

## Exploring Turn-Taking in People Who Do and Do Not Stutter

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Speech most often occurs in interactions between people, where utterances seem to effortlessly flow from one into the next. Both interlocutors are able to time their utterances based on predictions about the other speaker's speech timings [1, 2] and gaps between turns have been found to be only between 0 and 300ms in many languages [3]. This turn-taking has quite extensively been investigated in typical speakers (e.g., [4, 5, 6]). However, turn-taking in conversations including populations with atypical speech such as people who stutter (PWS) has received less attention. PWS often experience involuntary syllable repetitions, prolongations, and so-called 'blocks' during which speakers are unable to produce sounds. This could lead to less predictable timings of their speech, which in turn might influence turn-taking in these conversations. Previous research (e.g., [7]) has demonstrated that typical speakers may be more likely to interrupt or complete the utterances of a conversational partner who stutters. Building on this, we aim to explore turn-taking in conversations with PWS in more detail, focussing on whether there are differences in turn-taking speed, whether PWS get a similar amount of speaking time as typical speakers, and whether PWS are more likely to be interrupted than typical speakers.

Twenty conversations were analysed. Half of the conversations were between two typical speakers (age:  $M = 29.7$ ,  $SD = 10.5$ ; gender: 6 F-F, 3 F-M, 1 M-M), and the other half consisted of typical-PWS pairs (age:  $M = 32.8$ ,  $SD = 12.2$ ; gender: 2 F-F, 7 F-M, 1 M-M). PWS were self-identified people who stutter.

Speakers participated in a Diapix spot-the-differences task [8] over Zoom. Each pair discussed two different pictures with 12 differences to be found in 10 minutes. For each round, one of the participants was the leader starting the description, and the other participant the follower. The participant who stutters always started as the leader in the first round, after which they switched.

Results were assessed using three mixed effects models with random effects for speaker and transcriber. Model 1 predicted gap duration by turn change type (PWS to typical, typical to PWS, or typical to typical). Model 2 predicted turn duration by speaker group (PWS, typical interacting with PWS, or with typical) and role (leader or follower), with an interaction between the two. The last model predicted the number of backchannels versus interruptions (automatically coded) by speaker group and role.

Preliminary results showed that leader's turns were longer and there was an influence of role on the type of overlap. We found no evidence for a difference in gap duration between the different turn changes, nor for a difference between turn duration or type of overlap between the different speaker groups. These results indicate that negative experiences by PWS could possibly be overcome by giving people clear roles in interactions. Future research could develop a more nuanced picture by using manual coding and investigating the relationship between stuttering severity and turn-taking behaviours.

## References

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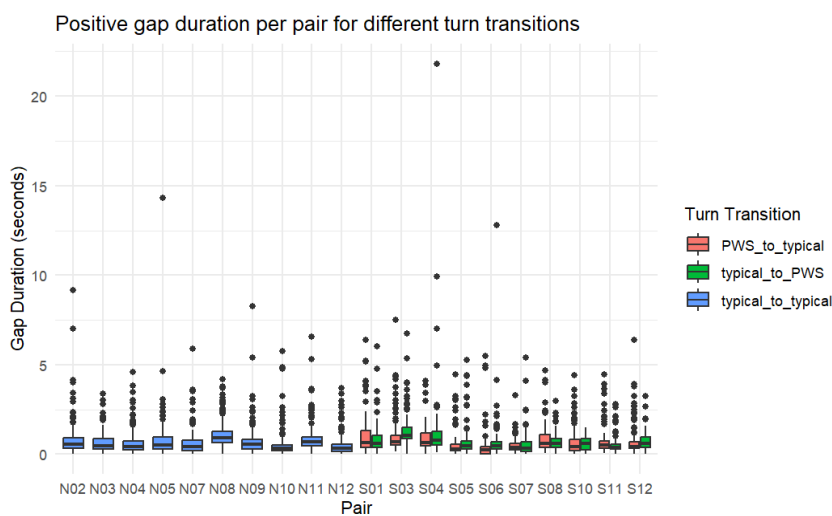


Figure 1. Positive gap duration per pair (S = PWS-typical pair, N = typical-typical pair)  
Turn duration by pair and speaker type, faceted by role

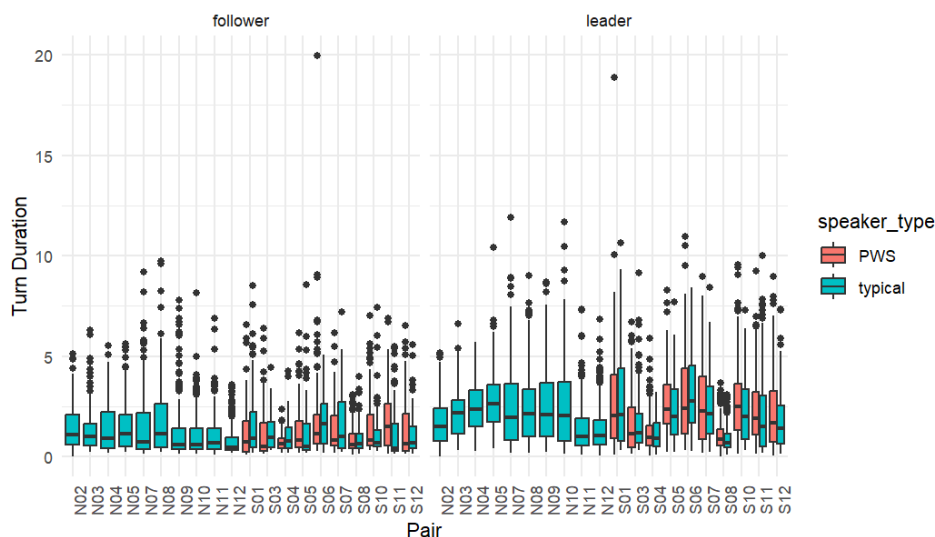


Figure 2. Turn duration by pair (S = PWS-typical pair, N = typical-typical pair), and speaker type (PWS and typical), faceted by speaker role (leader vs follower)