

## **Intonational Variation and Social Meaning: Categorical and Phonetic Aspects**

Robert J. Podesva  
*Stanford University*

Nearly all phonological variation studies have focused on segment-level phenomena. Only a handful have examined intonational variation (Guy et al. 1986, Yaeger-Dror et al. 2003), most of which define variables categorically in terms of contour shape (rising, falling), and none of which examine intra-speaker variation. The work presented here contributes to this small body of research by examining intra-speaker, cross-situational variation to investigate categorical and phonetic properties of intonation, suggesting that social meaning is encoded at both levels.

This paper is embedded in a larger ethnographic project on the speech of gay professionals, examining the intonation patterns of four individuals in social and professional situations. I considered only (syntactically) declarative utterances bearing focus on the final content word. Using acoustic representations, intonation contours were categorized as falling, rising, or level. Measurements were also taken of each contour's fundamental frequency ( $f_0$ ) peak, range, and slope (rate of  $f_0$  change).

Of all the English melodies, rising intonation on declaratives has attracted the most attention, particularly in language and gender research (Lakoff 1975, McConnell-Ginet 1983). With all its ties to varieties of femininity, one might expect the speakers here to use rising intonation more frequently in social situations, where gay identity might be more relevant, which indeed is the usual case ( $df=2$ ,  $c^2=7.39$ ,  $p\leq 0.025$ ). One speaker, however, uses rising intonation more frequently in his professional situation (medical consultation with patient) than in his social situation ( $df=2$ ,  $c^2=6.429$ ,  $p\leq 0.05$ ), to take advantage of the cooperative meanings associated with rising contours (McConnell-Ginet 1983) to calm his patient. Acoustic analyses revealed no differences in the phonetic character of rising intonation across situations for any speaker. Because rising intonation is less frequent (less expected) than its falling counterpart, speakers need not use acoustic extremes of the variant to convey meaning; merely using it is sufficient.

In contrast, falling contours appear equally frequently across situations, while their phonetic character differs across situations. Speakers use higher  $f_0$  levels ( $p\leq 0.001$ ), wider  $f_0$  ranges ( $p\leq 0.004$ ), and steeper  $f_0$  slopes ( $p\leq 0.001$ ) in their social situations. These acoustic properties are not simply markers of social (casual) speech, as these levels in other social situations more closely resemble the professional situation levels. To investigate the social meaning of higher  $f_0$ , wider ranges, and steeper slopes, I conducted a detailed conversational analysis for tokens exhibiting extreme values (2 s.d. greater than the mean), assuming these tokens most clearly represent the social meaning. In all cases the contours are used on expressive, evaluative utterances. Because falling intonation represents the unmarked declarative contour, using the contour alone is insufficient for indexing social meaning; speakers need to use marked acoustic variants to make them salient enough to do social work.

This paper shows that the domain of intonation is a rich site for encoding social information and to investigate such variation, it is necessary to conduct both categorical and acoustic analyses while taking into account social information about speakers, like the situations they are in and, within them, what they are trying to accomplish in particular conversational contexts.