Double Negatives, Negative Concord and Metalinguistic Negation

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Abstract
Two properties of the so-called (after Laka 1990) *n-words* (Italian *nessuno, niente…* and Spanish *nadie, nada…*) do not find a unified account in any of the existing analyses of Negative Concord (NC): (i) their uses in the special context of denials and (ii) their incompatibility with factive environments. We suggest that the unifying property of these two apparently unrelated phenomena is the common sensitivity of these two environments (denials and factives) to non-truthconditional aspects of meaning. Thereof we take these properties to reveal that the meaning of n-words involves a non-truthconditional component. Specifically, we explore the hypothesis that n-words are existential quantifiers at the truth-conditional level but that they contribute negative existentials at the level of their conventional implicatures. This hypothesis explains the special uses of n-words in denials and their incompatibility with factive environments. The fact that they are restricted to the scope of negation (or more precisely averidical expressions[1] (Giannakidou's 1997,2000)) in non-sentence-initial position follows as a consequence of the relation between their implicature and their semantic contribution to the truth conditions of the sentences they appear in. Under certain common additional stipulations, this view can be extended to preverbal occurrences as well.

1. Introduction

In NC Languages of the Spanish and Italian variety, certain negative expressions (*n-words*) exhibit an unstable semantic and distributional behavior. N-words sometimes behave as Negative Polarity Items (NPIs) like *anybody / anything* and sometimes Negative Quantifiers (NQs) like *nobody / nothing*. For example, even when there is no negation besides the sentence initial n-word, the sentences in (1) are interpreted as negative statements. The n-word appears to contribute a Negative Quantifier with sentential scope.

(1)   a. Nessuno è venuto.   (Italian)
            N-body is come
        b. Nadie ha venido.   (Spanish)
            N-body has come
         ' Nobody came'

On the other hand, n-words occurring within the scope of an overt negation, as in (2), do not contribute a negation, as the interpretation of the sentence involves only one negation.

(2)   a. *(Non) è venuto nessuno.   (Italian)
             Not is come n-body
         b. *(No) ha venido nadie.   (Spanish)

Not has come n-body
' Nobody came'

In addition, as illustrated in (2), non initial n-words are dependent on the presence of the higher negation, an effect that is reminiscent of well known Negative Polarity phenomena. In fact, the similarity with NPIs like *any* goes beyond the facts in (2), since non-initial n-words are acceptable in other contexts that typically license NPIs. Like *any*, n-words are licensed in the complement of *without*, in the complement of *before* and in embedded clauses introduced by *doubt*.

(3)   a. Maria uscì senza salutare nessuno.
         Mary left without greeting n-body
         ' Mary left without greeting anyone'.
        b. Maria usci' prima di aver salutato nessuno
         Mary left before greeting n-body'
        c. Dubito che Maria abbia visto nessuno.
         I doubt that Mary saw anyone.

This pattern suggests the following preliminary descriptive generalization:

(4)   a. When n-words appear in sentence initial position there is no need for an overt negative licenser. The n-word itself appears to be a NQ ($\neg\exists$).
       b. In all other cases, an NPI licenser is required and the N-word appears to be an existential quantifier, just like *any*. ($\exists$)

We will first concentrate on the clause in (4b). A somewhat closer look at the distribution of n-words in non-initial position, immediately shows that (4b) is an oversimplified description of the facts. N-words are much more constrained in their postverbal occurrences than NPIs like *any*. Merely Downward Entailing (DE) environments as well as antiadditive[2] ones (see Zwarts 1993) license NPIs, they do not license n-words (as shown in (5a,b)). In addition, n-words are infelicitous in the antecedent of conditionals (5c) and completely ungrammatical in the factive environments in (5d-f), while *any* and minimizers like *a red cent* are fine in all these contexts.[3]

(5)   a. * Meno   di tre studenti   hanno mangiato   niente.[4]
            Less then three students   have   eaten   n-thing
       b. ?? Ogni passeggero che avesse bisogno di niente, fu assistito.
         ' Every passenger that needed n-thing, was assisted'.
       c. ?? Se Maria si accorgesse niente, sarebbe un problema.
         ' If Mary noticed   n- thing, it would be a problem.
       d. ?? Solo Maria ha visto nessuno degli stdenti.
         'Only Mary has seen n-one of the students'.
       e. * Mi spiacerebbe che tu vedessi nessuno.

I would be sorry that you saw n-body
f. * Mi sono pentito di aver incontrato nessuno.
I regretted   to have met n-body.

Non-initial n-words in the context of denials generate interesting unexpected interpretations, which also appear to escape the generalization in (4b). The dialog in (6) illustrates this phenomenon.[5]

(6) A: Maria stara'   morendo di fame, **non ha mangiato niente** tutto il giorno.
Mary will be starving   , not has eaten   n-thing all day.
' Mary is probably starving, she hasn't eaten anything all day'
   B: **Non ha mangiato NIENTE**, ha mangiato un panino!
Not has eaten   N-THING, has eaten   a sandwich!
It's not correct that she didn't eat anything: she ate a sandwich!

Within A's utterance, the negative word *niente* occurs under negation and is interpreted, as expected, as an existential quantifier, just like in (2). What is puzzling about (6) is that B uses exactly the same string A used (*non ha mangiato niente*), *modulo* intonation, to actually express disagreement with what A said. B's remark is a denial of A's, even when the two sentences contain the same number of negations and negative words. Where does the additional negation expressing disagreement come from? What exactly is B disagreeing with?[6]

A theory of NC for the two languages at stake should at least account for (i) the apparent negative interpretation of n-words in sentence initial position, (ii) their peculiar restrictions on the non-initial occurrences (and especially their incompatibility with factives) and (iii) their special interpretation in denials. Section 2 briefly illustrates that all previous analyses of NC fall short of coping with one or more of these aspects. In section 3 we propose that n-words are unambiguously non-negative existential quantifiers that come with a conventional implicature involving negation. In sections 3 and 4, we will argue that this semantic analysis of n-words can explain both the restrictions on their non-sentence initial occurrences and the special interpretations they generate in denials In section 5, we envisage how to extend the proposal to the sentence initial cases.

2. Previous approaches and their problems

The massive literature on NC in Romance falls into three categories. The first group proposes that n-words are unambiguously NPIs. The second entertain the hypothesis that n-words are unambiguously NQs. The third argue that n-words are lexical ambiguous: they are both NQs and NPIs.[7]

The hypothesis that n-words are NPIs (Laka 1990, Ladusaw 1992, Giannakidou 1997, 2000) provides no straightforward account for why the distribution of n-words in non-initial position is more limited than run of the mill NPIs like English *any* or minimizer*s* like *a finger* in both English and Romance.[8, 9]In addition, it fails to predict the difference between NPIs n-words in denials, since denials typically do not license NPIs while n-words can be used in these contexts, as we saw above. Finally, this view needs to

stipulate an abstract negation licensing n-words in sentence initial position and contributing the negative interpretation of sentences like (1) above (see Ladusaw 1992).

The hypothesis that n-words are always NQs is defended in Zanuttini 1991. Although it does not directly explain the non-negative readings of n-words and their peculiar NPI-like restrictions in postverbal position, at first it seems to have an advantage over the NPI-approach when it comes to explaining the behavior of n-words in denials. The meaning of B's utterance in (6) could just be viewed as a double negation (DN) statement. If one negation is provided by *non* and the n-word *niente* contributed another one, as indeed assumed within the NQ approach, we would have a fully compositional analysis of (6B). Unfortunately, this option raises more questions than it can answer. First, one might wonder why the alleged DN readings are available in denials, but excluded in plain negative statements.[10] The second problem becomes evident when (6B) is viewed in the context of A's utterance. In fact, in A's utterance the same n-word *niente* has its typical existential import under negation, rather than receiving an NQ interpretation. Given this, there seems to be no easy way to reconcile an NQ analysis of the n-word in (6B) with its reading in (6A) without assuming a lexical ambiguity for *niente*.

This leads us directly to the third hypothesis: that Spanish and Italian n-words are lexically ambiguous between an NQ and an NPI meaning, as defended in Herburger 2001. The ambiguity hypothesis shares problems with both the above alternatives.[11] For instance, the differences between NPIs and postverbal occurrences of n-words are obviously problematic for this approach as well.[12] In addition, it has some drawbacks of its own. In fact, while the alleged NPI- interpretation is limited to negative contexts by its polarity sensitive nature, NQ readings should in principle be possible all over the place, contrary to the facts. An independently justified criterion governing the distribution of the two readings is needed.

The only articulated solution to this problem we are aware of is presented in Herburger (2001). Herbuger assumes that postverbal n-words have scope narrower than an existential quantifier ranging over events. In the case of object n-words expressing the theme of the event, one can read her account as relying on the distinction between predicates like *eat*, which semantically require the existence of a theme, and those like *look,* which do not impose this requirement. The former class cannot tolerate NQ postverbal n-words. A sentence like *Maria ate n-sandwich* would be true if there was an event of eating by Mary where nothing was eaten. This is a contradiction as long as every eating event is an event where something is eaten. The latter can tolerate postverbal n-words, because, in fact, there are events of looking where nothing is looked at.

Given this, the specific proposal Herburger puts forth fails to make sense of the facts in (6) as well. In fact, while the assumptions of a NPI-NQ ambiguity in principle, would allow different readings for the n-words in A's and B's utterance in (6), Herburger's account actually predicts that with predicates like *eat* an NQ reading of the object *niente* should be unavailable.[13] This is sufficient to exclude the possibility extending Herburger's analysis to the facts in (6).[14]

On the basis of these considerations, we can safely conclude that there isn't any ambiguity-approach to n-words either that provides a straightforward unified account of all the facts discussed in the introduction.

3. The proposal.
We said that a theory of n-words for the languages at stake should account (i) for their apparent negative interpretation in sentence initial position (as in (1)), (ii) for the peculiar restrictions on their non-initial occurrences ((shown in (3) and (5)) and (iii) for the special interpretation they can trigger when used in denials (6). In this section we propose an analysis of n-words and show that it accounts for (ii). Section 4 shows that it naturally accounts for (iii) as well, and section 5 that it can also be extended so as to account for (i).

3.1 N-words are existentials.
This is our proposal: we take all instances of n-words to be non-negative existential quantifiers that contribute a negative conventional implicature. As illustrated in (7), n-words are equivalent to non-negative existential quantifiers at the truth-conditional level, but contribute negative existentials by the means of a conventional implicature.

(7)   a. [[**Nadie/nessuno**]] = $\lambda P.\exists x[person'(x) \& P(x)]$
         b. Conventional implicature: $\sim\exists x[person'(x) \& P(x)]$

The proposal predicts that n-words will be felicitous only if the sentence they are contained in is negated by some higher (a-veridical) operator. Consider the sentences in (8). According to our analysis, they assert that somebody came and implicate that nobody came. The absence of sentential negation provokes a clash between the truth-conditions of the sentence and its implicature. The clash renders the sentences unusable.

(8)   a. *É venuto   nessuno.   (Italian)
         b. *Vino   nadie   (Spanish)
            Came   n-body
         Assertion: Somebody came
         Conventional Implicature: Nobody came.

Consider, in contrast, the sentences in (9). According to our analysis, the sentences in (9) assert that nobody came, because the n-word is under the scope of sentential negation. They also implicate that nobody came. There is no clash between the truth conditional and the non-truth conditional components of meaning.[15]

(9)   a. Non é   venuto   nessuno.   (Italian)
         b. No ha   venido   nadie.   (Spanish)
            Not has   come   n-body
         Assertion: Nobody came
         Conventional Implicature: Nobody came

We want to propose that the distribution of non-sentence initial n-words derives from the fact that they render the sentence they appear in unusable, unless they are interpreted under the scope of negation or some other averidical expression. Something else, along these lines, will have to be said about their sentence-initial occurrences and we will in section 5.[16] Now we want to show that our analysis predicts the full range of contexts that license non-initial n-words.

3.2 The distribution of postverbal n-words.

Our analysis predicts that only if the combination [[n-word]] (P) is negated in the semantics are the truth conditions and implicatures of a sentence containing an n-word compatible. This turns out to be a welcome prediction, beyond the contrast between (8) and (9). Recall that n-words are not only licensed under the scope of sentential negation, but also in *before* clauses, *without* clauses and the complement of predicates like *doubt*:

(10)   a. Maria uscì senza salutare nessuno.   (Italian)
            Mary left without greeting n-body
            ' Mary left without greeting anyone'.
        b. Maria uscì prima di aver salutato nessuno   (Italian)
            Mary left before greeting n-body'
        c. Dubito che Maria abbia visto nessuno.   (Italian)
            I doubt that Mary saw anyone.

In fact all these contexts can be analyzed as involving in their semantics a negation, they are a-veridical, in Giannakidou's sense (Giannakidou 1997, 2002). Take the sentences in (11). They assert that when Mary left at a certain time t and that, at that time, she had not greeted anybody yet. According to our analysis, they implicate that Mary had not greeted anybody. There is no conflict between the truth-conditions of the sentences and its implicature. In fact, since *p before q* entails *when p **not** yet q*, the implicature that n-words contribute will not clash with the truth-conditional component and we correctly predict n-words to be licensed in the scope of *before*.[17]

(11)   a. Maria uscí prima di aver salutato nessuno.   (Italian)
        b. Sp. María salió antes de haber saludado a nadie   (Spanish)
                Mary left before greeting n-body

We can make similar remarks for *without* clauses. *Without p* can be analyzed as *and **not** p*. Take the examples in (12). They assert that Mary left and at that point she hadn't greeted anybody. They implicate that Mary didn't greet anybody. There is no conflict between what is asserted and what is implicated. Consequently, n-words are licensed under the scope of *without*.

(12)   a. Maria uscí senza aver salutato   nessuno   (Italian)
        b. María salió sin   haber saludado a nadie   (Spanish)

Mary left   without greeting n-body

Finally, *doubt that p* can be analyzed as **not** *think (or believe) that p.* The sentences in (13) assert that Mary doesn't think that you can help anybody and, given the projection properties of predicates like *think* and *doubt* (see Heim 1992) they implicate that Mary thinks that you cannot help anybody. There is no clash between what is asserted and what is implicated and, consequently, n-words are licensed.

(13)   a. It.   Maria dubita   che tu possa aiutare nessuno.
        b. Sp. María duda de que tú puedas ayudar a nadie
               Mary doubts that you can help n-body

So far we have focused on the fact that the implicature associated with n-words can clash with the truth-conditions of the sentence it occurs in. In fact, we predict that it can also clash with other non-truth conditional components of the meaning of the sentence they appear in. To the extent that it does, we will have further evidence of its presence.
       Recall that there are contexts where NPIs like *any* are licensed and n-words are not:

(14)   a. * Meno   di tre studenti   hanno mangiato   niente.
                Less then three students   have   eaten   n-thing
        b. ?? Se Maria si accorgesse niente, sarebbe un problema.
             ' If Mary noticed   n- thing, it would be a problem.
        c. * Ogni passeggero che avesse bisogno di niente, fu assistito.
             ' Every passenger that needed n-thing, was assisted'.
        d. ?? Solo Maria ha visto nessuno degli stdenti.
             'Only Mary has seen n-one of the students'.
        e. * Mi spiacerebbe che tu vedessi nessuno.
             I would be sorry that you saw n-body
        f. * Mi sono pentito di aver incontrato nessuno.
             I regretted   to have met n-body.

Let us start by singling out the case of factives like *surprise, regret* and *only*. Von Fintel(1999) convincingly argues that, once we take into consideration their presuppositions, these predicates can be shown to have a property very similar to Downward Entailment, Strawson-DE, which enable them to license NPIs, like *un dito* or *un dedo* ('a finger') in (15).[18] Nevertheless, as the contrast between (15) and (16) shows, they do not license n-words:

(15)   a.It. Mi sorprende   che tu   abbia   alzato   un dito per aiutarmi.
        b.Sp. Me sorprende   que   hayas   movido un dedo por ayudarme.
              To me surprise:3s that you had:subj lifted   a finger to   help me.
              'I am surprised that you had lifted a finger to help John'.

(16)   a.It. *Mi   sorprende   che tu   abbia/hai   visto nessuno.

b.Sp.*Me   sorprende   que   te   haya   visto nadie.
　　　　To me surprise:3s that   you had:subj/ind seen n-body
　　　　'That nobody has seen you surprises me'.

Our proposal provides an explanation for the contrast. Factive predicates like *surprise* and *regret* trigger the presupposition that its complement is believed to be true by the holder of the attitude (see Heim 1992). So, in this case, (16a) presupposes that the speaker believes that you saw somebody. The n-word in the complement of *surprise* projects the conventional implicature that the speaker believes that you saw nobody, thus conflicting with the factive presupposition of *surprise*. The sentence is rendered unusable and, consequently, the n-word is disallowed.

　　　　The same line of reasoning applies to the contrast between (17) and (18). N-words are not licensed by *regret* because the implicature that they trigger systematically conflicts with the factive presupposition of *regret*.

(17)　a. It.　A Maria dispiace di aver alzato anche solo un ditto per aiutarmi.
　　　　　　To Mary regrets of have lifted even only a finger to help me.
　　　　　　'Mary regrets having lifted a finger to help me´.
　　　b. Sp.　María lamenta haber levantado un sólo dedo para ayudarme.
　　　　　　Mary regrets have lifted even a only a finger to help me.
　　　　　　'Mary regrets having lifted a finger to help me´.

(18)　a. It. * A Mary spiace   che tu   abbia/hai   visto nessuno
　　　b. Sp. * Mary   lamenta   que tú   hayas   visto a nadie
　　　　　　　Mary   regrets   that you have (ind/subj)   seen n-body

　　　　The reader will have already guessed how to explain the cases with *only*. Again, as the contrast between (19) and (20) illustrate, *only* licenses NPIs, but it does not license n-words. *Only* triggers the presupposition that Mary saw some student (Horn 1969), which conflicts with the implicature that the n-word contributes. i.e. that every individual in the domain (including Mary) saw no student.[19]

(19)　a. Solo Maria ha alzato un dito per aiutarmi.　　　　(Italian)
　　　b. Sp: Sólo Maria ha movido un dedo para ayudarme.　(Spanish)
　　　　'Only Mary lifted a finger to help me'

(20)　a. * Solo Maria ha visto nessuno studente.　　　　(Italian)
　　　b. * Sólo Maria   a ningún estudiante　　　(Spanish)
　　　　　Only Mary saw   n-one   student

　　　　In sum, the implicature that n-words contribute can conflict not only with the assertion of the sentence they occur in, but also with its presuppositions, as expected.
　　　　To end our discussion about the distribution of non-sentence initial n-words, consider the occurrences of n-words in the antecedent of conditionals and in the restrictor

of universals. (21) illustrates that n-words in these contexts render the sentences they occur in somewhat infelicitous.

(21)   a. ?? Se Maria avesse   visto nessuno, sarebbe   un problema.
              If   Mary had: subj. seen n-body, it would be a problem
        b. ?? Ogni passeggero che avesse bisogno di niente, verra'
            Every passenger that needed:subj   n-thing, will be
            assistito   al piú presto
            assisted   as soon as possible.

Our analysis can derive these facts. Assume any run-of-the mill analysis of conditionals where the antecedent helps determining the domain of quantification of the modal in the consequent. A sentence like (21a) is true in a world w, say, if all worlds most similar to w where the proposition expressed by the antecedent is true are worlds where the proposition expressed by the consequent is also true. Now, in (21a), the antecedent-worlds are restricted, by the implicature, to those where Mary sees nobody. The truth conditions require that all these worlds be worlds where Mary saw somebody. The set of worlds where Mary saw somebody and nobody is empty. The infelicity comes from expressing a conditional with a vacuous restrictor.[20]

A similar story can be told about (21b). The n-word triggers the implicature that every one of the passengers being quantified over needs nothing. The sentence asserts that every passenger who needs something will be assisted, thus requiring that the passengers being quantified over need something. Again, it's strange, though not impossible, to express a universal generalization over an empty set. This, again, explains why the sentence is highly marginal, although not completely ungrammatical.

We started the section by claiming that a theory of n-words for the languages at stake should account (i) for their apparent negative interpretation in sentence initial position, (ii) for the peculiar restrictions on their non-initial occurrences and (iii) for the special interpretation they can trigger when used in denials. We have shown that it is possible to give an account of (ii) by assuming that n-words are existential quantifiers associated with a negative implicature. Before saying something about (i), we will show in the next section how to account for (ii).

4. Denials as cases of metalinguistic negation.
Recall the dialog in (6), repeated below:

(22) A: Maria stara'   morendo di fame, **non ha mangiato niente** tutto il giorno.
        Mary   will be starving   , not has eaten   n-thing   all day.
        ' Mary is probably starving, she hasn't eaten anything all day.
     B: **Non ha mangiato NIENTE**, ha mangiato un panino!
         Not has eaten   N-THING, she ate a sandwich!
          It's not correct that she didn't eat anything: she ate a sandwich!

Within A's utterance, the negative word *niente* is interpreted as an existential quantifier under the scope of sentential negation. However, B's remark is a denial of the content of A's utterance, even when both A and B use the same sentence, containing the same number of negations and negative words. We need to explain where the additional negation expressing disagreement come from and what exactly B is disagreeing with. Our analysis gives a handle on this puzzle. We take the cases of denials with n-words, as in (22) to be cases where the speaker expresses disagreement with the implicature triggered by the n-word in a previous utterance. In the case at hand, B expresses disagreement with the implicature that Mary ate nothing, as her final remark illustrates. In other words, the negation in B's utterance is an instance of external or metalinguistic negation.

A speaker using negation externally in a sentence S denies that it be appropriate or correct to utter 'S'. Disagreement with a presupposition or with an implicature of S is one common reason why a speaker can say that it is not appropriate or correct to utter 'S'. (Horn 1985). The sentences in (23) illustrate this phenomenon. Somebody can utter (23a) to express disagreement with the implicature triggered by *manage* that solving the problem was somehow difficult for Mary. The sentence in (23b) can be uttered to express disagreement with the scalar implicature triggered by the expression *warm,* which conveys the information that the speaker thinks it is not hot.

(23)   a. Mary didn't *MANAGE* to solve the problem, it was easy for her.
         b. It is not *WARM,* it's *HOT.*

At this point the reader might wonder whether there is any independent justification to assume that the meaning of negation in (22) and (23) is the same, i.e. metalinguistic. Horn (1985) provides the following diagnostic for metalinguistic negation. He observes that non-concessive *but* is excluded in external negation contexts, as illustrated in (24):

(24)   It is not *HOt*, (but) it's scalding

The distinction between concessive and non-concessive *but* is overtly realized in Spanish (see Horn (1985)). Spanish *pero* is non concessive *but* and *sino* (which conjoins NPs) is concessive. The distribution of *pero* and *sino* provides, indeed, one piece of evidence for the metalinguistic nature of negation in (22B). As expected if these are cases of metalinguistic negation, Spanish *pero* is excluded in (25B), where *sino* is perfectly fine:

(25)   A: Maria no   está mirando nada.
              Mary   not   is looking at n-thing
       B: Maria no   está mirando *NADA*,   sino a nadie
              Mary   not   is looking   at n-thing, but at n-body
       B: #Maria no   está mirando *NADA*,   pero no está mirando a nadie
              Mary   not   is looking   at n-thing,but not is looking at n-body

The mere existence of cases like (22) and (25) argue for the fact that n-words trigger a certain implicature that metalinguistic negation can target.

5. Preverbal N-words and Abstract Negation.
In this section we finally return to our question (i), concerning the case of sentence initial n-words like those in the examples in (1), repeated below:

(26) a. Nessuno è venuto.   (Italian)
          N-body is come
       b. Nadie ha venido.   (Spanish)
          N-body has come
         ' Nobody came'

The problem these cases present to our analysis is twofold: if n-words are unambiguously existential quantifiers introducing the negative implicature described above what license their presence in sentences like (1) and what makes these sentences negative? In order to extend our proposal to cases like (1) an additional stipulation is required: that these sentences contain an abstract negative morpheme. This stipulation was already proposed in Laka (1990) and Ladusaw (1992). However we will partly depart from Ladusaw and Laka's proposals for reasons that will become clear shortly.

Laka and Ladusaw propose that preverbal n-words are licensed by an abstract negation located in the syntax in the same position as the overt negative marker. We instead believe that the abstract negation licensing preverbal n-words is higher in the structure than the overt negation. Let's first illustrate the main features of our idea and then conclude by highlighting its possible advantages over Ladusaw and Laka's proposal.

One possible implementation of our proposal can be formulated within Rizzi's (1997) syntax of the left periphery. The idea is that one of the heads constituting the CP, perhaps Foc, can sometimes host a semantically active but phonologically unrealized negative feature (say [neg]) that requires an overt specifier with matching morphology. Although semantically inert, the negative morphology of negative words enables them to satisfy this requirement. The case can be seen as totally parallel to that of wh-questions, where a silent but semantically active morpheme in a question coplementizer requires in many languages (inlcluding Italian and Spanish) an overt specifier with wh-morphology. Given this, the n-words in (1) moved overtly in Spec-FocP to legitimate an abstract negation, as shown in (27):

In the structure in (27) the requirements of the covert negation are satisfied, but not those of n-words, which, due their implicatures, are felicitous only when interpreted in the scope of negation. Therefore, at LF the n-word *nessuno* reconstructs to its base position, generating the observed reading ~∃.

One of the advantages of assuming that preverbal N-words moved in the overt syntax is that we can understand cases like (28) and (29) as cases of bare argument ellipsis, where ellipsis applies to structures similar to (27):[21]

(28) a. Chi hai visto?   Nessuno.   (Italian)
         Who did you see? Nobody.
      b. Voglio vedere te o nessuno.   (Italian)
         I want to see you or nobody.

The apparent negative meaning of n-words in elliptical answers like (28a) and in coordinated structures, like (28b) has often been held as an argument against the hypothesis that they are unambiguously existentials or indefinites (see Zanuttini 1990 and Herburger 2001). The negative meaning can, however, be accounted for by the presence of the [+neg] feature if these two cases are derived as in (29). :

(29) a. [$_{FocP}$Nessuno$_1$ [$_{Foc}$ $\emptyset$ $_{[+neg]}$ [$_{IP}$ ~~ho visto t$_1$.~~]]
      b. Voglio vedere te o [$_{FocP}$nessuno$_1$ [[$_{Foc}$$\emptyset$ $_{[+neg]}$ [$_{IP}$~~voglio vedere t$_1$.~~]]

Evidence that (29a) is the structure form which (28a) is given in (30): the non elliptical version of (29a) in (30a) is fine while (30b) is ungrammatical:

(30) a. Chi hai visto? Nessuno$_1$ ho visto t$_1$.   (Italian)
      b. Chi hai visto? *Ho visto nessuno.   (Italian)

What makes (29b) the most plausible analysis of (28b) is that it explains why (31), where licensing by abstract negation is unavailable, is ungrammatical:

(31)   * Voglio ballare con nessuno o (al piu') con te.
          I want to dance with n-body or (at best) with you.

Finally, the assumption that the abstract negation is located in a different and higher position then the overt one accounts for the DN reading of examples like (32), also mistaken as strong evidence in favor of an inherent negative semantics of n-words in this position in Herbuger (2002).

(32)   Nessuno non ha chiamato.
        N-body didn't call.
        'Nobody didn't call'

In fact, under the assumption made in this section, (32) contains two negations, one covert in FocP licensed by the presence of the n-word in its specifier and one overt negative marker *non*. Hence the DN reading.

(33)   [_{FocP}Nessuno$_1$ [_{Foc} $\varnothing$ _[+neg] [_{IP} t$_1$ [non [ha chiamato]]]]]

6. Conclusions.

We have proposed that n-words are non-negative existential quantifiers that contribute a negative conventional implicature. They behave like existential quantifiers at the truth conditional level, but also like negative existentials when we consider the implicatures of the sentences that host them.

The main advantage of our proposal against previous ones is that it explains a wider range of facts. From the assumption that the interpretation of n-words involves a conventional implicature, we derive both their restricted distribution (distinguishing it from the apparently related distribution of NPIs) and also their uses in the contexts of denials.

The negative conventional implicature that n-words contribute derives the restricted NPI-like distribution via interaction with the truth-conditions of the sentence. This is an advantage over the hypothesis that n-words are uniformly NQs, which has no straightfoward account to derive the restriction distribution. We have also shown that the distribution of n-words is more restricted than the distribution of run-of-the-mill NPIs in that downward entailigness is not a sufficient licensing condition. Strawson-DE factive environments do not license n-words, because the factive presupposition conflict with the conventional implicature associated with them. This is a clear advantage over the NPI approach.

Our approach shares with the NPI approach the need to stipulate an abstract negation that licenses the sentence initial occurrences of n-words. However, our assumptions about the abstract licensor are free of the criticisms that the NPI approach raises: they provide a way to account for the fact that n-words are fine in the absence of an overt licensor when used as elliptical answers.

A major advantage of our proposal is that the negative conventional implicature explains the use of sentences containing n-words in the context of denials. Under our assumptions, uttering a sentence like *Mary didn't see n-body* implicates that Mary saw nobody. Metalinguistic negation expresses disagreement with the appropriateness of a certain utterance. Frequently, it expresses disagreement with the implicatures that a certain utterance trigger. It is only natural that it can be used to express disagreement with the implicatures triggered by n-words. A speaker can use *Mary didn't see n-body* to express disagreement with the implicature that Mary saw nobody, hence their use in the context of denials. Our explanation does not take the uses of n-words in denials to be DN statements and so is free from the concerns that such approaches raise. Since we take the alleged DN statements to be cases in which a speaker uses negation to target the negative implicature of the n-word, it does not come as a surprise that the alleged DN readings are excluded in plain negative statements, where negation targets the truth conditions of the sentence.

Notes

[1] Given a proposition p, a propositional operator Op is averidical if the proposition that results from applying it to p entails the complement of p. (Op (p) --> W-p) (see Zwart 1995).

[2] Antiadditive operators resemble more closely negation in their logical properties, that DE ones, in that they also support the following entailment: Op (A ∨ B) → Op (A) ∧ Op (B).

[3] For an account of why this is so see Von Fintel (1999).

[4] We include only the Italian examples, but Spanish exhibits exactly the same patterns.

[5] The example (6) is reminiscent of data recently discussed in Herburger (2001). It differs from Herburger's cases in an important way, as discussed below.

[6] Notice, in passing, that the English sentence with *any* under negation cannot be used as a denial of A's remark, unless one negation is added, as in the English translation provided.

[7] The advantages and disadvantages of each of these views are discussed at length in the relevant literature (see, for instance, Zanuttini (1991), Ladusaw (1992), Giannakidou (1997)-(2000), Herburger (2001)), to which we refer the reader for the details. For reasons of space, in this section we will just provide a brief summary of those considerations, focusing especially on the drawbacks these approaches show with respect to the facts presented in section 2.

[8] Giannakkidou's more fine grained classification of Sensitive Items provides a more adequate generalization (i.e. that n-words are acceptable only in co-occurrence with averidical expressions).

[9] This is in a sense an aspect of what Ladusaw (1979) refers to as 'the sensitivity problem', namely the problem of deriving the restrictions on polarity sensitivity items from independent properties. The proposal in this paper is an attempt in the direction to address this problem at least as far as n-words are concerned.

[10] A possible response to this criticism (offered in Herburger 2001) is that Double Negatives are convoluted constructions, difficult to process and rare in every language, which can very well be governed by pragmatic restrictions confining them to cases like denials.

[11] Ladusaw (1992) points out other concerns of a conceptual nature.

[12] But see Herburger 2001 for a different characterization of the facts.

[13] We would like to thank Irene Heim for pointing out this prediction to us .

[14] Herburger discusses alleged DN readings of denials containing n-words in the object position of *look at*. These cases are reminiscent of our example in (6). However, her cases of denials are responses to utterances (like i) where the n-word in the object position is supposed to be interpreted as NQs.
(i) A: Il bebe' sta guardando nessuno (= the baby is looking at n-body)
(ii) B: Il bebe' non sta' guardando nessuno. (= the baby not is looking at N-BODY)
Besides the fact that the grammaticality status of (i) is at least very controversial, in our case in (6), A's utterance contains a non-negative occurrence of *niente* in object position, which is licensed by the presence of the higher negation. It is the possibility of B's utterance to be used as a denial of this particular structure what we aim to understand. Such a possibility remains unexplained in Herburger's system.

[15] In this case and most the others where n-words are acceptable, the implicature introduced by the n-word is either equivalent or entails the truth-conditions of the sentence. This is why we believe that this component of the meaning of n-words cannot be seen as a presupposition, in the sense of precondition on

the utterance context, but more neutrally as an implicature of a conventional type. However, such an implicature exhibits all the projection properties of run of the mill presuppositions, as we will see below.

[16] For the time being, assume that sentence initial n-words are licensed by an abstract negation.

[17] To predict n-words to be fine in *before*-clauses we do not need a decompositional analysis of *before* as *when ...not* in the syntax. The presence of the implicature is compatible with anything that would yield the semantic effect that before Mary greeted n-body entails that Mary had greeted nobody at the evaluation time of the main clause, no matter how this result is achieved. This entailment is indeed generally supported by *before*-clauses, where n-words are felicitous.

[18] Assuming a cross-categorial notion of entailment, a function of type < σ,τ> is Strawson Downward Entailign iff for all x,y of type σ such that x entails y and f(x) is defined: f(x) entails f(y) (Von Fintel 1999:7).

[19] In order to establish how the conventional implicature of the n-word projects in this environment we assumed, for simplicity, a GQ semantics of *only+NP* (see also von Fintel 1999) and then extended to this case Heim's (1988) analysis on how presuppositions project in quantificational structures . However, that the implicature of *niente* conflicts with the factive presupposition of *only* follows from Rooth's (1985)'s analysis of *only* as well.

[20] According to the informants we consulted, there is a difference in the degree of acceptability between sentences like (16), (18) and (20), which are completely ungrammatical (*), and those in (21), which sound awkward but less infelicitous (??). Our analysis of these cases we suggested captures this difference.

[21] See also Giannakidou 2000 for more arguments in favor of a bare-elliptical analysis of answers involving n-words in isolation and n-words in disjunctions.

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