

Greek intonation in contact

Ongoing long-term language contact has been shown to result in intonational features spreading from one variety to another (O'Rourke, E. 2012; Queen, R. 2012). In this talk I present results from an ongoing project that aims to understand whether such changes in intonation persist after contact has ceased, an area that is so far under-researched. In particular, the results involve tunes from two Greek varieties. First, declarative and polar question tunes in contemporary Cretan Greek, a regional variety of Greek whose speakers were in contact with Venetian Italian speakers during the four and half centuries of Venetian rule on the island of Crete (1204 to 1669). Second, continuation rise tunes in Asia Minor Greek (AMG), whose speakers cohabited with Turks in the Anatolian peninsula for 800 years, until the 1923 Convention Concerning the Exchange of Greek and Turkish Populations forced a two-way mass migration between Turkey and Greece. Heritage speakers of AMG, second- and third-generation ones, now live in their own villages in Greece. Standard Modern Greek as spoken in Athens (henceforth Athenian) is used as a control. The hypotheses under investigation were that (a) Cretan and AMG intonation patterns are different from Athenian ones; (b) intonation patterns in the two Greek varieties are similar to the languages they were in contact with, Cretan to Venetian Italian and AMG to Turkish; (c) for the AMG-Athenian-Turkish comparison, intonation patterns in the speech of first-generation AMG speakers born in the Anatolian peninsula resemble Turkish patterns more than those of second-generation heritage speakers born and raised in Greece.

Drawn from pre-existing corpora, our data comprises spontaneous and semi-spontaneous speech, in contrast to the controlled laboratory speech analysed in the majority of intonational studies. We used 1610 declarative and 698 polar question tokens for the Cretan-Athenian-Venetian comparison, and 1127 continuation rise tokens for the AMG-Athenian-Turkish comparison. We quantified similarities and differences among the language varieties in intonation patterns by a combination of tools. The first is mathematically modelling the shape of the tunes employing techniques of Functional Data Analysis (Ramsay, Hooker & Graves, 2009) and fitting 4th-order orthogonal (Legendre) polynomials $\hat{f}_0 = \sum c_n t^n$ to f_0 contours to analyse shape properties of the f_0 contours (such as average height, expressed by the polynomial coefficient c_0 , slope c_1 , quadratic curvature c_2 , etc; cf. Grabe, E., Kochanski, G. & Coleman, J. 2007). The second is using mainstream Autosegmental-Metrical (Pierrehumbert, 1980; Ladd, 2008) measures such as the alignment of nuclear tones in the tunes with relevant segmental landmarks. Unlike most current intonation studies, we take a corpus-based approach (Taylor, 2008), using statistical methods to discern patterns in corpora of natural speech in the language varieties.

The results of the Cretan-Athenian-Venetian comparison confirm that the intonation patterns of Cretan declarative and polar question tunes are similar to those of Venetian Italian. These results were found to be stronger in polar questions than in declaratives. In declaratives, which is an f_0 fall in all three varieties, subtle shape variations statistically place Cretan closer to Venetian than Athenian ones. In polar questions, no significant differences between Cretan and Venetian in the shape of the f_0 contours were found for three of the four polynomial coefficients we examined, nor in the alignment of the L tone in declaratives and H in polar questions, which aligned very close to the end of the nuclear vowel. In contrast, the Athenian L and H tones aligned later, especially so in polar questions where the H appeared 570 ms after the nuclear vowel. The findings of the AMG-Athenian-Turkish diachronic study showed two patterns in the f_0 curve shape and tone alignment of the continuation rises, one similar to the Athenian and one similar to the Turkish, indicating code-mixing. In addition, our results revealed that this dual patterning diminishes in the speech of second-generation AMG speakers, indicating intergenerational change towards a more Athenian-like pattern.

These results suggest a lasting effect of historical language contact on dialect intonation patterns persisting to the present day. The findings of the Cretan-Athenian-Venetian comparison especially, highlight the robustness of contact effects almost three and a half centuries after regular contact ceased.

References

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