On the prosodic marking of contrast in Romance sentence topic: evidence from Neapolitan Italian

Lisa Brunetti, Mariapaola d'Imperio, Francesco Cangemi

'Where's the cake?'
B: La torta, l'ha   mangiata MARIO.
the cake it$_{cl}$ has eaten-up Mario
'(As for) the cake, Mario ate it up'
Topic   *Comment*

1.2. Topic as a set of alternatives

The idea of topic as introducing a set of alternatives better fits English and German data. According to [35], [22], [9] (among others), a sentence topic in Germanic languages is indicated by a particular intonation, the *bridge contour*. In English the initial part of the bridge contour is traditionally called *'B' accent*, to distinguish it from the *'A' accent*, which is focal ([3], [21]). The B accent is, precisely, a rise-fall-rise tune analyzed as a L+H* accent plus a L-H% edge tone ([27]). The corresponding German contour, which Büring calls *'T' accent*, is described as a low tone on the most prominent syllable, followed by a high tone: L*H ([19]).

As mentioned before, within Büring's analysis, if an expression bears a B or T accent, a set *of sets* of propositions (a set of questions) is introduced in the semantic computation. The set is obtained by replacing the sentence focus with a wh-word and then replacing the expression bearing the B or T accent (the sentence topic) with some alternatives to it ([10]). For instance in (2aB), where *Fred* bears a B accent (indicated with boldfaced small caps), the topic value is a set of questions of the type *What did x eat?* (2b).

(2) a. A: What did Fred eat? B: **FRED** ate the BEANS.
    b. *What did Fred eat?; What did Mary eat?; What did John eat?; etc....*

The alternatives evoked by the B accent can be in contrast with each other or can be subsets of a larger set that includes them all. The topic can in fact be used to 'narrow down' a given discourse topic represented by an implicit or explicit question, hence offering a partial (non-exhaustive) answer. For instance, in (3), the female pop stars form one of the two subsets that the set of pop stars is made of. The answer is partial as it only informs about the clothes worn by the subset of *female* pop stars, without saying anything of the male ones. It is this 'partial' topic the one we will focus on in the rest of the paper.

(3) a. A: What did the pop stars wear?
       B: **The FEMALE pop stars** wore CAFTANS.
    b. *What did the female pop stars wear?; What did the male pop stars wear?; What did the female + male pop stars wear?*

The B accent in (3aB) is obligatory. As a matter of fact, according to Büring, the B accent makes it possible for the

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Abstract

In this paper we present data in Neapolitan Italian that show a clear phonological difference in intonation between a clitic left dislocated object topic in an exhaustive answer and in a partial answer. In the latter, the topic expression is set aside in its own prosodic phrase, made of a rising accent (H*) followed by a !H- boundary tone. An exhaustive answer does not show such phrasing pattern. The finding of a 'partial' tune in Romance provides a solution to the pragmatic problem of defining sentence topic by supporting a *bi*-dimensional model of Information Structure.

1. Introduction

As McNally observes [25], two different notions of 'sentence topic' exist in the literature. One notion views topic as an *entity*, about which the sentence provides some information (generally called *comment*, cf. [28], [29], [32]). With a more precise definition, Vallduví ([32]) says that a sentence topic (a *link*, in his terminology) is an 'address pointer', namely "an expression that directs the hearer to a given address [...] in the hearer's knowledge-store, under which the information carried by the sentence is entered" ([32]:59). The other notion views topic as a question (cf. [9], [18], [30]). More precisely in Büring's definition (see [9]), a sentence topic is an element that introduces a set *of sets* of alternatives in the semantic computation, namely a set of questions.

The former notion implies that a topic expression has referential properties. The latter notion, on the contrary, assumes that topic is propositional in nature. The two notions are therefore totally incompatible, although they are supposed to define the same phenomenon.

1.1. Topic as an entity denoting expression

McNally considers various set of data in different languages that support of one or the other notion. Romance languages seem to favor the notion of topic as an entity. As discussed in [32] for Catalan, in [13], [2] for Italian, in [36], [37] for Spanish, in [23] for French (among others), the syntactic construction called 'Clitic Left Dislocation' (from now on, ClLD), which is very common in Romance, singles out a referential expression that represents 'what the sentence is about'. The expression is generally an argument of the verb and is syntactically separated by the rest of the clause by displacement from its canonical position to a preverbal, clause external position. The argument can or must be resumed by a clitic pronoun inside the clause, as illustrated in Italian in (1) (small caps on *Mario* indicate the focal accent).

(1) A: Dov'è finita la torta?

answer to be congruent with the question, by introducing in the semantic computation an alternative set such that one member of the set is a question about the *whole* set of pop stars (see 3b).

1.3. What single notion of topic?

Many scholars, among which see [35], [33], [24]-[26], assume that the fall-rise tune in Germanic and the ClLD in Romance express *the same* topic function. The idea is that while English and other Germanic languages exploit prosody to express informational notions, without (or only sporadically) modifying the syntax for such purposes, in most Romance languages, on the contrary, prosody is rigid and has just one accent that indicates the focus, topic material being represented by syntactic detachments.

The correspondence between ClLD and B accent is indeed supported by the comparison between Italian (but the same observations hold for Catalan and Spanish) and English partial answers. As we said above, in English the B accent is obligatory. In Italian, the partial answer has an obligatory ClLD, as shown in (4). A Clitic *Right* Dislocation, which is also possible if the answer is exhaustive, is unacceptable (4C).

(4) A: Chi compra le bibite?
　　　'Who is buying the drinks?'
　　B:　La birra la compra MARIO.　　← ClLD
　　　　the beer　it$_{cl}$ buys Mario
　　　'MARIO is buying the BEER'　　← B accent
　　C: # La compra MARIO, la birra.　← # ClRD
　　　　it$_{cl}$ buys　Mario　the beer
　　# 'MARIO is buying the beer'　　← # NO B accent

The correspondence between ClLD and B accent observed empirically, if correct, should imply a uniform notion of topic for the two constructions. On the contrary, as seen above, different notions have been adopted depending on which of the two phenomena was studied. If we keep that the two constructions express the same function, a unified notion of topic is necessary. In the literature, however, no much attempt has been done to apply one single notion to *both* phenomena and/or to *different* languages. The only works we are aware of are [1] for Spanish and [6], [8] for Italian, where it is proposed that an alternative set is evoked also by the left dislocated element. A problem remains, however, in that the notion of topic as an entity implies referentiality, while the B accent does not (the evoked alternatives are made of *propositions* resulting from assigning different values to a variable).

2.　Romance prosody

We think that the main problem of previous works is the fact that they do not consider a complete set of data. In particular, what the previous literature fails to take into account is the prosody of partial vs exhaustive topics in Romance languages. Native speakers of these languages have the intution that in cases of partial answers like (4), a particular intonation is present on the ClLDed object, which differs from that of the same element in exahustive answers. These intuitions are supported for Catalan in a recent work ([7]), where the ClLDed object of a partial answer and that of an exhaustive answer, uttered by a Catalan phonetician, are analysed respectively as bearing a L+H* H- tune (cf. [17]) and a tune represented as L*H-. Further and stronger support comes also from another recent work by D'Imperio and colleagues ([14]-[16]) on SVO partial and exhaustive answers

in the Neapolitan variety of Italian. Since these works consider SVO sentences, the topic in their data is always a subject. In the present paper we extend their analysis to ClLDed object topics. First, however, we will present their results on topic subjects.

3.　Prosody of partial topics in Neapolitan Italian

3.1. Partial topic subjects

In [14]-[16], the SVO partial and exhaustive answers in Neapolitan Italian (from now on, NI) were elicited through question/answer dialogues between the experimenter and the subject. Informants were also given a brief description of the context in which the exchange took place. An example of an exhaustive answer and a partial answer are given below in (5) and (6) respectively.

(5) A: How does Milena drink coffee?
　　B: Milena lo vuole amaro.
　　　　'Milena wants it sugarless'

(6) A: How do your friends drink coffee?
　　B: Milena lo vuole amaro.
　　　　'Milena wants it sugarless'

The intonation of the exhaustive answer in (5B) was compared with that of the corresponding partial answer in (6B). In NI, three rising pitch accent categories can be observed: L+H* for narrow focus statements, L*+H for narrow focus questions and H* for prenuclear accent (hence, for non-partial topic cases). D'Imperio and collaborators found that the intonation of the partial topic shares the rising properties of the bitonal rising accents, in addition to a marked falling phrase accent occurring around the end of the topic constituent (see Fig. 2). Pre-boundary lengthening measures at the end of the target word also showed a stronger break in the partial answer cases with respect to the exhaustive answer cases.
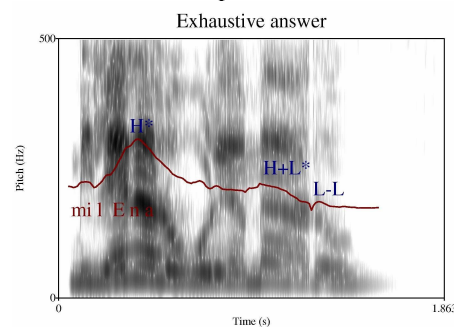

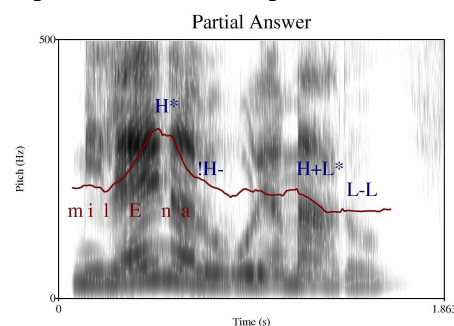Fig.1. F0 and tonal labeling for: *Milena lo vuole amaro*

Fig.2. F0 and tonal labeling for: *Milena lo vuole amaro*.

3.2. Partial ClLDed object topics

The results we are going to present for ClLDed object topics are perfectly comparable with those of subject topics. The data were also elicited through question/answer dialogues between the experimenter and 10 subjects. The procedure used was identical to that described for subject topics in the aforementioned works. An example of exhaustive answer (7) and one of a partial answer (8) are given below. The examples also include the contexts that were read to the informants before presenting them the question-answer pair.

(7) *Context.* You and your flatmates have three dogs: Lupo, Fido, and Momo. One of your flatmates asks:

Q: Chi ha dato da mangiare a Momo, oggi?
 'Who fed Momo today?'
 You answer:
A: A Momo gliel'ho   dato io.
 to Momo to- him$_{cl}$-it$_{cl}$ have given I
 '*I gave it to Momo*'

(8) *Context.* You and your family have many pets: a cat, a dog (Momo), and a bird. Today you fed the dog, but did not care of the other pets. Your mother comes home and asks:

Q: Chi ha dato da mangiare agli animali, oggi?
 'Who fed the animals today?'
 You answer:
A: A Momo gliel'ho   dato io.
 to Momo to-him$_{cl}$-it$_{cl}$ have given I
 '*I gave it to Momo*'

Although no measures were done in this case, a transcription of a consistent subset of the data clearly shows the same prosodic contrast between the partial and the exhaustive topic. The topic expression in a partial answer is set aside in its own prosodic phrase, made of a rising accent (H*) followed by a !H- boundary tone (Fig. 4). Exhaustive answers do not show such pattern (Fig. 3).
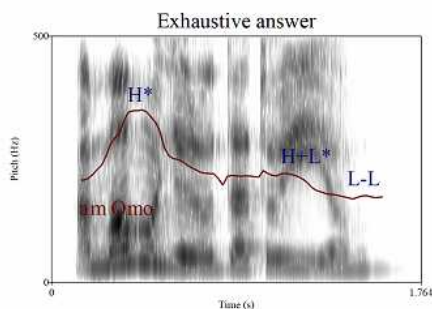

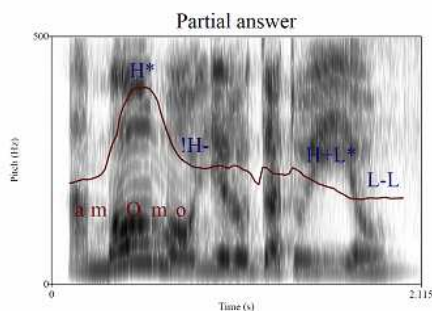Fig 3. F0 and tonal labeling for: *A Momo gliel'ho dato io*.

Fig 4. F0 and tonal labeling for: *A Momo gliel'ho dato io*.

4.   Theoretical consequences

These results have important consequences on the definition of sentence topic and on the role of prosody in representing informational categories. Recall that a partial topic has an obligatory B accent in English. The data presented in this paper show that, analogously, a Romance partial topic must be accompanied by a particular tune, which is not present in the exhaustive case.

From this result we can make a first general observation, namely that the difference between languages like English and languages like Italian cannot be reduced to a difference between languages that use prosody and languages that use syntax to represent informational categories (as done for instance in [33]). Our data show that at least in one Romance language, NI (but Brunetti's example in [7] suggests that the same can be said for Catalan), a special tune for topic material is present. This tune is present only when an alternative set *must* be introduced in the computation. In other words, it seems to be the case that both types of languages use intonation to express topic *as a set of alternatives*.

We may be led to conclude from this that a uniform notion of topic is the one where the topic is interpreted as a set of alternatives. But such a conclusion would not account for the fact that in Romance, when the topic is an object, the object is left dislocated. Therefore, the notion of entity-like topic cannot be dispensed with. Further support to this conclusion comes from German, where according to [20] an entity-like topic has to occupy a *specific position* in the syntactic tree. As a consequence, the 'partial' tune in Romance rather seems to lead us to maintain both informational notions, both in Romance and in Germanic. More precisely, the data support a *bi-dimensional* model of Information Structure (see [31] and [34]), where two distinct informational dimensions are proposed: the Topic-Comment (or Theme-Rheme, in their terminology) dimension, and the orthogonal dimension of Contrast. Contrast can combine with both the Topic/Theme and the Comment/Rheme. Its function is to introduce a set of alternatives in the computation. More precisely, Thematic Contrast induces the following interpretive effect ([34]):

(9) Thematic Contrast: *If a property P holds of the topic, a property P' different from P holds of other members of the set the topic belongs to*.

For instance, (4B) implies that other drinks that are not the beer (wine, tequila, etc.) will not be bought by Mario.

Within this model, the 'partial' tune in NI marks (Thematic) Contrast, as well as the corresponding tune does in English and German. The ClLD, on the contrary, represents the Topic/Theme, and has then no role in evoking alternatives. The picture that arises concerning the marking of informational categories in Romance and Germanic languages is therefore the following. Both language groups mark contrast by prosodic means, so there are no differences in this respect. As for the Topic/Theme, an explicit marking is accomplished through dislocation in Romance (only visible with object topics, as subjects are canonically preverbal), and presumably also in German (if we follow [20]), but it is only optionally present in English. It might be the case that English uses prosodic means also to express the Topic/Theme, but further research is needed to confirm that.

5. Partial tune: open questions

In [5] it is found that contrastive topics in German are mostly prosodically distinguished from non contrastive ones by peak height and alignment range and duration of the rise, as well as by the duration of the stressed vowel. These authors then leave open the possibility that contrast marking might be gradual and not categorical. [4] goes a step further and argues that the difference between contrastive and neutral utterances is not phonological but rather based on local acoustic differences, such as the characteristics of the pitch rise and durational properties. Calhoun ([11], [12]) casts similar doubts for English tunes. Calhoun does not compare contrastive vs neutral tunes but thematic vs rhematic contrastive tunes. In [12], she concludes that the difference between the two tunes is signalled mainly by pitch height: the H* of the topic/theme is lower than that of the comment/rheme. More precisely, she argues that the theme-rheme distinction is marked by *relative* pitch spans of adjacent phrases. In the light of our conclusions on Romance, Calhoun's conclusions, if correct, suggest that in English even the topic-comment distinction is intonational, fact that makes it harder to distinguish the representation of this dimension from that of Contrast, as we have done for Romance languages. Nevertheless, since Calhoun only considers contrastive utterances but not non-contrastive ones, the picture is incomplete and does not allow us to draw safe conclusions in this respect.

6. Conclusions

In this paper we have presented data in NI that show a clear phonological difference in intonation between a ClLDed object topic in exhaustive and partial answers. Unlike what previously claimed in the literature, these findings show that even in Romance, intonation plays a role in the representation of informational categories, more precisely of Contrast, while syntax (ClLD) marks the Topic/Theme ('what the sentence is about').

Assuming that Contrast (the introduction of alternatives) is a discourse notion ([30], [10]), this paper also confirms that prosody is an aspect of grammar dedicated to express discourse related – rather than sentence related – phenomena.

7. References

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