

The perception of intonational emphasis: Continuous or categorical — and for whom?

Jason Bishop
City University of New York

Ladd and Morton (1997) carried out a set of perception experiments to test for a categorical distinction between "normal" and "emphatic" speech defined by the height of f0 peaks. Interestingly, in an identification task with English-speaking listeners, they found evidence for categorical behavior: as a group, listeners' identification patterns showed a sigmoid response curve for a continuum of f0 values ranging from low (120Hz) to high (180Hz), although the requisite discrimination patterns were not found, suggesting listeners did not treat the contrast a truly discrete one. This led Ladd and Morton to conclude that f0, as it relates to intonational emphasis, may be "categorically interpreted" but not categorically perceived. In the present study, still in progress, we revisit this pattern from an individual differences perspective, exploring whether cross-listener variation in "pragmatic skill" predicts the extent to which listeners assign emphatic interpretations to f0 continua categorically. In fact, we find that measures of pragmatic skill that rely on identifying emotions -- e.g., the Reading the Mind in the Eyes test (Baron-Cohen et al. 2001) and the Bell-Lysaker Emotion Recognition test (Bell et al., 1997) are systematically related to the steepness/shalowness of identification functions for f0 continua. I'll discuss these and other perceptual findings (e.g., from Rapid Prosody Transcription) with the goal of better understanding how different kinds of linguistic meaning are encoded in/decoded from gradient versus categorical prosodic cues.

References

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the Mind in the Eyes" Test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry*, 42(2), 241–251. <https://doi.org/10.1017>.

Ladd, R. & Morton, R. (1997). The perception of intonational emphasis: Continuous or categorical. *Journal of Phonetics* (1997) 25, 313–342. <https://doi.org/10.1006/jpho.1997.0046>.

Bell, M., Brysonb, G., & Lysaker, P. (1997). Positive and negative affect recognition in schizophrenia : A comparison with substance abuse and normal control subjects. *Psychiatry Research*, 73(1–2), 73–82. [http://doi.org/10.1016/S0165-1781\(97\)00111-X](http://doi.org/10.1016/S0165-1781(97)00111-X).