Perception of Syntactic Boundaries in Speech Produced by Individuals with Parkinson's Disease: The Effects of Linguistic Context, Loudness, and Listener Experience

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A cardinal characteristic of dysarthria associated with Parkinson's disease (PD) is monopitch. The effect of reduced pitch variation in the dysarthria of PD on the intonational marking of syntactic boundaries is unclear. Elucidating this effect is essential since reduced intonational marking of these boundaries may reduce listeners' ability to perceive the intended meaning. In order to examine the effect of PD on the perceptibility of syntactic boundaries and to investigate the effect of PD and listener experience with Parkinsonian speech on the perception of these boundaries, 17 individuals (6 with PD and their spouses and 5 older adults unfamiliar with Parkinsonian speech) listened to individual words that were produced in final and nonfinal positions in list and clause constructions by 26 speakers (13 with PD and their matched controls). Based on the information present in the words, listeners judged whether the word occurred at the end of a syntactic unit. Results indicated that PD, particularly in male participants, reduced the perceptible marking of syntactic boundaries. Further, persons with PD and their spouses demonstrated better perception of boundary cues in degraded listening circumstances. These data demonstrate an effect of PD and listener experience on the perception of syntactic boundaries.