Sentential negation and negative concord
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3 Issues in the study of negation

In this chapter I will discuss five topics that have occupied a central position in the study of negation. These topics have been well investigated the last 15 years, but the extent to which these topics are correlated has not often been subject of study. One of the central aims of this study is to describe and explain the correlations between these different topics. The aim of this chapter is therefore not to provide an overview of the literature on these chapters, but to provide (working) definitions of the different phenomena and to introduce the questions that will be addressed throughout the rest of this book. In this chapter I will briefly introduce each topic.

In section 3.1 I will discuss the notion of negative element and will relate this to the study of Negative Polarity Items; in section 3.2 I will discuss what constitutes sentential negation and in which ways sentential negation can be expressed cross-linguistically (including the diachronic developments known as the Jespersen Cycle); in 3.3 the interpretation of clauses or sentences with more than one negative element is discussed; in 3.4 I discuss the form and availability of (true) negative imperatives; and finally, the relation between negatives and universal quantifiers subjects (V-subjects) will be discussed in 3.5.

These five issues will not be treated as distinct problem sets. In the next two chapters I examine the correlation between these five topics, and in chapters 6-8, I explain these phenomena from the perspective of these empirical correlations.

3.1 Negative contexts and polarity items

In this section I provide a working definition of negative elements. In order to do so, I first describe what counts as a negative element by providing a set of examples that intuitively belong to the class of negative elements. Then I will discuss what the common property is that all negative elements share and that is not shared by any other element. As negative elements by definition are able to license Negative Polarity Items, the question what is a proper definition for negative elements corresponds to the question what are the licensing properties of NPI's (except for being negative). I discuss different approaches in the literature about which properties NPI licensors have in common, and I argue that the common property of a subset of the set of all NPI-licensors, namely anti-veridicality (Giannakidou 1997, a.o.), corresponds to the common property of negative elements and thus I will provide working definitions for negative elements, negative markers and n-words in terms of anti-veridicality.

I will conclude this section by describing the difference between contradictory and contrary negation and illustrate this distinction by applying both kinds of negative operators to scalar predicates.
3.1.1 Negative elements

Before defining negative elements properly, I will give examples of elements that count as negative elements. Based on syntactic, semantic and lexical differences, four kinds of negative elements can be distinguished. First, negative markers indicate negation and are generally used to express sentential negation (see also subsection 3.2.2).

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

b. John does not walk
    \( \neg \text{walk}'(j) \)

Second, negative quantifiers are negative elements. Negative quantifiers are elements that do not only negate a clause or constituent but also bind a particular variable within that clause or constituent.

(2) a. Jan ziet niets
    John sees n-thing
    \( \neg \exists x. [\text{thing}'(x) \& \text{see}'(j, x)] \)

b. John sees nothing
    \( \neg \exists x. [\text{thing}'(x) \& \text{see}'(j, x)] \)

Third, there is a class of negative elements, which depending on their position within a syntactic configuration give or do not give rise to negation. Sometimes the interpretation of such a negative element is equivalent to the interpretation of a negative quantifier, sometimes it is similar to the interpretation of a non-negative existential quantifier. In the first example (3)a personne has a negative reading whereas rien is assigned a non-negative existential interpretation. In (3)b the reverse is the case: rien seems to be negative and personne not. A similar phenomenon is going on in (4). In the first sentence nessuno is interpreted negatively; in the second example it does not seem to contribute to the negative semantics, as the negative operator has already been introduced by non. Negative elements, such as French personne or rien or Italian nessuno are referred to as n-words.

(3) a. \text{Personne ne mange rien}
    N-body neg eats n-thing
    ‘Nobody eats anything’

---

46 One can argue that negative markers also bind a variable, e.g. an event or situational variable. For the moment I will leave this question aside, but I readdress it in chapters 6-8.

b. *Rien n’est fait par personne*
   N-thing neg.is done by n-body
   ‘Nothing is done by anybody’

(4) a. *Nessuno ha telefonato*
   N-body has called
   ‘Nobody called’

b. *Non ha telefonato nessuno*
   Neg has called n-body
   ‘Nobody called’

Finally, some elements do not have a strict negative reading, but have a clear negative semantic connotation. Several verbs (*fear, fail, doubt*) and prepositions (*without, unless*) express ‘negative’ relationships. Note that their positive counterparts in combination with a negation can easily paraphrase the semantics of these elements.

(5) a. *Marie a assasiné Jean sans couteau*
   Mary has killed John without knife
   \[\exists [\text{kill}’(e) \& \text{Agent}’(e, m) \& \text{Patient}’(e, j) \& \text{without}’(e, \text{knife})]\]
   \[\exists [\text{kill}’(e) \& \text{Agent}’(e, m) \& \text{Patient}’(e, j) \& \neg \text{with}’(e, \text{knife})]\]

b. *Few girls like John*
   FEW(GIRL)(LIKE_JOHN) ≡ \neg \text{MANY}(GIRL)(LIKE_JOHN)

The four classes are summarised in (6).

(6) **Negative elements**

<table>
<thead>
<tr>
<th>Negative element</th>
<th>Properties</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative markers</td>
<td>Yield (sentential) negation</td>
<td><em>Niet</em> (Dutch)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Not</em> (English)</td>
</tr>
<tr>
<td>Negative quantifiers</td>
<td>Quantifiers that always introduce a negation and that bind a variable within the domain of negation</td>
<td><em>Nothing</em> (English)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Niets</em> (Dutch)</td>
</tr>
<tr>
<td>N-words</td>
<td>Quantifiers that introduce negation in particular syntactic configurations</td>
<td><em>Personne</em>, <em>Rien</em> (French)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Nessuno</em> (Italian)</td>
</tr>
<tr>
<td>Semi-negatives</td>
<td>Verbs or prepositions that have a negative connotation and that can be paraphrased with a true negative sentence</td>
<td><em>Sans</em> (French)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Few</em> (English)</td>
</tr>
</tbody>
</table>

In order to define these four classes of negative elements formally, one needs to define the common property that is shared by all these elements, but that does not apply to any non-negative element.
A natural attempt to define this property would be negation, i.e. the introduction of a negation in the semantics. However, this assumption faces two serious problems: (i) n-words do not always introduce a negation to the semantics; (ii) semi-negatives do not introduce a negation to the semantics either; only their paraphrases do. An explanation in terms of semi-negatives having an underlying negative lexical semantics (like *without = not with*) is not of any help either, since such an argument suffers from circularity: the only motivation to assume this underlying lexical semantics is to account for the fact that they are negative elements.

Another property, which is shared by all elements in (6), is that these elements are able to license Affective Items (AI’s). AI’s (cf. Giannakidou 1999) are elements that may occur in particular contexts only. A subset of the set of AI’s is referred to as Negative Polarity Items (NPI’s), since negation (among others) is able to license these elements, as is shown in the examples in (7)-(10) (cf. Van der Wouden 1994a).

(7)  a. John doesn’t like any spinach
    b. *John likes any spinach

(8)  a. Nobody ate any spinach
    b. *Somebody ate any spinach

(9)  a. Personne ne mange aucun des legumes
    N-body eats any of the vegetables
    ‘Nobody eats any vegetables’
    b. *Quelqu’un mange aucun des légumes
       Somebody eats any of the vegetables
       ‘Somebody eats any vegetable’

(10) a. Few people ate any spinach
     b. *Many people ate any spinach

Although the class of NPI licensers is broader than the set of the negative elements, a subset of this class is identical to the set of negative elements. Hence if it is clear which property is responsible for NPI licensing, the property that constitutes negative elements can be defined in terms of this NPI-licensing property. Therefore, the study of NPI’s and their licensing conditions is fruitful in order to provide a working definition of negative elements. Note that this approach does not suffer from circularity: I will describe some general properties of NPI licenser, that therefore automatically also applies to negation. A subset of these properties should then apply only for negative elements, as NPI’s are always licensed under negation.

3.1.2 Negative Polarity Items and their licensing conditions

The study of NPI’s has been dominated by four research questions, formulated as follows (cf. Ladusaw 1996):
The licensor 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 licensee question will play a less important role in this subsection, but will be addressed in the further chapters. The licensing question addresses the question of the relation between licensor and its licensee and its answer consists of the conditions for such a relation to be allowed (generally answered in terms of c-command). Finally the status question addresses the status of sentences containing unlicensed NPI's: are these sentences syntactically illformed, or semantically or pragmatically infelicitous. My analysis of n-words (chapter 7) presupposes a non-syntactic (i.e. semantic or pragmatic) account of unwellformed NPI expressions.

NPI's can be licensed by negative contexts, and negative contexts are introduced by negative elements (10). However, it is not only negation that can license NPI's. Yes/no questions or conditionals are for example also capable of licensing NPI's (11). Hence we need to determine which property it is that the negative contexts in (10) share, but those contexts as in (11) that also license NPI's do not.

(11)  a. Do you like any wine?
     b. If you want to have any wine, please tell me.

Several approaches have been formulated in order to account for NPI licensing. Apart from semantic approaches that I will discuss in detail in this section, syntactic or pragmatic approaches to NPI licensing have been formulated too. Progovac (1993), Neeleman & Van de Koot (2002) account for NPI licensing in terms that are similar to binding theory; Kadmon & Landman (1993), Krifka (1995) and Van Rooij (2003) account for NPI licensing in pragmatic terms. However, as the primary interest is to seek the shared semantic properties of negative elements and NPI licensors, I will focus on the semantic approaches in this subsection. Roughly speaking, two main approaches have been formulated in the semantic literature in NPI licensing: the first approach, put forward by Ladusaw's (1979), Zwarts (1986), Zwarts and Van der Wouden's (1994, 1997) account for NPI licensing in terms of downward entailment.

48 Other contexts are formed by if/perhaps clauses, disjunctions, habituals, imperatives, modals, subjunctives, superlatives, comparatives, conditionals, a.o. (Giannakidou 1997, 1999).
49 Strictly speaking the name NPI no longer holds, since these elements can also be licensed in some non-negative context. This is why Giannakidou refers to these elements as Affective Items (AI's). However, I will continue to use the name NPI, since this is the more common term.
relations. The second approach, proposed by Giannakidou (1997, 1999), following Zwarts (1995), argues that NPI licensing follows from the notion of non-veridicality.

Ladusaw (1979), following an idea by Fauconier (1975, 1979), argues that the common property elements licensing NPI’s is downward entailment. A function is downward entailing (also known as monotone decreasing, or downward monotonic) if the following relation holds:

\[
\delta \text{ is downward entailing iff } \forall X \forall Y (X \subseteq Y) \rightarrow ([[\delta]](Y) \subseteq [[\delta]](X))
\]

This definition allows for reasoning from sets to subsets (Van der Wouden 1994a). Thus it can be proven that nothing or few people and not are downward entailing functions, contrary to something or many:

\[
(13) \quad \begin{align*}
\text{a. } & \text{Nothing works } \rightarrow \text{Nothing works well} \\
& \text{Something works } \not\rightarrow \text{Something works well} \\
\text{b. } & \text{Few people sing } \rightarrow \text{Few people sing loudly} \\
& \text{Many people sing } \not\rightarrow \text{Many people sing loudly} \\
\text{c. } & \text{John doesn't like girls } \rightarrow \text{John doesn't like Mary} \\
& \text{John likes girls } \not\rightarrow \text{John likes Mary}
\end{align*}
\]

So far this seems to be a property that is shared by all four classes of negative elements as in (6). However, Van der Wouden (1994a) shows that downward entailment cannot be the only property that underlies negation. First he argues that some NPI’s need stronger negative contexts than pure downward entailment thus advocating against downward entailment as a sufficient condition for NPI licensing. This does not have to have any consequences for the quest for the definition of negative contexts, since downward entailment can still be regarded as a sufficient condition for negative contexts. Stronger negative contexts require additional conditions, such as anti-additivity⁵⁰ or anti-multiplicativity⁵¹. Second, contexts introduced by yes/no questions may license NPI’s. This does not form any problem either for a definition of negative contexts in terms of downward entailment, since these contexts are not downward entailing themselves. Giannakidou (1997) argues correctly that this is a serious problem for Van der Wouden’s theory of NPI licensing, as Van der Wouden tries to define all contexts that allow for NPI licensing in terms of monotonic properties of contexts. Third, and more importantly, he shows that some non-negative contexts are also downward entailing. I will discuss two examples: comparative clauses⁵² and the first argument of every⁵³.

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⁵⁰ A function \( f \) is anti-additive iff \( f(X \cup Y) \rightarrow f(X) \cap f(Y) \).
⁵¹ A function \( f \) is anti-multiplicative iff \( f(X \cap Y) \rightarrow f(X) \cup f(Y) \).
⁵³ In work by Heim (1982) and Diesing (1992) it has been shown that quantifiers take two variables: a restrictive clause and a nucleus. In every man walks, man forms the restrictive clause and walks forms the nucleus. This is referred to as the tripartite structure of quantifiers.
Chapter 3 - Issues in the study of negation

(14)  

a. Every car is ugly $\rightarrow$ Every Ford is ugly
   Every car that is owned by any man is ugly
b. He runs faster than we thought he could $\rightarrow$
   He runs faster than I thought he could
   He runs faster than anyone thought he could

Intuitively these contexts should not be regarded as negative contexts, given the classification in (6). Although the comparative clauses may be rephrased by a negation (15), which could be an argument in favour of classifying comparatives as semi-negatives too, this is not the case for universal quantifiers.

(15)  

He runs faster than we thought he could $\rightarrow$
   We did not think he could run (any) faster

Hence we have to look for a property that introduces a subset of downward entailment contexts, thus excluding cases such as the ones mentioned above. I argue that this notion is Giannakidou’s (1997, 1999) notion of anti-verificationality. She derives anti-verificationality from the notion of non-verificationality, which is an expansion of downward entailment\(^{54}\). (Non-)verificationality and anti-verificationality are defined as in (16):

(16)  

Let $Op$ be a propositional operator

a. If $Op(p) \rightarrow p$ is logically valid, $Op$ is veridical; otherwise it is non-veridical.

b. If $Op(p) \rightarrow \neg p$ is logically valid, $Op$ is anti-veridical.

From these definitions it follows that negative markers (17) and negative adverbs like ‘never’ are anti-veridical.

(17)  

a. John didn’t come $\rightarrow \neg \text{come}(j)$

b. John never came $\rightarrow \neg \text{come}(j)$

With respect to determiners we can define (non-)verificationality as follows:

(18)  

A determiner DET is veridical w.r.t. its NP or complex NP$\cap$CP argument iff it holds that $[[\text{DET NP VP}]] = 1 \rightarrow [[\text{NP}]] \neq \emptyset$ or $[[\text{DET (NP$\cap$CP) VP}]] = 1 \rightarrow [[\text{NP$\cap$CP}]] \neq \emptyset$; otherwise DET is non-veridical.

From this it follows that negative arguments like nobody or nothing (18) are non-veridical.

(19)  

a. $[[\neg\text{come}(j)]] = 1 \rightarrow [[\neg\text{come}(j)]] \neq \emptyset$

b. $[[\neg\text{man danced}]] = 1 \rightarrow [[\neg\text{man}]] \neq \emptyset$

\(^{54}\) For a proof that non-verificationality is indeed an expansion on the notion of Downward Entailment (i.e. the proof that every DE contexts is also non-veridical), cf. Zwarts 1995.
The preposition *without* is also an anti-veridical element (20). But even ‘every’ is non-veridical with respect to its restrictive clause (21).

(20) He left *without* saying goodbye $\rightarrow$ $\neg$\textit{say}'(j, goodbye)

(21) \[[\text{Every man who owns a BMW has no taste}] = 1 \]

\[-/\rightarrow \llbracket \text{[man who own a BMW]} \rrbracket \neq \emptyset\]

_Few, seldom and hardly are not non-veridical elements. Few and hardly even introduce veridical contexts\textsuperscript{55}. Before can be veridical, non-veridical or even anti-veridical, depending on the context\textsuperscript{56}._

(22) \[[\text{[Few/hardly any people came]] = 1 \rightarrow [[\text{Few/hardly any people}] \neq \emptyset

Giannakidou (1995) accounts for the fact that these semi-negatives license PI’s by arguing that PI’s can also be licensed indirectly. The difference between direct and indirect licensing is defined as follows.\textsuperscript{57}

(23) a. A Polarity Item $a$ is licensed directly in a sentence $S$ iff $S$ provides some expression $z$ which is non-veridical, and $a$ is the scope of $z$.

b. A Polarity Item $a$ is licensed indirectly in a sentence $S$ iff $S$ gives rise to a negative implicature $S'$ and $a$ is under the scope of the negation at $S'$.

Now it is possible to account for the negativity of elements like *few* and *seldom*, since these elements give rise to negative implicatures. This makes it even possible to link non-veridical determiners like *no* to anti-veridical operators

(24) a. Few people came $\rightarrow$ Not many people came

b. No man came $\rightarrow$ It is not the case that any man came

Now, we can define a negative context as follows: either as a context that is introduced by an anti-veridical operator or a context that gives rise to a negative implicature that contains a negation:

(25) A negative context $C$ is introduced in sentence $S$ iff

a. $S$ contains an anti-veridical operator $Op$ that introduces $C$; or

b. $S$ contains an operator $Op$ due to which $S$ gives rise to a negative implicature $S'$;

\textsuperscript{55} Seldom can also be thought of as a veridical element, as it quantifies over times. ‘Seldom people came to the party’ means that there is at least one time that people came to the party. It does not imply that no one came to the party.

\textsuperscript{56} Cf Giannakidou 1999: 29 for a discussion of (non-)veridical before.

\textsuperscript{57} Cf. Giannakidou 1997: 92.
Chapter 3 - Issues in the study of negation

However, this definition still suffers from circularity with respect to the second clause because the definition of negative implicature is still defined in terms of negativity. But just as anti-veridicality is the proper definition for negative elements, such as negative markers, negative quantifiers and n-words, is it the property of the negative element in the implicature that is raised after the introduction of a semi-negative in a sentence. Hence (25) can be rephrased by (26):

(26) A negative context C is introduced in sentence S iff
   a. S contains an anti-veridical operator $Op$ that introduces C; or
   b. S contains an operator $Op$ that enables S to give rise to an implicature $S'$ that contains an anti-veridical operator $Op'$.

We saw before that downward entailment is not an incorrect notion for negative contexts, but rather a notion that overgeneralises. Therefore I showed that the notions of a-veridicality and indirect licensing yield the correct restriction on downward entailment. Hence the notion of negative elements (including n-words) can now be defined as follows:

(27) A negative element is an element that under well-defined conditions introduces a negative context C.

A negative element is thus equivalent to the operator $Op$ in (25) and (26): it is either an anti-veridical operator or it enables the sentence that it is in to give rise to an implicature containing an anti-veridical operator.

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

The exact conditions under which n-words do or do not introduce a negative context will be one of the central topics in this study. For the proper definition of n-words, to distinguish them from Negative Quantifiers, it suffices to say that there are specific conditions under which n-words do not introduce a negative context whereas Negative Quantifiers always introduce a negative context.

Now we have a formal notion of negative contexts and negative elements that serves as a working definition. Throughout the rest of the book I will refer to (26)-(28) when referring to negative contexts or elements, or n-words.

3.1.3 Negative adjectives: Contradictory and Contrary Negation

In the previous section I discussed four types of negative elements that have been introduced in 3.1.1. Another class of negative elements is formed by prefixes that generally form negative adjectives, like English un-. Before discussing these examples in detail, we should first have a look at some formal properties of negation.
Two laws govern negation in Aristotelian logic: the Law of Contradiction and the Law of the Excluded Middle. The first law demands that two opposite propositions cannot be true simultaneously; the Law of the Excluded Middle requires that of any two opposite propositions, one is true.

\[(29)\]  
\[a. \text{ Law of Contradiction (LC): } \neg(p \land \neg p)\]  
\[b. \text{ Law of the Excluded Middle (LEM): } \neg p \lor p\]

Standard negation, as we saw in the previous cases, obeys both laws:

\[(30)\]  
\[a. \text{ John is older than 18}\]  
\[b. \text{ John is not older than 18}\]

Whatever John’s age may be, it follows immediately that these sentences cannot be true simultaneously and that one of the sentences in (30) is true so both laws apply.

However, not every instance of negation obeys both laws:

\[(31)\]  
\[a. \text{ John is friendly}\]  
\[b. \text{ John is unfriendly}\]

The Law of Contradiction still holds: the two sentences cannot be true simultaneously in the same situation. The Law of the Excluded Middle however does not hold: it is very well possible that John is neither friendly nor unfriendly. Horn (1989) analyzes these predicates as so-called scalar predicates, which denote a scale from very unfriendly to very friendly. *Unfriendly* then denotes a particular part of this scale, just like *friendly*. However, the two do not meet.\(^58\)

Apparently, Aristotelian logic contains two different kinds of negation: *Contradictory Negation* and *Contrary Negation*.

\[(32)\]  
\[a. \text{ Contradictory Negation: obeys LC and LEM}\]  
\[b. \text{ Contrary Negation: only obeys LC}\]

As the definitions in (26)-(28) hold for both kinds of negation, it is predicted that negative adjectives can also license NPI's in their licensing domain. This prediction is born out.

\[(33)\]  
Unaware of any dangers, he went on vacation\(^59\)

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\(^{58}\) Apart from negative adjectives, it is possible in Dutch to put a negative prefix *on-* on some nouns (ding – *onding* ‘thing – unthing*'). However, this phenomenon is not productive: it can only apply to some nouns. Moreover, it only gives rise to specialized meanings. *Onding* ‘unthing’ refers to a thing, that does not work as it should work, e.g. a car that is almost always breaks down.

\(^{59}\) Cf. Den Dikken (2002) for more examples in Dutch.
3.1.4 Concluding remarks

In this section I developed a working definition for negative elements that will be used throughout the rest of the book. The definitions are based on the selection of four different types of negative elements. The reason for this selection of negative elements is that it is known of all these negative elements that they may give rise to unexpected phenomena with respect to multiple interpretation. These effects, especially Negative Concord, will form the core of this study.

3.2 Sentential negation and the Jespersen Cycle

In this section I describe the different ways that languages express sentential negation. First I explain the notion of sentential negation as opposed to constituent negation; second I provide a brief overview of the universal differences in expressing negation, and then I describe one particular strategy of expressing negation (by means of negative particles and by means of negative affixes). Finally I will describe the so-called Jespersen Cycle, which describes the cyclic diachronic change of negative particles and I show that this diachronic development can be used as a typological instrument.

3.2.1 Sentential negation

The definitions for the properties of negative contexts as provided in the previous section apply to both negative constituents and sentential negation. Given the fact that negation has been related to the introduction of an anti-veridical operator, the difference between sentential and constituent negation reduces to the difference in scope of the negative operator. If the entire proposition falls under the scope of the negative operator, the negation yields sentential negation. If the negation only applies to a particular constituent, there is no sentential negation, but only constituent negation. The distinction between sentential and constituent negation can be very subtle in some cases. Moreover, in some cases the distinction between sentential and constituent negation depends on whether sentential negation is defined in syntactic or in a semantic way. Klima (1964), following Jespersen (1917), introduces a tradition in which sentential negation is considered to be a syntactic phenomenon whereas Jackendoff (1969) initiates a line of thinking in which sentential negation is a semantic notion.

The distinction between sentential and constituent negation goes back to Klima (1964) who developed three different tests to distinguish between these two types of negation.

Klima shows that only sentential negation triggers the occurrence of the negative particle *either* in English (34). Otherwise the second clause cannot be modified by *either* but only by *too*.
(34)  
   a. Bill drives a car and John did too/*either  
   b. Bill doesn’t drive a car and John *too/either  
   c. Not long ago Bill drove a car and John did too/*either  

A second test Klima developed is the *not even* test (35). *Not even* tags are only possible in the case of sentential negation, not in the case of constituent negation.  

(35)  
   a. *Bill drives a car, not even a Fiat 500  
   b. Bill doesn’t drive car, not even a Fiat 500  
   c. *Not long ago Bill drove a car, not even a Fiat 500  

Third, Klima presents a test using positive question tags (36). Only sentential negation allows a positive question tag. In the case of mere constituent negation a positive tag is not allowed.  

(36)  
   a. *Bill drives a car, does he?  
   b. Bill doesn’t drive a car, does he?  
   c. *Not long ago Bill drove a car, did he?  

Note that the tests for sentential negation are not restricted to the occurrence of a negative marker like *not* or *n’t*. The observation also holds for negative quantifiers, negative adverbs and semi-negatives like *seldom* or *hardly*.  

(37)  
   a. Nobody likes Mary, not even John  
   b. John never dates a girl, not even Mary  
   c. Mary seldom dates a guy, not even John  

Klima shows that strong (real) and weak (semi-) negative elements can be distinguished by means of coordination with a *neither* phrase.  

(38)  
   a. Bill will {not/never} drive a care and neither will John  
   b. *Bill will {seldom/rarely} drive a car and neither will John  

However all these tests are not sufficient and sometimes give rise to conflicting results. Ross (1973)\(^{60}\) shows examples in which negative quantifiers in object position trigger negative question tags, but negative quantifiers in subject position do not (39). Jackendoff (1969, 1972) also shows examples that form counterarguments to Klima’s tests.  

(39)  
   a. Nobody saw John, did(*n’t) they?  
   b. John saw nobody, did*(n’t) he?  

\(^{60}\) Cited in Horn 1989: 185.
Hence new tests are needed. Ross (1973) and Culicover (1981) introduce a test that uses negative parentheticals. Only sentential negation allows for a negative parenthetical: constituent negation does not allow for it.

(40) a. It isn’t possible, I don’t think, to solve this problem  
b. *It is impossible, I don’t think, to solve this problem.

Another test follows from the conclusions in the previous section. As we saw, negative elements license NPI’s. Hence the fact that sentential negation licenses NPI’s can form the basis of a new test. But there are three requirements for such a test: (i) constituent negation also licenses NPI’s. Hence if the NPI is no longer licensed because it is part of a constituent other than the constituent that contains the negation, it is not a case of sentential negation (41);

(41) a. Bill didn’t drive any car  
b. *Not long ago Bill drove any car

(ii) the negation must be the licensor of the NPI. As NPI’s can also be licensed by some non-negative contexts, it should be the negation that licenses the NPI. This can be checked by removing the negation: the sentence containing the NPI should then no longer be well-formed; (iii) a third requirement of this test is that it is only valid if the NPI’s is licensed under c-command at surface structure. Hence, even in the case of sentential negation, the NPI cannot be included at any position.61

(42) (*Any) people didn’t show up.

A similar test follows from the fact that negation always has scope over universal quantifiers when the universal is preceded by the negation, whereas constituent negation does not have any negative scope over universals (unless the universal is part of the negative constituent). So if a universal quantifier at any position in the sentence preceded by the negation falls under the scope of the negation, the negation is sentential. If that is not the case, the sentence contains a constituent negation.

(43) a. Last year Bill didn’t always drive a car62  
   \( \neg \rightarrow \forall \)  
b. *Not long ago Bill always drove a car  
   \( \neg \rightarrow \forall \)

61 NPI verbs, such as Dutch hoeven ‘need’, are excluded from this requirement, since they need not be c-commanded at surface structure: The following sentence is grammatical:
   Jan hoeft niet naar school te gaan
   John needs not to school to go
   ‘John does not need to go to school’

62 \( \rightarrow \) reads as scopes over.
Still it remains unclear what is exactly meant by sentential negation. A sentence such as (44) can be regarded as sentential negation, since the predicate is negative, but the negation does not outscope the existential subject.

(44) Some people didn’t show up

Examples such as (44) have in fact led to a debate about what sentential negation really is: in the tradition of Jespersen (1917) and Klima (1964), sentential negation is clause based and marked on the finite verb. Seuren (1969) and Jackendoff (1969) argue that sentential negation is not a syntactic notion but a semantic notion: sentential negation of a proposition $p$ means that the proposition can be paraphrased by ‘it is not the case that $p$’. This distinction is illustrated in (45).

(45) a. Not many of us wanted the war
    b. Many of us didn’t want the war

According to Jespersen only the latter example exhibits sentential negation; according to Jackendoff only the former does. However, Jackendoff’s test in terms of negative paraphrases leads to other problems, e.g. neg-raising:

(46) a. I don’t think that John will arrive tomorrow
    b. It is not the case that I think that John will arrive tomorrow
    c. I think that it is not the case that John will arrive tomorrow

The meaning of (46)a is rather (46)c than (46)b. Hence in Jackendoff’s line of reasoning (46)a would not exhibit sentential negation, whereas within the syntactic approach (46)a would be analysed as sentential negation. Hence the usage of different tests may give rise to conflicting results.

Note that the fact that some of the diagnostics lead to conflicting results depends on the fact that Klima’s tests and Jackendoff’s test are diagnostics for different notions: Klima’s test are designed to investigate whether a verb is marked for negation, whereas Jackendoff’s test are meant to indicate whether the entire proposition is under the scope of negation. Hence the correctness of diagnostics for sentential negation depends on a theoretical definition of the notion of sentential negation: is the notion defined in syntactic or semantic terms?

I will address the question whether sentential negation should be captured in terms of syntax or semantics in chapter 6-8, where I will argue that negation is applied in the derivation after vP (i.e. the smallest domain containing all propositional arguments). However, as syntax operations can take place after Merge with negation, new material

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64 Note that the term ‘neg-raising’ is ambiguous in the literature. It can refer both to the fact that negation may scope over the entire proposition, although the negative operator at surface structure is dominated by other elements and to the phenomenon that is discussed here.
can be included such as adverbs that are not under the scope of negation (47)a or (existential) quantifiers moving out of vP to a higher position in the clause(47)b.

(47)  

a. John probably doesn’t go to school  
   Probably > ¬

b. Somebody doesn’t go to school  
   ∃ > ¬

Assuming that the scopal order with respect to negation is read off at surface structure, this explains why sentences that are syntactically negative do not give rise to ‘it is not the case that ...’ paraphrases. Hence the difference between the syntactic and semantic version of sentential negation can be reduced to the fact that negation is merged in a low position after which other syntactic operators can take place. In the rest of this book I will refer to sentential negation when a vP is dominated by a negative operator. However, this does not rule out Jackendoff’s approach in terms of semantics: it only captures a different notion, namely whether negation still dominates all material at LF.

The next subsection will deal with typological differences in the way of expressing sentential negation. One particular strategy of expressing sentential negation, by means of negative markers, will form the central topic in this study.

### 3.2.2 Ways of expressing sentential negation

Languages exhibit different ways of expressing (sentential) negation. However, the number of these different ways is restricted. Three different kinds of languages can be distinguished: languages that have special verbs that deny a sentence like Evenki (spoken in Siberia), or languages, like Tongan (Polynesian), with negative verbs that take an entire clause as their complement.

(48)  

a. Bi ṭ-ḏ-w dukuwūn-ma duku-ra  
   I neg-PAST-1SG letter-OBJ write-PART  
   ‘I didn’t write a letter’  

b. Na’e ‘ikai [CP ke ’alu ‘a Siale]  
   ASP neg [ASP go ABS Charlie]  
   ‘Charlie didn’t go’

The third strategy uses negative particles or negative affixes (either prefixes, suffixes or infixes) to express sentential negation. In this study I will restrict myself to the latter category, excluding the more ‘exotic’ varieties as in (48). In several

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Zanuttini distinguishes four different strategies to express negation: the Evenki and Tongan types, languages that express negation by means of a negative particle, and languages that have a negative
languages negative particles or affixes can express sentential negation by themselves (49), e.g. the Czech negative prefix *ne*-, the Italian negative particle *non* or the German negative adverb *nicht*. In other cases we find obligatory combinations of negative particles/affixes (50), such as Negative Doubling in Afrikaans, or the combination of affix/particles and adverbs, as in standard French.

(49) a. Milan moc nejedl
   Milan much neg.ate
   ‘Milan hasn’t eaten much’

b. Gianni *non* ha telefonato
   Gianni neg has called
   ‘Gianni hasn’t called’

c. Hans hat *nicht* gegessen
   Hans has neg eaten
   ‘Hans hasn’t eaten’

(50) a. Die voorbereiding neem *nie* lank *nie*
   The preparation takes neg long neg
   ‘The preparation doesn’t take long’

b. Jean *ne* mange *pas* beaucoup
   Jean neg eats neg much
   ‘Jean doesn’t eat much’

In all strategies, negative particles or affixes mark the presence of a negation. Hence I will refer to these elements as negative markers. In chapter 4 I will show which variety with respect to the kinds of negative markers has been found in Dutch; in chapter 5, I will take a series of other languages into account and explore the range of variation in those languages. In chapter 6 I provide a syntactic account of what constitutes the different kinds of negative markers.

### 3.2.3 The Jespersen Cycle

Languages do not only differ cross-linguistically in the way they express sentential negation; languages also vary diachronically. The Danish grammarian and philosopher Otto Jespersen (1917) observed a general tendency in the expression of negation in various languages:

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affix. However, I will show that many negative particles have to be reanalyzed as negative affixes. In chapter 6-8 I will provide a new division between the different substrategies of the particle/affix type.  
67 Zanuttini analyses the examples in (48) as negative verbs: however, it is conceivable to think of these negative verbs as zero verbs with negative inflection. In that case, these examples fit nicely in the class of languages that express sentential negation by means of a negative affix.
68 Cf Den Besten (1989). See also section 3.3.3. Note that Den Besten’s notion of Negative Doubling originally did not apply to Afrikaans, because the second *nie* ‘neg’ does not occupy any position in the middle field. However, Van der Wouden’s reinterpretation of this notion (see also 3.3.3) makes it applicable to Afrikaans.
The history of negative expressions in various languages makes us witness the following curious fluctuation; the original negative adverb is first weakened, then found insufficient and therefore strengthened, generally through some additional word, and in its turn may be felt as the negative proper and may then in course of time be subject to the same development as the original word.99

Jespersen supports this claim by a number of examples from different languages in which indeed such a development can be found. English diachronically shows a rich variety of different patterns to express negation. In Old English, instances of a sentence-initial particle no have been found in the epic Beowulf, which is said to reflect the oldest versions of English (Van Kemenade 1999, 2000a-b), probably from the 7th or 8th century (51).70

(51)  *No ic me an herewæsmun hnagran talige, guðgeweorca, þonne Grendel hine*71  
Neg I me in less battle-power count, fighting-acts, than Grendel him  
‘I don’t count my self less than Grendel in battle power, fighting acts’

This way of expressing negation is rather rare in this text. More common is using a weaker negative marker ne, capable of attaching to the finite verb in (52), in a preverbal position. Note that this sentence also contains an NPI ænge þinga, a common strategy in languages expressing negation by means of a weak phonological marker (see chapter 6 for an analysis in detail). Furthermore, Jespersen (1917) argues that the incorporation in the negative marker ne as in nolde (‘neg wanted’) was first restricted to a class of auxiliaries, such as forms of to be, to have, or will.

(52)  *Nolde eorlā hleo ænge þinga pone ðwealcuman cwicne forlætan*72  
Neg-wanted nobles protector some thing the murderer alive free  
‘The protector of the nobles didn’t want at all to free the murderer alive’

Old English underwent part of the Jespersen Cycle by changing the phonological strong form no in the weaker ne. Support for such an analysis could come from possible co-occurrences of the two negative markers in the same clause. Sporadically these examples can be found in Beowulf.

(53)  *No ðu ymb mines ne ðearft // lices feorme lenge sorgan*  
Neg you about mine neg needs body’s bury long worried  
‘Then you don’t need to worry long about burying my body’

Apparently the negative marker ne became too weak to occur entirely by itself and given Jespersen’s observation, one would expect to find occurrences of a second

70 The English examples have been taken from Van Kemenade (2000b) and have been checked with the original texts.
71 Beowulf: 677.
72 Beowulf: 791.
negative element to express negation. Indeed these examples show up in 11\textsuperscript{th} and 12\textsuperscript{th} century English in many different forms: \textit{na, nauht or noht}. These elements have been analysed as contracted forms of Old English \textit{nawith} (\textit{no thing}), but the weaker form \textit{na} can also be analysed as a weaker form of \textit{no}. \textit{Nawith} has probably been derived from \textit{ne with}.

\begin{itemize}
  \item[(54)] \textit{Ne het he us na leornian heofonas te make}\textsuperscript{73} \hspace{1.5cm} \text{Late Old English (11\textsuperscript{th})}
  \begin{quote}
    Neg called he us neg leam heavens to make
    \textquote{He didn't order us to make heavens'}
  \end{quote}

  \item[(55)] \textit{bis ne habbe ic nauht ofearned}\textsuperscript{74} \hspace{1.5cm} \text{Early Middle English (12\textsuperscript{th})}
  \begin{quote}
    This neg have I neg deserved
    \textquote{I haven't deserved this'}
  \end{quote}
\end{itemize}

In these sentences, in which the co-occurrence of both negative markers is obligatory, \textit{nauht} takes over the role as carrier of negation and becomes the main negative marker, resulting in the loss of \textit{ne}. 14\textsuperscript{th} Century English hardly shows any examples of the preverbal negative marker and \textit{not} (in any of its forms) is responsible for negation.

\begin{itemize}
  \item[(56)] \textit{He yaf nat of that text a pulled hen}\textsuperscript{75} \hspace{1.5cm} \text{Early Middle English (12\textsuperscript{th})}
  \begin{quote}
    He gave not of that text a pulled hen
    \textquote{He didn't give a thing about that text'}
  \end{quote}
\end{itemize}

Now the circle that started with single \textit{no} is complete. Sentential negation can be expressed by means of a single negative element \textit{not}. This pattern can still be found in current English sentences such as (57).

\begin{itemize}
  \item[(57)] \textit{I am not ill}
\end{itemize}

However, the cycle continues and in the 15\textsuperscript{th} century \textit{do}-support enters English and negative expressions with a DO auxiliary become standard. In these sentences the negative marker attaches to the auxiliary \textit{dyd} (otherwise it would remain in situ yielding \textit{dyd I not}) and yields the complex form \textit{dyd-not} (or \textit{have-not}).

\begin{itemize}
  \item[(58)] a. \textit{Dyd not I send unto yow one Mowntayne} \ldots \textsuperscript{76}
    \textquote{Didn't I send you a Mowntayne ...'}
  
  \begin{itemize}
    \item[b.] \textit{Have not I chosen you twelve}
  \end{itemize}
\end{itemize}

Later on in these cases \textit{not} can be reduced to the phonological weaker \textit{n't} as is available in Standard English, often followed by a so-called \textit{any-term}. And two strategies for negation are available (either by using \textit{n't} or by using \textit{not}\textsuperscript{77}).

\textsuperscript{73} \textit{Ælfric Lives of Saints}.XVI.127.

\textsuperscript{74} \textit{Vices and Virtues} 7.9.

\textsuperscript{75} \textit{Chaucer}. Canterbury Tales, General Prologue, 177-78.

\textsuperscript{76} Mowntayne.210.

\textsuperscript{77}
(59) a. I didn’t move to England
   I did not move to England
b. I didn’t do anything
   I did not do anything

The reduced form n’t is the standard way of expressing negation in colloquial English and in fact has become the obligatory way in African American English. If it is indeed the case that n’t is the weaker form of not and n’t is taking over the role of not, similar to the change from no into ne in Old English, possible co-occurrences of n’t and not are predicted, comparable to the example in (53). This prediction is born out. In African American English (but also in other varieties of English), the negative sentence (often negative questions) can often have an additional not without reversing the sentence’s interpretation.

(60) a. Can’t you not find an answer here? Contact me!
b. You don’t not have to rent or purchase expensive test special use test equipment
c. No, you don’t not have the right to talk about ‘we’ if you think that ‘we’ includes ‘me’.

On the basis of English we might describe the Jespersen Cycle in the following way:

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77 The increasing preference of n’t over not in colloquial use is illustrated by the use of not contractions of American presidents from Kennedy to Bush. While Kennedy and Nixon still used the uncontracted form not in the majority of cases (during public debates), Bush Sr. and Clinton used this form in only in 14-17% of all cases (Yaeger-Dror & Hall-Lew (2002)).

78 The choice between n’t and not may lead to interpretation differences as n’t fails to acquire any stress, contrary to not.

79 All these examples (there are hundreds) have been found on the internet and have been checked with native speakers.
(61) The Jespersen Cycle

- Phase I: Negation is only expressed by a single negative marker that is attached to the finite verb.
- Phase II: The negative marker that is attached to the finite verb becomes phonologically too weak to express negation by itself and a second negative adverb becomes optionally available.
- Phase III: Sentential negation is obligatory expressed by the negative marker that is attached to the finite verb and the adverbial negative marker.
- Phase IV: The negative adverb is the obligatory marker for negation and the use of the negative marker that is attached to the finite verb becomes optional.
- Phase V: The negative adverb is the only available negative marker. The negative marker that is attached to the finite verb is no longer available.
- Phase VI: The negative marker is available in two forms: it can appear either as negative adverb or as a negative marker that is attached on the finite verb, though sometimes simultaneously.
- Phase VII=1 Negation is only expressed by a single negative marker that is attached to the finite verb.

It remains a question however whether this development holds for every language using particles to express negation. Jespersen shows examples from Latin (62) and French and Scandinavian languages that show that these languages underwent (parts of) the same process. Also Dutch, I will show in the next chapter, changed from Phase I/II to Phase V (through Phase III-IV).

In Latin negation was first expressed by a single element *ne*, followed by a strengthening element *oenum*, from which the later *non* is derived. This *non* expresses the negation on its own (without *ne*) and finally occupies the original position of *ne* in the sentence.

(62) a. *Ne dico*
   neg say.1SG
b. *Dico ne oenum*
   say-1SG neg a-thing
c. *Dico non*
   Say.1SG
d. *Non dico*
   neg say-1SG
   ‘I don’t say (anything)’
The cycled continued in French, often regarded as a prototypical language with respect to the Jespersen Cycle, and examples can be found in all stages.

(63) a. Je ne di
    I neg say
Old French
b. Je ne dis pas
    I neg say neg
Modern French
c. Je dis pas
    I say neg
Colloquial French

French negation developed from the clitical element *ne* via the complex negative form *ne ... pas* to the single adverbial element *pas*. In French a second development co-occurred with the Jespersen Cycle: positive elements became reanalysed as negative elements. For example *pas* used to mean 'step', but got reinterpreted as the negative marker. The French word for 'n-body' *personne* used to mean 'person' and the French word for 'n-ever' (*jamais*) originally meant 'already more' (Latin: *iam magis*).

Given the similarities between English, Latin and French, it is safe to conclude that the diachronic change with respect to the expression of sentential negation is not a specific property of English but it can be generalised to other languages as well. Although it has not yet been proven that this cycle applies to all languages using particles or suffixes to express negation, it is possible however to link all these languages to what I call a Jespersen Phase, i.e. their alleged position in the cycle. This typological tool makes it possible to link the properties of each different phase of the Jespersen Cycle with other properties of a language with respect to negation, such as the phenomena that I will discuss in the rest of this chapter. In the other chapters I will show that the relation between the Jespersen Phase and the interpretation of multiple negation forms a major key to a better understanding of Negative Concord.

### 3.3 The interpretation of multiple negation

In this section I discuss the possible semantic and pragmatic effects that co-occur with the interpretation of multiple negative elements. Contrary to formal logical systems, it is not generally the case that two negations cancel each other out and yield an affirmation. Van der Wouden (1994a) describes four different classes of multiple negation. In this section I discuss these four classes and show that this classification can be reduced to a binary classification: application of the Law of Double Negation (LDN) vs. no application of LDN.

The four classes of multiple negation that Van der Wouden distinguishes are:

- **Double Negation**: Two negative elements cancel each other out and yield an affirmative.
**Weakening Negation:** One negative element weakens the negation of another negative element. The result is somewhere between a positive and a negative.

**Negative Concord:** two or more negative elements yield one negation in the semantics.

**Emphatic Negation:** One negative element enforces another negative element. The result is stronger than it would be the case with just the second negative element.

I show in the next subsections that both Double Negation and Weakening Negation are the result of the same semantic mechanism (application of the Law of Double Negation) and that their different interpretations follow from the difference in their pragmatics. Moreover I will argue that Negative Concord and Emphatic Negation are two phenomena that belong to the same class: both seem to violate LDN. However, Emphatic Negation is not a subclass of Negative Concord or vice versa. They show similar behaviour, but I will argue that they are the results of different syntactic/semantic mechanisms.

### 3.3.1 Double Negation

Double Negation (DN) refers to cancellation of two negative terms as in formal logic. According to the Law of Double Negation (LDN) two negations yield an affirmative:

\[(64) \quad \text{Law of Double Negation:} \quad \neg \neg p \leftrightarrow p\]

\[(65) \quad \text{Mary will not not show up} \leftrightarrow \text{Mary will show up}\]

However, Double Negation in natural language is extremely rare. Not only is it hard to give rise to DN readings in Negative Concord languages (see the subsection 3.3.3), but also in languages that lack Negative Concord, such as Standard Dutch, Standard German, or the Scandinavian languages, constructions with two negative elements are hard to find. Yet it is not impossible to construct or interpret these sentences, and (given the working definition of negative elements), which includes so-called semi-negatives, the examples become much more natural (66)-(67). We will see that it is only hard to find contexts in which these expressions become natural.

\[(66) \quad \text{Few people didn't show up}\]

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80 Double Negation occurs quite frequently in natural languages if the two negations are in different clauses. However, this is not strict Double Negation as two propositions are negated once, and no proposition is negated twice.
Chapter 3 - Issues in the study of negation

(67)  a. *Nobody will not be touched by this movie*

\[
\neg \exists x. [\text{Person}'(x) \land \neg \text{Will be touched by the movie}'(x)] \iff \\
\forall [\text{Person}'(x) \rightarrow \text{Will be touched by the movie}'(x)]
\]

‘Everybody will be touched by this movie’

b. *We must not allow nothing*

\[
\neg \exists y. [\text{Thing}'(y) \land \text{Allow}'(we, y)] \iff \\
\exists y. [\text{Thing}'(y) \land \neg \text{Allow}'(we, y)]
\]

‘We must allow something’

Whereas the example in (66) does not yield problems for interpretation, the ones in (67) are harder to interpret. The interpretation in the first sentence is that ‘nobody remains untouched by this movie’, in the second sentence that ‘we must allow something’. In these cases the interpretation follows immediately from the Law of Double Negation, and the rules for quantifiers and modal operators.

The reason why these sentences seem unnatural is because of their usage conditions: a sentence containing two negations (instead of the equivalent sentence without a negation) will only be expressed if there is a necessity to do so. In the case that a speaker wants to utter ‘everybody will be touched by this movie’, he will use this expression rather than a complex sentence containing two negations, obeying Grice’s *maxim of manner* (‘be brief, don’t use unnecessary prolixity’). When the context is such that a speaker wants to deny a negative claim made by another speaker, the Double Negation construction becomes more acceptable.

(68)  a. A. I am told that *La vita è bella* is a horrible movie. I can’t imagine that anyone will be touched by it.

B. How can you say that? It was beautiful. Nobody will not be touched by this movie.

b. A. I think we need to be very strict. I think we must allow nothing

B. No, you can’t do that. That’s too strict. We must not allow nothing

It follows from (68) that Double Negation becomes natural in the proper context, namely when it is a response to a previous statement containing a negation. This observation is in line with observations by Seuren (1976) and Van der Sandt (1989) who claim that denial is heavily restricted with respect to presuppositions. Horn (1989) also shows that the pragmatic conditions of denial are closely related to the presupposition of the proposition to be denied. In the case of Double Negation, pragmatics requires a presupposition, which is doubted by one speaker, hence yielding a contrary presupposition, which on its turn will be denied by the other speaker. Given these highly infrequent usage conditions (cf. Horn 1989 for an overview on the literature), clause-internal Double Negation expressions are expected to be rare in spontaneous speech.

\[^{81}\text{Cf. Grice (1975).}\]
Hence I conclude that Double Negation is available universally. Clause-internal Double Negation is extremely rare, but I account for this due to its pragmatic restrictions and not to any syntactic or semantic unavailability of Double Negation. This is illustrated by the fact that even in Negative Concord languages, constructions yielding Double Negation readings are available (see chapter 8.2.3).

3.3.2 Weakening Negation

The second category Van der Wouden (1994a) distinguishes is called Weakening Negation. Weakening Negation (WN) is described as the occurrence of two negative elements, such that their common negative reading still remains a single negative, but a weaker one. An example is a sentence as in (69).

(69) John is not unfriendly

In a context in which some ask whether John is a friendly guy, (69) gets a reading that John is not a nasty guy, but he is not friendly either. This possibility is actually predicted by the laws of formal logic: The predicate friendly is a scalar predicate (cf. Horn 1989) that forms a spectrum from very unfriendly to very friendly.

(70) Scalar predicates: friendly

| very unfriendly | unfriendly | Neither friendly nor unfriendly | friendly | very friendly |

As one can see, unfriendly denotes the area between the dark area very unfriendly and the grey area neither friendly nor unfriendly. As the Law of the Excluded Middle does not hold for un-82, the combination of the contradictory negation not and the contrary negation un- denotes every area except for unfriendly.

(71) \( \neg \text{friendly(john)} \)

Then depending on the context, it becomes clear for the hearer what is meant by the denial of the negative predicate:

(72) a. John is not unfriendly. He is awful.
    b. John is not unfriendly. He isn’t very friendly either.
    c. John is not unfriendly. In fact, he is very friendly.
    d. A: John is unfriendly. B: No, John is not unfriendly. He is friendly.

82 It is not true that every instance of un- yields a contrary negation. (Un)married for example is a binary predicate. However, the lack of a scale is due to the semantics of married, and not of un-.
83 Contrary negation is denoted by \( \neg \).
In principle every area in (70) that is not denoted by *unfriendly* can be intended by ‘not *unfriendly*’. The question is however why the reading *neither friendly nor unfriendly* is the most salient reading of (69). This is accounted for by Horn’s (1990, 1991) *Division of Pragmatic Labour*:

The use of a longer, marked expression in lieu of a shorter expression involving less effort on the part of the speaker tends to signal that the speaker was not in a position to employ the simpler version felicitously. (Cited in Van der Wouden 1994a:123)

Whereas the readings denoted by the areas of *very friendly*, *friendly* and *very unfriendly* can be expressed without using any additional negation at all, this is not possible for the middle area. Hence according to this principle, there should be an extra reason to expect the first three readings in (72), but the fourth reading cannot be uttered felicitously in a shorter way. Therefore this is the unmarked reading for the so-called *liotes*. It is the result of formal semantics, obeying the laws of negation, in combination with the *Division of Pragmatic Labour* that excludes several possible readings in the standard situation.

3.3.3 Negation Concord

In this subsection I will provide an overview of Negation Concord (NC) phenomena in natural language. NC is defined in the introduction of this section as ‘two or more negative elements yielding one semantic negation’, following Labov’s (1972) observation. NC has been a widely studied phenomenon, since it exhibits morpho-syntactic behaviour that should intuitively be ruled out by semantics. In chapters 6-8 I will thoroughly discuss previous analyses of the phenomenon and explain my own analysis in detail, but first I want to prepare the ground by investigating which kinds of NC phenomena one may expect.

Van der Wouden & Zwarts (1993), following and expanding on Den Besten (1986, 1989), distinguish three different kinds of NC: Negative Spread (NS), Negative Doubling (ND) and a combination of both Negative Spread and Doubling (NSD). Van der Wouden (1994a) defines them as follows:

(73) **Negative Spread**: the negative feature is ‘spread’ or distributed over any number of indefinite expressions within its scope.

(74) **Negative Doubling**: a distinguished negative element shows up in sentences that contain a negative expression.

(75) **Negative Spread and Doubling**: a distinguished negative element shows up in sentences that contain more than one negative expression.

In Negative Spread construction (76) two indefinite expressions are morpho-phonologically marked for negation. In Negative Doubling constructions a negative quantifier and a negative marker together yield the semantic negation (77). When the
two constructions are combined, we find multiple n-words in combination with one negative marker, still yielding only one semantic negation (78).

(76) a. *Nessuno* ha telefonato a *nessuno*  
N-body has telephoned to n-body  
‘Nobody called anybody’  
b. *Tee niemand niets* gezeid  
It has n-body n-thing said  
‘Nobody said anything’

(77) a. Jean *ne dit rien*  
John neg says n-thing  
‘John doesn’t say anything’  
b. ‘k *En een geen geld*  
I neg have no money  
‘I don’t have any money’  
c. Milan *nevidim nikoho*  
Milan neg sees n-body.ACC  
‘Milan doesn’t see anybody’

(78) a. *Personne ne mange rien*  
N-body neg eats n-thing  
‘Nobody eats anything’  
b. Valère *en klaapt nie tegen niemand*  
Valère neg talks n-ever against n-body  
Valère doesn’t ever talk to anyone  
c. *Nikdo nedá nikomu nic*  
N-body.NOM neg gives n-body.ACC n-thing.DAT  
‘Nobody gives anything to anybody’

However the distinction between Negative Spread and Negative Doubling is inadequate to distinguish different typological classes of Negative Concord languages. Van der Wouden & Zwart’s (1993) distinction suggests a tripartite division of languages, namely (i) Negative Spread languages; (ii) Negative Doubling languages; or (iii) languages with both Negative Spread and Negative Doubling. However, this does not reflect what is found in natural languages. There is no language that exhibits Negative Spread, but lacks a particular negative element that accompanies n-words. French, West Flemish and NC varieties of English all allow a negative marker to be involved in the NC relation. Some languages however do not allow a combination of a negative subject and a negative marker. Negative Doubling languages are not found in natural language either: Afrikaans has been reported to be a Negative Doubling language, since negative sentences containing a negative marker *nie* or or n-word are (nowadays optionally) followed by a sentence-final second negative marker *nie*. Hence expressions without an n-word have obligatorily two *nie’s* whereas expressions with an n-word only have one.
Chapter 3 - Issues in the study of negation

(79)  a. Ek het hom nie gesien nie\(^{84}\)  Afrikaans
     I have him neg seen neg
     ‘I haven’t seen him’

b. Ek het hom nooit gesien nie
     I have him n-ever seen neg
     ‘I have never seen him’

However, Negative Spread also occurs in Afrikaans, although its frequency is rather low and it is said that these expressions may also yield an emphatic reading (Den Besten p.c.).

(80)  Ek krijg geen hulp van niemand nie\(^{85}\)  Afrikaans
     I get no help from n-body neg
     ‘I don’t get any help from anybody’

It is uncertain that the alleged emphatic reading stems from the occurrence of more than one negation. The English translation is also emphatic though this sentence contains only one negation. The reason for this is that to get is a transitive verb that is only optionally overtly bi-transitive. The fact that no help is received already implies that no help is received from anyone. Therefore mentioning that one did not get any help from any person emphasises that no help has been received.

(81)  \(-\exists x[\text{help}'(x) \& \text{get}'(l, x)] \rightarrow -\exists x\exists y[\text{help}'(x) \& \text{person}'(y) \& \text{get}''(l, x, y)]\)

The emphatic readings are thus simply a by-product of the argument structure in the sentence in relation to the content of the event. Not every example of Afrikaans NC is an instance of Negative Doubling and, just like the case of Negative Spread, no language has been found that exhibits only Negative Spread or Negative Doubling.

Typologically speaking, all NC languages exhibit therefore both Negative Spread and Negative Doubling. In all NC languages, multiple n-words can establish NC relations, and in all NC languages a separate negative element (the negative marker) is involved in the NC relation. Languages only differ with respect to whether a negative marker should always accompany n-words. In some languages (Slavic languages, Greek), this is the case, but in other languages (Spanish, Italian), it is related to the position of the n-word in the clause. If the n-word is occupying a preverbal position in languages like Spanish or Italian, the negative marker is no longer allowed, whereas the occurrence of an n-word in postverbal position requires the presence of a negative marker. This leads to the following subcategorisation of Negative Concord in Giannakidou’s (1997, 2000) terms of Strict vs. Non-Strict Negative Concord.\(^{86}\)

\(^{84}\) Examples from Van der Wouden (1994a): 104.

\(^{85}\) Examples from Donaldson 1993 (also cited in Van der Wouden (1994a)).

\(^{86}\) Giannakidou does not restrict the classification of Negative Concord to these classes: In fact, she proposes a rich classification of Strict and Non-Strict NC languages, which can further be classified in languages that have a light or a heavy negative marker or both. She also takes examples of what seem
(82) a. **Strict Negative Concord**: N-words are not allowed to occur by themselves, but have to be accompanied by a single negative marker.

b. **Non-Strict Negative Concord**: N-words are not allowed to occur by themselves, but should be accompanied by a single negative marker, except when the n-word is in a preverbal (subject) position. Then it may not co-occur with a negative marker.

Examples of these two instances are in (83) and (84).

(83) a. Milan *nikomu nevolá.*
   Milan n-body neg-call
   ‘Milan doesn’t call anybody’

b. *Nevolá nikdo.*
   Neg-calls n-body
   ‘Nobody is calling’

c. *Nikdo nevolá.*
   N-body neg-calls
   ‘Nobody is calling’

(84) a. Gianni *(non) ha telefonato a nessuno*  
   Italian
   Gianni neg has called to n-body
   ‘Gianni didn’t call anybody’

b. *(Non) ha telefonato nessuno*  
   Neg has called n-body
   ‘Nobody called’

c. *Nessuno *(non) ha telefonato (a nessuno)*  
   N-body neg has called (to n-body)
   ‘Nobody called (anybody)’

In all of these examples the first negative element introduces the negation and the other negative elements do not contribute a negation by themselves, but indicate that their indefinite interpretation should fall under the scope of negation.

Negative Concord is clause-bounded. No negative element in a main clause can establish a Negative Concord relation with an underlying negative element in a subordinate clause. This yields only Double Negation readings.

(85) a. *Milan neříká, že vidi nikoho*  
   Czech
   Milan neg-says that see.3SG.PERF n-body
   Milan doesn’t say that he has seen anybody

to be NC constructions in non-NC languages as instances of Negative Concord whereas I will treat these under the class of negative emphatics, which have a different nature than Negative Concord constructions.
b. *Gianni non ha detto che e arrivato nessuno  
Gianni neg has said that neg has arrived n-body  
‘Gianni hasn’t said that anybody has arrived’

The only phenomenon that is allowed to violate this constraint is so-called Paratactic Negation.

(86) **Paratactic Negation**: a semi-negative verb or preposition in a main clause can establish a Negative Concord relation with a negative element in a position in its complement.

Paratactic Negation (also known as expletive negation or resumptive negation) is known only to occur in contexts that give rise to negative implicature. These contexts are: (i) clauses depending on negatively connotated predicates (like *fear*, *hinder*, *forbid*, *doubt*, etc.); (ii) clauses dependent on comparatives and (iii) clauses depending on negative prepositions (like *before*, *unless* or *without*). Examples from French are in (87).

(87) a. J’ai peur qu’il *(ne)* vienne  
I am afraid that he neg comes.SUBJ  
‘I am afraid that he comes’

b. Il est autre que je *(ne)* croyais  
He is different than I neg believed.SUBJ  
‘He is different than I thought’

c. Il vient *sans personne*  
He comes without n-body  
‘He comes without anybody’

Paratactic Negation does not only license negative elements in subordinate clauses, it may also license negative complementisers, such as Latin *ne* or Greek *mipos*.

(88) a. Timeo *ne* veniat\(^{87}\)  
Fear.1SG neg.that comes.3SG  
‘I fear that he comes’

b. Fornamai *mipos* kano lathos  
Fear.1SG neg.that make.1SG error  
‘I am afraid to make an error’

 Crucial for any explanation for Paratactic Negation is whether the negative element indeed does not contribute to the negative semantics or not. Van der Wouden advocates the view that these negative elements in subordinate clauses act as Negative Polarity Items and do not contribute to the semantics at all, hence acting as an instance of Negative Concord.

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\(^{87}\) Data from Van der Wouden (1994a): 107-108.
This view is argued against by Portner & Zanuttini (2000) who show examples from the Italian dialect of Padua, which allows for Paratactic Negation in Wh and non-Wh exclamatives:

(89) a. Cossa (no) ghe disse-lo!
   What neg him says-he
   ‘What things is he telling him’

b. (No) ga-lo magna tuto!
   Neg has-he eaten everything
   ‘He has eaten everything!’

The examples that include the negation are intended to show that the subject is really telling/eating everything, even the most unlikely things. When the negation is left out, the connotation with unlikely elements disappears. Hence the negation does contribute to the semantics of the sentence.

However, these exclamatives are no proper examples of Paratactic Negation as Paratactic Negation is a subcategory of Negative Concord, and the same effect can hold for non-Negative Concord languages, like Dutch or English, that allow for this kind of construction.

(90) a. Wat hij allemaal (niet) vertelt!
   What he all neg tells
   ‘What things he is telling’

b. Wat hij allemaal (niet) eet!
   What he all neg eats
   ‘What things he is eating’

In this case the introduction of niet implies that the kind of things the subject talks about or eats is unexpected whereas the positive exclamative only refers to the amount of things that the subject generally tends to tell/eat.

From this it can be concluded that negation in exclamatives contributes to the semantics, but that these elements do not count as instances of Paratactic Negation as the phenomenon is not restricted to Negative Concord languages only. A proper explanation of the interpretation of negative exclamatives will be the subject of further research.

Paratactic Negation as in the definition in (86) is not comparable to this phenomenon. Moreover, as we saw it is restricted to the class of languages that exhibits also Strict or Non-Strict Negative Concord. Therefore the subdivision of Negative Concord languages is the following:

On the basis of my empirical research I will show (see chapter 4-5) that every Negative Concord language exhibits Paratactic Negation, to the extent that there is variation between languages, which elements may participate in a Paratactic Negation construction: whereas Latin accepts verbs expressing doubt to participate in NC relationships, French does not.
3.3.4 Emphatic Negation

In this subsection I will discuss the different occurrences of the final category of multiple negation as proposed by Van der Wouden: Emphatic Negation (EN). First I will give several examples, and I will provide a classification of different EN expressions. Then I will account for the distribution of EN expressions from different classes and finally I will sketch two possible strategies for an explanation of EN.

Examples of EN in Dutch are mostly found in idiolectical varieties whereby the single negative reading is emphatic. Although Van der Wouden treats it as a separate class, from a semantically point of view it should be regarded as a special subclass of NC. It is similar to other kinds of NC, since the cancellation of two negative elements against each other is ruled out.

(91) a. Hij heeft nergens geen zin in
    He has n-where no lust in
    ‘He doesn’t feel like anything at all’

b. Hij gaat nooit niet naar school
    He goes n-ever neg to school
    ‘He never ever goes to school’

c. Ik vind dat niks niet leuk
    I find that n-thing neg nice
    ‘I don’t like it at all’

EN differs from standard NC in four ways. First, the negative reading is strengthened, whereas standard NC yields non-strengthened negative readings. Second, Emphatic Negation is subject to very strict locality conditions: Emphatic Negation can occur only if two negative elements are (almost) adjacent.

(92) a. Hij gaat nooit niet naar school
    He goes n-ever neg to school
    ‘He never ever goes to school’

b. Nooit gaat hij niet naar school
    N-ever goes he neg to school
    ‘He always goes to school’

(93) %‘Niemand vertelde mij (*gisteren) niks’
    N-boddy told me (yesterday) n-thing
    ‘Nobody told me anything at all (yesterday)’

---

88 The sentence with gisteren (‘yesterday’) included is not ungrammatical, but cannot yield the emphatic negative reading anymore. This sentence gets a Double Negation reading.
89 The % symbol indicates that only for some speakers of Dutch this sentence is grammatical.
Third, Emphatic Negation is forbidden when the negative marker precedes an n-word or when the negative marker gets additional stress. Those constructions only yield a Double Negation reading.

\[(94)\]

a. Hij gaat *niet nooit* naar school
   He goes *neg never* to school
   ‘He sometimes (=not never) goes to school’

b. Hij gaat *nooit NIET* naar school
   He goes *never NOT* to school
   ‘He does never NOT go to school’

Fourth, EN is different from the other subclasses of NC because it only occurs in languages that do not exhibit standard NC (like Dutch or German varieties). Languages that exhibit standard NC lack EN.

Given these four differences between NC and EN, it follows that EN is a different phenomenon than NC. Hence an explanation for EN should be different from an account that explains any of the other NC instances\(^{90}\). In the rest of this book I will provide an analysis that accounts for Strict and Non-Strict Negative Concord and for Paratactic Negation. In the rest of this subsection I describe and discuss the different occurrences of EN.

The examples in (91) and (93) exhibit two different kinds of EN. In the first case (91) the two negative elements form one constituent and the emphatic negation is the result of the fact that the first negative element is modified by the second negative element. In all cases in (91) the second element may be removed without any loss of meaning except for the loss of the emphatic effects (95). Removal of first element leads to a different meaning or even unwellformedness (96).

\[(95)\]

a. Hij heef *t nergens zin in*
   He has *n-where lust in*
   ‘He doesn’t feel like anything’

b. Hij gaat *nooit naar school*
   He goes *n-ever to school*
   ‘He never goes to school’

c. Ik vind sport *niks leuk*
   I find that *n-thing nice*
   ‘I don’t like any kind of sport’

\[(96)\]

a. *Hij heeft geen zin in*
   He has *no lust in*
   ‘He doesn’t feel like anything at all’

\(^{90}\) Emphatic Negation is also widely spread in English varieties. However, their distribution is freer and its occurrence is more frequent. I will show later that English is a language that substandardly allows for Negative Concord.
b. Hij gaat niet naar school
He goes neg to school
*‘He never goes to school’
c. Ik vind sport niet leuk
I find that n-thing neg nice
*‘I don’t like any kind of sport’

As EN constructions of this class consist of a true negative element and a second enforcing negative element, it follows that it should be possible to remove the enforcing negative element without damaging grammaticality of the sentence. This is not always the case for the negative elements in the first position but is always possible for elements in the second position. In (95)a and (96)a it is nergens that has been modified by geen. In the b examples, both sentences are grammatical, but (95)b still has a temporal reading whereas as (96)b does not. The case in (95)c and (96)c is more complicated. At first sight niks seems to modify niet, as (96)c is more standard than (95)c, but (95)c is substandardly wellformed. The difference between (95)c and (96)c is that (95)c has a partitive reading in which any part of the DP sport is rejected whereas (96)c only refers to sports as a whole. Although the meaning difference is rather subtle, one can come up with contexts in which only one of the two sentences is salient.

(97) a. Context: John has several hobbies: he likes to read, sing and cook, but he doesn’t like sports.
Jan vindt sport {*niks/niet/*niks niet} leuk
John finds sport {n-thing/neg/nthing neg} nice
‘John doesn’t like sports’

b. Context: John has tried several sports: hockey, football, tennis, etc., but he didn’t like them. He likes a whole lot of other things, but he doesn’t like any kind of sport.
Jan vindt sport {niks/niet/niks niet} leuk
John finds sport {n-thing/neg/nthing neg} nice
‘John doesn’t like (any) sports’

It follows from (97) that only in those cases in which the [niks DP] construction is allowed, the EN construction [niks niet DP] is allowed as well. This proves that also in these cases niet is the modifier of niks and not vice versa. Thus it can be concluded that in all cases the second negative element enforces the first.

The other class of EN is the construction in which two n-words yield two different constituents, occupying two different theta roles. These constructions are only accepted under adjacency. A good example of this class is (93). Other examples are the combination of a negative direct and a negative indirect object or a negative temporal quantifier in combination with a negative object (98). Empirical support for the two different classes of EN stems from the fact that in general speakers have more
problems with accepting examples of the latter class than examples of the former class.

(98) a. "Jan geeft niemand niets."
John gives n-body n-thing
'John doesn't give anything to anybody at all'

b. "Jan heeft nooit niemand kwaad gedaan"
John has n-ever n-thing evil done
'John never ever hurt anybody'

In these cases the negation of the second negative quantifier modifies the first negation. The quantificational properties of the second negative quantifier are not involved in the EN construction. Apparently what happens is that in EN constructions the negative part of the second negative element emphasises the negation of the first negative element. The non-negative part of the second negative element contributes in the standard compositional way to the semantics of the sentence:

(99) LF: \([\text{neg-Q]} [\text{(Q)}]\) 

This explains the restriction in possible combinations of negative elements that yield EN readings. EN is only acceptable if the non-negative part of the second negative element can felicitously contribute to the semantics of the sentence. In the case of niet as a second negative element, it should always be possible, since niet contains only a negative operator and not any quantificational part\(^9\). The ban on EN constructions that start with niet is a consequence of the syntactic position of niet. I will show in chapter 6 that niet is a modified vP and negative quantifiers overtly scope over niet. Therefore a negative quantifier cannot follow niet unless niet yields constituent negation with the negative quantifier. This however yields Double Negation readings.

A similar analysis holds for geen. Geen consists of a negative part and a quantificational part that has to bind an NP. Hence the only EN construction of the first type consisting of geen has the form \([\text{neg-Q} [\text{geen NP}]]\) under the condition that \([\text{neg-Q NP}]\) is acceptable too. EN constructions of the second type are only acceptable under adjacency, whereby the first constituent is a negative quantifier and the second constituent is a \([\text{geen NP}]\) construction. This explains immediately the ban on EN constructions of the form \([\text{geen NP} [\text{neg-Q}]]\), since the NP blocks adjacency of the two negations.

\(^9\) This is not necessarily true. It is possible to think about negative operators as quantifiers binding for example event or temporal variables (cf. Krifka 1989, Ramchand 2002). The exact semantic nature of negative operators will be discussed extensively in chapter 6-8.
The other instances of EN are combinations of two negative quantifiers. In those cases the negative part of the second negative quantifier enforces the negation of the first negative quantifier. As the remaining part of the second negative quantifier is not vacuous, these instances cannot exhibit any EN of the first class. The second negative element has to occupy an argument or an adverbal position in the clause due to the syntactic/semantic contribution of the non-negative part of the second negative quantifier. This explains the distribution of EN constructions consisting of two negative quantifiers: they are acceptable if and only if the non-negative part of the second negative quantifier can felicitously contribute to the semantics of the sentence without violating any syntactic or semantic constraint. Take the following examples:

(100) a. *Jan heeft niemand nooit geslagen
   Jan has n-body n-ever hit
   ‘John never hit anybody (ever) at all’

b. *Jan heeft niemand niets geslagen
   Jan has n-body n-thing hit
   ‘John never hit anybody at all’

In (100)a nooit is included as the second negative Quantifier. Its non-negative part says that the event did not ever take place, introducing a temporal variable that is scoped over by the first Negative Quantifier. In (100)b niets is introduced. Its non-negative part is the existential quantifier iets (‘something/anything’), and this can only occupy an argument position. As the verb slaan (‘to hit’) only allows for two theta roles, the introduction of iets violates the theta-criterion. Hence, this sentence is ruled out.

To summarise, EN consists of two classes: Class I, in which the two negative elements form one constituent, where the second negative element does not contribute anything to the semantics of the sentence except for the emphasis on the first negative element; and Class II, in which two different negative elements both form a negative constituent, but the negation of the second negative constituent only emphasises the negation of the first negative constituent. The non-negative part of the second negative constituent contributes to the semantics of the sentence in the standard compositional fashion.

The question is now: how can this phenomenon be explained. I will discuss two possible strategies: (i) one can analyse EN as idiomatic expressions, which are part of the lexicon; or (ii) EN can be analysed by means of a morpho-syntactic or semantic analysis in which the negative feature of the second element agrees with or melts into the negation of the first element.

The first strategy seems attractive: the set of possible EN constructions is limited as there are only 6 different negative elements. Especially if one takes class I examples (ending in niet or geen), a lexical account is plausible given the small number of these constructions. The introduction of these lexical items can thus be explained from the
fact that they are remnants of earlier stages of Dutch. The fact that older varieties of Dutch exhibited NC is a strong argument in favour of this lexical strategy as it is a common property of idiomatic expressions that they stem from earlier stages of the language. The fact that some EN instances consist of more than one constituent is not a counterargument, as idiomatic expressions in general consist of more than one constituent, which are said to be lexically stored as one unit. Hence EN can be thought of as a subclass of the set of idiomatic expressions, which stems from stages of Dutch that exhibited NC. This also explains the semantic constraints as discussed above. Because general constraints like the theta criterion obviously held in older forms of Dutch, it follows immediately why only a subset of the set of possible combinations of two negative elements can be stored lexically: these were the only acceptable forms in these older stages of Dutch.

The only problem with an explanation in lexical terms is that lexical accounts are to a certain extent theoretical escape hatches. Although it may seem plausible that these EN constructions are lexically stored, there is no direct evidence for it. The plausibility for the lexical analysis basically comes from the lack of a morpho-syntactic (or semantic) account. Therefore the following question is legitimate: can we come up with a morpho-syntactic account for these EN constructions?

Barbiers and Bennis (2003) discuss a similar phenomenon, namely the difference between weak and strong reflexives. Strong reflexives are reflexives that are followed by a second element (zelf ‘self’ or eigen ‘own’ in Dutch). Not all combinations are possible. In Dutch dialects have been found in which zijn eigen ‘his own’ is acceptable, but hem eigen ‘him own’ is always ruled out whereas hem zelf ‘him self’ and zijn zelf ‘his self’ are both found in Dutch dialects. Barbiers and Bennis argue that this is due to feature agreement under spec head configuration. As long as there is one feature shared by the two elements, the strong reflexive form is born out. Eigen ‘own’ consists of one feature [poss] and therefore it can only be combined with zijn ‘his’ ([3sg],[poss]) and not with hem ‘him’ ([3sg]). The underlying feature representation of zelf ‘self’\footnote{Cf. Postma (1995) for an analysis of SELF as a possessive element.} is [3sg],[poss] and hence it can agree both with hem ‘him’ and zijn ‘his’.

A similar explanation can be formulated for the case for the EN constructions. Negative Quantifiers consist of a [neg] and a [Q] feature, and niet only consists of a [neg] feature. Hence EN is the result of agreement of the two [neg] features resulting in a stronger negation. Supporting evidence for this analysis stems from English, in which emphatic negations are not expressed by means of agreement of [neg] features but agreement of [Q] features.

\begin{enumerate}
\item [(101)] He \textit{never}\textsubscript{[neg],[Q]} \textit{ever}\textsubscript{[Q]} woke up
\end{enumerate}

‘He never woke up at all’

However, several questions remain open. What is the domain in which this feature agreement may take place? It cannot be under standard locality restrictions, as
Chapte rr 3 - Issue s in the study  o f  negatio n

(almost) adjacency is a constraint to these EN constructions. The domain cannot be a spec head configuration (within the same XP) either, since we saw that some examples of EN constructions (Class II) consisted of two constituents (thus agreement under spec head agreement is ruled out). What constitutes the loss of the semantic content of the second negative feature? In isolation all these negative elements introduce a negation, and they can all participate in Double Negation relations in the case of multiple negation. What accounts for the difference in acceptability amongst speakers? Even Class I EN constructions are not generally accepted by all speakers. Some speakers only accept some (Class I) EN constructions and reject other (Class I) examples.

I conclude this subsection by arguing that in principle EN can be accounted for by a lexical or a syntactic account, but both accounts are far from satisfactory: the lexical account on pre-theoretical grounds and the syntactic one because of the open questions that have been formulated above. A proper explanation of EN is subject to further study. However, both classes are significantly different from other instances of Negative Concord.

3.3.5 Concluding remarks

In this section I reduced the categorisation of Multiple Negation from four classes to two classes of semantic phenomena: the application of the Law of Double Negation (LDN) and the phenomena in which the LDN does not apply. This yields a typological division between two types of languages: Negative Concord languages and Double Negation languages with a subdivision in Double Negation languages that allow for EN and that forbid EN. This allows us to formulate the following taxonomy of possible interpretations of Multiple Negation (102) and the typology of languages with respect to this interpretation (103). A nice result of the reduction into two types of languages is that the types yield a complimentary distribution: a language exhibits Double Negation or Negative Concord (in the clause).

93 It is not sure whether two arguments always yield two constituents. It can be the case that the two arguments, base-generated in two different maximal projections, generate one constituent under polyadic quantification. In that case the two monadic DP's both move to a higher FP (probably a FocP) in which they form one constituent. In that case the locality restrictions can be formulated in terms of constituency.
(102) Multiple Negation (taxonomy)

Multiple Negation

LDN always applies

LDN does not always apply

Negative Concord

Paratactic Negation

Emphatic Negation

Clause-internal NC

Strict NC

Non-Strict NC

(103) Multiple Negation (typology)

Double Negation languages

DN and Emphatic Negation languages

Dutch, German

DN without Emphatic Negation languages

Swedish, Norwegian

Negative Concord languages

Strict Negative Concord languages

Czech, Greek, French

Non-Strict Negative Concord languages

Italian, Spanish

Note that the two diagrams differ. The taxonomy of multiple negation is not reflected in the typology: although EN is not a subclass of DN, it is only found in (some) DN languages. The fact that EN is not found in NC languages follows from their different
properties: NC is the standard way to express negation in a NC language whereas EN is a way to emphasise negation. Therefore a language cannot exhibit both NC and EN, since then the language would no longer be able to express the standard negation without emphasis. Thus EN cannot be found in NC languages and hence EN languages typologically form a subclass of DN languages.

Negative Concord will be a central issue in the rest of this study: not only will I show the correlation between Negative Concord and the syntactic status of negative markers, but I will also show how this correlation leads to a compositional explanation of Negative Concord.

The rest of this chapter will deal with two less widely studied phenomena in the study of negation, namely the way that negation is expressed in imperatives and the relation between universal quantifiers and negative elements.

3.4 Negative imperatives

In this section I will discuss the form of negative imperatives. It is known from the literature (Zanuttini 1998, 2001, Tomic 1999, a.o.) that languages cross-linguistically differ with respect to the availability of true negative imperatives. Some languages allow for this, but others disallow these constructions and express a negative imperative by using a so-called surrogate imperative.

Dutch allows both for a true imperative, in which the finite verb takes the imperative form in combination with the negative marker, and for the surrogate imperative, in which the negative marker is combined with a non-imperative form of the verb (in casu the infinitive) yielding an imperative reading (104). Spanish does not allow for true negative imperatives, and only accepts surrogate negative imperatives by using the subjunctive or the infinitive 0. Greek true negatives are not well-formed either (106).

\[(104)\]
\[
\begin{array}{ll}
\text{a. } & \text{Lees niet!} \\
& \text{Read neg} \\
\text{b. } & \text{Niet lezen!} \\
& \text{Neg read} \\
& \text{‘Don’t read’}
\end{array}
\]

\[(105)\]
\[
\begin{array}{ll}
\text{a. } & \text{*No lee!} \text{\textsuperscript{95}} \\
& \text{Neg read.2SG.IMP} \\
\text{b. } & \text{No leas!} \\
& \text{Neg read.2SG.SUBJ} \\
\text{c. } & \text{No leer!} \\
& \text{Neg read.INF} \\
& \text{‘Don’t read’}
\end{array}
\]

\textsuperscript{94} The original observation has been made for Italian (Zanuttini 1998).

\textsuperscript{95} Data are from Tomic (1999).
(106) *Dhen diavase to!
  Neg/neg read.2SG.IMP it
  ‘Don’t read it’

At first sight one might conclude that the ban on true negative imperatives in Spanish is due to the fact that these languages have a preverbal negative marker as opposed to Dutch, which has an adverbial negative marker. In chapter 5 I will show that there is indeed such a relation, but it is unidirectional. I am not aware of any language that has only a negative adverbial as a negative marker but does not allow for true negative imperatives. However, there is a large group of languages that have a preverbal negative marker but that do allow for true negative imperatives, such as Serbo-Croatian or Bulgarian.

(107) a. Ne čitaj ga!
  Neg read.2SG.IMP it.ACC.CL
  ‘Don’t read it’

b. Ne go četi!
  Neg it.ACC.CL read.2SG.IMP
  ‘Don’t read it’

The relation between the occurrence of true imperatives and the kind of negative marker will be investigated in section 6.4.

3.5 Negation and universal quantifiers

In this section I will address an issue that has not been discussed to a large extent in the literature. It has been claimed (Beghelli & Stowell 1997, Hintikka 2002) that clauses consisting of a universal quantifier preceding negation do not always give rise to well-formed expressions, and the interpretation that the marginal acceptable construction may yield inverse scope effects.

(108) ˝Every boy didn’t leave

Note that (108) is fine under special intonation that may stem from particular topic or contrastive focus effects96 (‘EVERYBODY didn’t leave’). However, it is only marginally acceptable when such intonational effects are absent. Moreover, the sentence is ambiguous between a reading in which the negation scopes over the universal quantifier, and a reading in which the universal quantifier outscopes negation (109).

There may be two kinds of explanations for the marginality of acceptability. Within the first approach these sentences are ruled out due to some syntactic rule as Beghelli & Stowell argue for. The second approach explains these facts from a pragmatic (in

casu game-theoretical) point of view, which stresses that the sentences are not completely out, but yield semantic ambiguities, whereas both readings can be expressed easily by the unambiguous expressions in (109).

(109) a. ‘No boy left’ $(\forall > \neg)$
    b. ‘Not every boy left’ $(\neg > \forall)$

Hence the speaker would, in order to be as clear as possible, only use such an expression when the pragmatic situation requires it:

(110) John didn’t leave; Bill didn’t leave; Tom didn’t leave; in fact, every boy didn’t leave

At first sight a pragmatic solution is to be favoured because it accounts for the acceptability of sentences like (108) in certain contexts. However languages vary cross-linguistically with respect to the interpretation of such sentences with respect to scopal order between negation and universal quantifier. Languages like Dutch and German yield unambiguous readings in which the universal quantifier scopes over the negation.

(111) a. Iedereen komt niet aan voor 6 uur
    Everybody arrives not PRT before 6 o’clock
    ‘Nobody arrives before 6’
    b. Elke man komt niet aan voor 6 uur
    Each man arrives not PRT before 6 o’clock
    ‘Nobody arrives before 6’

Other languages only allow for the reading in which the negation outscopes the universal quantifier

(112) Tous le monde ne parle pas votre langue
    Everybody neg speaks neg your language
    ‘Not everybody speaks your language’

I will discuss these examples in chapter 6, but the central argument will be that negation blocks movement of universal quantifier to a higher position than the negative operator. Only if the universal quantifier is base-generated in a higher position than the negative operator the $\forall > \neg$ interpretation is possible, otherwise not. Languages differ with respect to the position of the negative operator, so languages with a low negative operator will accept this reading, languages with a high negative operator will not. Hence I will account for this ambiguity in syntactic terms. The reason why these expressions (with their correct interpretations) are still only marginally acceptable has a pragmatic nature: expressions of the forms in (109) are favoured over the constructions using a universal quantifier and a negation for pragmatic reasons.
Note that only quantifiers like *every* or *each* yield marginally acceptance. Negative expressions with a DP containing *all* or constructions with floating quantifiers do not yield any problems for acceptance or interpretability. Also negative expressions that do not only contain a universal quantifier and a negation but also an indefinite expression can be well-formed.

(113)  
\begin{enumerate}
\item All the men didn’t leave before noon
\item The men didn’t all leave before noon
\end{enumerate}

(114) Every boy didn’t buy one book

It will turn out that there is a correlation between the set of languages that do not allow for the $\forall > \neg$ interpretation and the set of languages exhibiting Negative Concord. This requires a theory that explains both phenomena from the same mechanism.

3.6 Conclusions

To summarise, the study of negation in natural language is very complex, occupying a central position in both syntax and semantics. In this chapter I discussed 5 different phenomena: (i) Negative contexts and Negative Polarity Items; (ii) different ways that sentential negation can be expressed, the notion of negative markers and their ability to be the subject of diachronic change; (iii) the different possible interpretations of multiple negative expressions; (iv) negative imperatives; and (v) the scopal relation between universal quantifiers and negation.

All these subjects have been studied, but not much has been said about their internal relationship. Although the relation between the syntactic status of negative markers and the occurrence of Negative Concord readings has been the subject of study and debate (cf. Haegeman & Zanuttini 1996, Deprez 1997) and the question whether n-words are NPI’s has been widely discussed, hardly any research has for instance been done on the question why Negative Concord languages have the possibility to reverse the universal quantifier and the negative marker at LF.

In the following chapters I will summarise the results of my investigation of negation in Dutch and a set of 25 other languages and provide both a syntactic and a semantic analysis for the results. In these chapters I will address the following questions:

(115)  
\begin{enumerate}
\item Does the language/variety exhibit Negative Concord?
\item If so, is it Strict or Non-Strict Negative Concord?
\item Does the language/variety exhibit Paratactic Negation?
\end{enumerate}

(116)  
\begin{enumerate}
\item Does the language/variety exhibit Double Negation?
\item If so, does the language exhibit Emphatic Negation?
\end{enumerate}
These questions are necessary for the typological classification of these languages/varieties with respect to multiple negation.

(117) Does the language/variety have NPI’s like *any*-terms that are phonologically distinct from *n*-words.

In the literature on the semantic nature of *n*-words in NC languages, it has often been posed that *n*-words are actually NPI’s comparable to English *any*-terms (Laka 1990, Ladusaw 1992, Herburger 2001). The strength of this argument depends on the presence of *any*-terms that phonologically differ from *n*-words in a particular language. If a language has both a series of *any*-terms and a series of *n*-words, an analysis of *n*-words in terms of NPI’s is less likely.

(118) What is the syntactic status of the negative marker that expresses sentential negation in the language/variety?

The relation between the occurrence of NC in a language and the syntactic status (spec/head) of the negative marker has been the subject of debate for a long time (cf. Haegeman & Zanuttini 1996). I will readdress this issue, and in chapter 6 I will formulate a unidirectional generalisation on the basis of the data in chapter 4 and 5.

(119) In which phase of the Jespersen Cycle can the language/variety be classified?

As languages can typologically be classified in terms of ‘Jespersen Phases’, it is interesting to investigate whether there is any correlation between the Jespersen Cycle and the occurrence of NC.

(120) Does the language allow for true negative imperatives?

The question why negation in certain languages blocks negation is related to the syntax of imperatives and negative markers in these languages. In order to draw a proper generalisation between the occurrence of true imperatives and the syntactic status of the negative marker, this question needs to be investigated for all languages/varieties.

(121) What is the interpretation of constructions in which a universal quantifier precedes the negative marker?

It has been suggested that there is a relation with the scopal order of universal quantifier subjects and NC (Baltin, p.c.). In this study I will examine these correlation and account for it in syntactic terms.
The possible correlation between answers to these questions will form the core of this study. We will see that all phenomena that have been discussed in 3.1-3.5 are correlated. The central empirical research questions therefore are:

(122) Which correlations/generalisations can be drawn on the basis of the answers to questions (117)-(121)?

(123) How can these generalisations be formulated such that they form a proper input for syntactic and semantic theory of negation?

In the following two chapters, these questions will be answered for both Dutch microvariation and a set of 25 different languages, mainly European. On that basis I will formulate a set of generalisations that will be analysed and explained in the rest of this book, in chapters 6-8.