

Politeness- and tune-induced variation in the realization of prosody

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In the autosegmental-metrical (AM) model of intonational phonology there is a principled separation between intonation, the primary exponent of which is considered to be F₀, and metrical structure, phonetically realized as changes in duration, amplitude and segment quality. Despite this separation, recent research has shown that the choice of tune can affect parameters other than F₀ in systematic ways that cannot be accounted for by changes in metrical structure (e.g. Arvaniti, Żygis, Jaskula, 2016). Here we present results from a large study of Greek wh-question tunes produced under different pragmatic and politeness conditions. The results show exactly this kind of systematic variation.

Twenty speakers of Greek (10F, 10M) took part in a discourse completion task (DCT): they heard and saw on screen short scenarios ending in a wh-question. DCTs were controlled for politeness, with power (inferior, equal, or superior) and solidarity (solidary, non-solidary) independently manipulated. (Degree of imposition was not included due to the nature of wh-questions.) DCTs were also controlled for context: the scenarios used lead to the wh-questions being used either to request information or to indirectly make a statement; for the former, the preferred tune is L*+H L- !H%; for the latter, L+H* L-L% (Arvaniti Baltazani, Gryllia, 2014). The data were statistically analyzed using linear mixed effects models with context, power, and solidarity as fixed effects, and speaker and items as random factors.

The results largely confirmed Arvaniti et al. (2014) regarding context: the two context types led to the elicitation of distinct tunes, L*+H L- !H% and L+H* L-L%, with lower scaling and later alignment of the accentual H in the former, and differences in final F₀ consistent with a !H% and L% respectively. In addition, context affected the duration of specific segments, such that questions after information contexts had a shorter accented vowel and longer final vowel than questions following non-informational contexts. Finally, politeness affected both duration and aspects of intonation: in conditions considered more polite (specifically, the addressee being non-solidary with the speaker), questions were produced with later and more highly scaled accentual peaks, and with an overall lower speaking rate.

The results indicate that tunes are associated with different durational profiles which are also influenced by politeness. The accentual H also exhibited context-sensitive differences in scaling not directly related to its phonological representation. The influence of context and politeness and the variability in the realization of tunes they give rise to support recent studies showing that the study of intonation must include parameters beyond F₀ (e.g. Arvaniti et al. 2016), and strongly argue against the view that phonological representations like those of AM can (or should) directly predict phonetic detail (cf. Arvaniti 2016).

References

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