
\[
\text{Neg come.fut because he has.IND done n-thing with n-body}
\]
\[
\text{‘He won’t come because he has done anything with anybody’}
\]
\[
b. \quad \text{No vindrà perquè ha fet res amb ningú} \quad \text{Catalan}
\]
\[
\text{Neg come.fut because he has.SUBJ done n-thing with n-body}
\]
\[
\text{‘He won’t come because he has done anything with anybody’}
\]

Although similar to NC licensing quantifiers may exhibit QR in infinitival or restructuring clauses (cf. Farkas & Giannakidou 1996), n-words are not interpreted quantificationally in such constructions.\(^{261}\)

\[(110)\] 

\[
\text{\textit{Dhen} pistevo oti ides \textit{KANENAN}} \quad \text{Greek}
\]
\[
\text{Neg believe.1sg that saw.2sg n-thing}
\]
\[
\text{‘I don’t believe you saw anything’}
\]
\[
\ast \text{‘Every person is such that I don’t believe that you saw him’}
\]
\[
\ast \text{‘I don’t believe that you saw every person’}
\]

\(^{261}\) Giannakidou (2002) acknowledges that it is not necessarily the case that QR should be applied here. She only wants to illustrate the strong correspondence between locality restrictions on NC and QR. However, the non-universal interpretation of (110) still requires an explanation.
A final argument against a treatment of n-words as universal quantifiers is the fact that universal quantifiers do not move across negation. Giannakidou (2000) argues that this argument does not hold for NPI \( \forall \)-quantifiers. She postulates that normal combinations of a universal quantifier scoping over negation are blocked by the presence of other constructions that yield the same interpretation (involving n-words). However, it became clear in chapter 6.4 that even in languages in which universal quantifier precedes negation, an inverse reading is often yielded. The ban on universal quantifiers scoping over negation seems to be much stronger. Therefore the question why universal quantifier n-words are allowed to scope over negation remains open within this approach.

### 7.4.2 N-words as quantifiers: *almost* modification

The claim that n-words are universal quantifiers (in certain languages) has often been supported by the fact that n-words allow *almost*-modification. It is well known that indefinites/existential cannot be modified by *almost* as opposed to universal quantifiers (cf. Carlson 1980).

(111) a. *John saw almost somebody*
b. John saw almost everybody

Zanuttini (1991) and Giannakidou (2000) take this as an argument that n-words are universal as these can be modified with *almost* too.

(112) *Non ha telefonato a quasi nessuno*
    Neg has.3sg called to almost n-body
    ‘I called almost nobody’

This argument has been under attack, as *almost* modification is not restricted to universals, but rather to endpoints on a scale (Horn 2000, De Sag & Swart 2002). In the discussion about the quantificational status of n-words this counter argument does not hold, as existentials/indefinites denote minimal amounts, whereas universals denote endpoints, as Giannakidou (2000) argues correctly. However, note that *almost* modification precedes the negation. The semantics of (112) are either ‘ALMOST(\(\neg \exists\))’ or ‘ALMOST(\(\forall \neg \cdot\))’. In both cases *almost* modifies an endpoint of the scale. The only open question is how *almost*, being a DP modifier can outscope the negation. It would make sense to exclude this possibility, thus providing evidence for the universal quantifier analysis. On the other hand, if the universal quantifier analysis is correct, two multiple n-words can each be modified by *almost*. If n-words are existentials/indefinites *almost* cannot occur more than once in the clause since it cannot modify existentials/indefinites, but only the first almost can scope over the negation, yielding the order ALMOST > \(\neg \exists\), yielding the correct reading. Movement of the second almost to a position dominating negation would make the
sentence ill-formed (as it does not modify the second argument anymore, but only the first argument that has already been modified by *almost*).

(113) *Skoro niko nije kupio skoro nist

Almost n-body neg bought almost n-thing

‘Almost nobody bought almost anything’

This sentence is reported to be ill-formed, which is only possible if n-words are non-universal.

Giannakidou (2000, 2002) provides more arguments in favour of her analysis of n-words as universal quantifiers. She argues for example that n-words, similar to universal quantifiers, cannot bind donkey anaphora. Richter and Sailer (1998) argue against this argument since negation forms islands for donkey anaphora anyway. However I do not discuss these elements here in detail, as I take the arguments presented in 7.4.1 and 7.4.2 as sufficient to provide an analysis that takes n-words to be non-negative indefinites lacking quantificational force.

### 7.5 Conclusions

In this chapter I first argue that the analysis that n-words are negative quantifiers that melt into one larger negative quantifier (Zanuttini 1991, Haegeman 1995, Haegeman & Zanuttini 1996, De Swart & Sag 2002), is not tenable for different reasons: first, the motivation to analyse n-words as negative quantifiers was their resemblance with *Wh*. However, closer examination of this correspondence has shown out that there are serious differences between multiple negation and multiple *Wh* constructions. Second, these analyses fail to explain why languages differ cross-linguistically with respect to the occurrence of NC. Third, n-words may have a non-negative reading in many DE contexts, which cannot be accounted for easily in such a framework. Finally, the unidirectional relation between negative heads NC is not predicted by these analyses.

In this chapter I also discuss the view that all n-words are non-negative and need to be licensed by a possibly abstract negative operator (Ladusaw 1992, Giannakidou 1997, 2000). I show that many of the problems, which follow from the account that takes n-words semantically negative, can be solved by this analysis, but that one particular interpretation of this perspective, namely that n-words are NPI’s is problematic, as the behaviour of NPI’s is substantially different from that of n-words (n-words are allowed to occur to the left of the negative marker in Strict NC languages, n-words may occur in fragmentary answers, and licensing n-words is clause bound). Moreover, I show that the position that NC is a form of syntactic agreement with respect to negation corresponds neatly to the observed uni-directional relation between negative heads and NC.

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262 It should be mentioned that Giannakidou does not argue n-words in all NC languages are universal quantifiers, but she argues that this is the case in a number of languages, such as Greek, Hungarian, or many Slavic languages.
Finally I discuss the approach that takes n-words to be ambiguous between negative quantifiers and NPI’s (Zwarts & van der Wouden 1993, Van der Wouden 1994a, Herburger 2001) and show that these analyses face problems too: first the NPI-like behaviour of n-words is not always similar to the behaviour of real NPI’s (e.g. in being clause-bound or exhibiting DN effects). Furthermore, I argue that an analysis that can account for NC without falling back on ambiguity is theoretically preferred. Finally, analyses within this approach fail to account for the syntactic correspondences that go along with NC, as has been presented in chapter 5 and 6.

In 7.4, I conclude on the basis of a number of arguments that n-words are best considered as indefinites, lacking quantificational force of their own.

This leaves us at the point where it is possible to draw the main conclusion of this chapter: n-words are non-negative indefinites that are syntactical marked for negation by means of a [uNEG] feature that are crucially different from NPI’s. In the next chapter I will formulate my own theory of NC. I will show how all readings can be constructed compositionally, and how my analysis accounts for those problems that other analyses have been facing.