The Syntax and Semantics of Scalar Negation: Evidence from Paduan

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A wide range of syntactic phenomena related to verb movement leads one to ask whether pre-verbal negative markers count as independent constituents, or whether they form a unit with the verb. In this paper we show that the syntax of a single language may allow both possibilities. In the case we examine, the two syntactically distinct negative markers differ in their contribution to the interpretation of the clause. While one negative marker only contributes the ordinary interpretation of negation, the other also triggers a scalar conventional implicature. For example, out of a set of alternative answers to a question, scalar negation implicates that certain of them–including the true one–were unexpected in the conversation up until that point. Similar effects can be found in connection with focus. Thus it seems that a difference in the syntactic status of negative morphemes in this language can be related to a particular semantic/pragmatic contrast.

1   Pre-Verbal Negative Markers and Verb Movement

The language under investigation is Paduan, a Romance variety spoken in the city of Padua, in the Veneto region in Northern Italy. Paduan exhibits a contrast in the relative order of subject clitic and verb in interrogative and non-interrogative clauses: While in non-interrogative clauses the subject clitic precedes the verb, in interrogative clauses the order is reversed. This holds of both yes/no questions and WH-questions, as shown in the examples in (1) and (2) (cf. Poletto (1993a, 1993b), Benincà (1994), among others):

(1) a. El   vien.
        s.cl comes
        'He is coming.'

b. Vien-lo?   (*El vien?)
   comes-s.cl
   'Is he coming?'
c. Quando vien-lo?   (*Quando el vien?)
   when   comes-s.cl
   'When is he coming?'
(2) a. La ga magnà tuto.
      s.cl has eaten   everything
      'She ate everything.'
   b. Cossa ga-la   magnà? (*Cossa la ga magnà?)
      what   has-s.cl eaten
      'What did she eat?'

Let us refer to the word order in which the verb precedes the subject clitic as "subject clitic inversion", following the literature on this topic. As indicated by the ungrammatical examples in parentheses, subject clitic inversion is obligatory in these types of questions, and its absence yields ungrammaticality. We take it to indicate that these are contexts where the verb moves to a position higher than the one it occupies in declarative clauses; for simplicity, let us assume that the position to which it moves is C°.[1]

Paduan negates a clause by means of the pre-verbal negative marker *no*. When *no* occurs in an interrogative clause, subject clitic inversion cannot occur:

(3) a. *No vien-lo?
      neg comes-s.cl
      'Isn't he coming?'
   b. *Cossa no ga-la   magnà?
      what neg has-s.cl eaten
      'What didn't she eat?'

Negative yes/no questions exhibit the same word order as declarative clauses, i.e. the subject clitic precedes the finite verb:

(4) a. No (e)l vien?
      neg s.cl comes
      'Isn't he coming?'
   b. No la ga magnà?
      neg s.cl has eaten
      'Hasn't she eaten?'

In contrast, negative WH-questions employ a cleft construction:

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[1]Verb movement to C° can either be assumed to take place in the syntax (cf. Rizzi & Roberts (1989), Poletto (1993a, 1993b) and Roberts (1993), among others) or at LF (cf. Sportiche (to appear)). According to the first view, the verb occurs to the left of the subject clitic in questions because it raises to C°; according to the latter, the verb and the subject clitic in these contexts form a morphological unit, which is licensed by movement of the verb to C° at LF.

(5)   Cossa ze che *no* la ga magnà?
       what is that neg s.cl has eaten
       'What didn't she eat?'

Let us focus on yes/no questions, in particular on the contrast between (1)b (*Vien-lo?*) and (3)a (*No vien-lo?*). It could be suggested that whatever triggers verb movement in yes/no questions (whether in the syntax or at LF) is "suspended" in the presence of negation. This would amount to proposing that the syntax of negative and that of non-negative yes/no questions differs not only because of the presence or absence of negation but also in that negative clauses lack whatever serves as the trigger for verb movement. Lacking independent evidence for the second difference, we choose not to invoke it and instead to work under the assumption that the two types of yes/no questions differ only with respect to the presence/absence of negation. This position leads us to the conclusion that whatever triggers verb movement in non-negative yes/no questions is operative in their negative counterparts as well. This forces us to address the question of why examples like (4)a above (*No (e)l vien?*) are grammatical, despite the absence of the indicator of verb movement, i.e. subject clitic inversion.[2]

We will adopt a solution along the lines of the one proposed in Zanuttini (in press). Following much of the literature on this topic, we assume that yes/no questions contain an abstract yes/no operator in the specifier of CP, which contributes the question interpretation. We further assume that sentences containing an operator are subject to the general requirement that the head of the projection containing the operator match the features of its specifier.[3] We suggest that in the case of yes/no questions this requirement is satisfied if either a verb or a negative element is present in C°.

In non-negative yes/no questions, the finite verb in I° is the head closest to C° with features which could match those of the yes/no operator. Hence, it will be attracted to C°. In contrast, when the pre-verbal negative marker *no* heads the projection NegP, we assume that Neg° constitutes the closest head with appropriate features which is attracted to C°. Therefore, in these contexts the requirement which triggers verb movement in non-negative yes/no questions is satisfied by the negative

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[2]Previous accounts have analyzed lack of verb movement to C° as resulting from a blocking effect created by the presence of the negative marker. That is, assuming that the negative marker is a head, it is taken to block head-to-head movement of the verb from I° to C°, since it would constitute the closest governor for the trace of the verb. These accounts leave open the question of why verb movement, which is obligatory in the absence of the negative marker, can fail to take place in the presence of the negative marker without giving rise to ungrammaticality.

[3]This requirement can be viewed as a more general version of one of the two requirements expressed for individual functional categories under the labels of 'criteria' (cf. the WH-Criterion in May (1985), reformulated in Rizzi (1990, 1995); the Neg-Criterion in Haegeman & Zanuttini (1991, 1995) and Haegeman (1994, 1995); the Clitic Criterion in Sportiche (1992), among others). Haegeman (1992, 1995) generalizes over the common phenomena involving WH- and negative phrases and formulates the more general "AFFECT-Criterion", which covers both. The requirement we are concerned with here is essentially half of the AFFECT Criterion: it requires that an operator be in a Spec-head configuration with a head with compatible features.

marker. We propose that in negative yes/no questions the negative marker moves to C° instead of the verb. This makes movement of the verb unnecessary and, in light of economy considerations, impossible (for the notion of economy and of movement as attraction, cf. Chomsky (1995)).[4]

What is crucial for this analysis to go through is that the negative marker be a syntactic head separate from the one of the finite verb, and that its features be able to satisfy those of C°. Independent evidence for both these assumptions can be found in the literature. That the projection NegP headed by pre-verbal negative markers in Romance is structurally higher than the landing site of the finite verb has been argued in Laka (1990), Zanuttini (1990, in press), Rivero (1994), among others. That the negative marker (or its features) can raise to C° in the presence of a yes/no operator has been independently proposed in Chen (in prep) and Cheng et al. (in prep).[5]

This behavior of Paduan *no* contrasts with that of French *ne*, or Walloon *nu*: in interrogative clauses in these languages, the verb occurs on the left of the subject clitic, despite the presence of the negative marker:[6]

(6) a. *N'è-c'*   nin come dès   cantikes ou cwè? (Walloon)
      neg-is-it neg like some hymns or what
      'Isn't it like hymns or what?'
  b. *N'est*-il   pas heureux? (French)
      neg-is-he neg happy
      'Isn't he happy?'

This difference can be captured by saying that, whereas Paduan *no* heads the functional projection in which it occurs (call it NegP), French *ne* and Walloon *nu* do not. Following Pollock's (1989) proposal, we view them as negative markers originating in the head of a negative projection lower in the clause and then raising to pre-verbal position (by virtue of their clitic nature) where they left-adjoin to an in-

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[4]As in the case of verb movement briefly discussed in note 1, movement of the negative marker also might take place either in the syntax or at LF. A choice between these two options cannot be made on the basis of the empirical data at our disposal, but only on the basis of theoretical considerations.

[5]The case of WH-questions differs from that of yes/no questions in that they do not contain a yes/no operator but rather a WH-operator in the specifier of CP. In these contexts, the pre-verbal negative marker gives rise to ungrammaticality regardless of the presence of subject-clitic inversion:

(i)a. *Cossa no ga-la   magnà?
    what   neg has-s.cl eaten
    'What didn't she eat?'
  b. *Cossa no la ga magnà?

The negative element counts as the closest element to C°, but its features do not match those of the WH-operator, hence the derivation does not converge and ungrammaticality ensues. The language therefore makes use of a cleft to form a negative WH-question.

[6]Example (6)a is from Remacle (1952).

dependently existing functional head. In our view, the reason why Paduan *no* makes verb movement unnecessary while these negative markers do not is to be related to this difference. There are several possible ways of implementing it. One consists in viewing the negative marker as left-adjoined to the same functional head to which the verb is left-adjoined. The unit thus formed is attracted to C°. A view along these lines reflects the traditional analysis of these elements but is incompatible with Kayne's (1994) approach to linear order in syntax and morphology (his Linear Correspondence Axiom does not allow left-adjunction of more than one element to the same position). An alternative way of expressing our intuition, compatible with Kayne's proposal, would consist in viewing these negative markers as differing from that of Paduan in lacking the relevant features which would make C° attract them. For example, they could be viewed as purely scope markers, which do not share the same features as negative markers which can negate the clause alone. This view is plausible, as the negative markers of French and Walloon cannot negate the clause alone but must always co-occur with another negative element.

Since the latter alternative would require some more extensive discussion of the exact characterization of these elements, for the sake of brevity in this paper we adopt the more traditional approach of viewing the negative markers of French and Walloon as forming a unit with the finite verb. The precise characterization of their syntax is not crucial for the discussion that follows. Henceforth, we will refer to the negative markers which co-occur with subject clitic inversion, and which we tentatively view as forming a unit with the verb, as 'clitic negative markers', for ease of reference.

Returning to Paduan, there are four contexts in which the negative marker *no* exibits the syntactic behavior of a clitic negative marker, and not that of a negative marker which counts as an independent head. That is, there are four contexts in which we find subject clitic inversion despite the presence of the pre-verbal negative marker. The first three of them are described in Benincà and Vanelli (1982).

1. One such context is that of WH-exclamatives. Although they resemble WH-questions, since they are introduced by WH-phrases, these exclamative clauses differ from WH-questions in two respects which are relevant for our discussion. First, the WH-phrase in exclamatives can be immediately followed by the negative marker, something which is impossible in questions.[7] Second, in the presence of the negative marker, the word order is not the same as that found in declarative clauses, but rather obligatorily exhibits subject clitic inversion, as shown below:[8]

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[7]This was illustrated in the examples in note 5.

[8]The verb can fail to occur on the left of an interrogative subject clitic only when an overt complementizer is present in the clause; in this case, in fact, subject clitic inversion is impossible, in negative as well as in non-negative clauses:

what that neg s.cl him says

(7) a. Chi *no* invitarisse-*lo* par parere importante!
      who neg invite-s.cl   for to-seem important
      'What people he would invite in order to seem important!'
    b. *Chi *no* *(e)l* invitaresse par parere importante!
(8) a. Cossa *no* ghe dise-*lo*!
      what neg him say-s.cl
      'What things he is telling him!'
    b. *Cossa *no* *(e)l* ghe dise!

Informally, these sentences are used to convey that he would invite all sorts
of people in order to feel important, and that he would tell him all sorts of
things. Anyone who wasn't invited, or anything that wasn't said, is so unlikely
or implausible that they do not deserve consideration.

2. A second context in which Paduan *no* co-occurs with movement of the verb
around the interrogative subject clitic is that of questions introduced by *par-
cossa*, one of the two words for 'why' in Paduan. When associated with a par-
ticular intonational pattern (cf. Benincà and Vanelli (1982:18)), these sentences
convey surprise or dismay:

(9) a. Parcossa *no* ve-to   anca ti!?
      why   neg go-s.cl also you
      'Why aren't you going as well?'
    b. Parcossa *no* ghe-to   acetà?
      why   neg have-you accepted
      'Why didn't you accept?'

They contrast with the example of WH-questions in (5) above, where a cleft is
required, as well as with those instances of questions with *parcossa* which are
used to request information, rather than to express surprise or dismay, such
as (10) below:

(10) a. Parcossa ze che *no* te   ve anca ti?
      why   is that neg s.cl. go also you
      'Why aren't you going as well?'
    b. Parcossa ze che *no* te ghe acetà?
      why   is that neg s.cl have accepted
      'Why didn't you accept?'

Whereas the questions in (10) are asking for the reasons why the hearer is not
going, or has not accepted something, those is (9) are used when the speaker
knows the hearer is not going, or has not accepted something, and wants to
convey his belief that there are no valid reasons for that.

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b. * Cossa *che* no ghe dise-*lo*!
      what that neg him says-s.cl
      What things he tells him!

3. A third context in which Paduan *no* co-occurs with subject clitic inversion is yes/no questions of the type of (11), or those where *no* co-occurs with the post-verbal negative marker *miga*, as in (12):

(11)   Vien-lo   o *no* vien-lo?
       comes-s.cl or neg comes-s.cl
       'Is he coming or is he not coming?'

(12) a. *No* vien-lo   miga?
       neg comes-s.cl neg
       'He's not coming??'

   b. *No* lo ghe-to   miga fato?
       neg it have-s.cl neg   done
       'You haven't done it??'

Example (11) is used when the speaker has the impression that the person referred to is not coming and expresses impatience, implying that that person was supposed to come. The examples in (12) are used when the speaker knows that he's not coming, or that the hearer has not done it, and wants to convey that this was contrary to expectation (cf. Cinque (1976)).

4. Finally, a fourth context, pointed out to us by P. Benincà (p.c.) and described in Benincà (1995), is that of non-WH exclamative clauses, such as (13) below:

(13)   *No* ga-lo   magnà tuto!
       neg has-s.cl eaten   everything
       'He's eaten everything!'

Suppose the speaker is talking about a child who does not usually eat much; if, at some particular time, the child eats everything, sentence (13) can be uttered felicitously. It conveys that the fact that he ate everything is very surprising.

Following our previous reasoning, we suggest that in these contexts Paduan *no* does not count as the closest head with appropriate features to be attracted to C°. The negative marker either forms a unit with the verb or else does not have the appropriate features to be attracted by C°, and therefore the verb is the closest head which can be attracted. As we did above for French and Walloon, for simplicity we choose to express this difference by saying that in these cases the negative marker forms a syntactic unit with the verb. That is, in contrast with the previous examples where *no* was the head of an independent syntactic projection, in these contexts Paduan *no* is adjoined to the same functional head as the verb. Let us refer to it as "clitic *no*".

We are arguing that, not only is it possible for different languages within the same language family to have pre-verbal negative markers with different syntactic characterizations, but it is also possible for a single language to exhibit two syntactically different types of pre-verbal negative markers. Independent evidence for this is provided by a Romance variety spoken in the same Northern Italian region

where Paduan is spoken, i.e. Veneto, in the area called Basso Polesine (we will re-
fer to the language as Basso Polesano). Two morphologically different forms of the
pre-verbal negative marker exist: *no* is the form which appears when the negative
marker negates the clause alone; *ne* is the form which is used when the pre-verbal
negative marker co-occurs with the post-verbal negative marker *miga* or with negative
constituents corresponding to 'nobody, nothing' or 'never'. Two examples are given
below:[9]

(14) a. A   *no* vegno. (Basso Polesano)
        s.cl neg come
        'I am not coming.'
     b. *Ne* vien-lo   mina? (Basso Polesano)
        neg comes-s.cl neg
        'Isn't he coming?'

In our view, this language encodes in a morphological distinction the syntactic am-
biguity which is manifested by the morpheme *no* in Paduan.

If we are correct that Paduan *no* is syntactically ambiguous, why would a
language allow such apparently needless complexity in its grammar? We argue that
this syntactic difference is not gratuitous but corresponds to a semantic difference
between the two syntactically distinct negative markers. In particular, in the case
of Paduan which is the object of our investigation, we will argue that the syntactic
distinction corresponds to the following difference in the semantic interpretation:

- the negative marker *no* which heads its own projection contributes the ordinary
  interpretation of negation;

- clitic *no* is a focus sensitive particle which generates a characteristic scalar
  implicature.

We will argue that the readings we described above are not simply the result
of the ordinary interpretation of negation combined with the meaning of exclamative
clauses and questions. Rather, it is clitic *no* that adds the scalar implicature to their
interpretation. In the next section, we will provide a semantic characterization of
clitic *no*.

2   The Interpretation of Clitic *no*

We argue that clitic *no* is a focus sensitive particle which generates a char-
acteristic scalar implicature. The implicature depends on a pragmatically provided
scale much like that familiar from the interpretation of *even* (cf. Jackendoff (1972),
Karttunen and Peters (1979), Rooth (1985)):

[9]Example (14)a is from Poletto (1993a:23), example (14)b from Poletto (1993b:242).

(15) a. Mary even applied for the job in ROME.
    b. $[\![(15)a]\!]_w = \{w : \text{Mary applied for the job in Rome in } w\}$

The truth-conditional import of (15)a is the proposition in (15)b. *Even* plays no role here. On the basis of a set of alternatives C to Rome, the denotation of the focused element, a set of alternative propositions X to (15)b is generated. These alternatives are ordered in a scale according to how likely they are considered to have occured. Based on this we get the implicature below; here s is a contextually supplied, necessarily quite low, level of expectedness:

(16) C = alternatives to Rome
            = {Venice, Milan, Rome, Palermo}
       X = alternatives to 'Mary applied for the job in Rome'
            = {'Mary applied ... in Palermo', 'Mary applied ... in Rome',
                'Mary applied ... in Milan', 'Mary applied ... in Venice'}
      Scale = ⟨'Mary applied ... in Palermo' ≺ 'Mary applied ... in Rome'
               ≺ 'Mary applied ... in Milan' ≺ 'Mary applied ... in Venice'⟩

    Implicature: $\forall p \in X[p \text{ is true} \rightarrow [\![(15)a]\!]_w \preceq p]$
                  & Expectedness($[\![(15)a]\!]_w$) ≺ s.

Another way to state this implicature would be in terms of a scale based on C rather than X:

(17)   Scale = (Palermo ≺ Rome ≺ Milan ≺ Venice)
      Implicature: $\forall x \in C[\text{Mary applied for a job in } x \rightarrow \text{Rome} \preceq x]$
                & Expectedness(Rome) ≺ s.

Clitic *no* can be analyzed along the lines of (17). Let us begin with negative exclamatives, using (8)a as an example, repeated as (18):

(18)   Cossa *no* ghe dise-lo!
      what neg him say-s.cl
      'What things he's telling him!'

We assume that (18) has the semantics of a question,[10] because it is an inversion structure, and follow Karttunen (1977) in assuming that a question denotes its set of true answers:

(19) $[\![(18)]\!]_w = \{p : p \text{ is true in } w \ \& \ \exists a[p = \text{'he didn't tell him } a']\}$

This proposition can be generated in the following way. The S which *cossa* quantifies into denotes the set of things he didn't tell him, as in (20):

(20) $[\![\text{no ghe dise-lo [e]}]\!]_w = \lambda x[\text{he didn't tell him } x]$

Cossa is a function mapping (20) into (19):

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[10]Elliott (1974) argues that questions and exclamatives in English differ syntactically and seman-

(21)   For any property P, $[\![$ cossa $]\!]_w(P) = \{p : p$ is true in w & $\exists a[p = P(a)]\}$

Next we can examine the interpretation of *no*. It must produce (20) from the denotation of *ghe dise-lo [e]*, the set of things which he told him. This is handled by the assertion part of (23):

(22) $[\![$ ghe dise-lo [e] $]\!]_w = \lambda x[$he told him $x]$
(23)   For any property P, Assertion: $[\![$ no $]\!]_w(P) = \lambda x[\neg P(x)]$
            Implicature: $\forall x \in C[\neg P(x) \rightarrow \text{Expectedness}(x) \prec s]$

(23) also encodes the implicature generated by clitic *no*. In the case of (18), it is (24):

(24) $\forall x \in C[$he didn't tell him $x \rightarrow \text{Expectedness}(x) \prec s]$

There is a background set C of alternative things he might have told him. These are ranked according to how expected it was that he would tell him them (i.e. according to how expected it was that they would have property P). Let us assume (25)–(26):

(25) $C = \{$'he committed a murder', 'he is having trouble in his marriage',
            'he dislikes his neighbor', 'it is a nice day outside'$\}$
(26)   Scale = ('he committed a murder' $\prec$ 'he is having trouble in his marriage'
            $\prec$ 'he dislikes his neighbor' $\prec$ 'it is a nice day outside')

The implicature says that everything he didn't tell him has expectation level below s. Let us assume that 'he is having trouble in his marriage' has expectation level s. (24) then says that he even told him about the troubled marriage, and that the only thing he didn't tell him is that he committed a murder.

(27)

More Unexpected $\longleftarrow$ s $\longrightarrow$ More Expected
    things he didn't tell him   *things he told him*

Next let us look at *why* questions expressing surprise or dismay. The semantic rules above generate (29) as the implicature for (9)a, repeated as (28):

(28)   Parcossa *no* ve-to   anca ti?!
        why   neg go-s.cl also you
        'Why aren't you going as well?'
(29) $\forall x \in C[$you aren't going as well because of $x \rightarrow \text{Expectedness}(x) \prec s]$

(29) says that every reason the hearer has for not going is very unexpected. If we make the plausible assumption that expectedness of reasons corresponds to how good a reason they are, this amounts to saying that the hearer only has bad reasons for not going.

    Next let us look at yes/no questions such as example (11), repeated below:

(30)   Vien-lo   o *no* vien-lo?
        comes-s.cl or neg comes-s.cl
        'Is he coming or is he not coming?'

As with (18) and (28), the implicature of (30) is based on alternatives corresponding
to the piece of the sentence being questioned. In (30), this is the whole proposition.
The alternatives then are as in (31)–(32):

(31) C = {'he isn't coming', 'he is coming'}
(32)   Scale = ⟨'he isn't coming' ≺ 'he is coming'⟩

According to the scale in (32), the implicature is then (33):[11]

(33) $\forall p \in C [p$ is true in $w \rightarrow$ Expectedness$(p) \prec s]$

In order to correctly understand (30), and (34) below, it is important to keep separate
two similar-seeming types of expectedness. Suppose that we were waiting for him to
arrive at 6:00, at which time we would leave for dinner. We fully expect him to show
up, a fact represented in the scale (32). But he's not there at 6:00; he's not there at
6:30; he's still not there at 7:00. At this point I may say (30), indicating that I now
doubt that he will show up. In this respect (30) presupposes that 'he isn't coming' is
the true answer. The source of this presupposition is unclear, but seems to have to do
with (30)'s status as an alternative yes-no question. In light of the scale in (32) and
the true answer's being 'he isn't coming', (33) yields the right results. The sentence
implicates that his not coming was unexpected.

        Matters are the same with negative questions containing *miga*, as in (12)a,
repeated here:

(34)   *No* vien-lo   miga?
        neg comes-s.cl neg
        'He's not coming??'

Here the fact that the sentence is a negative question seems to bring about the
presupposition that 'he isn't coming' is the true answer. This is then implicated to
have been unexpected.

        Finally, there are the non-WH exclamatives exemplified in (13), repeated here
as (35):

(35)   *No* ga-*lo*   magnà tuto!
        neg has-s.cl eaten   everything
        'He's eaten everything!'

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[11]In (23) we have given a somewhat simplified semantics for *no*, one which is specialized for WH
constructions. The more general form will amount to:

(i) $\forall x \in C[x$ is the true answer to the question $\rightarrow$ Expectedness$(x) \prec s]$
Giving a general formulation to the property of 'being the true answer to the question' brings up
technical issues beyond the scope of this paper.

Just as with the yes/no questions, the alternatives are the positive and negative forms of the proposition. In these cases, though, the scale ranks the negative form as the more likely:

(36) $C = \{$'he ate everything', 'he didn't eat everything$\}$

(37)   Scale $= ($'he ate everything' $\prec$ 'he didn't eat everything'$)$

Since (35) is used in contexts in which he ate everything, this scale leads to the implicature that the fact that he ate everything was unexpected.

The last two constructions are somewhat similar. We have shown that, by assuming a particular scale on the positive and negative forms of the proposition, we can generate the correct implicature for each case. Since the scales are opposite in the two constructions (the positive version is higher in the yes/no question but lower in the exclamative), it appears difficult to establish independent criteria for generating them. One possibility is that individual constructions determine the type of scale appropriate to them. Alternatively, one could pursue the idea that there is only a single construction, with subcases differing precisely in the form of the scale; for example, if the positive version of the proposition is higher in the scale, the result is a yes/no question, whereas if it is lower the result is an exclamative. We leave this issue open awaiting further investigation.

3   Focus Sensitivity of Scalar Negation in Assertions

All of the examples we have considered so far have involved inversion structures. The presence of verb movement allowed us to identify instances of clitic *no*. However, since we have now identified the semantic contribution of clitic *no*, we may ask whether we can find it in ordinary assertions. It appears that we can, as similar implicatures are generated in the context of focus.

(38)   *No* (e)l ga miga fato domanda a ROMA.
        neg s.cl has neg made query   to Rome
        'He hasn't applied to Rome.'

This sentence has an implicature very similar to the one it would get if the position of *Roma* were questioned. Let's imagine that the situation is as with (15)a. Then (38) asserts that he didn't apply to Rome. It implicates that his applying there was unexpected. It also indicates that he didn't apply to Palermo, since it would be considered even less likely that he would apply there.

The semantics of clitic *no* requires a set of alternatives. It seems that in (38) these alternatives are provided via focus, rather than by wh-movement. This point is in a way not suprising, given the well-known connections between the semantics of questions and that of focus. On the other hand, ordinary focus-sensitive particles li... formation in the way that we have seen *no* to. 12
Consider (39):

(39)   Who did John even see?

Example (39) does not have an implicature similar to that of *John even saw MARY*, as we would expect if question formation had the same effect as focus. Rather, it requires that some other element in the sentence be focused. Clitic *no* is unique, as far as we know, in generating its implicature on the basis of a set of alternatives provided either by question-formation or by focus. Further work will be necessary to determine the theoretical consequences of this fact.

Another important issue to be considered is the status of *miga* in (38). Since it is obligatory in this context, it is important to ask what role it plays. If it is crucial to generating the implicature, this would conflict with the interpretation we have assigned to clitic *no*. If, on the other hand, it is simply an additional negative morpheme, it would seem to be redundant in co-occurrence with *no*. However, *no* is the one constant element in the full range of examples displaying the type of scalar implicature we are interested in.[12] Therefore, the simplest hypothesis is that *no* itself contributes this piece of meaning. Still, from this we do not want to conclude that *miga* is playing no role in the examples in which it occurs. We plan to investigate the function of this element in future research.[13]

4   Conclusion

All occurrences of *no* which show clitic-like syntactic behavior share a common semantics. While contributing the ordinary interpretation of negation, they also generate a characteristic scalar implicature (or presupposition). This implicature is based on a set of alternatives derived from the semantics of questions or focus in combination with a pragmatically provided scale and standard of expectedness.

Some of the cases we have discussed, such as those in (7)a and (8)a, could be described as cases of so-called 'expletive' or 'pleonastic' negation (cf. Benincà (1995)). We have shown that, for these cases at least, the negation does contribute to the interpretation of the sentence. For example, relative to the context described in (25)-(26), (8)a implicates that he didn't tell him that he committed a murder, but it does indicate that he told him that he's having trouble with his marriage, something

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[12]Benincà (1995) notes that it is possible to get an exclamative reading for a sentence lacking *no* but containing *miga*, but only if subject clitic inversion (otherwise optional) occurs:

(i)a.   Ve-to miga?
        go-s.cl miga
        'You are not going??'
   b.   *Te ve miga?

[13]*Miga* may be necessitated by syntactic, semantic or pragmatic factors. One possibility we have considered is that it plays a role in making available the alternatives generated by focus to clitic *no*. *Miga* need not accompany clitic *no* with WH-movement structures (cf. (7)a, (8)a and (9)) or alternative yes/no questions (cf. (11)) because in these cases the alternatives are provided as part of the ordinary meaning of the sentences.

rather unexpected. On these grounds, the sentence could be translated as 'The things he's telling him!', which expresses the unexpectednesss of some things he *did* say. This latter fact may explain why the negative marker has sometimes not been taken to express negation in such contexts. In future work, we hope to see whether this type of treatment extends to other cases of so-called expletive or pleonastic negation.

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