Prosodic matching and turn competition in multi-party conversations (Contribution to Prosodic constructions in dialog, organized by Ward Nigel, Richard Ogden, Oliver Niebuhr & Nancy Hedberg)

Prosodic constructions used to compete for the speaking turn in conversation have been widely studied (French & Local (1983), Kurtić et al. (2013)). Usually, turn competition arises in overlapping talk between at least two speakers. Coordination between participants in their prosodic design of talk (Szczepek-Reed, 2006) and social action (Gorisch et al. 2012), as well as entrainment in more general terms (Levitan et al. 2011), is well established in the literature. Nevertheless, previous studies on turn competition and overlap do not investigate the prosodic design of turn competitive incomings in reference to the orientation of the speakers to each other. Rather, they assume that prosodic constructions are used for turn competition regardless of the co-participants’ design of the turn. In this paper, we ask whether the prosodic design of turn competitive talk is co-constructed between two participants talking in overlap. More specifically, we investigate whether the prosodic design of one participant’s in-overlap talk is developed with respect to the interlocutor’s prosodic features during the same portion of overlapped talk, and whether this prosodic matching can discriminate between the overlaps that are competitive and those that are not.
Our analyses are based on two-speaker overlaps drawn from a corpus of multi-party face-to-face conversation between four friends recorded in British English (Kurtic et al. 2012). 3407 instances of two-speaker overlaps have been extracted from 4 hours of talk. Two independent conversation analysts performed the interactional categorisation of overlaps into competitive and non-competitive for all these two-speaker overlap instances and achieved a good agreement of alpha=0.807 (Krippendorff 2004) as measured on a subset of 808 overlaps selected for our initial analysis. For the analysis of prosodic features we focus on F0 related features: mean, slope, span and contour, all of which have previously been shown to be used by each overlapping speaker separately for turn competition (Kurtic et al. 2009; Oertel et al. 2012). We investigate the similarity in F0 mean, slope and span by correlating these features across the two participants. For F0 contour, a similarity coefficient is computed using dynamic programming method described in Gorisch et al. (2012). We consider the difference in F0 contour similarity in competitive and non-competitive overlaps as an indication of intonational matching being a turn competitive resource. We conduct these analyses for overlaps that are clearly competitive or non-competitive as indicated by inter-annotator agreement. In addition, we qualitatively explore those cases that annotators disagree on in order to investigate whether they reveal further important interactional or prosodic features of in-overlap talk.

Our preliminary results suggest that conversational participants attend and adapt to the interlocutor during overlap depending on whether they return competition or not. We explain our findings in relation to previous work on turn competition in overlap, discuss the quantitative method employed and also address the possible consequences of our results for the study of prosodic realization of other social actions in conversation.