Transfer the Floor: The Timing of Turn-taking in High-functioning Autism

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Conversational partners in dialogue usually aim to reach a high degree of entrainment and rhythmicity. One objective is the smooth transition from the conversational turn of one participant to that of the interlocutor. To ensure this, there should be neither an overlap across nor too large a gap between turns. Following Levinson & Torreira (2015), we can identify three types of turn transition: gaps (silent intervals), between-overlaps (overlapping speech before the transition) and within-overlaps (one turn overlapping with and being contained entirely within another). We investigated turn-taking in a parallel corpus of Map Task speech by adults diagnosed with high-functioning autism (HFA) and neurotypical controls (NT). Our general hypothesis is that HFA subjects will reach a lesser degree of entrainment. Examining the different kinds of turn transitions, we found that NT speakers behave in line with the data in Levinson & Torreira (2015) in showing a clear preference for the "gap" type of transition, whereas in the HFA group this was not the case, with speakers producing a much larger amount of overlaps (Fig. 1). Excluding within-overlaps, a further detailed analysis of the remaining two types of transitions using the measure of Floor Transfer Offset (FTO) reveals the same trend (Fig. 2). The fact that this tendency for more overlap in HFA is shown both in more discrete, categorised terms (Fig. 1) and more continuous terms (Fig. 2) is of interest regarding the broader theoretical issue of mapping continuous parameters onto discrete categories (cf. Grice et al., 2017). The temporal organisation of turns across conversational partners furthermore holds interesting parallels to collaborative music making (Hawkins et al., 2013). We are planning to conduct further analyses on the developing entrainment of speakers over time, focusing e.g. on the roles of instruction giver/follower, on the function of backchannels and on speaker-specific strategies.

Figure 1: Proportion of the different types of turn transitions (gaps, between-overlaps and within-overlaps) by group
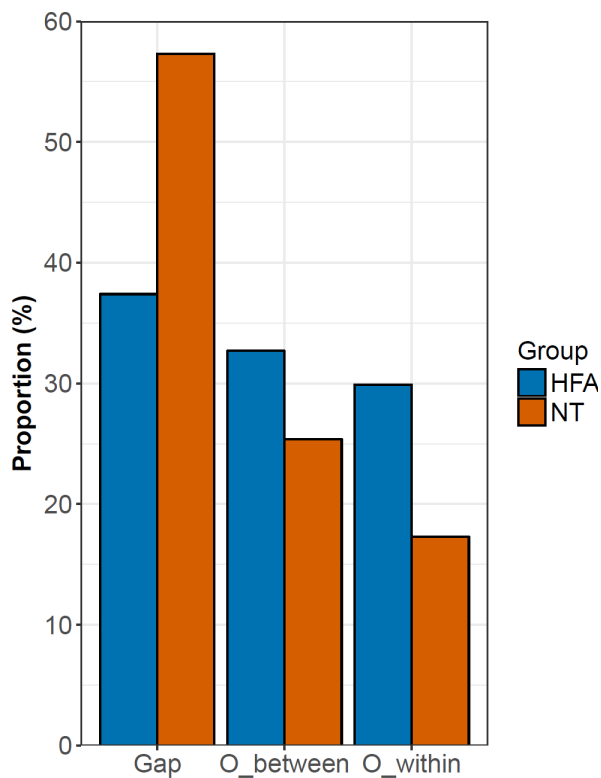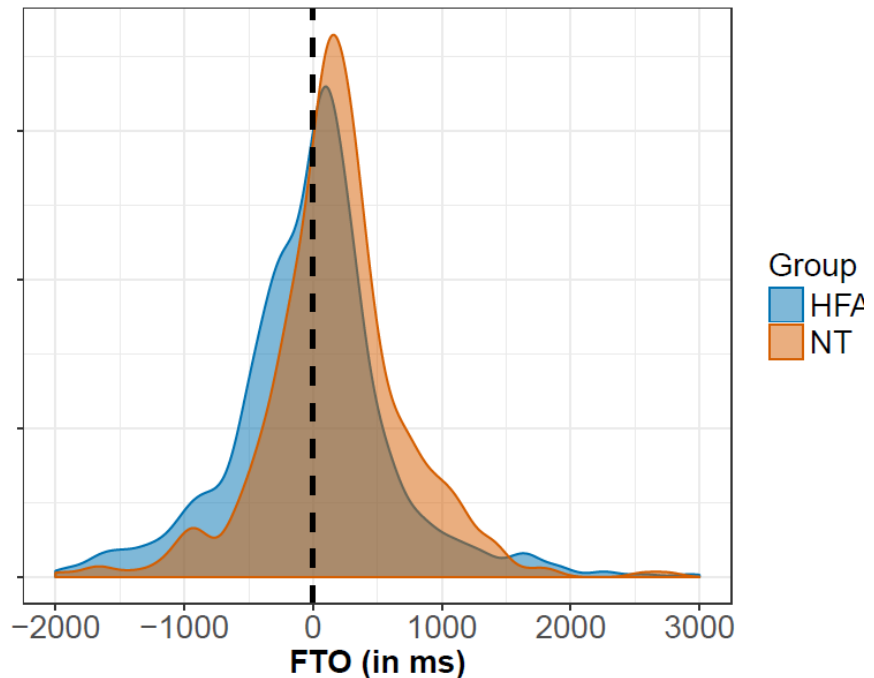

Figure 2: Floor Transfer Offset (FTO) values of gap- and between-overlap transitions by group. Negative values represent overlaps, positive values represent gaps.

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