

The dynamics of the PF interface: Negation and clitic clusters[☆]



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Abstract

In this article we take into account the different development of Italian and French with respect to the Jespersen cycle of negation: both languages started with a similar system, but are nowadays rather different. We argue that several different factors are involved in the activation of the cycle, which is the result of a general economy strategy. We claim that Jespersen's cycle can be blocked if speakers have access to any kind of evidence that the negative marker is complex. Here we provide evidence that the cycle is blocked when the preverbal negative marker is morphologically complex (i.e. at least bi-morphemic). We investigate several Italo-Romance varieties (both old and modern) and show that the alternation between two forms of the preverbal negative marker which depends on the presence of object clitics can either be a syntactic process or a phonological one, (although still sensitive to syntactic information). We argue that these morpho-phonological phenomena block the activation of the cycle as they make the bi-morphemic nature of the negative marker recognizable by the speakers. In addition, the data we present can shed light on the more general principles that map the PF interface.

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1. Introduction

Our article is devoted to the analysis of some peculiar processes at the boundary between morpho-syntax and phonology that involve clusters of negation and object clitics in some old and modern Italian varieties. In the dialects we take into consideration the preverbal negative marker, whose longer form is identical or similar to the standard Italian *[non]*, also displays a reduced form, *[no]* or *[n-]*. This shorter form requires specific morphological and phonological conditions, which vary across varieties, but it can be shown that in all dialects except the less conservative variant of modern Florentine, it is sensitive to syntactic information and, more precisely, to structural phrasing, and not simply to linear adjacency. This alternation also has interesting consequences for the explanation of the dynamics of the Jespersen cycle: since it requires that the preverbal negative marker is bi-morphemic, i.e. morphologically complex, it blocks the

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typical doubling of the negative marker through so called negative reinforcers (like adverbs or minimizers) which generally starts the cycle.¹ In other words, the alternation between a complex and a simple form of the preverbal negative marker is the piece of evidence that induces speakers to analyze the negative marker as a bi-morphemic item, which does not need to be reinforced by any additional morpheme, given that it is already morphologically articulated.

As we will claim below, the activation of the Jespersen cycle is due, as originally proposed by Jespersen himself, to the weakness of the negative marker, whereby we surmise that this weakness must concern all the levels of grammar, not only phonetics, and that it is to be reinterpreted as (morphological, phonological or syntactic) complexity. This means that for the cycle to activate, there can be no component of the grammar that provides the speaker with evidence that the negative marker is complex. The phenomenon we analyze is only one of the possible clues that a speaker can have concerning the complexity of the negative marker. This means that we do not predict that, as soon as the morphological phenomenon investigated here disappears, the Jespersen cycle activates, because also all other levels of the grammar must provide the speaker with no clue that negation is complex (for further cases of evidence for complexity see [Postma, 2002](#); [Meisner, 2013](#)).

The article is organized in the following way: in section 2 we discuss some general problems about the Jespersen's cycle and the differences between the languages that have undergone it, like French, and those where it has not fully developed, like Italian posing the question of the reason why Italian has a frozen syntax while French has undergone a change in the type of negative marker.

In section 3 we observe that some Italian varieties have two alternative forms of the preverbal negative marker, and describe the conditions of the phenomenon in Sicilian and Tuscan dialects comparing it with other similar phenomena involving negation–clitic clusters. In section 4 we present some general conclusions with respect to the interaction between phonology and syntax and argue in favor of the hypothesis that phonology does not see categorial labels but only syntactic (and in some cases possibly prosodic) units.

2. The Jespersen cycle and its trigger

Since Jespersen formalized for the first time the empirical generalization which is now commonly known as the Jespersen cycle, several linguists have tried to pin down what the actual trigger of the evolution of the negative marker is. According to Jespersen's original intuition, the cycle proceeds in three steps, which we briefly mention here: (a) in the first one the original negative marker is still stable and expresses negation alone, (b) in the second stage negation is represented by a discontinuous negative marker formed by the original negation and an additional adverb or negative argument which is first optionally and then obligatorily added to the original one, (c) in the third stage the additional element has completely substituted for the original negative marker, which in the end is lost. Some authors have proposed a more detailed division of the Jespersen cycle: for instance [van der Auwera \(2009\)](#) proposes five stages instead of three, splitting the stages where optionality is possible from the stages where either discontinuous or single negation is obligatory.

After about a century of research on the Jespersen cycle, we are in a position to provide a more detailed picture of the various stages through which the evolution of the negative marker proceeds, and also of the type of element which can act as the substitute for the original negative marker. We also have a better description of the residual semantic import of the original negative marker (see for instance [Breitbarth and Haegeman, 2013](#) for Dutch varieties where the original negative marker *en* has become a presuppositional marker). However, there is still no consensus in the literature as to the factor(s) that determine(s) the evolution of the Jespersen cycle. The original proposal Jespersen made is formulated in terms of phonetic weakness of the original element, which becomes more and more impoverished in its lexical form so that it needs some other element to reinforce it.

The debate on the Jespersen cycle has also been centered on further motivations which contribute to the development of the cycle. For instance [van der Auwera \(2010a\)](#) proposes that there is a semantic component of emphasis involved in the first cases of doubling of the negative marker through an additional but not yet grammaticalized negative marker. In other words, he proposes that the trigger of the evolution is not only phonetic, as Jespersen originally thought, but semantic, and that the first contexts in which doubling ensues are those in which the negative marker is focused, so that it

¹ Some Ligurian varieties studied by [Parry \(1997\)](#) present multiple preverbal negative markers in combination with preverbal clitics:

(i) e-n te-n capiš (Carcare)
 I=not you=not I.understand
 'I do not understand you.'

Parry shows that even if the phenomenon has a phonological component (and could derive from a type of epenthetic insertion) it is clearly syntactic, as it usually targets negation and some combinations of clitics.

needs to be reinforced. A similar analysis has been proposed by Kiparsky and Condoravdi (2006) to explain the use of minimizers and generalizers in emphatic negative structures, which they consider the first step of the cycle.

Alternatively, van Gelderen (2011) proposes that the Jespersen cycle is an effect of a more general economy principle, which reduces complex items to heads as soon as this analysis becomes possible, or better prevents the projection of any unnecessary structure. The effect of making a head out of a complex item then requires that the original element is reinforced by an additional item.²

Another proposal, still in the spirit of an impoverishment of the negative marker is the one made by Zeijlstra (2004), who assumes that the original negative marker loses a negative feature. Hence, up to now phonetic, semantic and syntactic explanations have been put forth. Probably, the reason why there is no consensus as to the factor triggering the Jespersen cycle is that the answer is complex, i.e. there is not a single factor which is responsible for this evolutionary path, but several factors which conspire to provide the speaker with empirical evidence that the original negative marker is actually “weak” in all domains of the grammar. As the term weak is only impressionistic, we would like to make it more precise. Although we believe that each of the abovementioned factors is important in triggering the process, we intend to discuss one additional aspect which might contribute to the general picture, namely morphological impoverishment.

If we compare the evolution of French negation (the paradigmatic case on which Jespersen first formulated his generalization) with the one of Italian, it is immediately clear that the answer to the problem of the trigger of the cycle is not simple. Comparing Old French (1–2) to Old Italian (3–4) we observe exactly the same stage of evolution: in both languages there is a preverbal negative marker which is formed by a single syllable.³ This negative marker can be “reinforced” by an additional element, which, in both languages can vary or be absent without any apparent change in the semantics of the sentence, which remains negative. The following examples show the point:

- (1) Si fait oscur, *ne* veient gote,
 refl= makes dark not they.see not
 (...) *ne* veient clarté *ne* soleil
 not they.see light not sun
 ‘It’s so dark, they do not see, (...) they do not see any light nor the sun’
 (Enéas 195)
- (2) Mais a bataille *n’o*set il *pas* venir
 but to battle not= dares =he not come
 ‘But he does not dare to come to battle’
 (Guillaume 81)
- (3) Se noi domandassimo uno consiglio
 if we we.asked a suggestion
 certo *no* llo darebbe tosto così
 sure not it= he.would.give soon so
 ‘If we asked him for advice, he would not answer so soon’
 (B. Latini, *La Rettorica*)
- (4) a. “Certo, sire” disse elli “io *non* ve lo celerò *mica*.”
 sure sir said he I not to.you=it= I.will.hide not
 ‘He said “Of course, sir, I will not hide it from you”’
 (Tristano Riccardiano 75)
 b. Di ciò *non* s’adirò *punto*
 of that not refl.=he.got.angry not
 ‘He did not get angry about that’
 (Novellino 77)

In the examples above (1, second clause) and (3) represent cases where the only negative marker is respectively *ne* and *no*, while the cases in (1, first clause) (2) and (4) represent cases in which there are two negative markers of different types. Old French is rather well studied in this respect and there is general consensus on the fact that the postverbal element was not necessarily *pas*, but several other items could act as the second part of the discontinuous negative marker (see, among others, Roberts and Roussou, 2003).

² Behind this analysis there is the assumption that the negative marker needs to be complex. We will not go any further into this, because it would lead us too far from the actual empirical domain of this work, but intend to point out that van Gelderen is probably correct in her assumption, which might be due to the necessity of the negative marker to have its domain of scope directly inside its internal structure.

³ For an extensive treatment of the development of negation from Old French to the modern pattern see Martineau and Vinet (2005). See also Meisner (2013).

If we compare this with the situation we find today, we see that while standard French exhibits the well known discontinuous negation (and some spoken varieties have already dropped the preverbal *ne*), Italian has remained fossilized in the same stage for over seven centuries, i.e. there is a preverbal negative marker, which can, but need not be accompanied by a postverbal one that can vary. Given that the two languages are rather similar in other respects which one might think interfere with the expression of negation, like the presence of a clitic system and the height of verb raising, the question as to why French has changed while Italian seems to be pretty stable is definitely an interesting one. Moreover, Northern Italian varieties like Emilian dialects have discontinuous negation, as in (5), while Lombard and Piedmontese varieties have already reached the last stage and only display a postverbal negative marker (see (6)).⁴

- (5) a. A *n* mang *mia* la cherna. (Zocca, Modena)
 b. A *n* magn *briza* la cheran. (Mezzolara, Bologna)
 c. A *n* magn *menga* la cherna. (Nonantola, Modena)
 I= not= I.eat not the meat
 'I do not eat meat.'
- (6) a. Maria a mangia *nen*. (Turin)
 M. she= eats not
 'Mary does not eat.'
 b. Lo film l'era *pa* dzen. (Cogne, Aosta)
 the movie it=was not nice
 'The movie was not nice.'
 c. El lupo el va *no*. (Milan)
 the wolf he= goes not
 'The wolf is not going (there).'

One might put forth the hypothesis that the expression of negation somehow has to do with the strength of verbal inflection, but if we compare Emilian with North Eastern Italian dialects, which have a very similar system of verbal inflection and subject clitics, but still work like standard Italian, we can immediately discard this hypothesis.

- (7) a. Maria *no* la magna la carne. (Venice)
 M. not she= eats the meat
 'Mary does not eat meat.'
 b. A *no* magno carne. (Loreo, Rovigo)
 I= not I.eat meat
 'I do not eat meat.'

In this work, we show that one of the factors that can play a role in the (non) activation of the Jespersen cycle is the morphological complexity of the negative marker: if the speaker has evidence that the preverbal negative marker is morphologically complex, (s)he will be less prone to activate the cycle. Our hunch is that the cycle, as [van Gelderen \(2011\)](#) assumes, is the expression of a very general economy strategy, which reduces the original element in all the components of grammar (phonological, morphological, syntactic and semantic) and activates so to speak "by itself" unless the speaker has reasons to believe that the element is indeed complex (at one or more levels of the grammar). Hence, the fact that the Jespersen cycle is blocked (at least in some Italian varieties) must be due to the presence of some phenomena that induce the speaker to believe that the negative marker is indeed a complex element, and as such cannot be reduced triggering then the extensive doubling phenomena which lead to the grammaticalization of another element as the actual negative marker. The hints for the complexity of the negative marker that the speaker can have are of different sorts, and can pertain to different areas of the grammar. It is known that clitic heads are all monosyllabic, while bisyllabic elements are generally not reanalyzed as heads, at least in Romance (see the case of Italian *loro* 'to them' analyzed by [Cardinaletti, 1991](#); [Egerland, 2005](#)), hence the phonological weight of the element itself most probably counts for the activation of the Jespersen cycle. However, as both in Italian and French the negative marker was already a single syllable in the medieval phase, it cannot be the pure phonological weight of the element that can explain the different evolution of the two languages. Our proposal is that among the factors that kept Italian stable there is a phonological alternation which is analyzed by the speakers as reflecting a

⁴ The data coming from modern Italian dialects stem from the ASIt data base. We refer to the ASIt webpage for a discussion of the methodology used during field work. For further information see [Cornips and Poletto \(2004\)](#).

morphological alternation which in turn is subject to the syntax of the clause area where negation occurs (namely the preverbal clitic space in the high portion of the IP). We want to underline that by no means do we believe that this is the only factor at play in the process, but that this proposal is the first step toward singling out the phenomena that make negation more stable in those Romance varieties which do not start the Jespersen cycle. This means that if the effect we describe for Italian is not present, no automatic activation of the Jespersen cycle is expected, as the language might provide the speaker with other independent evidence that the negative marker is complex.

In what follows, we examine Sicilian and Florentine (both old and modern varieties) and show that they display an interesting interaction between the negative marker and object clitics, so that the negative marker has a fuller form when no clitic is present, while it is reduced when a clitic is present. The different varieties display distinct distributions, and in some of them the alternation is to be analyzed as a syntactic phenomenon but in others as a phonological one; yet, we argue, even when it is phonological in nature, it is sensitive to structural proximity. The phonological restriction that requires a well formed syllable is imposed on a syntactic structure which contains two positions which can either be occupied by a bi-morphemic negation or by a single negative morpheme and an object clitic (or by two clitics if negation is not present). It is this alternation between a full and a reduced form of the negative marker that provides the speaker with evidence that the negative marker is bi-morphemic, and therefore renders it more stable with respect to other varieties where there is no alternation, varieties, which are therefore more prone to start the Jespersen cycle.

3. Reduced negation in clitic clusters

In this section we examine three types of systems where the negative marker interacts with clitics and argue that these phenomena drive the speaker to assume that the negative marker is composed of more than one morpheme, thus rendering the language more stable with respect to the Jespersen cycle.

3.1. Old Italian varieties

Old Florentine provides direct evidence for the interaction between the negative marker and clitics because it displays deletion of part of the negative marker only when an object clitic is present. In Old Florentine the negative marker is usually *non*, as in modern standard Italian, but it is reduced to *no-* when it is combined with an object clitic. The set of clitics which have the property of deleting part of the negative marker varies across time. In the XIII century, the phenomenon is observable with both object and dative clitics (examples in (8), from Bono Giamboni), while in the second half of the XIV century this happens only with third person object clitics (examples in (9), from Boccaccio).⁵

- (8) a. Il prossimo tuo *non* ucciderai e *no* l fedirai
 the neighbor your not you.will.kill and not =him will.hurt
 e *no* li farai (...) alcuno rincrescimento
 and not =to.him you.will.do any damage
 'You will not kill you neighbor, nor hurt him, nor do him any harm' (Vizi e Virtudi 17)

⁵ An anonymous reviewer points out that the cases with the third person might be due to a purely phonological process, namely assimilation. Notice however that cases like (8b), where the negative marker loses the coda although the following clitic starts with /t/ show that this cannot be the whole story. Notice furthermore that some authors/manuscripts, like the *Libro dei banchieri fiorentini* do not display any alternation and only have one negative marker, namely *no*. Others, like Guittone d'Arezzo display a wider alternation, where the short form *no* also occurs when the following verb starts with a vowel in addition to occurring with clitics starting with any consonant

- (i) non facie Sengnore (...) charo suo
 not makes Lord beloved his
 'The Lord does not love the one who...' (Guittone d'Arezzo, *Lettere*)
- (ii) a. No è colore alcuno...
 not is color any
 'There is no color...' (Guittone d'Arezzo, *Lettere*)
- b. Dio no odia noi...
 God not hates us
 'God does not hate us...' (Guittone d'Arezzo, *Lettere*)
- c. No ti remembra che...
 not you.refl remember that
 'Don't you remember that...' (Guittone d'Arezzo, *Rime* CCXXXVI)
- d. forse no vi fu unque
 perhaps not there was ever
 'Maybe it never existed.' (Guittone d'Arezzo, *Lettere*)

- b. No ti vo' qui mostrare e aprire
not =to.you I.want here show and explain
'I do not want to show and explain to you (that)' (Fiore di Rettorica 65)

- (9) a. ...che io prima no l vi dicessi
that I before not =it to.you= I.said
'...that I had not said it to you before' (Decameron 3.3)

- b. ...che grave non gli fosse il nascondersi
that hard not to.him= was the hiding=oneself
'...that hiding was not hard for him' (Decameron 7.6)

- c. Tu non mi scapperai delle mani che
you not me= you.will.flee from.the hands that
io non ti paghi sì dell'opere tue
I not you I.pay so of.the=deeds your
'You will not flee from my hands before I pay you for your deeds' (Decameron 8.7)

Thus, we can hypothesize that in Old Florentine the negative marker is made up of two morphemes, as shown in (10), and that deletion only targets the second morpheme, phonologically corresponding to the coda of the closed syllable:

- (10) [no] [n]⁶

Interestingly, Old Sicilian is similar to Old Florentine in the sense that the negative marker lacks the coda when there is an object clitic, while this is not the case otherwise:

- (11) a. ...ki Deu non possa cuntentari ad unu so bon sirvitori,
that God not can satisfy to one his good servant
et ki no li possa donari la visioni sua perpetua et
and that not =him can give the vision his eternal and
perpetua seuranza di no li mancar mai
eternal certainty of not =to.him disappoint never
'...that God cannot satisfy one of his good servants, and give him his eternal vision and the eternal certainty that he will not be disappointed' (Sposizione del Vangelo della Passione secondo Matteo 1.7)
- b. ...nui (...) non simu sculpati, si no la putimu aviri
we not are excused if not=it we.can have
'...we are not excused if we cannot get it' (Sposizione del Vangelo della Passione secondo Matteo 1.8)

One might wonder whether this phenomenon could simply be analyzed as deletion of the coda in order to get the basic CVCV phonological structure. Hence, the phenomenon would be purely phonological and would not have any impact on the evolution of the negative marker. However, this analysis cannot be applied to the case of Old Florentine. This is so because of cases like (9b) and (9c), where the nasal in the coda of the negative marker is not deleted. In these cases the more complex CVCCV structure is preserved, even when the two adjacent consonants are not a proper complex onset (for example /n/+m/) and, thus, the onset of the second syllable of the cluster cannot be maximized.

This means that, at least in the case of the second stage of Old Florentine, the alternation between [non] and [no] cannot be interpreted as a phonological process of deletion with consequent readjustment of the syllabic structure. In this case, the nasal in the coda behaves as an independent morpheme, which is only present when no object clitic is realized.

However, the case of Old Sicilian might be a better candidate for a phonological solution: here the clitic that can trigger deletion of the last portion of the negative marker are third person clitics, which start with a liquid, and could be found in coda position. However, also in Old Sicilian, the phenomenon cannot be phonological, because a verb with the same phonological form does not display the same behavior, as shown in (12):

- (12) ...cui liga la navicella a la rocca non liga per
who binds the boat to the rock not binds to

⁶ Throughout the article, we will use square brackets when we refer to the morphological makeup of the element and slashes when we quote the phonological form of the elements.

firmari la rocca...
snub the rock

'...who binds the boat to the rock does not do that to snub the rock

(*Sposizione del Vangelo della Passione secondo Matteo 1*)

Examples like the one above show that the loss of the final nasal is not phonological in nature: it occurs only before object clitics and not with verbs which start with the same consonant as the clitic. We propose that phonology does not have access to the category of the elements involved in the deletion process. Therefore this cannot be treated as a purely phonological rule.

It thus seems that in both Old Sicilian and Old Florentine the alternation in the form of the negative marker, which lacks the final morpheme only when the clitic is present, can only be analyzed as a syntactic phenomenon. Hence, we can state for Old Florentine and Old Sicilian that: (a) the negative marker is bi-morphemic, and (b) the final negative morpheme is not present when an object clitic is realized.

As for the reason why only the clitic has the property of substituting for the negative morpheme, we hypothesize that this is so because the two elements compete for the same position, as shown in (13):

$$(13) \quad [\text{NegP } no \text{ [FPn [Clit]]}] \rightarrow [\text{NegP } no \text{ [FP } \# \text{ Clit [E\#]]}]$$

This means that the clitic raises in Old Florentine and Old Sicilian to the position of the final morpheme of the negative marker, an effect which is not visible in modern standard Italian (see below for modern Florentine and modern Sicilian). As for the reason why an object clitic and a negative morpheme should compete for the same position in the clitic field in the high IP space (see a.o. Benincà and Tortora, 2010; Poletto, 2000), we propose that the negative marker and clitics share one feature, whose semantic value characterizes the head of FP in (13). This means that in their internal endowment both the clitic and the negative marker contain the same feature, which is checked precisely in the position for which they compete. The scenario we figure is the one originally proposed by Obenauer (2004) for so-called “alternative checkers” i.e. cases in which two or more elements can check the same feature. Obenauer considers cases where verb movement alternates with a special *wh*-form, both of which can check a high modal projection in the left periphery of a special interrogative clause. The same type of mechanism applies in our case: the head of FP can either be checked by a negative morpheme or by the clitic morpheme.⁷ As for the actual interpretative content of the FP, we surmise that it is an existential feature. The reason for this proposal is that clitics are known to be morphologically complex. We refer to Cattaneo (2009), who provides an overview of the possible features an object clitic instantiates on the basis of the incompatibilities between different clitic types in Romance. We adopt here Cattaneo’s (2009:75) proposal that all clitics are not heads but complex XPs which contain several features in their internal structure. According to Cattaneo, some clitics also possess an existential feature (in addition to others like gender, case, number etc.). The idea that several functional elements must contain an existential feature is a straightforward assumption once features are split into their primitive components and hierarchically ordered as they are for instance in the nano-syntactic theory. Elements like pronouns of all types, including *wh*-items, most probably have in their internal endowment an existential component.

On the other hand, we propose that the same is true of the negative marker, which also encodes an existential feature inside its internal structure. Evidence in favor of this assumption comes rather straightforwardly from the etymological origin of the negative marker *non*, which derives from *nē-oinum*, i.e. it contains the numeral ‘one’ (see van der Auwera (2010b:457–458) on the analysis of *nē-oinum* as a stage of the Jespersen cycle in pre-historical Latin).⁸ As etymology can be thought of as “frozen syntax”, the fact that Latin had an existential component inside the negative marker, means that this must be true of Italian as well, although the morphological evidence for this is now blurred by historical processes. On the cartographic (and nano-syntactic) assumption that functional structure is universal, the fact that Italian no longer provides this morphological evidence, does not mean that the existential feature is lost.⁹

Hence, the syntax or phonology of Old Florentine or Old Sicilian does not contain any deletion rule of a nasal in coda position or of part of the negative marker. In these cases there is no deletion at all, neither phonological nor syntactic: here

⁷ An anonymous reviewer points out that this should be morphology and not syntax. We adopt a framework like the cartographic one or the nano-syntactic one where morphemes inside a word can check the features of a projection.

⁸ In other words, it is as if the negative marker already contained an element on which the negative component has scope. This recall cases like German, in which the negative marker is directly attached to the indefinite article of the object.

⁹ As for the semantic reason why an existential should be included into the syntactic makeup of the negative marker, we cannot justify it here, because it implies a thorough analysis of all the semantic features of the negative marker on the basis of etymological and morphological evidence (see Manzini and Savoia, 2005; Garzonio and Poletto, 2009, 2013).

the existential component in the clitic field is either realized by the morpheme [n] in the coda position of the negative marker or by the object clitic, which can do this because it has the same feature in its internal composition. In other words, the movement of object clitics to the position of the existential component gives the (false) impression that part of the negative marker is deleted only when the clitic is present.

3.2. Modern Sicilian

Let us now turn to Modern Sicilian in order to see how the system has changed: among Sicilian varieties, Eastern dialects provide a rule which looks rather similar to the one of Old Sicilian. In the varieties of East Sicily, the form of the preverbal negative marker in unmarked contexts is also *non*, like in standard Italian (or, in some varieties, *nun*). The examples in (14) provide some cases from different dialects of this area.

- (14) a. S'avissi statu cchiu attentu, *non* fussi a ssu punto. (Catania)
 b. Si avissi statu chiù attentu, *non* saria a stu puntu. (Messina)
 d. Avissi statu cchiù attentu, *non* fussi a stu puntu. (Naso, Messina)
 if you.had been more careful not you.would.be at this point
 'If you had been more careful, you would not be in this situation.'

The examples in (15) show that this form *non/nun* alternates with a shorter form in a specific syntactic environment, i.e. it is reduced to *n-* when it is combined with third person object clitics.

- (15) a. Penzu ca rumani *n o* pottu. (Catania)
 I.think that tomorrow not=it I.bring
 b. lu criru ca dumani *n o* pozzu puttari. (Catania)
 I I.think that tomorrow not=it I.can bring
 c. Penzu chi *n o* pottu dumani. (Messina)
 I.think that not=it I.bring tomorrow
 'I think that I will not bring it tomorrow.'

The AIS atlas (Jaberg and Jud, 1928–40) also shows that the phenomenon is rather widespread in the area¹⁰:

- (16) a. *Nom* vi maritati? (Mascalucia, Catania)
 not you you.marry
 'Are you not going to marry?'
 a'. ...ka *n a* truvassimu.
 that not=her we.find
 '...that we do not find her.'
 a''. *Non* è ancora bona.
 not is yet good
 'It is not ready yet.'
 b. ...*num* fussi kuntentu. (San Michele di Ganzaria, Catania)
 not I.would.be happy
 '...(that) I would not be happy.'
 b'. *N u* trovu a nnudda banna.
 not=it I.find at no place
 'I cannot find it anywhere.'

However, contrary to Old Sicilian, the reduction of *non/nun* to *n-* is not limited to cases where a third person object clitic is present. It can occur also when the verb immediately follows the negative marker and starts with a vowel, like in the examples in (17). Notice, however, that in such cases the reduction is only optional and not obligatory as in (15–16):

- (17) a. *N*'assicutunu picciriddi, ma cani. (Catania)
 not=they.follow kids but dogs
 'They do not follow kids, but dogs.'

¹⁰ Notice that for the sake of convenience the examples from the AIS atlas are here reported in a simplified transcription.

- b. *N'ambracchiari u quadernu!*
not=doodle the copybook
'Do not doodle the copybook!'
- c. *Non assicutunu picciriddi, ma cani.*
not they.follow kids but dogs
'They do not follow kids, but dogs.'

Examples like those in (17) show that this type of reduction is not a purely syntactic phenomenon as the Old Sicilian and Old Florentine cases, but is sensitive to the phonological component.¹¹

We can formulate the rule that describes the alternation between *non/nun* and *n-* in Modern Eastern Sicilian in the following way: whenever there is a vowel after the negative marker, then part of the negative marker is deleted and the following element becomes the nucleus of the new syllable.

- (18) a. [nun] o → [~~nun~~] o → [n] o
b. [nun] assicutunu → [~~nun~~] assicutunu → [n a]ssicutunu

In this case the phenomenon can indeed be analyzed as a phonological process of deletion in which the syllabic structure is simplified to the unmarked CV order because either the vowel of the third person object clitic or the initial vowel of the verb can substitute for the nucleus of the negative marker, whose residual nasal in the original onset of the closed syllable *non* is then syllabified with the vowel of the clitic or of the verb.¹² It is a well known fact that the phonological process of deletion applies in Italian varieties to render syllabic structure more similar to the unmarked CV alternation. Also in this case, the phonological process of deletion creates a new but well formed syllable. Notice however that this does not explain why the phenomenon must apply when the following vowel is a clitic, while it is optional when it is the initial vowel of a verb. In other words, it seems that the phonological process still has access to the categorial information of the elements which are restructured and becomes obligatory only in the case of a clitic. This is not a minor point, as it bears on the question of the precise type of information that enters the phonological component when it gets its input from the syntactic one.¹³ In the literature on Italian, several phonological phenomena are known to apply only when the two elements are syntactically close to each other (either on neighboring heads or at least inside the same extended projection). A very well known case is that the majority of Italian varieties, on a par with other Romance languages, display a process of deletion of the vowel of the determiner when the following noun starts with a vowel, as shown in (19):

- (19) *la arancia* → ~~la~~ arancia → *l'arancia*
[la'rantʃa]
'the orange'

¹¹ The fact that before verbs with an initial vowel *n-* can be used alone is paralleled by the fact that third person object clitics also display a different form in the same phonological context. While normally third person clitics forms are: *a* (feminine singular), *o* (masculine singular) and *i* (plural), before a verb with an initial vowel the form *l* appears, which is unmarked for number and gender:

- (i) a. O vo cceccu. (Catania)
him=I.go I.search.for
b. A vo cceccu.
her=I.go I.search.for
c. I vo cceccu.
them=I.go I.search.for
'I go to search for him/her/them.'
- (ii) L'assicutunu.
him/her/them=they.follow
'They follow him/her/them.'

¹² The phonological rule we propose is a rule that substitutes the complex rhyme /un/ with the simple one /o/, therefore, it is a simplification rule. An anonymous reviewer points out that the structure is already a CVCV one, hence it is to be syllabified as /nu.nu/. Notice however, that this is not the case, as there is originally a word boundary between /nun/ and /o/, which is deleted when the sandhi rule applies simplifying the rhyme. Furthermore, there are reasons to believe that the underlying form of the clitic is CV and not only V. This is shown by the behavior of other Sicilian dialects (like the variety of Ragusa), where the clustering of /nun/ plus /u/ results in the form /nunnu/, where there has been lengthening of the consonant due to the fact that the underlying clitic form is not a simple vowel but a CV structure.

¹³ It must be pointed out that all our informants share the intuition that the reduction of *non/nun* to *n-* is optional before verbs and obligatory before (vocalic) clitics, but there is not a quantitative analysis at our disposal at the moment. Nevertheless, the pattern is relevant for our proposal, as it shows that linear phonology treats linear proximity and structural proximity differently.

The process of deletion does not apply in other contexts where the two vowels are only linearly but not structurally as close, in the sense that they belong to the same extended projection, as shown in (20):

- (20) sono andata a casa → *sono andat a casa
 I.am gone to home
 'I went home'

Notice that in both cases the vowel corresponds to an agreement morpheme, hence this cannot be a factor distinguishing between the two cases.

However, it must be pointed out that phonology alone is not enough to explain the alternation of Modern Eastern Sicilian *non/n-* for at least two reasons. First of all the reduction of *nun/non* to *n-* is impossible with monosyllabic verb forms:

- (21) a. L'idea ca occarunu fussi disonestu *non* è nova. (Catania)
 the=idea that someone was dishonest not is new
 'The idea that someone is dishonest is not new.'
 b. *L'idea ca occarunu fussi disonestu *n'è* nova.

As phonology does not have access to the categorial status of elements, it is not clear how it could discriminate between a vowel representing a clitic (like the third person clitic forms *o/a/i/e*) and the vowel representing the copula.

The second reason is that phonological rules apply without exception when the correct environment is provided. Therefore, one would expect the phonological rule of reduction of the nucleus and coda to apply to all contexts where there is structural proximity, like for instance the following one:

- (22) Don Antonio → *D'Antonio
 'Don Antonio'

However, the rule of deletion only applies when the complex rime made by the vowel and the nasal coda is part of the negative marker, and it is absent from all other environments where it could potentially apply. Hence, although the rule looks phonological in nature, it has a very limited application: it can only be applied in cases of real proximity of the two heads, namely when they are adjacent heads, as is the case for the negative marker and the clitic. Given that the rule of deletion is so special in Modern Eastern Sicilian, as it applies only to the negative marker, we propose that modern speakers also have direct evidence that negation contains two morphemes. However, in this case the distribution of the two morphemes is different from the one found in the Old varieties:

- (23) [n] [on]

This process of negative reduction is not limited to Eastern Sicilian; it can be observed also in other Southern varieties with vocalic clitics, like the Calabrian varieties described by [Pescarini \(2009\)](#):

- (24) a. Ancora *n o* cattasti? (Locri)
 yet not=it you.bought
 'Haven't you bought it yet?'
 b. Nuju vitti a me mughieri e *n a* spettastivu.
 no-one he.saw to my wife and not=her you.waited
 'Nobody saw my wife and so you did not wait for her.'

If our analysis is correct, we could also expect cases in which the interaction between the negative marker and object clitics goes in the opposite direction, i.e. it is the clitic which gives up part of its form in favor of the negative marker. This is precisely what happens in the variety of Acate (Eastern Sicilian, province of Ragusa) with third person object clitics. [Kayne \(2000:133\)](#) proposes that third person clitics, contrary to clitic forms for other persons, are bi-morphemic, as the vowel realizes number and gender, while the consonant realizes person. In Sicilian, the clitic can actually be realized as one of two morphemes depending on the environment. The phonetic realization of the clitic is related to syllable structure: when it is in proclisis, it appears as a consonant when the verb can provide the nucleus of the syllable to which the consonantal clitic attaches as the onset, i.e. when the verb starts with a vowel. Otherwise, the clitic is realized as a single vowel.

- (25) a. Sta cartuzza già ci l'aviti. (Acate, Ragusa)
 this card already there=it=you.have
 'You already have this card.'
 b. Quannu a viristi, scappasti.
 when her= you.saw you.fled
 'When you saw her, you fled.'

When negation occurs, assimilation is triggered between the negative morpheme and the following clitic:

- (26) a. *Nunn* u cattasti?
 not=it you.bought
 'Haven't you bought it?'
 b. *Nun* viristivu a ma muggheri, e *nunn* a spittastivu.
 not you.saw to my wife and not=her awaited
 'You did not see my wife and did not wait for her.'
 c. I piatta *nunn* i lavau nuddu.
 the dishes not=them (s)he.washed no-one
 'Nobody washed the dishes.'

If the clitic starts with an obstruent, no assimilation is found:

- (27) *Nun* ti preoccupari.
 not =you worry
 'Do not worry.'

If the following verb starts with a vowel, no assimilation is observed between the clitic and the negative marker, the clitic has its consonantal form and exploits the following vowel of the verb to form a syllable:

- (28) Di tannu *nun* l a vistu chiù.
 from much not=her/him has seen anymore
 'Since then he has not seen him/her anymore.'

Hence, a dialect like Acate does not display the phenomenon of negative reduction found in other Eastern Sicilian dialects, and there is no evidence that the negative marker is bimorphemic, but there is rather evidence that third person object clitics are.

3.3. Western Sicilian

In the varieties belonging to Western Sicilian, the form of the negative marker lacks the initial nasal in the onset and is lexicalized as *un*.

- (29) a. Si fussi statu chiù attentu, *un* fussi accussì. (Corleone, Palermo)
 if he.were been more careful not he.would.be this.way
 b. S'avissi statu chiu attentu,
 if=he.were been more careful
unn'avissi arrivatu a stu puntu. (Palermo)
 not he.would.have arrived to this point
 'If he had been more careful, he would have not been in this situation.'

In proclitic position, the form of third person object clitics is similar to the one of Eastern Sicilian and depends on the form of the verb: it is the consonant /l/ when the following verb begins with a vowel, otherwise the form is /u/ in all other contexts (fem. /a/; plur. /i/).

- (30) *U=va* cciercu. (Palermo)
 it=go I.search
 'I'm going to search for it.'

The underlying form is most probably /lu/, as the *lu* form occurring in enclisis suggests:

- (31) Piusu ca pi curreggi~~ll~~u t u puortu rumani. (Palermo)
 I.think that to correct=it you=it I.bring tomorrow
 'I think that I will bring it to you tomorrow in order to correct it.'

Here, the interaction between clitics and negation manifests itself (like in Acate) by means of an assimilation rule: if the negative marker is present, then the liquid of the clitic resurfaces as an assimilated nasal onto the nasal of the negative marker, which seems thus "reinforced".

- (32) Di du iorno, unn u vitti chiù. (Corleone, Palermo)
 from that day not=him I.saw anymore
 'From that day I have not seen him anymore.'

- (33) Pensu ca rumani unn u puortu. (Palermo)
 I.think that tomorrow not=it I.bring
 'I think that I will not bring it tomorrow.'

If another clitic starting with an obstruent intervenes, then the third person object clitic surfaces in its vocalic form providing the nucleus for the other clitic, which becomes the onset of the new syllable:

- (34) Piusu ca rumani un t u puortu. (Palermo)
 I.think that tomorrow not you=it I.bring
 'I think that I will not bring it to you tomorrow.'

If the following verb starts with a vowel, no assimilation is observed between the clitic and the negative marker, the clitic exploits the nucleus of the following verb to surface as a liquid:

- (35) Un l'accattasti ancuora? (Palermo)
 not it=you.bought yet
 'Haven't you bought it yet?'

To summarize, assimilation is only possible when the clitic whose underlying form has a liquid and the negative marker ending in a nasal are (a) adjacent and (b) the liquid does not already surface as the onset of the nucleus provided by the following verb.

Although clearly of phonological nature, the phenomenon is restricted to the clitic field, where the negative marker and the clitic are on adjacent heads (as shown by Parry, 1997; Zanuttini, 1997): the assimilation rule /n/+l/→/n:/ does not apply in contexts that do not involve clitics and the negative marker:

- (36) Don Luigi → /Dɔl:uidʒi/ * /Dɔn:uidʒi/

Hence, also the assimilation process is sensitive to the syntactic proximity of the two elements involved as we saw for the case of Eastern Sicilian deletion, and only occurs when the two heads are structurally adjacent as in the case of the negative marker and the clitic, but not in other contexts in which the two elements are only linearly adjacent or even located inside the same extended projection. Moreover, the type of assimilation process is rather exceptional, because Italian varieties generally do not have lag assimilation.

3.4. Modern Florentine

Florentine also changed the form of the negative marker from Old Florentine and nowadays only displays the form /un/:

- (37) Un vengo oggi. (Florence)
 not I.come today
 'I am not coming today.'

On a par with the dialect of Palermo, it also shows assimilation between an object clitic and the negative marker:

- (38) Da qui ggiorno unno vedo più
 from that day not=him= I.see anymore
 'I do not see him anymore from that day.'

However, here the assimilation process can also go in the other direction and assimilate the nasal of the negative marker to the liquid of the following clitic¹⁴:

- (39) Da qui ggiorno ullo vedo più.
 from that day not=him= I.see anymore
 'I do not see him anymore from that day.'

Notice furthermore that in this dialect the form of the object clitic is never only vocalic, but always /l+V/, except for the cases like the above:

- (40) Lo vedo.
 him= I.see
 'I see him.'

Interestingly, there is a difference between the two possible patterns of assimilation: in other contexts, the assimilation process cannot proceed from the nasal of the negative marker to the liquid of the third person clitic, but only in the other direction, so that it is the nasal which assimilates to the liquid:

- (41) a. San Leonardo → *Sa/n n/leonardo 'Saint Leonard'
 b. don Luigi → *do/n n/uigi
 c. don Luigi → do/l l/uigi

We see again that the assimilation phenomenon from the negative marker to the third person clitic singles out only the context of "negation plus clitic", while the other one is the same found throughout the language.

We conclude, that although Modern Florentine (and the dialects like Acate and more generally Western Sicilian dialects) has lost the syntactic alternation which rendered the internal structure of the negative marker visible, it still shows that the context negation plus clitic in the clitic field is a special one, as it displays, at least optionally, one type of assimilation that is not found in any other context in the language.

4. Negative and clitic interaction: from syntax to phonology

In this work we have analyzed the patterns of interaction between clitics and the preverbal negative marker and have shown that the Old Italian Florentine and Sicilian varieties have a clear alternation between two forms of the negative marker *non/nun* and *no/nu* depending on the presence of an object clitic, which requires the shorter form of the negative marker. Given that neither variety displays any general phonological rule that deletes a nasal coda in the presence of another initial consonant in the word following it, we have argued that this rule is not phonological at all, but is a morphosyntactic alternation due to the presence of the clitic which requires an analysis of the negative marker as being composed of two morphemes. No other element (including the verb) following the negative marker can trigger the shorter form of the negative marker. This alternation has helped to keep the activation of the Jespersen cycle "at bay", as the negative morpheme is perceived by the speakers as a complex item. Hence, Old Italian and Old French, which both had the possibility to reinforce the negative marker by means of a post-verbal adverb, minimizer or NPI, have developed differently: French has undergone the Jespersen cycle while Italian has not, also because French lacked any evidence which induced the speaker to assume that the preverbal negative marker was bi-morphemic.

Looking at modern varieties, we have noticed that they display a similar though not identical rule. In Eastern Sicilian the alternation between the two forms, which are now *n-/non*, is clearly conditioned by phonology, and more precisely by the rules of syllable formation: only when the following clitic is a vowel which can act as the vocalic nucleus of the nasal representing the negative marker can the rule of deletion apply and the form of the negative marker be reduced. Furthermore, this is also (at least only optionally) possible with the verb, when it starts with a vowel, which means that the rule is no longer sensitive to the category of the element following it, as in the case of the Old varieties. On this basis, we have analyzed this as a phonological rule of deletion conditioned by a special context, i.e. by the proximity of the two elements involved, which need to be strictly adjacent heads in hierarchical and not simply linear terms in order for the rule

¹⁴ This type of assimilation is found normally in the more innovative urban varieties, while the more conservative rural varieties keep the [un lo] → [unno] assimilation. This might show that the vocalic element of the negative marker is an independent morpheme. We leave this to further research.

to apply. Modern Sicilian thus possesses a phonological rule which however still seems to retain part of its original syntactic conditioning, as it still does not apply throughout the language. The case of modern Florentine assimilation, especially the type which assimilates the nasal to the liquid of the clitic, can be described as a purely phonological rule assimilating /n/ to the following /l/ when the nasal is in coda position of the preceding word. The fact that in the language we find sequences such as /ullo/ (meaning not+it) just as we find /salleonardo/ deriving through assimilation from /san leonardo/ shows that the rule applies in all relevant phonological contexts and that there is no syntactic prerequisite for its application, as is the case for Eastern Sicilian. Hence, the most advanced variant of modern Florentine has completely lost the evidence that induces the speaker to not apply the Jespersen cycle, i.e. there are no clues that the negative marker might be complex. Potentially, the less conservative variant of modern Florentine generating /ullo/ is now a language prone to undergo the Jespersen cycle, unless there are other clues in the language that prevent the speaker from analyzing the negative marker as a mono-morphemic element.

Notice that we do not argue that the only possible evidence blocking the Jespersen cycle is the one presented here, different languages can have all sorts of mechanisms that induce the speaker to analyze the negative marker as a complex element and thus block the activation of the cycle. We also do not think that the only necessary condition to the activation of the cycle is the mono-morphemic status of the negative marker. What we argue is that the Jespersen cycle is the result of a very general economy strategy, as already proposed by several authors like [Roberts and Roussou \(2003\)](#), [van Gelderen \(2011\)](#) among others, which applies anywhere that is possible and which targets all sorts of elements, not only the negative marker. We have tried to single out a phenomenon which indirectly induces the speaker to think that the negative marker cannot be interpreted as a single morpheme, and thus block the simplification of the negative marker. We believe that being a single morpheme is only one of the conditions required by the activation of the Jespersen cycle, because the negative marker must be “simple” at all levels of the grammar, including phonology and syntax in order for the cycle to start.

The second line of thought we have tried to develop here concerns the relation between phonology and syntax. We have proposed that phonology does not see categorial labels: in Old Italian the rule that captures the alternation between *non* and *no* is only a syntactic rule, because it only applies between the negative marker and the following clitic. It does not occur in any other context and not even when the element following the negative marker is a verb starting with the same consonant as the clitic. In order to analyze this process as a pure process of phonological deletion, we would have to assume that phonology discriminates among different categories, i.e. it has access to the categorial labels like negation, clitic and verb. We do not think that this is necessary, as the rule can be explained as a purely morphosyntactic alternation inside the clitic field. Other cases of alternation between elements in the clitic cluster are known in the literature (see for instance the phenomenon of object clitic for subject clitic described by [Roberts, 1993](#); [Benincà, 1986](#) or the cases described in [Manzini and Savoia, 2005](#)).

In the case of the phonological rule of deletion found in Modern Eastern Sicilian, given that it targets the negative marker and the following element (be it a clitic or a verb, the categorial status does not seem to be important), but it is clearly sensitive to the principles of syllable structure formation, we have assumed that the rule is indeed phonological, though with a syntactic conditioning: the domain of application of the rule are only structurally adjacent heads. Hence, if we want to maintain that the rule is phonological, we are forced to assume that phonology sees something more than constituent boundaries. This does not necessarily imply that phonology has direct access to the whole of syntactic structure, as we know that prosodic phrasing is formed on the basis of syntactic structure and the sensitivity of the rule to the proximity of the two heads involved in the deletion process could be formulated in prosodic terms, i.e. the deletion rule applies only inside the same prosodic phrase. However, it remains to be seen whether assuming that the deletion process only applies internally to a prosodic phrase is enough to restrict the domain of application of the deletion rule to the context where we actually see it, or whether we need some smaller entity than the prosodic phrase, either a prosodic entity or, at this point a syntactic one.¹⁵ The Modern Eastern Sicilian rule seems to be only optional when the second element is the verb, but obligatory when the second element is the clitic. This distinction could be captured by saying that what we see here are actually two rules: the one between the negative marker and the clitic is purely syntactic and is identical to the one of Old Sicilian, while the other is a phonological rule that applies to adjacent elements contained in the same prosodic phrase. If we want to be more minimal, and do not postulate two distinct deletion rules which operate on the same domain, (a move which seems indeed rather redundant), we could appeal to another prosodic unit internal to the prosodic phrase which holds the negative marker and the clitic, but which can include the verb as well, though not obligatorily. Given that such a claim would require a phonetic investigation of the prosodic contour of the sentences where deletion applies and where it does not, we leave this to future research.

As for the phenomenon of assimilation, it seems clear that in its last stage represented by Modern Florentine, it is a purely phonological rule whose domain of application is still the prosodic phrase, as in other well studied phonological

¹⁵ We refer to the standard work on prosodic domains like [Selkirk \(1984\)](#) and [Nespor and Vogel \(1986\)](#).

sandhi phenomena like “raddoppiamento fonosintattico” (syntactic doubling), see [Loporcaro \(1997\)](#).¹⁶ One further interesting observation is that the assimilation process found in the Sicilian variety of Acate and in the more conservative variant of Florentine, the one that admits assimilation of /l/ to /n/ yielding /unno/ instead of /ullo/ is a case of lag assimilation, which is rather rare in Italian varieties, which generally display rather anticipatory assimilation. This might also be an indication that the process still bears some traces of the old purely syntactic alternation between clitic and negation.

In any case, we can conclude this investigation by stating that Italian varieties have undergone a process of reanalysis from a purely syntactic rule into a phonological rule and are thereby losing or have already lost the trigger for an analysis of the negative marker as a bi-morphemic element.

The fact that in our analysis the boundaries between different components of the grammar seem to be blurred is due to the fact that some phenomena can either be analyzed as belonging to the morphological or phonological component in the acquisition process. However, we think that precisely this ambiguity is most probably one of the mechanisms through which linguistic change applies.

A possible further development of this work concerns the notion of allomorphy. The variants of negative markers we have investigated here could be seen as simple allomorphs of a single morpheme. However, we have tried to go beyond this notion and explain why two allomorphs are needed and under which conditions they are used. It could be argued that the different allomorphs actually encode different subcomponents of a complex internal syntactic structure of functional elements like negation in a nano-syntactic perspective.

We hope to have helped to shed light on the complex mechanisms that rule syntactic change, which is sometimes related to very subtle clues the speaker perceives and to have provided evidence that the fact that Italian, contrary to French, has not developed an obligatory post-verbal negative marker is not a mere chance.

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¹⁶ Cases like the following show that assimilation is blocked if the two elements belong to different prosodic phrases as in the case of left dislocated constituents.

- (i) I ffon lascialo su i llavello quando tu esci (Florence)
the hairdryer leave=it on the basin when you= you.go.out
'The hairdryer, leave it on the basin when you go out.'

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