Can Rapid Prosody Transcription be replicated?

Riccardo Orrico, Stella Gryllia, Jiseung Kim, Amalia Arvaniti

Radboud University

Prominence is studied using Rapid Prosody Transcription (RPT), in which naïve participants hear utterances and mark the words they consider prominent. One such study, Arvaniti et al. (2022; Speech Prosody), examined the prominence scores of 281 accents - independently coded as H* or L+H* using phonetic criteria and as contrastive or non-contrastive using pragmatic criteria - provided by Standard Southern British English (SSBE) speakers. Individual participant responses fell into three patterns: responses based on acoustic prominence (favouring L+H* accents), pragmatic meaning (favouring contrastive accents), or both (marking both L+H*s and contrastive accents as prominent). We tested whether RPT results and these response patterns are replicable and explainable by Empathy Quotient (EQ), which enhances attention to meaning leading to higher scores for contrastive accents, and Autism Quotient (AQ) or musicality (measured by mini-PROMS), which enhance attention to phonetic detail leading to higher scores for L+H*s. Sixty two SSBE speakers participated in RPT using the method and materials of Arvaniti et al. (2022). The aggregate results were replicated: contrastive L+H*s were significantly more likely and non-contrastive H*s significantly less likely to be considered prominent, while non-contrastive L+H*s and contrastive H*s had similarly low scores. Individual participant responses were not affected by AQ. However, participants with high EQ did prioritize pragmatic over phonetic cues (i.e. they favoured contrastive accents independently of shape). Finally, those scoring high in musicality were most sensitive to phonetic differences particularly when they combined with pragmatics (leading to very high scores for contrastive L+H*s and very low scores to non-contrastive H*s).