THE INTONATION OF QUESTIONS IN BARI ITALIAN:
DO SPEAKERS REPLICATE THEIR SPONTANEOUS SPEECH WHEN READING?

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Abstract

In this paper we investigate the intonation of yes-no questions in Bari Italian across two speech styles. We compare the intonation of tokens produced in task-oriented dialogues with those read aloud, both from sentence-lists and from paragraph-length texts in which the target question was integrated. Results show that although all questions have a rising pitch accent, L+H* (already shown to be the marker of interrogation in Bari Italian by Grice and Savino 1995), they differ in their phrase-final F0 contour. A final rise to a high endpoint was found in 78% of read but only in 13% of spontaneous tokens. These data indicate that care should be taken when extending results from reading intonation to that of spontaneous speech.

In diesem Aufsatz untersuchen wir die Intonation von Entscheidungsfragen im Bari-Italienischen. Es wurden zwei Darbietungsformen verglichen, nämlich gelesene und spontan in task-orientierten Dialogen vorkommende Fragen. Obwohl die Entscheidungsfragen in beiden Darbietungsformen einen steigenden Tonakzent (L+H*) haben, der im Bari-Italienischen als Kennzeichnung der Interrogation gilt (Grice und Savino 1995), unterscheiden sie sich im phrasenfinalen F0-Verlauf. Ein final steigender F0-Verlauf wurde in 78% der gelesenen aber nur in 13% der spontan gesprochenen Fragen gefunden. Diese Daten zeigen einen deutlichen Unterschied, was bedeutet, daß Ergebnisse von der Intonation der gelesenen Sprache nicht ohne weiteres auf Spontansprache übertragen werden können.
1. Introduction

This paper focusses on the intonation of yes-no questions in the variety of Italian spoken in Bari. Previous accounts of this variety have not agreed as to the intonation used. Whilst Canepari (1980, 1992) describes a rise-fall-rise pattern, Grice and Savino (1995, 1997) found a rising-falling one. The former studies were based on a corpus of read speech, whereas the latter investigated spontaneous data. We hypothesise that the difference found in the literature is one relating to the task performed rather than one of cross-speaker variation. An experiment was therefore carried out in which speakers produced spontaneous questions within a dialogue setting and, in a subsequent task, read the same questions aloud.

2. Method

Five university educated speakers of Bari Italian (henceforth BI), aged between 24 and 37, were recorded in two sessions. They were all unaware as to the purpose of the experiment. The first session consisted of task-oriented dialogues (an Italian version of the HCRC Map Task (Anderson et al, 1991)) where pairs of participants exchange information as to a route on one of a pair of maps. One speaker was paired with a non-naive participant whose speech data was not analysed here. Maps were specially constructed to contain landmark names covering a range of word stress patterns and syllable structures. In the second session, speakers were asked to read aloud orthographic transcriptions of a number of their own spontaneous questions. They read two repetitions in randomised sentence lists (each list with a different randomisation) and two in specially constructed texts where the questions appeared as direct speech.

Not all yes-no questions from the dialogues were selected for analysis. The selection involved all questions where the speaker was seeking information which was not recoverable from the dialogue context, so-called information-seeking questions, or QUERIES (Carletta et al, 1995). In addition, it included a number of questions referring to information which had already been conveyed, so-called
confirmation-seeking questions, or CHECKS. The criteria used for classifying questions as QUERIES or CHECKS were identical to those used for English (Carletta et al, 1995). It was shown in (Grice and Savino, 1997) that the intonation of CHECKS depends on the degree of speaker confidence. Both QUERIES and tentative CHECKS have an accentual rise whereas highly confident checks have an accentual fall. Only the tentative CHECKS were taken into account.

3. Results and discussion

As can be seen from table 1, 87% of the 52 spontaneous questions had no rise to a high endpoint whereas 78% of their 208 read counterparts did. Details of each speaker's performance are given in Refice et al (1997).

Table 1. Number of utterances with and without a final rise, all tokens, pooled results for five speakers

<table>
<thead>
<tr>
<th></th>
<th>RISE</th>
<th>NO RISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPONTANEOUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(one production only N=52)</td>
<td>7</td>
<td>45</td>
</tr>
<tr>
<td>READ ALOUD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(four productions N=208)</td>
<td>163</td>
<td>45</td>
</tr>
</tbody>
</table>

We argue that the difference in tonal pattern between spontaneous and read questions is at the phonological level, in that it involves a choice of tonal category. Although both spontaneous and read questions have a rise within the pitch accent, which has been shown in perceptual tests to function as a marker of interrogativity (Grice and Savino, 1995), they differ phrase-finally; spontaneous questions have a fall, whereas their read counterparts have a rise. An autosegmental-metrical analysis of the contours, as reported in (Grice and Savino, 1997), involves a L+H* pitch
accent in both conditions, followed by L-L% boundary tones in spontaneous speech, and L-H% in reading. Figures 1 and 2 show the F0 contours of a spontaneous and read rendition respectively of the question "Sopra il museo delle bambole?" (Above the doll museum?). The difference in final boundary tone is evident from the low endpoint in figure 1 as opposed to the final rise to a high endpoint in figure 2.

It might be argued that the final rise in the read questions could be simply a continuation rise appended to the question intonation pattern, a phenomenon which could be expected in sentence-list reading but not in the reading of a text in which the target questions are integrated. The fact that 73% of questions embedded in contexts had a final rise suggests that we are not dealing here with such a continuation rise. Raw data is shown in table 2.

Table 2. Final rises in questions read aloud in sentence lists and embedded in contexts, pooled results for five speakers

<table>
<thead>
<tr>
<th></th>
<th>RISE</th>
<th>NO RISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SENTENCE LIST (N=104)</td>
<td>87</td>
<td>17</td>
</tr>
<tr>
<td>CONTEXT (N=104)</td>
<td>76</td>
<td>28</td>
</tr>
</tbody>
</table>

In a previous study of spontaneous speech (Grice and Savino, 1997) it was found that speakers of Bari Italian often curtail the L+H* L-L% tonal contour after the accentual rise if there are no postaccentual syllables, such that there is either no fall at all or a fall to no lower than a mid point in the speaker’s range. Since landmark names with final stress were included in the maps, there were a number of questions focussing on a landmark with no postaccentual syllables, although these were only found in the questions of three of the participants. In the speech material analysed here, a degree of curtailment of the tonal contour was found in the speech of all of the subjects, both in spontaneous and read questions. However, in the read tokens, two speakers employed an alternative strategy. The tonal sequence, this time L+H*
The intonation of questions in Bari Italian...

Figure 1. Spontaneous rendition of "Sopra il museo delle bambole?" (Above the doll museum?)

Figure 2. Read version of "Sopra il museo delle bambole?" (Above the doll museum?)
L-H% rather than L+H* L-L%, was accommodated by a durational adjustment to the syllable bearing the tones. That is, the phrase-final accented syllable was considerably lengthened. The two speakers who used this strategy used it exclusively in read speech.

4. Implications

This paper reports work in progress. From a preliminary analysis of the data, we have shown that although speakers use the same pitch accent, the boundary tones found in spontaneous speech are different from those used in reading. These results hold for questions read both in sentence lists and within paragraph-length contexts. We have also indicated that durational adjustment used in reading for accommodating tones in phrase-final position is used by a subset of the speakers when reading aloud but not when speaking spontaneously.

It is clear that the collection of read materials is more straightforward than that of spontaneous speech, and that it enables within-speaker and cross-speaker comparisons with amounts of comparable data which can yield statistically significant results. However, the fact that 78% of read questions had a final rise as opposed to 13% of spontaneous ones makes clear that what is true for reading cannot simply be extended to spontaneous speech.

Further analysis of durational and F0 characteristics of the data will reveal not only where other differences lie but also whether there are aspects of production which are constant across the two styles.
5. References


