The (en)rich(ed) meaning of expletive negation

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This contribution addresses the issue of one of the instances of non-standard negation, the so-called expletive negation (EN). Though it discusses data from a variety of languages, it mainly concentrates on Italian, proposing that the behavior of EN in comparative, exclamative and temporal clauses warrants an analysis of EN in terms of an operator of implicature denial. This approach derives the fact that EN is truth-conditionally irrelevant from the fact that the semantics of negation as a truth-value reversal operator is shifted, in the case of EN, to the layer of implicated meaning. The analysis has a number of interesting consequences for the notion of metalinguistic negation. It further derives many of the interpretive effects normally linked to the so-called evaluative analysis of EN, and is compatible with a new set of data showing that EN scopally interacts with other negative elements. Finally, the proposal advanced here has a number of non-trivial implications regarding the relation between morphosyntax and the systems of interpretation, potentially affecting the standard view of language within cognition.

Keywords: non-standard negation, expletive negation, implicated meaning, implicature denial, negation processing

1. Introduction: The mystery of expletive negation

Negation in natural language has the semantics of a truth-value reversal operator (Horn 1989), an interpretation that can be conveniently generalized to the semantics of a complement-set operator. The peculiarities of negation as a linguistic phenomenon have been investigated mainly from a syntactic point of view (Zanuttini 1997 and much subsequent literature). However, it has become increasingly clear that the interpretation of negation has a rich pragmatic dimension (Horn 2010, Moeschler 2018 a.o.), which has been investigated even experimentally (Scappini et al. 2015 and the references cited therein). Within this scenario of

growing complexity, there are at least two phenomena that deserve specific attention, because they concern the intersection between syntax and the systems of interpretation of language. The first of them is negative concord (NC): the phenomenon according to which a series of two or more negative elements (including both n-words and sentential negation) is interpreted as if only one negation were present. This phenomenon has been extensively explored in the syntactic and semantic literature (Laka 1990, Ladusaw 1992, Zijlstra 2004, Giannakidou 2006, De Swart 2010, Déprez et al. 2015 a.o.). The second interface phenomenon that should be carefully investigated, but received much less attention in the literature, concerns the so-called expletive use of negation (EN). These are cases in which a formative often morphologically indistinct from standard sentential negation is used in certain types of main and embedded clauses without providing, arguably, any truth-conditional contribution to interpretation. Interestingly, besides not reversing the polarity of a sentence, EN does not license either negative polarity items or n-words; it is also contended that it does not give rise to double negation readings, though we will take issue with this claim later in Section 4.

On these premises, one of the questions that should be addressed concerns the possible relationship between NC and EN. In this regard, M.T. Espinal has suggested, in a series of contributions (Espinal 1997, 2000), that there is a set of syntactic properties that these cases of non-standard negation share with each other: clause-boundedness and a local dependency from a head hosting a negative feature of some sort. On the other hand, there is also a point at which this parallelism stops. Most noticeably, NC is definitely not semantically vacuous (it involves 'absorption' or similar semantic operations), whereas it is traditionally claimed that EN is. All in all, it is fair to conclude that NC is a better understood phenomenon than EN: though there is still no general consensus about the precise analysis to adopt, we feel we know what NC is about and what this non-standard use of negation amounts to. The mystery seems to be EN. More specifically, why is EN so pervasively optional (i.e. why is it optional even in the languages in which it occurs)? And why should we use negation in a truth-conditionally irrelevant way?

The state-of-the-art is that we started to make a problem of what originally was a mystery. The progress is perhaps best represented by the interplay of syntactic and semantic analyses. Syntactically, Espinal's treatment of EN in terms of a dependency from heads encoding non-veridicality suggests a formal parallelism with the syntax of NC. On the other hand, syntactic progress did not really help elucidate how morphosyntax feeds interpretation. Semantically, EN cannot be reduced to a negative polarity phenomenon. If this is taken to entail that what matters for EN is non-veridicality, and non-veridicality simply expresses lack of

truth-commitment and uncertainty,[1] the best we can do is to propose that EN is not a real negation, but a subtype of negation, aimed at activating a hierarchy of likelihood/desirability, which activates in turn an evaluative layer of semantic interpretation, to be carefully distinguished from the truth-conditional layer (in the sense of Potts 2005, 2011). This move has a number of far-reaching consequences. First, it suggests that there is a use of negation according to which negation activates the evaluative dimension of interpretation, by means of notions of negative anticipation, low likelihood, undesirability. Technically, these additional layers of meaning can be analyzed as conventionalized implicatures interpreted as utterance modifiers (Yoon 2011). This use of negation is non-standard not only in the sense that what is involved here is not 'logical' negation. It is non-standard also because it considerably increases the usual set of pragmatic extensions of the logical meaning of negation, which still are, at least from a Gricean perspective, strictly connected to this logical meaning. From this perspective, real negation and EN are two homophonous elements operating in two (almost) entirely different worlds. Second, this *evaluative* view of EN entails giving up a tradition of linguistic thought according to which EN was a real negation, after all. According to this tradition, the EN occurring in an embedded clause selected by a verb or noun expressing fear, prohibition, hindering, avoidance, denial or doubt expresses the negative content of the superordinate predicate. The claim is in fact that all these are predicates with a negative import. It has been made for a large variety of languages, such as Old/Middle English (Jespersen 1917), French (Muller 1978), Polish (Jabónska 2003) and Russian (Brown and Franks 1995) and it is perhaps best known as involving the concept of 'paratactic' negation, introduced by Jespersen. It is in fact the same stream of thought that led Seuren (1974) to propose that comparative clauses actually involve semantic negation: a sentence like "John is taller than Mary" should be read as "John is tall at a degree d, and Mary is not tall at that degree". No surprise, then, that in languages such as Italian one can say things of the sort "John is taller than Mary is not", endowed with the very same truth-conditional meaning as its positive counterpart: again, EN is a real negation, and what is *really* surprising is that there are languages in which it does not surface overtly. The paratactic approach undeniably has some merits. After all, both comparative clauses and before-clauses (which will be extensively discussed below) arguably involve a negative propositional layer at some level of analysis. However, this is arguably not the case for other constructions featuring EN, such as exclamative clauses. It seems thus that the view according to which EN is nothing more than

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1. An operator *F* is veridical if and if *Fp* entails or presupposes the truth of proposition *p*. If there is no inference from the truth of *Fp* to the truth of *p*, the operator *F* is called *nonveridical*. A nonveridical operator *F* is *anti*veridical iff *Fp* entails that *not p*.

standard logical negation is too strong. At the same time, are we really forced to accept the opposite position, according to which EN has nothing to do with standard negation, as in the evaluative approach?

In this paper, we will advocate the view that this is a false dilemma: EN is an instance of logical negation, but though its functional content is the same as with standard negation, this functional content applies to a distinct layer of propositional meaning: implicated meaning instead of asserted meaning. More particularly, the basic insight to be developed is that EN occurs in a syntactic structure S in order to deny the conversational implicature normally associated to S. The bulk of this paper will be devoted to show that this analysis makes a number of nontrivial predictions, all of which are fulfilled.

What is then the relation between the new analysis proposed here and the traditional analyses of EN? On the one hand, we still continue to assume that EN is truth-conditionally irrelevant, since EN, as occurring in clause S, does not reverse the truth-value associated to the positive proposition p expressed by S. On the other hand, EN retains its 'logical' meaning in that it applies to a different proposition q (implicated by S), and reverses the truth-value proper to q. The presence of q does not depend on the presence of EN: we do not need to assume, as in the evaluative analysis, that it is EN that activates a special layer of meaning (or, to put it in different terms, that EN triggers a conventionalized implicature). In fact, EN does not activate anything: it finds q as part of what 'is meant' by S and it does its normal job as a truth-value reversing operator. We will see that the claim that EN often expresses undesirability or unlikeliness is also fully vindicated, in the form of a pragmatic effect arising from implicature cancellation (through linguistically explicit implicature denial). However, the link is indirect. This entails that the evaluative/affective interpretations typically (though crucially not always) associated to structures containing EN are side-effects of its direct semantic function: shifting truth-value reversal from what is said (the proposition p expressed by the clause S in which EN occurs) to what is meant (the proposition q implicated by the positive counterpart of S).

Before closing these introductory remarks, let us introduce a further question: Is EN an instance of metalinguistic negation (Horn 1989, Moeschler 2018)? In fact, we will see in Section 3 that it is quite tempting to answer this question positively. However, we will also see that EN differs in some significant ways from the classical instances of metalinguistic negation. More generally, the very fact that EN performs implicature denial and (arguably) presupposition denial raises questions concerning the way in which syntax feeds interpretation that go quite beyond the (mainly) definitional issues around what should count as metalinguistic negation. At the end of the paper, we will briefly discuss some of the potential consequences of this state of affairs.

The paper is organized as follows. In Section 1, we will discuss the behavior of EN in temporal, exclamative and comparative clauses, presenting the evidence in favor of viewing EN as an implicature-denial operator. In Section 2, we will consider some important extensions and consequences of this analysis. In Section 3, we will discuss the relation between EN and metalinguistic negation. In Section 4, we will consider some original evidence in favor of the claim that EN is syntactically active, by showing that it interacts with other negative elements, contrary to the received wisdom. Finally, in the conclusions we will briefly discuss the implications that our proposal might have for language design, and most notably the relation between morphosyntax and the systems of interpretation.

2.   EN in temporal, exclamative and comparative clauses: A new proposal

Consider first the use of EN in Italian in *before*-clauses, exemplified in (1b) and (2b):

(1) a. Spara prima che sparino i nemici!
        'Open the fire before the enemies open the fire!'
    b. Spara prima che non sparino i nemici!
        'Open the fire before the enemies do not open the fire!'

(2) a. Avvertila prima che succeda qualche guaio!
        'Warn her before some trouble happens!'
    b. Avvertila prima che non succeda qualche guaio!
        'Warn her before some trouble does not happen!'

Two points need to be made. First, apparently adding EN does not affect the interpretation of (1) and (2). Second, *after*-clauses do not license EN. We will show that EN actually changes the meaning of (1a) and (2a) As for the second point, it is well-known that *after*-clauses have a different logical form w.r.t. *before*-clauses. This can be conveniently illustrated through the so-called non-converseness of *after* and *before* (Anscombe 1964, Del Prete 2006): the sentence in (3a) may qualify as true, whereas (3b) is certainly false:

(3) a. The Parthenon was there after St. Peter's was there (True)
    b. St. Peter's was there before the Parthenon was there (False)

It is generally agreed upon that *before*-clauses involve universal quantification (Higginbotham 1988, Krifka 2010). More particularly, (3b) is assigned the logical form in (4):

(4) $\forall t: t < \tau . \neg B (t) \cong \neg \exists t: t < \tau . B(t),$
where τ is the time extension of the event expressed by the main clause, and B is the property of times expressed by the *before*-clause.

Informally stated, the truth-conditions imposed by (4) to (3b) are that for all times t preceding the existence of St. Peter it holds that the Parthenon was not there at t. Similarly, (1) conveys the order to bring about a state of affairs in which for all times t preceding the time τ at which you shoot, it holds that the enemies do not shoot at t. As for (2), the order is to bring about a situation in which for all times t preceding the time τ at which you warn her, it holds that no trouble happens at t.

Clearly, these truth-conditions lend themselves to trigger the following Conversational Implicature (CI): What does not happen before τ happens in fact *after* τ. To see this in some detail, consider the slight modification of (1) in (5a):

(5) a. Ho sparato prima che (?non) sparassero i nemici
'I opened the fire before the enemies did (not) open the fire'

The assertion made by (5a) (corresponding to the truth-conditions encoded in (4)) is shown in (5b), whereas the CI triggered by (5a) is shown in (5c):

(5) b. <u>Assertion</u>: Given the moment in the past τ in which I opened the fire, the enemies did not open the fire before τ
 c. <u>Implicature</u>: The enemies opened the fire after τ

This seems to correspond to the standard conditions of use of *before*-clauses. For instance, when I tell you that I arrived before you, the assertion I make is that you weren't there at all the times preceding my arrival (this does justice to the nonconverseness effects). However, I'm also likely to implicate that you arrived after me. Generally speaking, whether the implicature goes through or is not calculated makes a huge difference, since it crucially affects the factuality of what is expressed by the *before*-clause. In fact, what is expressed in the assertion is a negative condition, which is in principle compatible with a state of affairs in which the relevant proposition is never true, i.e. neither before nor after τ. The implicature reinstates the factuality taken away in the assertion, so to speak: you actually arrived, but only after I arrived.

The hypothesis we would like to put forward is that EN denies the proposition corresponding to the implicature: the effect is clearly the same as when the implicature is cancelled. In other words, we might say that EN corresponds to preencoding implicature cancellation syntactically. It shifts the semantics of negation from the layer of meaning expressing the assertion to the layer of meaning expressing the relevant conversational implicature. Given the semantics of *before*-clauses, the presence of EN in a *before*-clause triggers thus a strong antifactivity effect.

Here is some evidence for the claim we made (for further evidence concerning syntactic encoding see Section 4). Consider the contrast between the acceptability on EN in (6a) w.r.t. its unacceptability in (6b):

(6)   a.   Mio padre parlerà prima che non lo faccia mia madre
           'My father will talk before my mother does not do it'
      b.   Mio padre è nato prima che (*non) nascesse mia madre
           'My father was born before my mother was not born'

Clearly, given our encyclopedic knowledge, it makes no sense to deny the proposition expressing the implicature in (6b), i.e. the proposition expressing the fact that my mother was born after my father's birth. The deviance of (6b) consists in the fact that using a syntactic structure that encodes implicature cancellation contradicts the requirement that the implicature cannot be canceled if we want to comply with our knowledge of the world (if my mother was not born at all, I wouldn't be here). Consider now the instances of EN in (7), also leading to utter unacceptability:

(7)   a.   Se continua così, morirà prima di (*non) fare testamento
           'If he goes on like that, he will die before he does (not) make a will'
      b.   Fai testamento, prima di (*non) morire!
           'Make a will, before you do (not) die!'

In (7a), the asserted meaning is that he will not make a will at any time t preceding his death. Clearly, there is no implicated meaning, since this meaning would contradict our knowledge of the world (nobody can make a will after his death). As is particularly emphasized in post-Gricean frameworks, and most notably in Relevance Theory (cf. Wilson and Sperber 2004), implicature calculation is a costly cognitive process, and conversational implicatures arise only when the cognitive environment favors their presence, in terms of optimality considerations. In the case of (7a), there is no implicated meaning. Consequently, there is nothing for EN to apply to, and EN is ruled out as deviant.

In (7b), the point about the order/advice expressed is that the interlocutor should avoid dying at any point t preceding the moment at which he makes a will. Clearly, he will certainly die sooner or later, and there is hence no point in negating the implicated proposition according to which he will die *after* making a will. EN creates thus awkwardness (the advice is to avoid dying both before and after making a will, and this is not really what the advice is meant to express). Again, EN is ruled out as deviant.

These considerations actually explain why a majority of Italian speakers find modal contexts, such as those involving imperatives, future tense or explicit modal predicates, mostly suited for EN, contrary to sentences in the past, as witnessed

by the contrast between (1) and (2) on one side and (5a) on the other side. The point is that modal contexts easily create environments that naturally lend themselves to implicature cancellation: the whole point about the order in (1) is that you should avoid being killed, and this is better achieved by ensuring that the enemies never shoot you, either before or after you open the fire at them. In a reportive context such as (5a) it is less clear whether one should cancel the implicature that also the enemies opened the fire, and this arguably explains why speakers feel the presence of EN as slightly more marked in these contexts. More generally, we think that non-veridicality constitutes an indirect trigger for EN, since it easily creates contexts of implicature cancellation. What we have is a truth-reversal operator that applies to implicated propositions, whose presence is thus legitimate in all contexts favoring implicature cancellation.[2] This is nicely shown by the counterpart of (7) in which EN is admitted:

(8)   Dobbiamo assolutamente trovare dell'acqua, prima di (non) morire di sete!
      'We have definitely to find some water, before we do (not) die of thirst!'

In (8), the wish expressed is that of not dying of thirst, and this desire is likely to extend to all times after the moment in which we find some water. Implicature cancellation correctly expresses this pragmatic bias, and this is the reason why EN

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2. An anonymous reviewer correctly raises the issue concerning the precise interpretation of the operation of syntactically pre-encoding implicature cancellation. Clearly, our analysis fares fairly well for the cases in which implicatures are compulsory: since EN encodes implicature cancellation, EN should be ruled out. As we have seen above, this is exactly what happens. Now the interesting question is: what happens in the cases where the implicature is not warranted? The behavior of EN in (7a) and (8) suggests that a difference should be made between the cases where the implicature simply does not arise (7a) and the cases where the implicature is likely to be considered in order to be cancelled. Clearly, the possibility that someone makes a will after her death is not worth considering: no implicature arise in (7a) and EN would apply vacuously. Conversely, if someone is dying because she is in urgent need of water, there is a possibility that she might die even after quenching her thirst. This is, however, the pragmatically disfavored possibility in (8): the implicature might be worth considering but should be cancelled, and this explains why EN is admitted in (8). Interestingly, this analysis entails that EN (i.e. syntactic pre-encoding of implicature cancellation) is used only in contexts where it is likely to replace the (potentially costly) cognitive process of ascertaining whether the proposition expressing pragmatic enrichment should be maintained or eliminated. For instance, in (8) EN pre-encodes the choice of a purely semantic interpretation in which people who are able to find some water and drink it will not die. Of course, we promptly acknowledge that other interesting questions arise, such as whether EN encodes a semantic process of proposition denial (as proposed here) or the metalinguistic instruction to refrain from calculating the implicature. These questions should be answered based on experimental evidence, and we intend to deal with them in future experimental work.

is fully legitimate: it explicitly cancels the implicature according to which we die of thirst after the reference time τ.

In this way, desirability can be shown to arise from the interaction between lexical/contextual meaning and implicature cancellation as performed by EN. Consider the following example from Korean (Yoon 2011: 118):

(9)   Koyangi-ga cwukci-ANH-kiceney, swuyusa-eykey   teyryeka-ra
      cat-NOM   die-NEG-before   veterinarian-DAT take-IMP
      'Take the cat to the vet before it dies'

The default pragmatic interpretation of the order expressed by (9) is to save the life of the cat by taking it to the vet. The assertion is to ensure that the cat does not die at any time t preceding τ (the moment the cat arrives at the vet). Clearly, however, the implicated meaning is that the cat will be in life also (for a long time) after τ, since the wish expressed is that the vet's intervention will save the cat's life. The desirability of the state of affairs expressed by negating the implicated meaning, in which the cat dies neither before nor after the vet's intervention, is not directly tied to the meaning of EN, but indirectly emerges as the pragmatic bias that triggers syntactically encoded implicature cancellation. To further elucidate this important point, consider the minimal contrast with (7b), which does not support EN, in spite of the superficial similarity of the two examples. In fact, in (7b) the default pragmatic bias is on the fact that death is perhaps approaching, and that the interlocutor should hurry up making a will. This context warrants no inference to the effect that the interlocutor will not die after making a will, since, to the contrary, the emphasis is just on the risk that death arrives before the reference time. We see thus that both the licensing conditions for EN (the contextually warranted requirement that the implicature be cancelled) and the particular affective interpretations to which EN may give rise, emerge as the result of a pragmatically enriched notion of meaning. In fact, the cases in which EN is ruled out in *before*-clauses can be seen either as violations of some version of the principle of Full Interpretation (FI; there is no implicated proposition to be negated, so EN applies vacuously) or as cases in which implicature cancellation is syntactically triggered but pragmatically not warranted (again, the contradiction emerges since FI uniformly holds, that is, once EN is introduced in the structure it must play its role of truth-reversal operator).

The empirical point about EN in *before*-clauses in Italian is that its use is not generally allowed in all kinds of contexts. The nature of the relevant constraints is clear enough. The semantics of *before*-clauses is correctly captured by two propositional layers of meaning, the first corresponding to the asserted proposition and the second corresponding to the implicated proposition. Since the asserted proposition is inherently negative (stating that something is not the case at all times t

preceding τ), negating the implicated proposition triggers an anti-factuality effect: the proposition expressed by the *before*-clause is always false. Del Prete (2006) hinted at this anti-factuality effect by pointing to the marginality of EN in sentences such as (10):

(10)   Saluterai Leo prima che (??non) parta per Roma
       'You will say bye-bye to Leo before he does (not) leave for Rome'

The anti-factivity effect can be made even more transparent by examining the minimal pair in (11):

(11)   a.   Parlale domani alla stazione prima che non faccia qualche sciocchezza!
            'Talk to her tomorrow at the railway station before she does (not) do some silly thing!'
       b.   Parlale domani alle 16.00 prima che (*non) parta il treno delle 16.30!
            'Talk to her tomorrow at 16.00 before the 16.30 train does (not) leave!'

Clearly, (11b) defines a factual context in which the interlocutor has a half-hour at her disposal before the departure of the train at 16.30. It makes thus no sense to cancel the implicature (that the train will leave) by explicitly negating the implicated proposition.

Let us consider now wh-exclamatives, which also feature EN (cf. Delfitto & Fiorin 2014 and the references cited there). This is a case of EN in root-clauses. Again, at first sight nothing changes in the interpretation when EN is added to the structure. However, it has long been observed that EN brings about a quasi-universal interpretation conveying strong emphasis (Zanuttini & Portner 2000). This effect can be detected in the minimal pair below:

(12)   a.   Che cosa mi ha detto Gianni!
            what to-me   has told   Gianni
            'Gianni told me something & this was surprising!'
       b.   Che cosa non mi ha detto Gianni!
            what not   to-me   has told   Gianni
            'Gianni told me everything & this was surprising!'

According to the standard approach to the semantics of wh-exclamatives, based on the semantics of questions, the relevant exceptional sentence (the particular exceptional thing that Gianni told me) must be selected within a set of algebraically structured propositional candidates, which are hierarchically ordered in terms of informativity. To exemplify, suppose that in context of (12) there are basically three things that Gianni may have told me: a, b, c. This leads to the propositional hierarchy in (13):

(13) Gianni told me a, b, c
      Gianni told me a, b; Gianni told me a, c; Gianni told me b, c.
      Gianni told me a (or b, or c)

Normally, the most likely state of affairs is selected, corresponding to the less informative proposition: Gianni told me a. Delfitto & Fiorin (2014) proposed that the semantic role of EN consists in reversing the order of informativity in the relevant propositional hierarchy. This entails that, as an effect of EN, it is the most informative (i.e. less probable) proposition in (13) that has to be selected, that is, Gianni told me a, b, c. Clearly, this is equivalent to "Gianni told me everything", and arguably captures, together with the 'surprise-semantics' associated to exclamatives, the universal flavor of wh-exclamatives featuring EN, such as 12b. In the spirit of the present contribution, a potential shortcoming of this proposal is that it conflicts with a unitary analysis of EN, since the role of information-reversal that EN would play in wh-exclamatives is instantiated only in this type of syntactic structures. Certainly, the proposed operation of information-reversal is not far from the standard use of negation as a reversal or complement set operator. However, the specific problem that arises here is whether there are ways to make the behavior of EN in wh-exclamatives compatible with the behavior of EN in *before*-clauses, along the lines explored above.

Suppose we adopt the standard analysis of the wh-exclamatives in (12). This entails that in uttering (12a), the speaker is asserting that there are one or more things that Gianni told her (corresponding to exceptional/surprising propositions). The speaker is also presumably implicating that the stronger (more informative, hence less likely) options expressed by the hierarchy in (13) are not selected. In other words, though asserting (12a) is truth-conditionally compatible with the fact that Gianni told the speaker a, b, and c (i.e. everything), it is implicated that this is not the case: as in the traditional analysis of scalar implicatures, the stronger options are denied. In the case at stake, this yields the enriched meaning of (12a) according to which the speaker is expressing surprise for the content of the exceptional proposition a (or b, or c). This seems to be the correct empirical result for (12a), which does not have any quantitative/universal flavor to it.

Suppose now further that we simply extend to wh-exclamatives the analysis of EN that has been adopted for *before*-clauses. EN is a standard truth-reversal operator, but it selectively applies to the implicated proposition. This entails that (12b) differs from (12a) in that the implicature is cancelled. Since the implicature consists in the denial of the stronger options within the propositional hierarchy in (13) (Gianni told me a, b… Gianni told me a, b c), negating the implicature is tantamount to lifting this denial: in uttering (12b), the speaker is asserting that Gianni told her one and possibly all the proposition in (13) (all of them corresponding

to exceptional/surprising propositions). Since the implicated proposition (it is not the case that Gianni told me a, b… Gianni told me a, b, c) has been negated by using EN, we get the universal flavor of (12b), i.e. the additional quantitative effect according to which Gianni told me an amazing number of surprising things. In fact, it seems that implicature cancellation delivers an even better empirical result than in Delfitto & Fiorin's proposal. Namely, as in the semantic reading of scalar implicatures, what we get is not exactly a universal reading, rather an existential reading that is truth-conditionally compatible with a universal reading (due to implicature cancellation): arguably, this is exactly what we need to derive the quasi-universal flavor of (12b).

Summarizing, what we have proposed is that the semantics associated to EN in *before*-clauses and in wh-exclamatives is exactly the same: EN, as occurring in S, is a truth-reversal operator that applies to the proposition q implicated by S. The fact that the effects of EN are superficially different in these two types of syntactic structures is simply due to the difference in the nature of the implicated propositions. EN instantiates the very same semantic value in both structures.

Let us inquire now into the role of EN in comparative clauses. Here, Italian data are particularly intriguing, since (i) EN is admitted across-the-board in embedded comparative clauses, i.e. there are no constraints on the occurrence of EN in these structures (cf. also Donati 2000); and (ii) there is, at least superficially, no appreciable contribution of EN to interpretation. In other words, it seems that EN in comparatives comes very close to the original concept of expletive negation as a dummy element. Given a sentence like (14a), it is always possible, in Italian, to have the counterpart in (14b) involving EN: the difference, if there is a difference, is simply stylistic:

(14) a.   Gianni è più alto di   quanto sia Maria
           Gianni is taller   than Maria is-SUBJ
           'Gianni is taller than Maria'
      b.   Gianni è più alto di   quanto non sia Maria
           Gianni is taller   than Maria not is-SUBJ
           'Gianni is taller than Maria'

The questions that arise are then the following: Why is it systematically possible to add EN in comparative clauses of the sort of (14)? Is there any contribution that EN makes to interpretation?

In order to provide an answer to these questions, let us first consider some intriguing facts regarding the interpretation of comparatives, which are completely independent of EN. We have chosen for a relatively informal treatment of these matters, which can be however easily formalized. Let's start with the positive sentence in (15a), which is plausibly interpreted as (15b):

(15)   a.   Mary is tall
      b.   Mary is d-tall (= there is a degree d such that Mary is tall at d)

Given the semantics in (15b), this sentence is hardly informative. It is even compatible with a situation in which Mary is in fact (comparatively) quite short. It stands thus to reason to suggest that sentences such as (15a) come with a conversational implicature: the degree d such that Mary is d-tall is higher than the (contextually determined) average. That's in fact the way in which we normally interpret (15a), that is, as the assertion that Mary is not short (based on a context-driven comparative metrics). Now, the important observation to be made at this point is that this implicature is no longer present in the comparative clauses in (14). Here, the assertion is roughly that Mary is d-tall, John is d′-tall and d < d′. There is no implicature to the effect that Mary (or John) are taller than the (contextually determined) average. In informational terms, this is not really surprising, since (14) is sufficiently informative even independently of our knowledge of whether Mary and John are tall (or short) with respect to the average. The reason is that the information supplied by (14) is essentially comparative: d < d′.

    The detected contrast is confirmed by the data in (16):

(16)   a.   Mary is tall, #though in fact she is short
      b.   John is taller than Mary, though in fact they are both short

These findings seem to indicate that implicature calculation takes place globally, and not locally. The simple sentence (15a) is (normally) interpreted as licensing the implicature that d is higher than the average, whereas the complex sentence (14a) is interpreted as not licensing that implicature.

    Interestingly, EN in Italian does not change this picture, at least at first sight. Consider the contrast in (17), essentially reproducing the contrast in (16), and where the comparative clause (i.e. (17b)) optionally contains EN. Apparently, the contribution of EN is totally vacuous:

(17)   a.   Maria è alta, #anche se è bassa
          'Maria is tall, though she is short'
      b.   Gianni è più alto di   quanto (non) sia Maria, anche   se sono entrambi
          Gianni is taller   than Maria (not) is-sᴜʙᴊ,   though both of them are
          bassi
          short
          'Gianni is taller than Maria, though both of them are short'

On these grounds, the original question is even more relevant: why is EN uniformly (though optionally) licensed across comparatives? Here is the insight we would like to propose. As is well-known from the abundant literature on scalar

implicatures, the latter can be calculated either globally or locally. For instance, given a sentence such as (18a), the contrast is shown in (18b)–(18c):

(18) a. Every student passed some of the exams
      b. It is not the case that every student passed all the exams (global implicature)
      c. Every student passed some but not all the exams (local implicature)

Clearly, (18b) and (18c) have a quite different truth-conditional import. In other words, there are cases where calculating an implicature locally or globally gives rise to different interpretive results. Let us now go back to the comparative sentence in (14a). Here, the result of the computation is clear: the computation leads to the conclusion that comparative sentences such those in (14a) do not license the conversational implicature normally associated to sentences such as (15a). Though part of the meaning of (14a) is that Mary is d-tall, there is no implicature, in (14a), to the effect that d is higher than the (contextually determined) average. Taken as such, the computation is global, since it is the global meaning and informational content of (14a) that we evaluate when we decide that there is no implicated proposition to the effect that Mary (or John) is not short. However, a possibility arises. Nothing prevents marking the process of implicature cancellation at a local level. If the propositional content of the embedded clause in (14a) is that Mary is d-tall, an option is to cancel the implicature that Mary is not short already at this local level, since this move perfectly matches the result of the global interpretation process: uttering (14a) is perfectly compatible with a situation in which Mary (as well as John) is short. From this perspective, the difference between (14a) and (14b) is that the variant containing EN (14b) marks locally (through a specific form of syntactic marking) the process of implicature cancellation that in (14a) takes places globally, that is, without resorting to local syntactic encoding. This optionality is based on the significant intersection between the two distinct modalities of implicature calculation: deciding that the complex sentence (14a) does not license the implicature that Mary is not short is tantamount to blocking the implicature triggered at the local level by the proposition 'Mary is d-tall'.[3]

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3. Quite interestingly, there are ways to force a reading of (14a) in which what is expressed is that though John is taller than Mary, both John and Mary are tall. In order to get this reading, Italian (as well as English) makes use of the focus-sensitive particle *ancora* 'even', in the main clause, and *già* 'already' in the embedded clause, as exemplified below:

(i) a. Gianni è ancora più alto di quanto (non) sia Maria
         'Gianni is even taller than Maria is'
         'Gianni is even taller than Maria' (= Maria is tall but Gianni is taller than her)
     b. ?Gianni è (ancora) più alto di quanto già sia Maria
         'Gianni is taller than Maria already is'
         'Maria is tall but Gianni is taller than her'

Summarizing, we have proposed that EN in comparative clauses denies the implicature locally associated to the embedded comparative clause. This explains why there are no constraints to the use of EN: nothing prevents implicature cancellation from taking place locally through explicit syntactic marking. It also explains why EN is optional, since an alternative way to block the implicature associated to the embedded clause consists in blocking the implicature at the global level (i.e. after the whole sentence has been processed and it has been determined that the informational value associated to the whole sentence does not require adding an implicated proposition). Once again, it can be concluded that the apparently idiosyncratic semantics associated to EN depends on the semantics of the structure in which it is contained. As in the preceding cases, a deep analysis promptly reveals that the semantic function of EN in comparatives is the very same function that has been detected in wh-exclamatives and *before*-clauses: EN is a truth-reversal operator that applies to the implicated proposition associated with the sentence S that contains EN.

3.   Some extensions of the analysis of EN as an implicated-meaning sensitive operator

As is well-known, verbs of fear trigger EN in many languages. In French, standard negation is normally expressed by means of the concomitant use of two distinct negative markers, preverbal *ne* and postverbal *pas*. EN is morphosyntactically marked as such by dropping postverbal *pas*. As an example, consider (19a):

(19) a.   Je crains qu'il ne vienne
          I am afraid that he not comes
          'I'm afraid that he comes'

How could we apply the ideas developed in the preceding section to this use of EN? Clearly, if someone states that he is afraid that p, there is (under standard

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c.   Gianni è (ancora) più alto di quanto già non sia Maria
     'Gianni is (even) taller than Maria already is not'
     'Maria is tall but Gianni is taller than her'

More particularly, when the presuppositional marker 'already' is used in the embedded clause (ib–c), the sentence entails that Mary is not short. In this structure, it is quite natural to use EN as well, as shown by the observation that its absence yields slight marginality (ib). The reason is arguably the potential competition between implicature and presupposition in producing the non-directly asserted propositional value 'Mary is not short'. The use of EN resolves this competition, by ensuring that the implicature is locally blocked and the relevant proposition (Mary is not short) is obtained presuppositionally.

circumstances of utterance) a conversational implicature to the effect that he believes that it is likely that p. So, if (19a) is the assertion, what is normally implicated is conveniently expressed by (19b):

(19) b.   I believe that it is likely that he will come

Suppose now that EN does its regular job, according to the lines explored above. This means that the presence of EN in (19a) is intended to deny (19b). Consider further that (19b) warrants in turn the local implicature expressed in (19c):

(19) c.   I believe that it is likely but not certain that he will come

A reasonable proposal is that if EN denies the implicature triggered by (19a), negation can apply both locally and globally. If negation applies globally, what is denied is the proposition expressed by (19b), yielding the result in (19d):

(19) d.   I do not believe that it is likely that he will come

If negation applies locally, the result produced is the proposition in (19e):

(19) e.   I believe that it is likely and virtually certain that he will come

In other words, uttering (19a) is equivalent to asserting that I am afraid that he comes and to (conversationally) implicating either (19d) or (19e).

The question is whether we can find some empirical evidence in favor of the predictions made by this proposal. The answer is a categorical yes. In the following examples from Korean and Japanese, what we see is that EN "triggers a likelihood scale […], expressing that an epistemic subject, the matrix subject 'John' in this case, regards the content of the embedded proposition as unlikely to be realized, hence presupposition on *uncertainty* or *unlikelihood* arises" (Yoon 2011: 24):

(20) a.   John-un Mary-ka   oci-**anh**-ul-ci   kekcengha-koissta
           John-TOP Mary-NOM come-NEG-FUT-NFcomp fear-ASP
           'John fears that Mary might come (although it is unlikely to hap- [Korean]
           pen).'
      b.   John-wa Mary-ga   ko-**nai**-ka(-to)   sinpaisi-te iru   [Japanese]
           John-TOP Mary-NOM come-NEG-NFcomp fear-ASP
           'John fears that Mary might come (although it is unlikely to happen).'

If we reinterpret Yoon's explication in terms of implicatures rather than in terms of presuppositions, we promptly arrive at the conclusion that the interpretation of (20) in Korean/Japanese exactly corresponds to what we predicted through (19d) (EN negates the implicature globally). From this perspective, global implicature denial expresses the enriched meaning according to which someone is afraid of *p* though she knows that *p* is unlikely.

On the other hand, this does not seem the enriched meaning normally activated by (19a) in French (or Italian). In these languages, using EN with verbs of fear rather corresponds to producing emphasis, by increasing the odds that something that we fear might really happen. This is confirmed by the observation that the Italian equivalent of (19a) readily licenses the focus particle *proprio*, which is bound to convey the implicature that what is feared is destined to happen:[4]

(21) Ho proprio   paura che   non mi   combini   un grosso guaio
    I   have really fear   that he not to-me causes-SUBJ a   big   trouble
    'I'm really afraid that he will cause a big trouble to me'

Notice now that this variety of enriched meaning, attested in French and Italian, readily corresponds to the process of local implicature denial instantiated in (19e).[5] These are nice findings. On the one hand, it becomes increasingly clear that EN freely acts as a polarity-reversal of the contextually-triggered implicated propositions. On the other hand, it is also clear that syntactically-triggered implicature cancellation has many pragmatic side effects regarding the evaluative dimension of meaning. For instance, local implicature cancellation in (21) is likely to emphasize the emotional state of the speaker, since part of the meaning expressed is that her state of fear is linked to her belief that what is feared will almost certainly happen.

The same process of local implicature denial seems to be present in the case of (22a) (as noticed above, the preverbal negative marker *ne* unambiguously qualifies as an instance of EN due to the absence of the postverbal marker *pas*):

(22) a. Evitez qu'il   ne vous   parle!
        avoid that he not to-you speak
        'Avoid that he speaks to you!'

Reasonably, (22a) gives rise to the scalar implicature in (22b):

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4. An anonymous reviewer submits that sentences such as (21), when featuring EN, sound rather awkward to her. In what follows, we deal with these examples of EN as fully warranted in standard Italian, based on the judgments of all three authors and of a small sample of informants from the North-Eastern part of Italy. However, we acknowledge that a broader survey would be needed in order to fully justify the empirical claim tentatively made here about (21).

5. As noted by a reviewer, this raises the important question of what accounts for the choice of global vs. local implicature denial in different languages. This is a complex question, and we will not able to deal with it here. At a general level, we should emphasize that EN amounts to syntactically pre-encoding the results of a potentially complex cognitive process of implicature cancellation (cf. fn. 1) and that once EN is recognized as a syntactically active propositional operator, there is no a priori reason why its scope properties should be uniform across languages, since this is plainly not the case with standard negation.

(22) b.   It is likely that he will try to speak to you

This triggers in turn the second-level implicature in (22c):

(22) c.   It is likely though not certain that he will try to speak to you

If EN applies locally, this turns (22c) into the positive sentence (22d), as an instance of double-negation:

(22) d.   It is likely and actually certain that he will try to speak to you

Once again, what is at stake semantically is the role of polarity-reversal operator (shifted to the layer of implicated meaning) assigned to EN, though the cognitive/ pragmatic effects of implicature cancellation significantly influence the evaluative aspects of meaning (the order in (22a) acquires a quite different emotional emphasis in a context in which someone is asked to avoid something that is most likely to happen).

    We would like to close this section by briefly discussing two classes of phenomena in which the negative formative contained in sentence S seems to deny the presupposition of S rather than the proposition implicated by S. In the next section we will then discuss the relevance of these data on presupposition denial for a precise definition of the relationship between EN and metalinguistic negation.

    The first case concerns certain uses of negative minimizers such as 'mica' in Italian, which have been discussed in Squartini (2017). Suppose someone is teaching in a university room and all in a sudden some member of the technical personnel tells her "I turned on the heat", though the temperature is – at least for the teacher – quite pleasant. The teacher might react, if she's Italian, by uttering the sentence in (23a):

(23) a.   Ma *mica* fa   freddo, qua dentro!
             but mica do.3sg cold,   here inside
             'It's not cold here!'

This use of *mica* in Italian is highly reminiscent of the canonical strategy that is employed in English in order to take issues with presuppositions. Suppose someone tells an English teacher "I just turned on the heat". She might react by uttering (23b):

(23) b.   Hey, wait a minute, it's not cold here!

In general, one can respond to a sentence S that entails p with *mica* or *wait a minute*, in order to challenge p, only if p is presupposed by S. When p is not a presupposition, the use of these expressions is deviant, as shown in (24):

(24) a. #Hey, wait a minute, you did not turn on the heat!
     b. #Ma mica hai acceso il riscaldamento!
        'But *mica* you have turned on the heat!'

Quite interestingly from the present perspective, Squartini observes that the use of *mica* exemplified in (23a) is paralleled, in Portuguese, by the instance of negation repetition shown in (25):

(25) Não está   muito frio *não*!
     NEG be.3SG very   cold não
     'It's not very cold!

In other words, (25) may be readily used, in Portuguese, in a context in which the speaker is willing to take issue with the presupposition contextually triggered in the situation described above, that is, in a context in which the speaker intends to challenge the presupposed proposition p (p = It's cold here). Notice that (25) contains two morphologically indistinguishable instances of negation, of which one should be considered, in our terms, as an instance of EN. In this case, it seems correct to propose that EN acts as an operator of presupposition denial, extending the use discussed above of EN as an operator of implicature denial.

    Another case of presupposition denial is arguably provided by a use of EN that has recently been detected in important work by Greco (2017). In Italian, there is a non-standard use of negation in peculiar structures that Greco dubs 'surprise negative sentences' (Snegs). Greco convincingly shows that negation in Snegs licenses neither negative polarity nor negative concord items. Moreover, Snegs are necessarily introduced by an expletive conjunction, preferably license an ethical dative and have an intermediate prosodic status between questions and exclamations, to the effect that they qualify neither as rhetorical questions nor as exclamative sentences. An example of Sneg-sentence (from Greco 2017) is provided in (26):

(26) (Ieri, ero alla stazione) e non mi scende dal treno Maria?!
     (Yesterday, I was at the railway station) and not to-me got off the train Maria
     '(Yesterday, I was at the railway station) and Maria got off the train!'

As already emphasized above, the English translation given in (26) should be taken with some caution, since (26) does not qualify as an exclamative, though it certainly expresses surprise for the state of affairs described (i.e. for the fact that Maria got off the train at that very moment). We will not discuss here the interesting syntactic analysis offered by Greco. From the present perspective, Snegs represent a double challenge: (i) how can we derive the relevant 'surprise semantics' if Snegs are not exclamatives and have not the semantics of exclamatives? (ii) what is the semantic function of EN in Snegs? The problem is compounded by the observation that the instance of EN found in (26) is not the sort of EN normally found

in wh-exclamatives, since Snegs are not wh-exclamatives. We think that a possible answer to this double challenge is that EN acts as an operator of presupposition denial. Here is, in a nutshell, what we have in mind.

When we answer a wh-question like "Which of your friends did he meet?", we presuppose that there is one or more people whom he met. The new element we provide in the answer (by uttering, for instance, "He met Mary") is thus part of a focus-set, that is, it qualifies as a member of a set of potential candidates among which we select the right one(s). In effect, we cannot answer to the question above with the sentence "He met Mary", if Mary qualifies as our worst enemy (and if we do, the focused element 'Mary' qualifies as corrective/contrastive focus rather than as informational focus). Suppose now that basically the same holds for narrative contexts such as the one in (26). When we add something to the sentence describing the state of affairs in which I was at the railway station, it is like we have to answer the question "and what happened at that point?". In the Question-Under-Discussion (QUD) approach (von Stutterheim & Klein 1989) what is proposed is exactly that: each sentence in discourse addresses a (often implicit) discourse-relevant question. In the case at stake, the answer to be provided to the relevant QUD (and what happened at that point?) is a member of a focus-set of potential propositional candidates, out of which we have to select, as in the case of the wh-question above, the right one(s). If in the case of the wh-question the membership of the focus-set is rather obvious (the members of the focus-set are the people who qualify as my friends), what is the focus-set in the case of the Sneg-sentence in (26)? Clearly, the focus-set contains all the sentences describing states of affairs that are likely to happen (or perhaps better: not very unlikely to happen) in the relevant narrative context. In fact, it is totally unnatural (if further qualifications are not added) to build up a narrative of the sort "Yesterday, I was at the railway station and my plane took off with considerable delay". The reason is that the second propositional conjunct in this narrative is not a member of the focus-set related to the QUD "what happened while you were at the station?". Now, the important point to consider is that a focus-set is *presupposed* in the context in which the Sneg-sentence in (26) is uttered. It is at this point that the mysterious presence of EN in the structure may be clarified. Namely, remember that what we are presently considering is the role of EN as an operator of presupposition denial. Suppose in fact that this is the role of EN in the Sneg-sentence in (26). What EN does is denying the presupposition associated to the clausal constituent in its scope (a TP, in Greco's analysis). Since the presupposition consists, in this case, in the membership of this clausal constituent to the focus-set, denying it is tantamount to denying this membership. In other words, what happened is not part of what was reasonably to be expected. This seems to be the correct empirical result. It captures the semantics of Snegs without having to assume that

Snegs are (rhetorical) questions or exclamatives (Greco showed that this is not the case). It also captures the fact that Snegs need a narrative context (as Greco showed, they must be introduced by a conjunction). More importantly, it captures the contrastive/corrective focus flavor of Snegs (which has also been fully eluci- dated by Greco's syntactic analysis), and especially the fact that Snegs are 'sur- prising' sentences without being exclamatives. Here, we are not interested in the syntactic details of the proposal. What matters, from our perspective, is that a possible extension of the semantics of EN to presupposition denial seems to be sufficiently motivated on empirical grounds. In the next section, we will see what the consequences are for a precise assessment of the relation between EN and metalinguistic negation.

4.   EN and metalinguistic negation

The traditional approach to metalinguistic negation (MN) involves the idea that MN does not focus on the truth-value of the sentence in which it is contained, but on its assertability (Horn 1989, Moeschler 2018). In other words, MN objects to the assertability of the utterance that contains the negation, from whatever perspective the utterance is viewed: we might object to the utterance on phono- logical, morphological, syntactic or interpretive grounds. In this sense, MN is meta-representational: what seems to be at stake is a representation that is inde- pendent of the representation that expresses the truth-conditions of the sentence. It is to this further representation that we object by using MN. Understood in this way, MN ranges from objections to the form of the utterance, as in (27), to objections to the content expressed by this form, as in the cases of implicature denial exemplified in (28):

(27) a. Mozart's sonatas weren't for violin and piano, they were for piano and violin
      b. I didn't manage to trap two mongeese: I managed to trap two mongooses

(28) a. You didn't eat some of the cookies, you ate all of them
      b. It isn't possible she'll win, it's downright certain she will

There is, however, an important difference between (27) and (28), since objecting to issues of form is intuitively a quite different matter than objecting to issues of meaning, though the aspects of meaning involved are not those relevant to the truth-conditions expressed by asserting the sentence. When negation applies in (28), there is clearly a sense according to which it fully preserves its function as a truth-value reversal operator. More particularly, in (28a) it applies to the propo- sition implicated by the affirmative counterpart of the first sentence (you didn't

eat all of the cookies) in order to reverse its truth-value, with the result surfacing as the corrective sentence "you ate all of them". In (28b), negation applies to the proposition implicated by the affirmative counterpart of the first sentence (it is not certain that he will win), reversing its polarity, with the result expresses by the corrective sentence "it's certain that she will". Conversely, when negation applies in (27) in order to deny the assertability of the sentence in which it appears, there is no sense in which negation acts as a polarity-reversal operator, and in fact the corrective sentence appearing in (27a) and (27b) is not intended to reverse the polarity of a proposition, it is rather intended to offer the form in which the sentence can be correctly asserted.

We are inclined to believe that the reason why these two classes of metalinguistic negation are not forcefully distinguished from each other is essentially formal: in all cases the negation can be interpreted metalinguistically only if the sentence containing the negation is followed by a corrective sentence. As emphasized in Moeschler (2018), we normally interpret a negative sentence such as (29a) in terms of (29b), and not in terms of (29c); the interpretation in (29c) requires the syntactic format in (29c), that is, it requires the presence of the corrective sentence that expresses the negation of the implicated proposition (Bill is not gorgeous):

(29) a. Bill is not beautiful
      b. Bill is not beautiful, he is ordinary/ugly
      c. Bill is not beautiful, he is gorgeous

These observations are strengthened by the behavior of negation in the classical cases of presupposition denial discussed in the philosophical tradition, which have their source in Russell's distinction between an internal and an external negation in ambiguous sentences such as (30a), which can be read either as (30b) or as (30c):

(30) a. The king of France is not bald
      b. The existing king of France is not bald (*internal negation*)
      c. It is not the case that the king of France is bald (*external negation*)

According to the received wisdom, (30b) corresponds to the standard use of negation as a polarity-reversal operator (it is false that the existing king of France is bald), whereas the external negation in (30c) is (preferably) used to negate the presupposed proposition 'there exists a king of France'. However, as Horn (1989) correctly emphasizes, it has never been clear, as a matter of linguistic judgments, that by using the external negation as in (30c) we actually deny the presupposition of (30a), referring to a state of affairs which makes (30a) true for the very reason that there does not exist a king of France. In fact, it rather seems that internal and external negation lend themselves to the very same linguistic judgment,

which largely favors the standard interpretation of negation over the metalinguistic interpretation that involves presupposition denial. The correct generalization seems to be that the metalinguistic interpretation of (30a) is readily achieved under the very same conditions that allow the metalinguistic interpretation (in terms of implicature denial) in (28) and (29): an explicit corrective clause has to be used in order to enforce the reading according to which the negation does not apply to (30a) but to the proposition presupposed by (30a) (there is a king of France), as shown in (31a):

(31) a. The king of France is not bald, for the very reason that there is not a king of France

The same holds for (30c), as shown in (31b):

(31) b. It is not the case that the king of France is bald, for the very reason that there is not a king of France

We conclude that when MN, as occurring in S, negates the implicated or presupposed meaning of S, a corrective clause is required, on full parallelism with what happens in the cases exemplified in (27), where what gets corrected is something about the form (and not the content) of the utterance. We submit that it is this formal parallelism that stands in the way of a principled conceptual distinction between the two uses of MN (the 'substantive' one exemplified in (28) and the 'formal' one exemplified in (27)).

What we intend now to propose is that there are cases in which MN denies the enriched meaning of S without the support of a corrective clause. This sets apart this use of MN from the cases in which MN is used to deny the assertability of the utterance expressing S, making room for a theory of MN that distinguishes the use of MN in which MN still acts as a polarity-reversal operator from the use of MN in which this is not the case. From this perspective, it becomes actually reasonable to claim that 'substantive' MN is not in fact an instance of MN, but rather represents an application of standard negation to the semantic layers expressing enriched meaning (i.e. the presuppositions and conversational implicatures of S).

More specifically, what we intend to propose is that the instances of EN reviewed in the preceding sections are instances of MN that do not require a corrective clause. On the one hand, we have in effect extensively argued in favor of an analysis of EN as an operator of implicature/presupposition denial. On the other hand, we have observed that in all relevant contexts, interpreting EN as an instance of standard negation would give rise to bizarre truth-conditions, hardly satisfying the standard informational requirements. Consider for instance EN as occurring in the comparative clause (14b), reproduced here as (32) for the reader's convenience:

(32)   Gianni è più alto di   quanto non sia Maria
       Gianni is taller   than Maria   not is-SUBJ
       'Gianni is taller than Maria'

If we had to interpret EN in (32) in terms of standard negation, we would get the improbable meaning according to which there is a degree d such that Mary is not d-tall, John is d′-tall, and d < d′. Intuitively, the same considerations apply to the other instances of EN that we have considered above. A case in point is the minimal pair opposing (33a) and (33b):

(33)   a.   Ho   paura   che non mi   combini   un grosso guaio
            I have fear that he not to-me causes-SUBJ a big   trouble
            'I'm afraid that he causes a big trouble to me'
       b.   Ho   paura   che non venga
            I have fear that he   not comes-SUBJ
            'I'm afraid that he won't come'

These are cases where the use of EN in the clausal complements of verbs of fear has not been lexicalized. Significantly, sentential negation can be naturally used as an instance of EN in (33a) (where a standard interpretation of negation would yield the bizarre reading according to which I'm afraid for the eventuality that someone does not cause a big trouble) but not in (33b) (where a standard interpretation of negation is perfectly admissible on pragmatic grounds, giving rise to the plausible reading according to which I'm afraid for the eventuality that someone does not come). What all of this suggests is that EN effectively provides cases of MN in which the competition with standard negation is independently ruled out. In turn, this suggests that negation as occurring in S standardly applies to the layer of meaning expressing the truth-conditions associated to the assertion of S, and only admits the shifting to implicated or presuppositional meaning when the standard interpretation is pragmatically implausible. From this perspective, the real cases of 'substantive' MN are the cases of EN discussed in the present contribution. The cases of 'substantive' MN traditionally discussed in the literature on metalinguistic negation are in a sense strongly atypical, since the metalinguistic reading, corresponding to implicature or presupposition denial, is not easily licensed there due to the competition of the standard interpretation of sentential negation, and requires in effect the addition of an explicit corrective clause. Significantly, the reason why (33b) is perfectly acceptable with the negation interpreted as EN in languages such as French, is that in the French counterpart of (33b) EN is morphologically marked as distinguished from standard negation, as shown in (34), where EN involves omitting *pas*, as has been repeatedly observed:

(34) a. Je   crains qu'il ne vienne   (EN)
          I am afraid that he not comes
          'I'm afraid that he comes'
     b. Je   crains qu'il ne vienne pas   (standard negation)
          I am afraid that he not   comes
          'I'm afraid that he does not come'

Once again, we see that negation is interpreted as EN whenever the competition with standard negation is neutralized. This may be the case on pragmatic or morphosyntactic grounds.

Summarizing, in this section we have proposed that EN corresponds to instances of MN in which what is negated is the presupposed or implicated meaning, and in which no corrective clause is needed in order for this reading to be accessible. From this perspective, 'substantive' and 'formal' MN are two entirely different phenomena, since only the latter, but crucially not the former (contrary to the usual approach in the literature) requires an explicit corrective clause. In other words, what we are actually suggesting is that the real cases of 'substantive' MN are those that involve EN, whereas the cases traditionally considered in the literature are fairly atypical, for the reasons discussed above. There is thus no residual sense according to which EN is 'expletive'. On the contrary, once the presence of EN is fully acknowledged and correctly assessed, there are serious consequences for both a general theory of negation and the internal boundaries within a theory of metalinguistic negation.

5.   EN as a syntactically active negative element

In this section we want to offer some original evidence in favor of the view that EN is not only semantically close to standard sentential negation (as argued in the preceding sections) but it is also syntactically active, exhibiting a limited pattern of scope interactions with other negative elements. Since the bulk of the present contribution is not on syntax, we will not present a detailed analysis here, reserving this for future work and limiting ourselves to present the main facts and the most straightforward conclusions that they suggest.

First of all, we should emphasize that there is a widespread consensus, in the literature, to the effect that EN licenses neither negative concord (NC) dependencies nor double negation (DN) readings.

This can be seen by considering, for instance, the paradigm exemplified by the minimal pair of exclamative sentences in (35) in Spanish (from Espinal 1997), which can be promptly replicated in Italian, as seen in (36). The EN present in

(35a) does not license the NC-reading of the n-words *nadie* 'nobody' as an indefinite in Spanish. Similarly, the EN present in (36a) does not license the NC-reading of the n-word *nessuno* 'nobody' as an indefinite in Italian. The sentences in (35b) and (36b) show that in both languages an explicit indefinite must be used in order to express the interpretation corresponding to the non-existent NC-reading of (35a) and (36a):

(35) a. *¡Qué barbaridades no cometería   nadie   así!
　　　 Which atrocities   not would commit nobody like this
　　　 'Which atrocities would not commit someone like this!'

　　 b. ¡Qué barbaridades no cometería   alguien así!
　　　 Which atrocities   not would commit someone like this!
　　　 'Which atrocities would not commit someone like this!'

(36) a. *Che   atrocità   non commetterebbe nessuno così!
　　　 Which atrocities not would commit nobody like this!
　　　 'Which atrocities would not commit someone like this!'

　　 b. Che   atrocità   non commetterebbe qualcuno così!
　　　 Which atrocities not would commit someone like this!
　　　 'Which atrocities would not commit someone like this!'

As for the impossibility of DN-readings with EN, consider the example from Korean in (37), which has been discussed in Yoon (2011: 9), and expresses hope for something not to happen (John hopes that Mary does not come). In this kind of structures, Korean admits the use of EN that is shown in (37), expressing unlikelihood (John hopes that Mary does not come though this is unlikely to happen), an affective interpretation that we have interpreted, in the previous sections, as the result of the relevant process of implicature denial (if John hopes that Mary does not come, the implicature licensed is that it is reasonably likely – or at least not completely unlikely – that Mary will not come):

(37) John-un Mary-ka   **anh**-oci-**anh**-ul-kka   kitayha-koissta
　　 John-TOP Mary-NOM NEG1-come-NEG2-FUT-NFcomp hope-ASP
　　 'John hopes that Mary might not come (although it is unlikely to happen)'

Here, the interpretation is the one expressed by the English translation in (37). Clearly, EN is doing its job as an operator of implicature-denial, without scopally interacting with the instance of standard negation contained in (37). In other words, a DN-reading expressing hope in the possibility that Mary might come is completely excluded for (37), in all possible circumstances of use.

Despite these facts, we intend to argue that a limited scope interaction between EN and other negative elements is in fact allowed. Our claim is based on the analysis of the behavior of EN in Italian comparative clauses. First of all, the

behavior of Italian as a NC-language is promptly confirmed by the interpretation of the negation in the comparative sentence (38a), which is obligatorily interpreted as in (38b):

(38) a. Non sono più intelligente di nessun altro
    b. I am equally intelligent or less intelligent than the others

The reading in (38b) is conveyed, in English, by the sentences in (38c), indicating that the interpretation of the n-word (*nessuno*) in (38a) is that of an indefinite, as expected under a NC-reading:

(38) c. I am more intelligent than nobody else / I am not more intelligent than anybody else

Consider now the equivalent of (38a) in which the embedded comparative clause features EN:

(39) a. Sono più   intelligente di quanto non sia   nessun altro
         I am more intelligent than   not is-SUBJ nobody else

The relevant question is how (39a) gets interpreted in Italian. In principle, there are four possibilities. The first possibility is that EN is simply ungrammatical in (39a), paralleling the status of EN in Italian exclamatives such as (36a). The second possibility is that (39a) is interpreted as licensing a NC-dependency, contrary to what happens in (35a) in Spanish. In this case the interpretation would correspond to (39b) in English (i.e. I am the dummiest of all).

(39) b. I am more intelligent than nobody else / I am not more intelligent than anybody else

The third possibility is that the two negative elements in (39a) give rise to the DN-reading in which the n-word has narrow scope (*non* > *nessuno*), corresponding to (39c) in English and expressing that I am more intelligent than someone else.

(39) c. I am more intelligent than someone else

The final possibility corresponds to the DN-reading in which the n-word has wide scope (*nessuno* > *non*), corresponding to (39d) in English (i.e. I am the smartest of all).

(39) d. I am more intelligent than all the others

Now, our own judgment (which is shared by all the Italian informants we have consulted) is that (39a) is well-formed and only has the last reading, that is, the DN-reading in (39d) according to which I am the smartest one. Since this uncontroversially corresponds to a DN-reading, we are faced with the intriguing

situation in which a truth-reversal operator, whose scope is shifted from the proposition expressing the asserted meaning to the proposition expressing the implicated meaning, is also involved in scope relations within the logical form that expresses the asserted meaning. From this perspective, a related puzzle is why the only legitimate construal appears to be the one in which EN has narrow scope, whereas the construal where EN scopes over the n-word is excluded. Interestingly, the behavior of EN in Italian exactly parallels the behavior of the concealed sentential negation whose presence has been hypothesized in Collins & Postal (2015) (C&P) in order to derive the interpretation of Free Choice 'any' in English. In C&P the negative polarity item 'any' is analyzed as involving a negative formative (i.e. *any = not + some*). For the analysis of Free Choice sentences such as (40) below, it is assumed that a covert sentential negation is also present in the abstract syntactic representation associated with (40), to the effect that (40) gets actually interpreted as a DN-sentence (i.e. no student could not pass the exam). The Free Choice reading of (40) is thus nothing else than this DN-reading:

(40)   Any student could pass the exam

Consider now the sentence in (41):

(41)   I talked to any student who showed up

In C&P, the only way to derive the FC-reading of (41) (I talked to all students who showed up) is via the underlying syntactic representation "I did not talk to no students who showed up". However, notice that here the n-word is syntactically in the scope of sentential negation (*not > no*), yielding the wrong reading "I talked to some students who showed up". In order to get the correct interpretation, we must hypothesize that sentential negation is obligatorily assigned narrow scope w.r.t. the negative quantifier (*no > not*). This is the very same situation we find in (39a) in Italian, which gives rise, as seen above, to a DN-reading in which negation is obligatorily in the scope of the negative quantifier (*nessuno > non*). These are theory-bound considerations, but we believe that future work on non-standard negation should not overlook the paradigm that emerged from the considerations above.

We would like to end up this section with a last empirical observation. It seems that the DN-reading detected in (39a) is regularly overruled by the presence of a NC-dependency in the same syntactic structure. The relevant paradigm is provided in (42–43):

(42) ?Parlale   prima che nessun altro lo faccia!
       talk-to-her before   nobody else it-does-subj
       'Talk to her before somebody else does it!'   (NC)

(43) a. Parlale   prima che non lo faccia   nessun altro!
          talk-to-her before   not it-does-SUBJ nobody else
      b. Talk to her before all the others do it!   (DN: nobody > not)
      c. Talk to her before someone else does it!   (NC)

As we can see in (42), *before*-clauses, as non-veridical contexts, can license NC in Italian (though the question mark in (42) is intended to express the fact that for a majority of speakers the option with the indefinite *qualcuno* instead of the n-word *nessuno* is clearly preferable). Arguably, a NC-dependency is created between the n-word and the non-veridical head (cf. Espinal 1997). The interesting case is thus the more complex structure in (43a). Here, two different dependencies could in principle be created, the NC-dependency between the non-veridical head *prima* 'before' and the n-word *nessuno* 'nobody' and the DN-dependency between EN and the negative quantifier *nessuno*, as in (39a). The question is: which of these two dependencies applies first, destroying the conditions for the creation of the other? Not surprisingly perhaps, (43a) is read as giving rise to the NC-reading reported in (43c). This means that a dependency is created between the non-veridical head and the n-word. The latter cannot thus be later interpreted as a negative quantifier, entering a scope relation with EN. In other words, the syntactically encoded dependency (NC) rules out the purely interpretive one (DN). Possibly, this suggests that EN, which is semantically active with respect to contextually enriched layers of meaning (i.e. implicated meaning) exhibits some sort of 'late interpretive effects': it enters scope relations – within the limits seen above – only after all the relevant syntactic dependencies have produced their interpretive effects.

Summarizing, we have started to explore the intricate set of data that appear to be relevant to answer the questions whether and to which extent EN enters scope relations that affect the asserted meaning. Though the data we have reviewed above are probably just the tip of the iceberg and need thus a more in-depth exploration that we leave for future research, some interesting patterns have emerged from our preliminary investigation, suggesting an intriguing parallelism between EN and the concealed sentential negation hypothesized in C&P's analysis of Free Choice 'any'.

6.   Conclusions

In this contribution, we have offered many empirical and conceptual arguments in favor of a unitary analysis of expletive negation (EN), exploring its interpretive behavior in a large class of syntactic structures. We propose that EN retains the semantic value of standard sentential negation as a truth-value reversal operator.

The difference between standard negation and EN is that EN shifts the application of this operation from the domain of asserted meaning to the domain of presupposed/implicated meaning. We argued that this approach comes close to explanatory adequacy. More particularly, it makes it possible to derive a large set of evaluative meanings traditionally associated with EN as by-effects of the semantic value of EN, and it allows a conceptually straightforward re-interpretation of the notion of metalinguistic negation, by dividing its effects between what is relevant for truth-conditional interpretation and what is relevant for assertability. On the other hand, the finding that a form of syntactically encoded negation interacts with the implicated meaning raises some important questions. These questions are not entirely new. Krifka (2010) offers for instance an intriguing analysis of a different sort of EN, which is licensed by *before*-clauses in some varieties of German, and involves double-negation structures, with one instance of negation in the main-clause and another instance of negation in the embedded temporal clause (cf. also Delfitto 2013). Krifka interprets expletive negation in German in incremental compositional terms, modulo reified conversational implicatures implemented in the form of two-dimensional semantic representations: <A, B> (whereby A expresses the asserted proposition and B expresses the implicated proposition). He further shows that this incremental interpretive procedure makes either the assertion or the implicature informationally irrelevant, yielding the correct reading of the relevant sentences. Krifka's analysis rests on the compositionality-based interaction between the negation in the main clause, which is standardly interpreted as a polarity-reversal operator, and the negation in the embedded clause, which is interpreted 'propositionally' as a complement-set operator defined on times. The analysis developed here differs from Krifka's in some important respects. In particular, we contend that there is a single interpretation of negation and that the only difference between standard negation and EN is that the latter applies to a different class of representations within the two-dimensional model. Moreover, the widespread use of EN that we have explored in the present work (in structures that usually involve only one negation) suggests a non-incremental interpretation of negation, according to which negation dynamically interacts with the contextual determinants of implicated meaning. If we adopt a post-Gricean model in which conversational implicatures (including scalar implicatures) are context-dependent layers of propositional meaning, the very existence of a syntactically encoded operator that reverses the polarity of an implicated proposition strongly suggests that syntax dynamically interacts with the enriched meaning that is created by perceptually and cognitively exploring the context in which the relevant syntactic structure is put to use. Though there is an interesting parallelism with the non-incremental models of negation in language processing, we are not inclined to believe that an 'enriched' seman-

tics of negation directly supports the proposed models of non-incremental nega-tion processing, such as the so-called 'two-step simulation hypothesis' (Kaup et al. 2007). However, we believe that an 'enriched' semantics of negation cer-tainly calls for a view of the syntax/semantics interface in which we do not sim-ply compositionally interpret syntax, in a relatively context-independent way, but rather regularly apply at least some of the interpretive instructions encoded in the morphosyntax of language to the representations produced in a much richer cognitive setting, of which language is only a part.

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