Meaning of words, meaning of sentences. Building the meaning of n-words[1]

M.Teresa Espinal (Universitat Autònoma de Barcelona)
Susagna Tubau (Universitat Autònoma de Barcelona)

Abstract

This article addresses the general question of what the meaning of words, namely n-words, is and how this meaning may contribute to the meaning of sentences. We hypothesize that this contribution is not conceptual, but it is fundamentally underspecified. An underspecified value can be attributed both to an inherent semantic feature and to a syntactic feature with which a lexical root merges during the derivation. In the specific case of n-words, we postulate a semantic feature that guarantees their behavior as polarity items, and a syntactic feature that guarantees their occurrence in Negative Concord structures. The Principle of Compositionality is guaranteed by checking both semantic features and syntactically uninterpretable ones.

Keywords: underspecified meaning, compositionality, n-words, Romance languages

1. Introduction

The question we will address in this chapter is what the meaning of words, more precisely the meaning of lexical roots, is and how their meaning may contribute to the meaning of sentences, mainly within a minimalist semantics approach.

A widespread assumption within classical lexical semantics (Cruse 1986, Levin & Pinker 1991, Geeraerts 2010, *inter alia*) is that the lexical meaning is conceptual, which suggests that, for each word, its lexically encoded (context-independent) meaning is associated with either a concept or a set of concepts organized in specific ways and relationships. An alternative view, within the philosophical realism tradition, is that words denote things in the world (Frege 1892, Tarski 1944, Davidson 1967). These two views may also be conceived as complementary: words can be said to correspond to mental representations that represent entities in the world (Fodor 1983). The idea of a conceptualist approach, as pointed out by Carston (2012: 607-8) is that: "We use sentences to express/communicate thoughts (truth-conditional contents) and we use words to express/communicate concepts, which are constituents of thoughts (hence contribute to truth-conditional contents)". But, as pointed out by this author, it is now quite widely accepted that the meaning (or semantic content) that a word is used to express or communicate on an occasion of utterance is often distinct from the meaning it has as an expression type in a language system (that is, its standing or encoded meaning). This view is claimed to be shared by 'contextualist' philosophers of

[1] We thank the editors of the volume and the two anonymous reviewers for their comments. This research has been funded by a research grant awarded by the Spanish Ministerio de Ciencia e Innovación (FFI2011-23356), and by grants awarded by the Generalitat de Catalunya to the *Centre de Linguística Teòrica* (2009SGR-1073, 2014SGR1013). The first author also acknowledges an ICREA Acadèmia award.

language, by some linguists, and by pragmaticists working within a cognitive framework such as Relevance Theory.

Furthermore, as discussed by Carston (2012), in spite of the fact that "word type meanings might be concepts, hence contentful entities that can be constituents of thought. (…) there is an equally widely held view that word meanings are 'underspecified'; that is, that they cannot contribute directly, without modification or transformation of some sort, to the thoughts/propositions that utterances in which they occur are used to express" (p. 608).

In this chapter we follow the latter approach, and we take seriously the idea that words, not only closed-class words (indexicals, determiners, quantifiers, prepositions and other function words, such as connectives), but also open-class words (nouns, verbs, adjectives and adverbs), may not encode concepts or map directly to contentful entities, but rather come with meaning-relevant components that are underspecified with respect to content. It is our aim to investigate how this underspecification can be understood, how it can be formalized, and how it can interact with other meaning components at the time of composing the meaning of sentences. It should be pointed out that this view not only makes specific predictions with regard to the meaning of words, but it also has specific consequences in the way we understand how the various types of meanings of words combine and compose to build the meaning of sentences.

In this respect, we will have to evaluate to what extent the Principle of Compositionality (PoC; Frege 1892, Werning et al. 2012, Pelletier forthcoming) might be accommodated when the meaning of words is highly underspecified. The PoC, which has been largely assumed by philosophers and semanticists to be a universal mode of composition of the meaning of a complex expression (e.g., a sentence), postulates that this meaning is determined by or is a function of the meaning of its constituent words and the rules used to combine them. This principle has been presented in the literature under different forms, depending on the degree of determinism that is postulated from the lexical meaning of words and the syntactic structure in which these words appear. More precisely, strong conceptual compositionality has been postulated in those circumstances where a full conceptual meaning for words directly combines with either the conceptual or functional meaning of other words, to build the conceptual representation of a sentence (Jackendoff 1972). Strong compositionality of meaning has also been postulated in those circumstances where a syntactic algebra is interpreted through a meaning-assignment *m*, a function from *E*(xpression) to *M*(odel), and the set of available meanings for the expressions of *E*, in order to build a logical representation for an expression *E*. This is the view developed in formal semantics (Montague 1974). Within the Principles and Parameters model of Generative Grammar a syntactic level of representation has been postulated, namely the Logical Form (LF), which corresponds to the meaning of a sentence at the syntax-semantics interface, as determined by lexical items occurring in specific positions within a syntactic structure (May 1985, Higginbotham 1985, Hornstein 1995). The PoC has been supplemented in the theory of language by various operations and processes that aim at accounting for the meaning of expressions that do not directly compose following the schema of function application.

In this chapter we will explore the relevance of the PoC under the view that postulates that the meaning of words is not genuinely conceptual and that, on the contrary, it is (syntactically or semantically) underspecified. If we assume that lexical items (i.e., roots), no matter whether they correspond to open-class or closed-class words, contribute indirectly to the meaning of sentences by providing syntactic or

semantic features whose contents will be valued in context by some process of enrichment that can either take place at the syntax-semantics interface (by means of a grammatically-driven operation) or beyond grammar (by some process of pragmatic adjustment), we will have to seriously investigate what sort of features are involved in an underspecified characterization, and decide whether they are purely semantic, syntactic or both.[2]

Our working hypothesis is that an underspecified meaning can be attributed both to an inherent semantic feature and to a syntactic feature with which a lexical root merges during a derivation. This suggests that an underspecified meaning, either caused by an underspecified semantic feature or by an underspecified syntactic feature is fully interpreted only when this feature is checked by an abstract operator, usually in a local domain. As we will discuss, a way to solve the compositionality of meaning at the syntax-semantics interface is to rely on the grammatical operation of Agree and the Principle of C-command (see below). The idea we will explore is that lexical items with underspecified meanings have underspecified features that must be submitted to highly constrained grammatical operations that guarantee their syntactic well-formedness and interpretation, before these items can be claimed to contribute to a more complex meaning (that is, to the meaning of sentences) and, therefore, satisfy the PoC.[3]

In the rest of this introduction (Section 1.1) we will sketch the relevance of this approach at the time of building the contribution of various types of pronouns and complementizers to the meaning of complex sentences. In Section 2 we will focus on the central topic of this chapter: the compositionality of the meaning of n(egative)-words (Laka 1990) to the meaning of sentences. In order to achieve this goal, we will focus on their features, their distribution and the formal requirements for building either a negative reading, distributed over multiple negative items (both in Strict and Non-Strict Negative Concord –NC– Romance languages), or a non-negative reading (in interrogative, comparative, conditionals and expletive contexts).[4] In this section we will limit the data discussed to Catalan, French, Romanian and Spanish.[5]

1.1. Pronouns and complementizers

[2] To our knowledge the antecedents of a theory of underspecification in linguistics have their origin in studies in phonology (Jakobson 1984a, b), but have been extended to synchronic studies of morphology and syntax (Lumsden 1992, Farkas 1990, Rooryck 1994), as well as to diachronic studies on lexical change (Martins 1998).

[3] Beyond grammar, the enrichment of underdetermined meanings up to the comprehension of a thought is not regulated by the PoC, which applies within the grammatical domain, but is pragmatically regulated by non-linguistic principles, such as the Principle of Relevance (Sperber & Wilson 1986/1995), which attempts to account for the interaction between linguistically encoded meaning and non-linguistically accessible information.

[4] It should be remarked that in Romance a Double Negation (DN) reading (Horn 1989), by which a positive interpretation can be inferred from the co-occurrence of two or more negative expressions, is compositionally driven only under very restricted syntactic contexts: when two negative markers are distributed in a main and a subordinate clause and when a negative marker co-occurs with a negative prefix (see Bosque 1980, Sánchez 1999 for Spanish; and Solà 1973, Espinal 2002 for Catalan). In addition, recent studies show the possibility of DN interpretation at the syntax-prosody and prosody-gesture interfaces (see Espinal & Prieto 2011, Prieto et al. 2013, and Espinal et al. to appear for studies on Catalan and Spanish), and at simple transitive sentences (see Déprez et al. 2013 for French, and Déprez et al. forthcoming for Catalan).

[5] Italian and European Portuguese are expected to work like Spanish (Zanuttini 1997, Matos 1999). Brazilian Portuguese is expected to work like Catalan (Teixeira de Sousa 2012). See also De Swart (2010).

A classical example to illustrate the notion of underspecified meaning might be to consider the characterization of pronouns in relation to their distribution within a clausal structure.

Traditional grammars already put forward the distinction between reflexive and third person clitics that any native speaker of a language is supposed to be well aware of. For example, if we consider the following data, from Spanish, a native speaker of this language realizes that, in spite of the fact that the occurrence of reflexive pronouns and the occurrence of third person clitics within sentences do show a strong parallel, the meaning conveyed by the two types of pronouns is different, and also that this depends on the distribution and licensing conditions of formal features that characterize these linguistic objects.

(1) a. *Los Hermanos Musulmanes*$_i$ *se*$_i$ reprimen (a *si mismos*$_i$). (Spanish)
the brothers muslim REFL. refrain to themselves
'The Muslim Brothers control themselves.'

b. *Los Hermanos Musulmanes*$_i$ *los*$_j$ reprimen.
the brothers muslim them repress
'The Muslim Brothers repress them.'

c. *Los Hermanos Musulmanes*$_i$ afirman que *los jefes del ejército*$_j$
the brothers muslim claim that the leaders of.the army

se$_j$ reprimen (a *si mismos*$_j$).
REFL. refrain to themselves
'The Muslim Brothers claim that the army leaders control themselves.'

d. *Los Hermanos Musulmanes*$_i$ afirman que *los jefes del ejército*$_j$
the brothers muslim claim that the leaders of.the army

los$_i$ reprimen.
them repress
'The Muslim Brothers claim that the army leaders repress them.'

Identity of indices represents identity of reference, while disjoint indices represent disjoint reference. Thus, whereas in (1a) the reflexive is interpreted as sharing reference with the only possible nominal antecedent that occurs in subject position in the sentence, in (1c) the reflexive is interpreted as constraining identity of reference with the structurally most immediate nominal antecedent, that is, the subject of the subordinate clause. Similarly, whereas in (1b) the third person plural accusative clitic is interpreted as having disjoint reference with the only possible nominal antecedent that occurs in subject position in the sentence, in (1d) the same pronoun is interpreted as constraining disjoint reference with the structurally most immediate nominal antecedent that occurs in subject position of the subordinate clause (Chomsky 1981, Reinhart 1983). This structural constraint makes it possible for the clitic pronoun to be interpreted as co-referent to the subject of the main clause or to a third set of individuals

(neither *los Hermanos Musulmanes* 'Muslim brothers' nor *los jefes del ejército* 'the leaders of the army'). The question is: what is the meaning of a clitic pronoun that makes this possible?

In accordance with a minimalist approach to semantics the most reasonable answer is that its meaning is grammatically underspecified, which makes it susceptible to some process of enrichment, either grammatically (when it is possible to postulate a formal checking relationship between the antecedent and the pronoun) or pragmatically (when this is not possible, but the pronoun still constrains the proposition expressed by providing instructions on the procedures required to find an appropriate referent for the pronoun; Wilson & Sperber 1993, Espinal 1996). Consider the lexical representations in (2).[6]

(2) a. *se*: [REFLEX, uREF]

b. *los*: [-IP, -IIP, +PL, -FEM, uREF]

In these schemas [uREF] stands for an uninterpretable reference formal feature, which means that the linguistic object that has this feature has no reference by itself; [uREF] must be checked by an [iREF] formal feature, which most characteristically characterizes proper names and definite descriptions of the sort exemplified in (1). For reflexive pronouns the formal condition is that the pronoun is dependent on an antecedent [iREF] that is a constituent of the same clause and, furthermore, the antecedent must c-command the anaphor. For third person clitic pronouns the requirement is that the pronoun does not have its antecedent in the same clause; in other words, [uREF] is not dependent on an antecedent that occurs in the same structural domain, but in a higher structure; again the antecedent must c-command the pronoun. Within the Principles and Parameters model of Generative Grammar (Chomsky 1981 and subsequent work) these constraints on anaphor and pronoun binding are subsumed within the well-known Binding principles, the general idea being that a linguistic theory of pronoun interpretation needs to bring together the ability to distribute and restrict the meaning of these linguistic objects within clausal domains.

A second phenomenon suitable to illustrate how a minimalist semantics approach can explain the contribution of word meaning to the meaning of sentences has to do with modality and syntax, and more specifically with the distribution and meaning of various moods and complementizers. Let us consider the data in (3).

(3) a. *Desitjo que sigui* puntual. (Catalan)
hope.1SG that be.3SG.SUBJ punctual
'I hope s/he is punctual.'

b. Em *pregunto si serà* puntual.
me ask.1SG if be.3SG.FUT punctual
'I wonder whether s/he will be punctual.'

[6] [REFLEX] stands for Reflexive, [uREF] for uninterpretable reference, [-IP, -IIP] for third person, [+PL] for plural, and [-FEM] for masculine.

These examples illustrate a dependency relationship between the type of modal domain of the subordinate clause (subjunctive (SUBJ) vs. indicative (IND)), the type of complementizer introducing the subordinate clause (*que* 'that' vs. *si* 'whether'), and the type of verb of the main clause of which the subordinate clause is an argument (modal vs. interrogative).[7] These examples show that, the modal flavor of a specific mood in the subordinate clause is indirectly dependent on the modal anchor provided by the complementizer that heads the object argument of the verb of the main clause (Rigau 1984, Quer 1998). This observation supports the line of research developed by Kratzer (1981, 2012, 2013) and Hacquard (2006), according to which a hypothesis is developed on the projection, restriction and syntactic representation of modal domains: "different types of modals select different types of anchors" and "modal anchors should be provided by the arguments of their modals" (Kratzer 2013: 191). The dependency we are postulating for (3) can also be formalized in terms of underspecified features, as illustrated in (4).

(4) a. $V_{modal\ [iMOOD]}$ [*que* $_{[uMOOD]}$ … $V_{[uMOOD]}$…]

b. $V_{interr\ [iMOOD]}$ [*si* $_{[uMOOD]}$ … $V_{[uMOOD]}$…]

What these rough representations make explicit is that the mood of the subordinate clause is underspecified and is dependent on the type of complementizer head, which, in turn, is dependent on the mood specification triggered by the verb of the main clause. This suggests that the underspecified mood feature of the verb in the subordinate clause will be checked and interpreted under a grammatical relation of Agree, similar to the one required for the checking of uninterpretable formal features in the case of pronouns.

To sum up, in these two examples we have briefly sketched that the meaning of pronouns, as well as the meaning of complementizers and moods, is neither conceptual nor straightforwardly referential, but is underspecified for some features. The way we understand this underspecification is that some features formally characterizing lexical items have a value that is context-dependent. In the two cases here considered these features are checked locally and they get an interpretable content via a formal relationship of Agree defined on the basis of the Principle of C-command.

In the next section we will present with more detail how this sort of analysis allow us to account for the meaning of n-words and its contribution to the meaning of negative sentences in various NC languages. We will focus on how an account of the meaning of words in non-conceptual terms can be extended to explain the meaning contribution of n-words and even the contribution of negative markers. The challenge of the characterization we aim to achieve is how to account for the distribution and meaning of n-words, and the compositionality of their meaning in both negative (concord) contexts as well as in non-negative ones. The ingredients of this minimalist semantics approach are the following: (i) lexical items (or roots) are defined by underspecified semantic or syntactic features, (ii) some syntactic operations guarantee the formal interpretability and instantiation of formal features at morphophonology, and (iii) some semantic operations guarantee the compositionality of meaning at LF.

[7] Furthermore, these examples show a temporal correlation between the Tense and Aspect of the subordinate clause and the ones specified in the main clause. We leave this topic aside.

2. The distribution and meaning of n-words

2.1. Definition and distribution of n-words

N-words are indefinite expressions that may encode a negative meaning, as shown in (5a, b) for Spanish. Notice that the preverbal n-word in (5a) or the isolated n-word used as answer in (5b) contribute a negative meaning either to the sentence (in (5a)), or to the fragment answer (in (5b)).

(5) a. *Nadie* ha llamado. (Spanish)
nobody has called
'Nobody called.'

b. Q: ¿Quién ha llamado?
who has called
'Who called?'
A: *Nadie.*
nobody
'Nobody.'

N-words also seem to behave as polarity items (PIs), as shown in (6a-c) for Catalan.[8]

(6) a. *(*No*) he vist *res.* (Catalan)
not have.1SG seen anything
'I haven't seen anything.'

b. Has vist *res*?
have.2SG seen anything
'Have you seen anything?'

c. Si veus *res*, avisa'm.
if see.2SG anything warn.me
'If you see anything, let me know.'

In this set of sentences the n-word needs to be licensed by a suitable operator (a sentential negation in (6a), an interrogative operator in (6b) and a conditional operator in (6c)).

The term *n-word*, originally coined by Laka (1990), captures the fact that in Romance languages such as Spanish, Italian and Portuguese, most –but not all– lexical items that participate in NC structures are spelled with an initial *n-* (e.g. Spanish *nadie*

[8] In Catalan n-words can also be used as fragment answers to questions, as illustrated in (5b) for Spanish. That is, *res* lit. thing is also legitimate as a fragment answer with a negative meaning 'nothing'. It should be noted that in Spanish n-words are less likely to be found in polarity contexts (Bosque 1980, Sánchez 1999).

'nobody/anybody', *nada* 'nothing/anything'; Italian *nessuno* 'nobody/anybody', *niente* 'nothing/anything'; Portuguese *ninguém* 'nobody/anybody', *nada* 'nothing/anything').[9]

A formal definition of n-word is given in (7). The property in (7a) is illustrated by (6a), whereas the property in (7b) is exemplified in (5b).

(7) An expression α is an *n-word* iff: (Giannakidou 2006: 328)
   a. α can be used in structures containing sentential negation or another α-expression yielding a reading equivalent to one logical negation;
   b. α can provide a negative fragment answer.

NC is commonly defined as the possibility that n-words have to combine with several manifestations of negation, although negation is logically computed just once. That is, multiple occurrences of negative constituents express a single negation (Labov 1972; Muller 1991; Van der Wouden 1994; Acquaviva 1996, 1997; Déprez 1997; Giannakidou 2000; de Swart & Sag 2002; Corblin & Tovena 2003; Floricic 2005; Corblin et al. 2004; Tubau 2008; among others).

In NC languages, n-words –some of which are not spelled with an initial *n-* (e.g. French *personne* 'nobody/anybody', *rien* 'nothing/anything'; Catalan *res* 'nothing/anything', *cap* 'no/any')– need to be licensed, in negative contexts, by the sentential negative marker (SNM) (8a), or by another n-word in pre-verbal position (8b). Without an appropriate licenser the sequence is ungrammatical (8c).

(8) a. *No* ha visto *nada.* (Spanish)
   not has seen anything
   'S/he didn't see anything.'

   b. *Nadie* ha visto *nada.*
   nobody has seen anything
   'Nobody saw anything.'

   c. *Ha visto *nada.*
   has seen anything

While all NC languages require post-verbal n-words to be licensed by a negative expression in negative contexts –either a SNM or a pre-verbal n-word– a crucial difference exists among them when pre-verbal n-words are taken into account: while languages like Spanish and Italian are defined as having a system of Non-Strict NC, languages like Romanian or Modern Greek have a system of Strict NC (Giannakidou 1998, 2000). In Non-Strict NC languages, the SNM is not compatible with n-words occurring pre-verbally if a single negation meaning is to be expressed. Conversely, in Strict NC languages, pre-verbal n-words and the SNM always co-occur. This is shown in (9) for Spanish (a typical Non-Strict NC language) and in (10) for Romanian (a typical Strict NC language).

(9) *Nadie* (**no*) ha visto *nada.* (Spanish, Non-Strict NC)

[9] The initial *n-* is not an indication of negative morphology, though. Etymologically, the Spanish n-words *nadie* and *nada* can be traced back to a Latin adjective: *(homines) natī* '(men) born' and *(res) nata* '(thing) born'.

nobody not has seen anything
'Nobody saw anything.'

(10) *Nimeni* *(*nu*) sună. (Romanian, Strict NC)
nobody not calls
'Nobody calls.'

Catalan is somewhat special with regards to the Strict vs. Non-Strict NC distinction, as for some speakers (including the authors of this chapter), the SNM can optionally co-occur with pre-verbal n-words with no difference in meaning. This is why the SNM *no* is in parentheses in (11).

(11) *Ningú* (*no*) ha vist *res.* (Catalan)
nobody not has seen anything
'Nobody saw anything.'

In the case of Standard French, n-words always co-occur with the negative scope marker *ne*, thus reproducing the pattern already illustrated in (10) for Romanian. This is shown in (12).

(12) a. *Personne n*'a mangé. (French)
nobody not.has eaten
'Nobody ate.'

b. Jean *n*'a *rien* vu.
Jean not.has anything seen
'Jean didn't see anything.'

However, if the SNM that combines with French n-words is *pas*, Double Negation (DN) arises, as shown in (13).

(13) a. *Personne n*'a *pas* mangé. (French)
nobody not.has not eaten
'Nobody didn't eat.' (= Everybody ate)

b. Jean *n*'a *pas rien* vu.
Jean not.has not anything seen
'Jean didn't see nothing.' (= Jean saw something)

In short, what the examples above show is that n-words may obtain a final negative reading, as in (5a, b), participate in NC structures, as in (6a), (8)-(12), or convey a non-negative meaning, as in (6b, c). In NC structures, the SNM is sometimes overt with pre-verbal n-words (in Strict NC languages, as in (10)), but sometimes it is not (in Non-Strict NC languages, as in (9)). Other times it is truly optional (as in (11)). In view of this variation it is our aim to disentangle (i) what exactly the contribution of n-words to the meaning of sentences is, (ii) what the feature specification of n-words is, and (iii) how the licensing of the features we will postulate in Section 2.2 will guarantee

the interpretation of n-words both in NC (Strict and Non-Strict) contexts and in non-negative ones.

In the next section, we argue that n-words can be formally characterized with reference to two main kinds of features: the semantic feature [+σ] (Chierchia 2006) and the syntactic feature [uNeg] (Zeijlstra 2004).[10] This characterization will be required in order to discuss in Section 3 how the meaning of n-words contributes to the meaning of sentences. Special emphasis will also be put in explaining how the semantic composition of negation crucially diverges in Strict and Non-Strict NC languages, and is dependent on the characterization of negative markers.

2.2. Underspecified meaning of PIs and n-words

We claimed in relation to (6) that when n-words are postverbal they behave like PIs, which can be licensed both in negative and non-negative contexts. PIs, as defined by Giannakidou (2000), are linguistic expressions that bear a semantic requirement with respect to the kinds of contexts where they can appear. As stated in the definition in (14), PIs need to occur in contexts with a non-veridical operator, defined as in (15).

(14) A linguistic expression α is a *polarity item* iff: (Giannakidou 2000: 464)
   (i) the distribution of α is limited by sensitivity to some semantic property β of the context of appearance; and
   (ii) β is (non)veridicality.

(15) *(Non)veridicality* (Zwarts 1995: 287)
   Let *O* be a monadic sentential operator. *O* is said to be *veridical* just in case $Op \Rightarrow p$ is logically valid. If *O* is not veridical, then *O* is *non-veridical.* A non-veridical operator *O* is called *a[nti]veridical* iff $Op \Rightarrow \sim p$ is logically valid.[11]

If we consider again the data in (6), it should be noted that n-words in Romance may qualify as PIs, as they can be licensed by negation (an anti-veridical operator, a subset of the non-veridical class of operators), as well as interrogative and conditional operators (both non-veridical).[12]

According to Chierchia (2006), the semantics of PIs makes them felicitous only in downward-entailing contexts (Ladusaw 1980), because they are scalar items that

[10] It was already argued in Tubau and Espinal (2012) that Catalan n-words, namely *res* 'anything', being a PI, carry the semantic feature [+σ]. However, Labelle and Espinal (2014) is, to our knowledge, the first study that postulates a combination of the semantic feature [+σ] and the morphosyntactic feature [uNeg] to account for the diachronic changes that affected French negative expressions: the semantic feature is postulated to be responsible for the interpretation of an expression as a PI, and a morphosyntactic feature is postulated to be responsible for the n-word behaviour of an expression. See this study for the proposal that, independently of having or not an initial *n-*, words may change from less negative to more negative or conversely, a process that is explained in terms of feature changes that affected lexical items one by one. See also Déprez's (2011) microparametric approach.

[11] We follow Giannakidou (1998) in substituting Zwarts's (1995) *averidicality* for *antiveridicality*, since the meaning intended is 'opposite to veridicality' not 'without veridicality properties'.

[12] Not all Romance languages, however, show the same sort of distribution. Thus, n-words in Romanian can only occur in negative contexts. They cannot be used in other polar contexts such as conditional and interrogative sentences, for which other lexical items are required. We thank E. Ciutescu (p.c.) for this observation. See below, the summary chart.

activate alternatives within smaller domains. That is, PIs must be interpreted within the largest relevant pragmatic context while also activating alternatives within smaller domains. Take, for instance, the PI *any* in a sentence like (16).

(16) The students did*n't* read *any* books.

In (16), the relevant pragmatic context is not restricted to the books included in a course bibliography, for example, but it extends to a much larger set of books, namely all kinds one can think of. With respect to the activation of alternatives, the indefinite item *any*, in *any books*, implicates that the students did not read math books, poetry books, history books, and so on.

Following the work by Kadmon & Landman (1993), Krifka (1994), and Lahiri (1998), Chierchia (2006: 559) postulates a [+σ] feature to account for the fact that PIs induce the process of domain widening described above. Given that, as shown in (6a-c), Romance n-words behave like PIs, they can be assumed to be scalar terms that bear the semantic feature [+σ]. Thus, similar to *any* in (16), the n-word *res* 'anything' in a sentence like (6a), activates alternatives (e.g. a specific individual object, something, many things, etc.) and introduces the implicature that *res* 'anything' is the pragmatically strongest alternative in this context (i.e., if I haven't seen anything, then I haven't seen something, I haven't seen many things, etc.). The [+σ] feature, associated with the scalar item, is uninterpretable and has to be checked in the syntactic representation of meaning by an interpretable abstract σ operator that can attach to negation as well as to other kinds of non-veridical operators, the idea being that the feature [+σ] linguistically encodes the need for an enriched interpretation (Chierchia 2006: 553-4). If the abstract σ operator attaches to a negative operator the PI bearing a [+σ] feature will be interpreted as a Negative PI, while if the abstract σ operator attaches to a non-negative operator the PI bearing a [+σ] feature will be interpreted as a Positive PI.

Notice that a [+σ] feature is also found in PIs that are not n-words (i.e., that cannot be used as negative fragment answers), such as Catalan *gaire* 'much'/ 'many', French *qui/quoi que ce soit* (lit. who/what it may be) 'anybody'/ 'anything', Romanian *cine știe ce* (lit. who knows what) 'much', and the Spanish post-nominal indefinite (e.g., *persona alguna* lit. person some 'anybody'), as shown in (17)-(20).

(17) a. *(*No*) he menjat *gaire.* (Catalan)
not have.1SG eaten anything
'I haven't eaten much.'

b. Has menjat *gaires* pomes?
have.2SG eaten many apples
'Have you eaten many apples?'

(18) a. Daniel *(n')a *(pas) rencontré *qui que ce soit*. (French)
Daniel NEG.has not meet anybody
'Daniel did not meet anybody.'

b. Si *quoi que ce soit* vous dérange faites-les nous savoir.
if anything you bothers let.them us know
'If anything bothers you, let us know' (adapted from Tovena et al. 2004: 398)

(19) a. *(*Nu*) am mâncat *cine ştie ce* la prânz. (Romanian)
not have.1SG eaten who knows what at lunch
'I haven't eaten much at lunch.'

b. Dacă spui *cine ştie ce*, le vei cauza probleme.
if say.2SG who knows what them FUT make trouble
'If you say anything, you will get them into trouble.' (Elena Ciutescu, p.c.)

(20) a. *(*No*) he visto *persona alguna*. (Spanish)
not have.1SG seen person some
'I haven't seen anybody.'

b. ¿Quién ha dicho *cosa alguna*?
who has said thing some
'Who said anything?'

These data show that PIs are dependent on a negative, interrogative or conditional operator, and we can formally represent this dependency by saying that PIs are encoded by a [+σ] semantic feature that must be c-commanded by an abstract σ operator adjoined to another operator, usually in the C(omplementizer) domain.

For the set of examples given in (17) to (20) we postulate that the non-negative reading is compositionally driven after an operation of checking between a PI semantically characterized with an inherent [+σ] feature that encodes enrichment under local conditions that can be formally represented as in (21). In (21) Op_{σ} c-commands the linguistic item specified [+σ], where Op is negative ((17a), (18a), (19a), (20a)), interrogative ((17b), (20b)), conditional ((18b), (19b)), and the operator freezes the enrichment constraints encoded by [+σ].

(21) $Op_{\sigma} \ldots PI_{[+\sigma]}$

In this chapter we put forward the hypothesis that the [+σ] feature is also inherent in the French negative marker *ne* (cf. the data in (12) above), which has been claimed to be a scope marker when it occurs as part of a negative dependency (Godard 2004).[13] We entertain the idea that French *ne* indicates that the SNM *pas* has sentential scope, which means that *ne* itself is not a SNM but a mere marker of the limits of the scope of sentential negation. Since the real SNM *pas* behaves as the negative operator in Standard French a sentence such as (22a) is assigned the structure in (22b), which represents the freezing operation of a [+σ] feature mentioned above. In the eventual situation that *pas* were not explicit, as in (12), a covert abstract negative operator would do the work. This is represented in (22c). Both (22b,c) contain the ingredients to compose a negative proposition expressing single negation.

(22) a. Jean *n*e mange *pas*. (French)
Jean NEG eats not
'Jean doesn't eat.'

[13] *Ne* is argued to be a PI in Zeijlstra (2009).

b. [$_{TP}$ Jean$_i$ [$_{NegP}$ pas$_\sigma$ [$_{Neg^o}$ ne$_{[+\sigma]}$] [$_{vP}$ t$_i$ mange]]]

c. [$_{TP}$ Jean$_i$ [$_{NegP}$ Op$^{\neg}{}_\sigma$ [$_{Neg^o}$ ne$_{[+\sigma]}$] [$_{vP}$ t$_i$ mange]]]

We also postulate that Romanian, being a Strict NC language, requires also that *nu* is not a SNM, but a mere marker of the limits of the scope of sentential negation. In accordance with this hypothesis, our analysis for a sentence such as (23a) points at the presence of a covert abstract negative operator that takes sentential scope, to which the σ operator that binds the PI *nu* is adjoined. The relevant structure for this sentence is given in (23b).

(23) a. Elena *nu* sună. (Romanian)
Elena NEG calls
'Elena doesn't call.'

b. [$_{TP}$ Elena$_i$ [$_{NegP}$ Op$^{\neg}{}_\sigma$ [$_{Neg^o}$ nu$_{[+\sigma]}$] [$_{vP}$ t$_i$ sună]]]

So far it has been shown that PIs and negative heads like French *ne* and Romanian *nu* can be polar and, thus, bear a [+σ] feature. We would now like to extend this hypothesis to so called expletive negation markers. In particular, we would like to postulate the [+σ] feature as part of the semantic make-up of expletive *no* 'not' in those languages that allow the presence of an overt negative marker that does not modify the truth value of the proposition in which it appears.[14] In cases of expletive negation, as shown in (24) and (25) for Catalan and Spanish, respectively, *no* does not logically negate the proposition, but induces to consider domains of states of affairs broader than what one would otherwise have considered within the scope of negation (Espinal 2007). Expletive negation is associated with linguistic expressions that constrain the non-veridicality of the context: non-affirmative verbs (*doubt*), adversative predicates (*be surprised*), negative prepositions (*without*), temporal propositions (*before*), comparatives and superlatives, etc. (Horn 2013). The consideration of a broader domain leads to a stronger and more informative proposition.

(24) Gasta *més* ell en tres mesos que (*no* (*pas*)) tu en tot l'any. (Catalan)
spends more he in three months than not you in all the.year
'He spends more money than you in a year.'
(Espinal 1991: 42)

(25) *Preferiría* salir con vosotros que (*no*) estarme (Spanish)
prefer+COND.1SG go-out with you than not be.me

en casa todo el fin de semana.
at home whole the weekend
'I would rather go out with you than stay at home the whole weekend.'

[14] For references on the topic of expletive negation, see Jespersen (1917), Vendryes (1950), Bosque (1980), Martin (1984), Muller (1991), Espinal (1991, 1992, 2007), Horn (2010), among others. Expletive, pleonastic or paratactic negation is more residual in some languages than in others. This is the case of Spanish in comparison to Catalan.

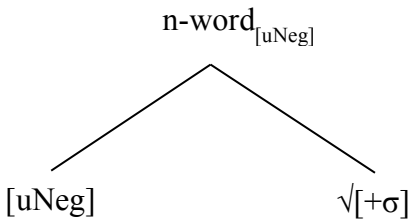
(Espinal 1997: 76)

In these examples the expletive *no* behaves like a PI dependent on the comparative degree adverb *més* 'more, better' or the comparative verb *preferir* 'to prefer', to which an abstract σ operator is adjoined.

In contrast to PIs in general, n-words behave most characteristically as Negative PIs (i.e., licensed in the context of a c-commanding negative operator, and therefore dependent on an antiveridical operator; (6a), (8a)). But, they are also allowed as isolated fragment answers and in preverbal position. Thus, the Romance n-words that we introduced in Section 2.1 do not seem to behave as PIs in all contexts. Furthermore, "the fact that n-words may occur as fragment answers with a negative reading makes them look like genuine negative quantifiers, but this is not compatible with the fact that they do not yield a double negation reading when they are used in combination with the sentential negation marker or another n-word" (Labelle & Espinal 2014: 199).

N-words have a double-sided behaviour: they are PIs in some occasions, but are interpreted negatively in isolation and in pre-verbal position. In the model outlined here, this means that these lexical items (roots) bear an inherent semantic feature ([+σ]) that needs to be licensed at the level of abstract meaning representation (e.g., LF), which makes them PIs. However, during the course of the derivation these lexical items can also acquire a negative syntactic feature that will need to be checked in the syntax for a NC reading to be legitimated. The negative feature that n-words have been claimed to be associated to in negative contexts is defined as uninterpretable (henceforth [uNeg]) (Zeijlstra 2004, Biberauer & Zeijlstra 2012), as n-words are assumed to be semantically non-negative, but syntactically active to participate in NC structures. We assume that n-words start as roots defined [+σ], and that in the course of the derivation these roots can merge with a [uNeg] feature to build a complex item, as in (26).[15]

(26)



Being uninterpretable, a [uNeg] formal feature needs to be checked by an interpretable matching feature, [iNeg]. The relation between these two is one of Agree, namely Reverse / Inverse Agree, as defined in (27), the main characteristic of which is that "the goal may have an uninterpretable feature checked against a higher probe" (Zeijlstra 2012: 491).[16]

[15] We thus assume that the [uNeg] feature is not inherent to lexical items, but part of syntax. Since pure PIs cannot stand on their own as negative fragment answers, we assume that the merge operation represented in (26) is not a possibility with these kinds of elements (e.g., Catalan *gaire,* Spanish *persona alguna*).

[16] The classical definition of Agree (Chomsky 2000, 2001) is the one in (i). Notice that the crucial difference is the c-command relation between α and β (i.e., the Probe and the Goal).

(i) Agree (Zeijlstra 2012: 493, after Chomsky (2000, 2001))
α can agree with β iff:

(27) [Reverse / Inverse] Agree (Zeijlstra 2012: 514)
α can Agree with β iff:
a. α carries at least one uninterpretable feature and β carries a matching interpretable feature
b. β c-commands α
c. β is the closest goal to α

3. The contribution of n-words in NC contexts

Let us see how the definition in (27) allows us to explain the NC data we presented in the previous section. In Non-Strict NC languages like Spanish, the SNM *no* is assumed to carry an interpretable negative feature, [iNeg], and can, hence, check the [uNeg] feature of n-words by c-commanding them.

The relevant configuration for an example like *No ha visto nada* (lit. not has seen anything (8a)) is given in (28a). In turn, *No ha visto nada en ningún cajón* (lit. not has seen anything in any drawer), represented in (28b), illustrates that it is possible for more than one n-word to establish an Agree relationship with a licenser equipped with an [iNeg] feature. Syntactically, this is a case of Multiple Agree (Hiraiwa 2011, Zeijlstra 2004), where one Probe (the negative operator) agrees with more than one goal (the two n-words). Semantically, Multiple Agree results in the combination of several expressions of negation into just one, hence facilitating the NC reading of the SNM and the post-verbal n-words.

(28) a. $[_{NegP}\ [_{Neg^o}$ no $[_{vP}$ ha visto nada]
[iNeg] [uNeg]

b. $[_{NegP}\ [_{Neg^o}$ no $[_{vP}$ ha visto nada en ningún cajón]]
[iNeg]] [uNeg] [uNeg]

The overt SNM is not the only lexical item that can bear an [iNeg] feature, though. Recall that, as illustrated in (9) above, pre-verbal n-words in Non-Strict NC languages are predicted not to be able to co-occur with the SNM (*Nadie (*no) ha visto nada* lit. nobody not has seen anything). How is the [uNeg] feature of the n-word in pre-verbal position checked? And, more importantly, how is the negative reading of this sentence compositionally driven, then? In other words, what is the licenser of the pre-verbal n-word? According to Zeijlstra (2004), the presence of uninterpretable negative features triggers the presence of a Last Resort abstract negative operator, $Op^{\neg}_{[iNeg]}$, which performs the checking operation, and ultimately tights a compositional interpretation. This is shown in (29), the structure corresponding to sentence (8b), which represents that both pre-verbal and post-verbal n-words are underspecified for a negative feature, and therefore for its participation in a NC relationship.

α carries at least one unvalued and uninterpretable feature and β carries a matching interpretable and valued feature
α c-commands β
β is the closest goal to α
β bears an unvalued uninterpretable feature

(29) $[_{NegP}$ [Op¬ nadie$_i$] [vP t_i ha visto nada]]
[iNeg] [uNeg] [uNeg]

As already mentioned, Spanish –like Italian and European Portuguese– is a Non-Strict NC language, and therefore, the structure in (29) –for a sentence with preverbal and postverbal n-words– does not contain an overt SNM.

The structures in (28a, b) and (29) should be contrasted with the ones postulated for French and Romanian, where the head of Negº was conceived as a PI. Besides, as shown in (30) –the syntactic structure for the French sentence in (13b) above– combining the SNM *pas* with the n-word *rien* yields DN. Within the framework we are developing, we follow Zeijlstra (2009) in assuming that *pas* is a logical operator *Op*¬ that cannot bear the syntactic feature [iNeg]. Hence, it crucially contributes to the semantics of the sentence by introducing an instance of logical negation, but cannot participate in an Agree relationship with lexical items that have acquired the feature [uNeg] during the course of the derivation. The prediction is that *pas* does not participate in NC structures.[17] The presence of the [uNeg] feature in the n-word triggers the insertion of a Last Resort Op¬$_{[iNeg]}$ that guarantees a successful checking of the uninterpretable feature, but also has an important consequence with regards to how the meaning of the sentence is composed: *pas*, which is logically negative (i.e., Op¬), and the rescued operator (i.e., Op¬$_{[iNeg]}$), cancel each other out, hence yielding a DN reading.

(30) Jean $[_{NegP}$ Op¬ $[_{NegP}$ pas$_{Op¬}$ $[_{Neg^o}$ ne [*vP* a rien vu]]]]
[iNeg] [uNeg]

In Strict NC languages like Romanian, the presence of an n-word with a [uNeg] feature also triggers the insertion of a Last Resort Op¬$_{[iNeg]}$ that Agrees with the (various) [uNeg] feature(s) present in the sentence. We suggested in (23b) that the negative marker *nu* fulfils a similar function than French *ne*, namely signalling that it is a scope marker of sentential negation, specified covertly by means of Op¬$_\sigma$. Besides, *nu* can merge with a syntactic [uNeg] feature that makes it possible that an Agree checking relationship is established. This surfaces as Strict NC, as shown in (31a), which corresponds to (10) above, but it may also be postulated for postverbal n-words, as represented in (31b), corresponding to the sentence *Nu sună nimeni* (lit. not calls anybody 'Nobody calls').

(31) a. $[_{NegP}$ [Op¬$_\sigma$ nimeni$_{[+\sigma]i}$] $_{Neg^o}$ nu$_{[+\sigma]}$] $[_{vP}$ t_i sună]]
[iNeg] [uNeg] [uNeg]

b. $[_{NegP}$ Op¬$_\sigma$ $[_{Neg^o}$ nu$_{[+\sigma]}$] $[_{vP}$ sună nimeni$_{[+\sigma]}$]]
[iNeg] [uNeg] [uNeg]

[17] As one of the reviewers pointed out, the situation is different in French Québécois, where *pas* can co-occur with n-words yielding a NC reading (Déprez 1997). In our analysis for this dialect of French *pas* is specified as [uNeg] and hence it is licensed by means of a Last Resort Op¬[iNeg].

Let us finally consider the contribution of n-words and *no* in NC contexts in Catalan, a language that is described as allowing an optional *no* after preverbal n-words. Catalan differs from Romanian in not having a Strict NC variety: there are no speakers for whom after a preverbal n-word *no* is obligatory, but still the combination n-word followed by *no* is a possibility. We explain the data in (6a) and (11) above in the following way:

(32) a. $[_{NegP}\ [_{Neg^o}\ \underset{[iNeg]}{no}\quad [_{vP}\ he\ vist\ \ res_{[+\sigma]}\underset{[uNeg]}{}]$

b. $[_{NegP}\ [Op\neg_{\sigma}\quad ningú_{[+\sigma]i}]\ Neg^o\ no_{[+\sigma]}\ ]\ [_{vP}\ t_i\ ha\ vist\ \ res_{[+\sigma]}]$

[iNeg] [uNeg] [uNeg] [uNeg]

Whereas in (32a) the SNM is specified with an inherent [iNeg] syntactic feature, that allows checking of the [uNeg] feature on *res*, in (32b) *no* is merely a PI, an expletive form similar to the one exemplified in the comparative contexts illustrated in (24) and (25). In (32b) the items that participate in a NC relation, *ningú, no* and *res,* are all defined as [uNeg], a feature that matches with a c-commanding [iNeg] formal feature that characterizes a covert Op¬.[18]

An overall picture of what has been discussed in this chapter regarding the contribution of PIs, n-words and the negative marker to the meaning of sentences in Spanish, Catalan, French and Romanian is summarized in the following table:

[18] We would like to hypothesize that the optionality of Catalan *no* in (32b) vs. the obligatoriness on Romanian *nu* in (31a) has nothing to do with expletiveness, since they are both characterized as [+σ], but with the fact that in Catalan, but not in Romanian, expletive *no* has an homophonous negative *no*. See the chart below.

	Polarity items	**N-words**	**Negative marker**	**Can [uNeg] associate with a negative marker with [+σ]?**
Spanish	[+σ] (e.g., *persona alguna*)	[+σ], [uNeg] (e.g., *nadie, nada*)	Two homophones: 1. $no_{[iNeg]}$ (used in single negation and Non-Strict NC structures) 2. $no_{[+\sigma]}$ (expletive negation). Residual	No.
Catalan	[+σ] (e.g., *gaire*)	[+σ], [uNeg] (e.g., *ningú, res*)	Two homophones: 1. $no_{[iNeg]}$ (used in single negation and Non-Strict NC) 2. $no_{[+\sigma]}$ (used in expletive negation)	Yes. It results in $no_{[+\sigma], [uNeg]}$ (used in what look like Strict NC structures)
French	[+σ] (e.g., *qui/quoi que ce soit*)	[uNeg] (e.g., *personne, rien*)	1. *pas*. Semantic negation, Op¬ (used in single negation) 2. $ne_{[+\sigma]}$ (used in expletive negation)	Yes. It results in $ne_{[+\sigma], [uNeg]}$ (used in single negation and what look like Strict NC)
Romanian	[+σ] (e.g., *cine știe ce*)	[uNeg] (e.g., *nimeni*, *nimic*)	$nu_{[+\sigma]}$ (used in expletive negation)	Yes. It results in $nu_{[+\sigma], [uNeg]}$ (used in single negation and Strict NC)

To summarize, we suggest that [iNeg] and [+σ] are formal features that are inherent to some lexical items. While [iNeg] is syntactic and defines a word as

inherently negative, [+σ] is a semantic feature associated to PIs and expletive negation. Unlike what has been proposed in the literature, we take the feature [uNeg] to be a formal feature to which a root can merge in syntax to build an n-word. [uNeg] can be merged to lexical items carrying a [+σ] feature, resulting in the requirement that an Agree syntactic relationship is compulsory. In the case of n-words, the [+σ] feature accounts for the possibility that they occur in non-negative contexts, while the combination of [+σ] and [uNeg] accounts for their ability to participate in NC structures. [+σ] requires an operator σ that freezes the PI, and [uNeg] requires a checking [iNeg] feature that guarantees a NC interpretation. In both cases the relation is one of c-command.

3. Conclusions

We started this chapter asking what the meaning of words is and how they contribute to the meaning of sentences, and we introduced the hypothesis that the contribution of words to the meaning of sentences is not conceptual, but underspecified. An underspecified meaning can be attributed both to an inherent semantic feature and to a syntactic feature with which a lexical item might merge during a derivation. The Principle of Compositionality is guaranteed by checking both semantic features and uninterpretable syntactic features. This is how underspecification can be understood and formalized within a minimal approach to the compositionality of meaning.

PIs are defined as being [+σ]. A prediction that is borne out from this characterization is that PIs are predicted not to occur in pre-verbal position in declarative clauses, because there is no operator to which the σ operator can attach.

We have considered two classes of n-words. Those that can only appear in negative contexts (e.g., the situation in French and Romanian), which are claimed to merge with a [uNeg] feature in the derivation, and those that may appear in non-negative as well as in negative contexts (e.g., the situation in Catalan and Spanish), which are items inherently defined with a [+σ] feature that can merge with a [uNeg] feature in the course of the derivation. We predict that languages that have n-words of the former group have an independent set of lexical items that encode a [+σ] feature. This prediction is also borne out when we consider French and Romanian.

With regard to negative markers the situation we have described is the following. In the case of French *pas* is a SNM that encodes logical negation (i.e., Op¬); this characterization predicts that this item cannot participate in NC structures because for this to be possible a syntactic correspondence between items characterized [uNeg] and an item characterized [iNeg] is required. By contrast, French *ne* is a scope marker defined [+σ]; this characterization predicts that it can be used in non-negative (e.g., expletive) contexts, and that in order to participate in NC structures a merge operation with a [uNeg] feature is required. Romanian *nu* behaves as French *ne.*

Spanish has two homophonous lexical items: (i) no_1, defined [iNeg], which is a SNM that is required to bind post-verbal n-words, as expected in a Non-Strict NC language; and (ii) no_2, defined [+σ], which is residual in EN contexts.

Catalan also has two homophonous lexical items: (i) no_1, defined [iNeg], which is a SNM that is required to bind post-verbal n-words, as expected in a Non-Strict NC language; and (ii) no_2, defined [+σ]. The difference between Spanish and Catalan is that in this language the possibility of EN is much more productive than in Spanish. Moreover, no_2 can merge with [uNeg] in what look like Strict NC contexts, similar to

Romanian, although in Catalan but not in Romanian no_2 is optional. This different use of no_2 in the two languages predicts that those Catalan speakers with a scarce use of expletive negation are those that generally prefer Non-Strict NC structures, whereas those Catalan speakers with a broad use of expletive negation are those that generally prefer what look like Strict NC structures. We leave for future research to investigate more extensively whether it is the case that those languages that show a higher use of expletive negation readings correlate with those languages that allow negative readings in what like Strict NC contexts, and whether the fact that Catalan no_2 is optional, but Romanian *nu* is not, in spite of both being characterized as [+σ] is due to the coexistence of a SNM no_1 ony in the former language.

Bibliography

Acquaviva, Paolo (1996), *The Logical Form of Negative Concord*. University of Venice Working Papers in Linguistics 6(2), 1-29.

Acquaviva, Paolo (1997), *The Logical Form of Negation: A Study of Operator-Variable Structures in Syntax.* New York: Garland.

Biberauer, Theresa/Zeijlstra, Hedde (2012), *Negative Concord in Afrikaans: filling a typological gap*, Journal of Semantics 29(3), 345-371.

Bosque, Ignacio (1980), *Sobre la Negación*. Madrid, Ediciones Cátedra.

Carston, Robyn (2012), *Word meaning and concept expressed*, The Linguistic Review 29(4), 607-623.

Chierchia, Gennaro (2006), *Broaden your views: implicatures of domain widening and the "logicality" of language*, Linguistic Inquiry 37, 535-590.

Chomsky, Noam (1981), *Lectures on Government and Binding*, Dordrecht, Foris.

Chomsky, Noam (2000), *Minimalist inquiries: the framework*, in: Roger Martin/David Michaels/Juan Uriagereka (edd.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, Cambridge, MA, the MIT Press, 89-155.

Chomsky, Noam (2001), *Derivation by phase*, in: Michael Kenstowicz (ed.), *Ken Hale: a Life in Language*, Cambridge, MA, the MIT Press, 1-52.

Corblin, Francis/Déprez, Viviane/de Swart, Henriëtte/Tovena, Lucia (2004), *Negative concord*, in: Francis Corblin/Henriëtte de Swart (edd.), *Handbook of French semantics*, Stanford, CSLI Publications, 417-452.

Corblin, Francis/Tovena, Lucia (2003), *L'expression de la négation dans les langues romanes,* in: Danièle Godard (ed.), *Les langues romanes. Problèmes de la phrase simple,* Paris, CNRS, 281-343.

Cruse, David (1986), *Lexical Semantics*, Cambridge, Cambridge University Press.

Davidson, Donald (1967), *Truth and meaning*, Synthese 17, 304-323.

Déprez, Viviane (1997), *Two types of negative concord*, Probus 9, 103-143.

Déprez, Viviane (2011), *Atoms of negation: An outside-in micro-parametric approach to negative concord*, in: Pierre Larrivée/Richard P. Ingham (eds.), *The Evolution of Negation: Beyond the Jespersen Cycle*, Amsterdam, John Benjamins, Amsterdam, 221-272.

Déprez, Viviane/Cheylus, Anne/Larrivée, Pierre (2013), *When and how is NC preferred. An experimental approach.* Paper presented at the *19è Congrés International des Linguistes,* Genève.

Déprez, Viviane/Tubau, Susagna/Cheylus, Anne/Espinal, M.Teresa (forthcoming), *Double negation in a Negative Concord language: an experimental investigation.* Ms., Rutgers University, CNRS, and Universitat Autònoma de Barcelona.

Espinal, M.Teresa (1991), *On expletive negation: some remarks with regard to Catalan*, Linguisticae Investivationes XV:1, 41-65.

Espinal, M.Teresa (1992), *Expletive negation and logical absorption*, The Linguistic Review 9(4), 338-358.

Espinal, M.Teresa (1996), *On the semantic content of lexical items within linguistic theory,* Linguistics 34, 109-131.

Espinal, M.Teresa (1997), *Non-negative negation and* wh-*exclamatives*, in: Danielle Forget/Paul Hirschbühler/France Martineau/María Luisa Rivero (edd.), *Negation and Polarity*, Amsterdam, John Benjamins, 75-93.

Espinal, M.Teresa (2002), *La negació*, in: Joan Solà/Maria Rosa Lloret/Joan Mascaró/Manuel Pérez-Saldanya (edd.), *Gramàtica del català contemporani*, vol. 3, Barcelona, Empúries, 2727-2797.

Espinal, M.Teresa (2007), *Licensing expletive negation and negative concord in Catalan and Spanish*, in: Franck Floricic (ed.), *La Négation Dans les Langues Romanes.* Linguisticae Investigationes Supplementa 26, Amsterdam, John Benjamins, 49-74.

Espinal, M.Teresa/Prieto, Pilar (2011), *Intonational encoding of double negation in Catalan*, Journal of Pragmatics 43, 2392-2410.

Espinal, M.Teresa/Tubau, Susagna/Borràs-Comes, Joan/Prieto, Pilar (to appear), *Double negation in Catalan and Spanish. Interaction between syntax and prosody*, in: Pierre Larrivée/Chungmin Lee (edd.), *Negation and polarity: cognitive and experimental perspectives,* Berlin, Springer.

Farkas, Donka (1990), *Two cases of underspecification in morphology*, Linguistic Inquiry 21, 539-550.

Floricic, Franck (2005), *La négation dans les langues romanes*, Lalies 25 : 163-194. *Actes des Sessions de Littérature et Linguistique* (Aussois, 23-28 août 2004). Paris, Presses de l'Ecole Normale Supérieure.

Fodor, Jerry A. (1983), *Modularity of Mind: An Essay on Faculty Psychology*. Cambridge, MA, the MIT Press.

Frege, Gottlob (1892), *Über Sinn und Bedeutung*, Zeitschrift für Philosophie und philosophische Kritik 100, 25-50.

Geeraerts, Dirk (2010), *Theories of Lexical Semantics*, Oxford, Oxford University Press.

Giannakidou, Anastasia (1998), *Polarity sensitivity as (non)veridical dependency*, Amsterdam, John Benjamins.

Giannakidou, Anastasia (2000), *Negative…concord?*, Natural Language and Linguistic Theory 18, 457-523.

Giannakidou, Anastasia (2006), *N-words and negative concord,* in: Martin Everaert/Henk van Riemsdijk (edd.), *The Blackwell Companion to Syntax,* vol III, 327-391.

Godard, Danièle (2004), *French negative dependency*, in: Francis Corblin/Henriëtte de Swart (edd.), *Handbook of French Semantics*, Stanford, CSLI Publications, 351-390.

Hacquard, Valentine (2006), *Aspects and modality,* Ph.D. dissertation, Massachusetts Institute of Technology.

Higginbotham, James (1985), *On semantics*, Linguistic Inquiry 16, 547-594.

Hiraiwa, Ken (2011), *Multiple Agree and the defective intervention constraint in Japanese*, MIT Working Papers in Linguistics 40, 67-80.

Horn, Laurence R. (1989), *A Natural History of Negation,* Chicago, University of Chicago Press.

Horn, Laurence R. (2010), *Multiple negation in English and other languages*, in: Laurence R. Horn (ed.), *The Expression of Negation*, Berlin, de Gruyter Mouton, 111-148.

Horn, Laurence R. (2013), *Revisiting the licensing question: some negative (and positive) results.* Paper presented at the *19è Congrés International des Linguistes,* Genève.

Hornstein, Norbert (1995), *Logical Form. From GB to Minimalism.* Oxford and Cambridge, Blackwell.

Jackendoff, Ray S. (1972), *Semantic Interpretation in Generative Grammar*. Cambridge, MA, the MIT Press.

Jakobson, Roman (1984a), *The structure of Russian case forms,* in: Linda Waugh/Morris Halle (edd.), *Russian and Slavic Grammar. Studies l93l-l98l,* Berlin, de Gruyter, 105-133.

Jakobson, Roman (1984b), *The structure of the Russian verb,* in: Linda Waugh/Morris Halle (edd.), *Russian and Slavic Grammar. Studies l93l-l98l*, Berlin, de Gruyter, 1-14.

Jespersen, Otto (1917), *Negation in English and Other Languages*, Copenhaguen, A.F. Høst.

Kadmon, Nirit/Landman, Fred (1993), *Any*, Linguistics and Philosophy 16, 353-422.

Kratzer, Angelika (1981), *The notional category of modality,* in: Hans-Jürgen Eikmeyer/Hannes Rieser (edd.), *Words, Worlds, and Contexts,* Berlin, de Gruyter, 38-74.

Kratzer, Angelika (2012), *Modals and Conditionals,* Oxford, Oxford University Press.

Kratzer, Angelika (2013), *Modality for the 21st century,* in: Stephen R. Anderson/Jacques Moeschler /Fabienne Reboul (edd.), *L'Interface Language-Cognition. The Language-Cognition Interface*, Genève-Paris, Librairie Droz, 179-199.

Krifka, Manfred (1994), *The semantics and pragmatics of weak and strong polarity items in assertions*, in: Mandy Harvey/Lynn Santelmann (edd.), *Proceedings from Semantics and Linguistic Theory* IV, Ithaca, Cornell University, 195-219.

Labelle, Marie/Espinal, M.Teresa (2014), *Diachronic changes in negative expressions: the case of French,* Lingua 145, 194-225.

Labov William (1972), *Negative attraction and negative concord in English grammar*, Language 48, 773-818.

Ladusaw, William (1980), *Polarity Sensitivity as Inherent Scope Relations*, New York, Garland.

Laka, Itziar (1990), *Negation in Syntax: On the Nature of Functional Categories and Projections*, Ph.D. dissertation, Massachusetts Institute of Technology.

Lahiri, Utpal (1998), *Focus and negative polarity in Hindi*, Natural Language Semantics 6, 57-123.

Levin, Beth/Pinker, Stephen (ed.) (1991), *Lexical and Conceptual Semantics*, Cambridge, MA, Blackwell.

Lumsden, John S. (1992), *Underspecification in grammar and natural gender*, Linguistic Inquiry 23(3), 469-486.

Martin, Robert (1984), *Pour une approaches sémantico-logique du* ne *dit 'explétif'*, Revue de Linguistique Romane 48, 99-120.

Martins, Ana Maria (1998), *On the need of underspecified features in syntax. Polarity as a case study*, GLOW's newsletter, Tilburg, Tilburg University.

Matos, Gabriela (1999), *Negative Concord and the scope of negation,* Catalan Working Papers in Linguistics 7, 175-190.

May, Robert (1985), *Logical Form. Its Structure and Derivation*, Cambridge, MA, the MIT Press.

Montague, Richard (1974), in: Richmond H. Thomason (ed.), *Formal Philosophy: Selected Papers of Richard Montague*, New Haven: Yale Univ. Press.

Muller, Claude (1991), *La Négation en Français. Syntaxe, Sémantique et Éléments de Comparaison Avec les Autres Langes Romanes.* Geneva, Droz.

Pelletier, Francis Jeffrey (forthcoming), *Annotated Bibliography on 'Compositionality'*, Oxford Bibliographies Online.

Prieto, Pilar/Borràs-Comes, Joan/Tubau, Susagna/Espinal, M.Teresa (2013), *Prosody and gesture constrain the interpretation of double negation*, Lingua 131, 136-150.

Quer, Josep (1998), *Mood at the Interface,* PhD dissertation, Universiteit Utrecht.

Reinhart, Tania (1983), *Anaphora and Semantic Interpretation*, London, Croom Helm.

Rigau, Gemma (1984), *De com* si *no és conjunció i d'altres elements interrogatius*, in: *Estudis Gramaticals. Working Papers in Linguistics,* Bellaterra, Universitat Autònoma de Barcelona, 249-278.

Rooryck, Johan (1994), *On two types of underspecification: towards a feature theory shared by syntax and phonology*, Probus 6, 207-233.

Sánchez, Cristina (1999), *La negación*, in: Ignacio Bosque/Violeta Demonte (edd.), *Nueva gramática descriptiva de la lengua española*, vol. 2. Madrid, Espasa-Calpe, 2561-2634.

Solà, Joan (1973), *La negació*, in: *Estudis de sintaxi catalana*, vol. 2. Barcelona, Edicions 62, 87-118.

Sperber, Dan/Wilson, Deirdre (1986/1995), *Relevance: Comunication and Cognition,* Oxford, Blackwell.

de Swart, Henriëtte (2010), *Expression and Interpretation of Negation: an OT Typology*, Dordrecht, Springer.

de Swart, Henriëtte/Sag, Ivan (2002), *Negation and Negative Concord in Romance,* Linguistics and Philosophy 25, 373-417.

Tarski, Alfred (1944), *The semantic conception of truth and thefoundations of semantics,* Philosophy and Phenomenological Research 4, 341-375.

Teixeira de Sousa, Lílian (2012), *Sintaxe e Interpretação de Negativas Sentenciais no Português Brasileiro*, PhD Dissertation, Universidade Estadual de Campinas, Campinas.

Tovena, Lucia/Déprez, Viviane/Jayez, Jacques (2004), *Polarity Sensitive Items*, in: Francis Corblin/Henriëtte de Swart (edd.), *Handbook of French Semantics*, Stanford, CSLI Publications, 391-416.

Tubau, Susagna (2008), *Negative Concord in English and Romance: Syntax-Morphology Interface Conditions on the Expression of Negation.* PhD Dissertation, Universitat Autònoma de Barcelona, Bellaterra, and University of Amsterdam, Amsterdam.

Tubau, Susagna/Espinal, M.Teresa (2012), *Doble negació dins l'oració simple en català*, Estudis Romànics XXXIV, 145-164.

Vendryes, Joseph (1950), *Sur la negation abusive,* Bulletin de la Société de Linguistique de Paris 46(1): 1-18.

Werning, Markus/Hinzen, Wolfram/Machery, Edouard (2012) (edd.), *The Oxford Handbook of Compositionality*, Oxford, Oxford University Press.

Wilson, Deirdre/Sperber, Dan (1993), *Linguistic form and relevance,* Lingua 90, 1-25.

van der Wouden, Ton (1994), *Negative contexts*, PhD dissertation, University of Groningen, Groningen.

Zanuttini, Raffaella (1997), *Negation and Clausal Structure: A comparative study of Romance Languages*, New York, Oxford University Press.

Zeijlstra, Hedde (2004), *Sentential Negation and Negative Concord,* University of Amsterdam, Ph.D. dissertation.
Zeijlstra, Hedde (2009), *On French negation*. Ms. University of Amsterdam, http://ling.auf.net/lingBuzz/000885.
Zeijlstra, Hedde (2012), *There is only one way to agree*, The Linguistic Review 29(3), 491-539.
Zwarts, Frans (1995), *Nonveridical contexts*, Linguistic Analysis 25, 286-312.