

## The importance of being civil: Intonational variability in Greek

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Variation in intonational structure has not received as much attention as segmental variation has. Although our knowledge of the intonation systems of a large number of languages from diverse language groups has been widening (see for example Jun 2005, 2014 and references therein), our understanding of the range, the causes and the types of variability admitted in this domain is limited. In this paper we examine variation occurring as a function of politeness and gender in Modern Greek statements and questions.

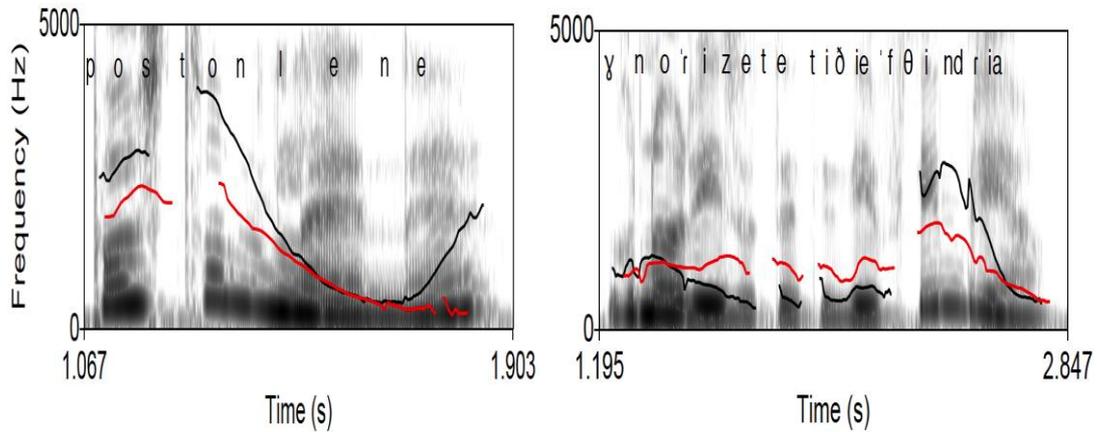
Previous research on the structure of Greek wh-questions has shown that it varies depending on gender and pragmatic interpretation (Arvaniti, Baltazani & Gryllia 2014). In this paper we extend the investigation of the social and pragmatic import of intonational variation by investigating more sentence modes, specifically statements and yes-no questions. Our hypothesis is that both gender and pragmatic factors such as polite or impolite address strategies contribute to variability in intonational structure and the phonetic realization of melodies.

In a series of controlled production experiments, we recorded a corpus of 1,440 utterances of different modalities and in two politeness styles: 360 tokens each for statements and yes-no questions [10 speakers (5 F, 5 M) × 6 lexicalizations × 3 repetitions × 2 address strategies (polite, impolite)], and 720 tokens for wh-questions [20 speakers (10 F, 10 M) × 6 lexicalizations × 3 repetitions × 2 address strategies (polite, impolite)]

Preliminary results reveal both categorical and gradient differences between polite and impolite utterances, across sentence modes. Among the categorical differences found in our data, are the type of pitch accents and edge tones, as shown for wh-questions (left) and yes-no questions (right) in Figure 1: polite wh-questions end high and carry a L\*+H pitch accent on the wh-word (black line) contrasting with the low end and L+H\* of impolite ones (red line); this result confirms the conclusions of Arvaniti et al. (2014). Polite yes-no questions, on the other hand, have a L\* nucleus on the syllable [ri] of [yno'rizete] (black line), while impolite ones realize this syllable with a L\*+H nucleus (red line). In addition to these categorical differences, Figure 1 also illustrates gradient differences in pitch range that were detected in the data: the pitch range of the whole contour in the polite wh-question was typically expanded in comparison to the impolite one and so was the final rise-fall of the yes-no question (realized here over the stressed syllable [fθi] of [ðie'fθindria]).

Gender effects were observed in addition to the pragmatic ones. These effects were mostly gradient: greater pitch range and duration differences between polite and impolite renditions were produced by female speakers in comparison to male ones.

Overall, the results supported our hypotheses. First, they confirmed that speakers systematically employ different strategies to produce polite and impolite utterances across sentence modes. Second, social factors such as gender play an important role in intonational variability. In sum, these results illustrate the complex relation between intonational variability on one hand and pragmatic and sociolinguistic parameters on the other, add to our understanding of the extent and sources of variation in intonation, and evince the need for further research in this area.



**Figure 1.** Polite (black) and impolite (red) versions of the wh-question [ˈpos ton ˈlene] “What’s his name?” (left) and the yes-no question [ɣnoˈrizete ti ðieˈfθindria] “Do you know the head-mistress?” See text for details.

## References

- Arvaniti, A., M. Baltazani and S. Gryllia, 2014. The pragmatic interpretation of intonation in Greek wh-questions. In Campbell, Gibbon, and Hirst (eds.). *Social and Linguistic Speech Prosody, Proceedings of Speech Prosody 7*, 1144--1148.
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