A study of intonation contours in Palermo and Catania Italian shows that surface dissimilarities between interrogative forms may be simply due to timing differences and the existence of a non-functional tone.

1 INTRODUCTION

In Italian, intonation plays a major role in the communication of interrogation. In the case of yes-no (polar) questions, there are no interacting morphological or syntactic cues; it is solely by virtue of their intonation contours that they are perceived as questions rather than as any other illocutionary act. Nonetheless, the tonal pattern which marks this function in different accents of Italian is not uniform. In the two Sicilian varieties examined here, those spoken in Palermo and Catania, it is marked with a rise-fall and a rise respectively.

Use is made here of recordings carried out as part of a more extensive study. The latter include spontaneous speech, and questions and statements which were read aloud. The latter had accompanying contexts clearly indicating the desired focus structure. An auditory and instrumental examination of these data for five speakers of each variety (all speaking regional Italian rather than a dialect) provides the basis for discussion.

2 THE TONAL FORM OF INTERROGATION

According to Crystal [3] (210-11) 'most intonologists view the final direction of pitch movement as paramount in the classification of tones; a rise-fall is therefore considered to be a variant of a fall rather than a rise. In Bolinger's pitch accent analysis, a rise-fall lies, along with falls, within the Accen A category, except where the fall has a shallow gradient.

If it is the terminal pitch direction which is crucial to the marking of interrogation, then the two varieties of Sicilian Italian, Palermo Italian (PI) and Catania Italian (CI), make use of entirely different intonation patterns: the terminal pitch movement is falling in the former and rising in the latter. However, the two are mutually comprehensible as far as interrogative function is concerned. It is therefore of interest to examine whether there is a common element in these two contours.

It could be argued that it is the rise which signals interrogation - in Bolinger group-finally in CI and before the final fall in PI. Although this is tenable in CI, the situation is not clear-cut in PI, where non-final clauses are distinguished from polar questions by intonational means, even though both types of contour contain a pre-terminal rise. Alternatively, interrogation could be signalled by the presence of high pitch, manifesting itself as a high terminal in CI and as a boosted peak in PI; but there is no simple correlation here either, as boosted peaks are not confined to interrogatives. They occur on non-final clauses and exclamations, both of which are intonationally (whilst not necessarily syntactically) distinct from polar questions. A consideration of these other forms is important in clarifying the tonal form of yes-no questions.

3 TIMING IN PI CONTOURS

A closer look at the interrogative in PI suggests that it is the timing of the rise that distinguishes polar questions from other sentence types. In the former, the rise begins and ends on the accented syllable; in fact it is generally accomplished during the vocalic portion of the syllable (which is also the part with highest sonority, cf. Silverman and Pierrehumbert [5]).

Figure 1 illustrates the F0 contour of a PI yes-no question with narrow focus on the last lexical item: "Glie lo porta domani?" (Will she bring it tomorrow?). As is most common in Italian, the penultimate syllable is stressed. The final part of the contour (in the region of the final accented syllable and beyond) may be described as the following sequence of tones: LHL. This LH sequence occurs in non-final clauses and exclamations mentioned above.

In the schemata presented below, an initial L tone is taken to occur at the point at which the F0 gradient becomes positive (the beginning of the rise), the LH tone the point at which a zero gradient is reached; this could be a turning point (peak) or the beginning of a plateau. The final L is the low point reached at the end of the utterance. Schematically:

In all cases, the final L occurs at the end of the intonation unit. We shall therefore concentrate on the timing of the LH sequence.

In the polar question, L occurs early and H late in the accented vowel. The contour may be schematised thus:

In non-final clauses, L occurs between one and two syllables before the accented syllable. H occurs late in the vowel, as follows:

In certain types of exclamation, L occurs early before the accented syllable and H occurs early in the accented vowel, as follows:

The existence of these contours makes it difficult to account for the distinctive timing in terms of association rules, which allow for the association of one tone with a mutually strong (accessed) syllable. Optionally, another tone may lead or trail. An association of the type LH* would have to be used for cases (b) and (c) above and L+H* for case (a).

Where the accented syllable is word and utterance-final, the rising movement is timed in the same way as in penultimately stressed words but the fall is not completed, i.e. does not terminate low; the rise(-plateau)-fall in Figure 1 has as its equivalent the rise-plateau-stump (Cruttenden's terminology) in Figure 2. "Glie lo porta domani?" (Did you say it?)

The timing of the LH part of the contour is such that both L and H occur on the vocalic part of the syllable; it can be argued that there is a final L if it is considered to be undershoot. It appears, then, that the final drop to low does not play an important role in signalling interrogation.

4 TIMING IN POLAR QUESTIONS IN PI AND CI

Figure 2 illustrates the CI contour of the yes-no question "Glie lo porta domani?" - equivalent to Figure 1 in PI.

Two alternative hypotheses might account for the mutual comprehensibility between PI and CI interrogative contours, both assuming that LH is the crucial sequence. The first relies on the concept of alignment which has been explored in various ways in a number of theoretical frameworks. The work of Bruce and Garding [1] accounts for dialectal variation in terms of whether a F0 peak is early or late in relation to the accented syllable. Ladd [4] formulates this in terms of the binary feature (delayed peak). The notion of precise alignment is not the one mentioned in work adopted here. However, no constraints are placed on the
number of tones aligned with any given unit.

The second hypothesis makes use of the concept of association where one tone only is associated with a unit in the syllable tier (Pierrehumbert [5]). In each case, the low end-point in PI is accounted for differently:

Hypothesis A: In PI, L is aligned with the beginning and H with the end of the accented syllable. Once the H target is reached, the pitch falls to a contextually-accounted for differently:

Hypothesis B: For PI, the contour is analysed as L*H H% although no independent evidence in support of Hypothesis A may be found by considering the tonal timing of the other LH contours in PI. An account of this alignment requires four alignment points, all of which can be used distinctively:

\[ \text{L*H L\%} \]

where, in relation to the segmental tier, \( \text{L*} \) is prior to the accented syllable (equivalent to a leading tone); within the accented syllable, \( \text{V} \) is early and \( \text{V}+ \) is last. \( \text{L} \) is at the end of the utterance.

The yes-no question (a) is aligned thus:

\[ \text{L H L} \]

For CI, the boundary tone is not obligatorily low; it may be high or low. The contour is analysed as L+ H% or L+H H% although no independent evidence in favour of the latter tonal form with a bithal pitch accent has been found.

In opposition to Hypothesis B is the existence of the contour in Figure 4 of the PI question "Ma e' andalo al cinema?" (But did he go to the cinema?) where narrow focus is underlined. Both L and H fall on the accented syllable "ca". The rest of the contour consists of a high plateau followed by HLL. Although the L% in this position is underlined, it is not obligatory low; it may be high or low. The contour is further corroborated, some of which may be gleaned from a study of other languages which use the rise-fall as marker of interrogation. This may provide an explanation for why these languages do not fit in with the universal tendency for a terminal rise to mark interrogation.

In addition, more detailed phonetic analysis needs to be performed on the PI interrogative contours and a more systematic comparison made with other non-interrogative contours. In particular, the alignment of each tone needs to be systematically varied.

6 REFERENCES

[3] Crystal, D, 1979, Intonation in English, CUP.