The Intonational Disambiguation of Potentially Ambiguous Utterances in English, Italian, and Spanish

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Abstract

We investigated the role that intonation plays in disambiguating potentially ambiguous utterances in English, Italian, and Spanish, to see a) whether speakers employ intonational means to disambiguate these utterances, and b) whether speakers of the three languages employed consistently different intonational strategies in this disambiguation.

In a preliminary production study, speakers of the three languages did differentiate among some types of syntactic and scopal ambiguity intonationally. Their strategies differed among languages, with Spanish and Italian patterning together more often than either patterned with English.

INTRODUCTION

It is often been claimed that phenomena such as the scope of negation and quantifiers and the attachment of prepositional phrases and relative clauses can be disambiguated intonationally (Ladd, 1988; Bolinger, 1989). In this preliminary study, we investigated the strategies native speakers of English, Italian, and Spanish might use to disambiguate structurally identical utterances.

METHOD

We conducted a production study to identify intonational variations associated with different readings of potentially ambiguous utterances embedded in disambiguating contexts. We focused on the following types of ambiguity: 1) scope of negation; 2) quantifiers; 3) PP attachment. An Italian example of (1) is: Non sono scopato da casa perché mia madre mi faccia paura; an English example of (2) is: William doesn’t drink because he’s unhappy.

We recorded four native speakers of each language (3 males and one female per language) reading these paragraphs. Two Italian speakers (GR, CA) are speakers of northern Italian, one (RF) of “scan, and one (R5) of a southern variety. Among them, only one (RF) can be said to have a strong regional (southern) prosodic characterization. Of the Spanish speakers, one is from the Ecuadorian Andes (JG) and the three others are Catalan, speaking Castilian for this experiment; of these, one is from Murcia (JP), and two

Our corpus is unbalanced: we have three pairs of utterances for scope of negation, two for quantifiers, and one for PP attachment.

We intended that subjects be able to infer each of the two interpretations of the sentences from the surrounding context. For example, a wide scope interpretation of negation for a sentence like William does not drink because he’s unhappy was conveyed by embedding it in the following paragraph.

I know William very well. Since his girlfriend left him, he’s done nothing but drink. Now, such a long time since his separation, he’s used to living alone. Now, William doesn’t drink because he’s unhappy.

A narrow scope was induced by embedding it in the following context:

There’s something about William that puzzles me. When he’s happy, he has a good time with his friends, and certainly he doesn’t dislike drinking. I think I understand what’s wrong. William doesn’t drink because he’s unhappy.

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utterscnes with a single intonational phrase, placing nuclear stress on the last content word of the utterance ("imbarazzò"); two others (RP, RS) produced utterances with two intermediate phrases, separated by a high intermediate phrase accent. Note that all speakers appeared to use same phrasing and same intonational contour for disambiguating the narrow scope of the negative quantifier and the wide scope of negation in type (1) sentences.

A different strategy was used for disambiguating the quantifier solo in sentences like 'E necessario che venga solo Maria'. Accent placement and relative prominence appear to be the relevant means employed to disambiguate here, but speakers were inconsistent in their productions. One (RP) used pitch accent placement as a main prosodic cue, accenting the quantifier and deaccenting the noun (Maria) in the narrow scope utterances, while deaccenting the quantifier and accenting the noun in the wide scope ones. CA and GR accent both quantifier and noun in both cases, but assigned greater prominence to the quantifier than to the noun in the narrow scope contexts.

Intonational phrasing seemed to be the most important cue in disambiguating VP from NP attachment for prepositional phrases in sentences like 'Vince la donna con i dadi'. All speakers distinguished VP attachment by producing two intermediate phrases, with the phrase boundary occurring after the direct object (la donna). NP attachment differed among subjects: For three speakers (RP, CA, GR), the sentence was uttered as one intonational phrase (RP, CA, GR); for the fourth (RS), the sentence was uttered as two intermediate phrases, but the boundary occurred after the verb vinse; so, this speaker delimited the domain of attachment using phrasing in each case.

Summarizing, it appears that intonational phrasing was the only means used consistently by our Italian speakers to disambiguate the scope of the negative quantifier and to disambiguate ambiguous PP attachment. In type (1) utterances, intonational phrasing and nuclear accent placement were used by all speakers to disambiguate. Accent placement and prominence were the means through which our speakers disambiguated the scope of the quantifier solo. When speakers differ in their production of one member of the pairs, speakers of the northern Italian generally pattern together, as do speakers of Tuscan and southern Italian. In only one case (NP attachment) did northern and Tuscan speakers exhibit similar behavior among themselves, differing from the southern Italian speaker.

Spanish
Spanish-speaking subjects used phrasing to disambiguate ambiguous scope of negation in utterances like 'Guillermo no beke porque esti triste. All four speakers produced wide scope utterances as single intermediate phrases and narrow as two intermediate phrases, with a high phrase accent at the end of the first phrase. For wide scope utterances, speakers deaccented triste, while accenting it in narrow scope utterances.

Quantifier scope disambiguation in sentences like 'La presenza de ningún estudiante podría poner las nerviosas' was disambiguated through phrasing variation. Our Spanish speakers produced wide scope utterances as two intermediate phrases, and narrow scope utterances as a single intermediate phrase. However, the scope of the quantifier solo was disambiguated by three speakers (PP, JG, JP) though pitch accent assignment. Wide scope utterances were produced with deaccented solo or a low accent (*L*), and the narrow scope reading was uttered with a peak (H* accent) on the quantifier.

Spanish subjects were inconsistent in the disambiguation of PP attachment. While speakers JG and PP did not distinguish between the two readings, JS and JP disambiguated the sentences through variation in phrasing. PP attachment was indicated by producing utterances as single intonational phrases, and VP attachment by producing two intermediate or intonational phrases.

So, our Spanish speakers consistently disambiguated scope of negation by varying prosodic phrasing and by varying accent placement. They disambiguated negative quantifier scope by varying phrasing alone, and the scope of solo by varying accent placement and type. PP attachment was less consistently treated by these speakers.

**DISCUSSION**

We found that most of our speakers used intonational means to disambiguate the potentially ambiguous sentence types under investigation in this study. English, Spanish, and Italian speakers were most similar in their disambiguation of the scope of negation, employing variation in prosodic phrasing to distinguish wide from narrow scope productions, with wide scope utterances produced as a single phrase and narrow

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**SAMPLE PARAGRAPHS**

VP attached PP: I remember that scene in the officers club. There were four of them, and they were playing dice. One of them, the youngest, was in love with the commandant's wife. The commandant was older than she was, and had a wild passion for gambling. That night he lost all he had. The youngest player proposed the woman as a stake. The commandant accepted. They rolled the die.

PP attached PP: Paradise worked in the carnival. In the next stand, there was a target-shooting game, where the prizes were old paintings. Paradise's favorite one showed a woman throwing a pair of dice. Paradiso tried and tried to win this painting, but try as he would he always failed. Finally, one night he decided that he no longer wanted the painting. And what do you suppose happened then? He won the woman with the die.

Wide scope negative quantifier: Usually our university organizes at least one seminar per year. Every student and every researcher is supposed to attend that seminar. Next week, Maria will give a talk with Marina on quantifiers. The presence of none of the students would embarrass them.

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**REFERENCES**

