Linking variability in pitch accent production and perception

Constantijn L. van der Burght^{1,2}, Ture Berg²

¹Leiden University Centre for Linguistics, Leiden University, Leiden, Netherlands, ²Max Planck institute for Psycholinguistics, Nijmegen, Netherlands,

Prosody can mark sentence elements occupying parallel roles. In "Mary kissed John, not Peter", a contrastive accent on Mary or John cues the implied syntactic role of Peter. There is known to be between-listener variability in the perception and interpretation of prosodic phenomena such as contrastive accents. Similarly, there is considerable between-speaker variability in the realisation of prosodic cues. We asked if variability in prosody production and perception are linked. 40 female native speakers of Dutch participated in a production and perception experiment. The experimental sentences (in Dutch) were of the type "The police officer arrested the thief, not the inspector/murderer". In the production session, participants performed a picture description task in which a lead-in sentence encouraged the realisation of a contrastive accent on the subject or object of the main clause. In the perception session, two weeks later, participants listened to the experimental sentences, recorded by a separate speaker. From these sentences the ellipsis clause was omitted. Participants indicated the focus structure they perceived by selecting (via button press) the semantically appropriate sentence-final noun (presented visually). The perception experiment confirmed individual differences previously reported, with some listeners exhibiting good sensitivity to prosodic information and others relying on a structural bias. The production data were analysed using contour clustering. Again, between-speaker differences were found, with varying degrees to which distinct focus conditions could be categorised based on each speaker's intonation contours. A forthcoming analysis will test the productionperception link: Can the perceptive ability to discriminate between prosodic categories predict the degree to which two distinct prosodic categories are produced?