

Assessment of information status in British and Canadian English by Canadian listeners

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A rating experiment was conducted to investigate perceptual differences in intonational marking of information status (givenness, newness) in British English and Canadian English accented speech. Accented speech has been shown to affect speech perception and processing (e.g., Floccia et al., 2009; Porretta, 2015). However, little research has been done on cross-dialectal perception of intonational patterns. Differences were expected, based on observed differences of prosodic realization in other dialectal studies (Grabe, 2004), but no predictions were made because of the lack of studies on Canadian English prosody. The present study lays the groundwork for future studies on the impact of dialectal variation of intonation on discourse processing.

Nineteen native speakers of Canadian English rated 108 sentence pairs in each variety for acceptability, given the information structural context, on a 5-point scale. The object of the second sentence could either be a newly introduced object (new-condition) (e.g. *Put the cage above the square. Now put the cake below the triangle.*), or refer to an object that was already mentioned in the first sentence (given-condition) (e.g. *Put the cage above the square. Now put the cage below the triangle.*). The object in the second sentence was spoken with either a falling (H*L) or rising (L*H) accent, or no accent, in line with how prosody is used in British English (Chen, Den Os, & De Ruijter, 2007). Pairing accentuation with information status led to six experimental conditions. Each stimuli set was identical except for the accent (British vs. Canadian). The realization of the accents might not have been identical because of the use of natural productions.

Listeners rated the intonation in the two regional accents differently (Figure 1). Linear models indicated that acceptability ratings for British speech were predicted by information status in interaction with intonation ($p < .001$). This is in line with earlier studies on how British listeners interpret prosody in their native variant (Chen et al., 2007). In contrast, ratings for Canadian accented speech were solely based on intonation ($p < .001$), irrespective of information status. Remarkably, unlike British listeners in earlier studies, Canadian listeners in the present experiment did not associate a falling accent (H*L) with either givenness or newness. Moreover, rising accentuation was rated unacceptable across the board in Canadian speech, but was acceptable in British speech (in ‘given’ information).

These results indicate that Canadian listeners know how to process intonation interacting with information status for British English, but do not process intonation in Canadian speech in a similar manner. Two alternative explanations can be put forward: Canadian English does not use intonation to mark information status at all, similar to Indian and Singapore English (Ouafeu 2007), or it does so in a different way than British English (via accentuation and accent type). DePape et al. (2012) conducted a phonetic analysis on sentences produced as responses to WH-questions by native speakers of Canadian English and found that newness and givenness were distinguished in pitch- and duration-related measurements. This finding provides indirect evidence for our second explanation. Also, the Canadian listeners might have treated falling accent as an unmarked accent. Furthermore, our results suggest that the rising accent may not to be commonly used in Canadian English, in line with the finding that dialects of English spoken in the British Isles differ in both the inventory of pitch accents and the distribution of the same pitch accents (Grabe, 2004).

References

- Chen, A., Den Os, E. & De Ruiter, J. P. (2007). Pitch accent type matters for online processing of information status: Evidence from natural and synthetic speech. *The Linguistic Review*, 24, 317-409.
- DePape, A. R., Chen, A., Hall, G. B. C., and Trainor, L. J. (2012). Use of prosody and information structure in high functioning adults with Autism in relation to language ability. *Frontiers in Psychology*, 3, 1-13.
- Floccia, C., Butler, J., & Goslin, J. (2009). Regional and foreign accent processing in English: Can listeners adapt? *Journal of Psycholinguistic Research*, 38, 379-412.
- Grabe, E. (2004). Intonational variation in urban dialects of English spoken in the British Isles. In Gilles, P. and Peters, J. (eds.) *Regional Variation in Intonation*. Linguistische Arbeiten, Tuebingen, Niemeyer, pp. 9-31.
- Ouafeu, Y. T. S. (2007). Intonational marking of new and given information in Cameroon English. *English World-Wide*, 28, 187-199.
- Porretta, V. (2015). Perception and lexical processing of gradient foreign accentedness. Academic Dissertation, University of Alberta. Retrieved from: <https://era.library.ualberta.ca/files/4f16c5678#.VsRLVikdPcc>

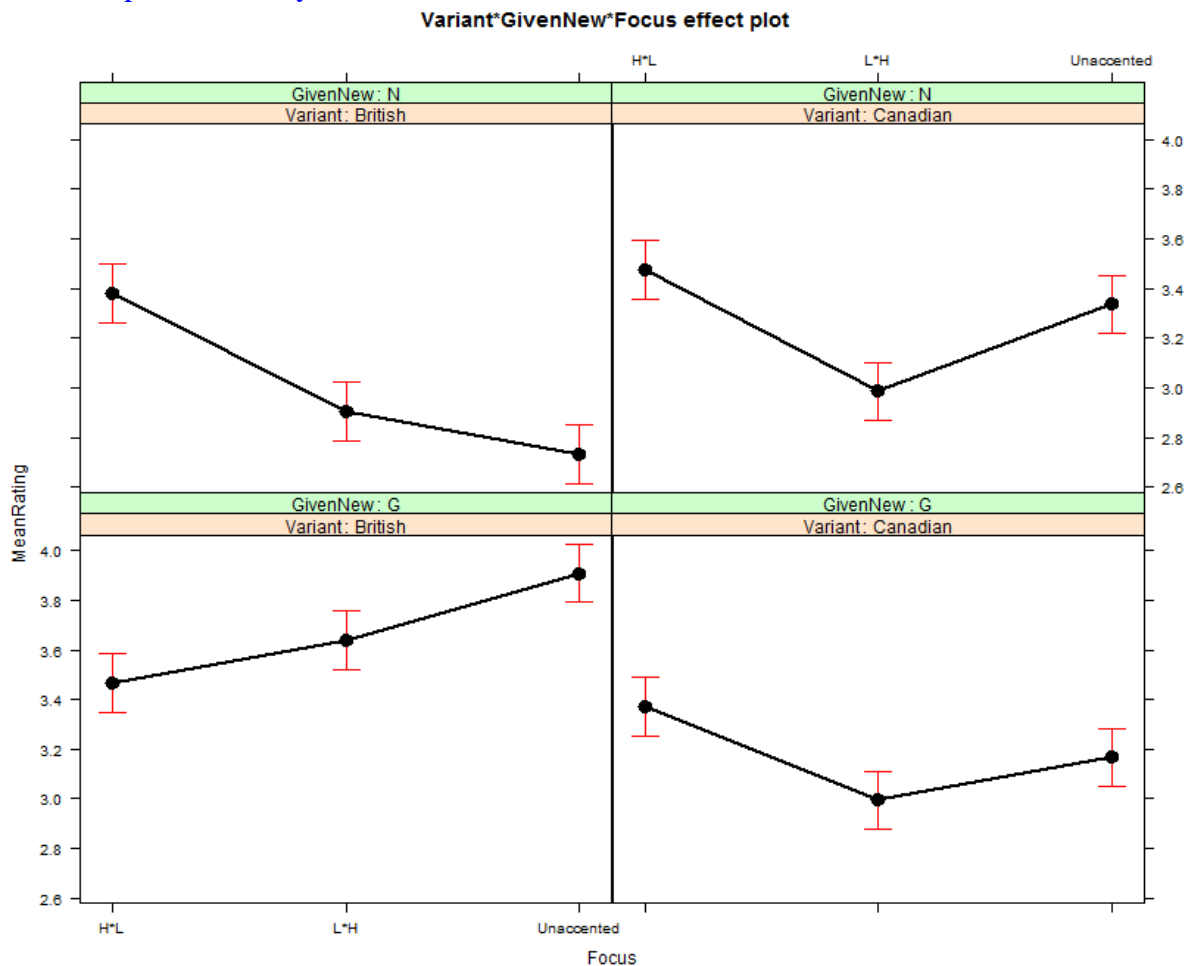


Figure 1. Depiction of the three-way interaction between Variant, Information status, and Intonation.