

## Exploring alignment in articulation rate

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Alignment is the phenomenon that interlocutors adapt their way of speaking to each other. It is still an open question why people align. We also do not know how long alignment lasts and whether speakers align faster to someone they have spoken to before. We conducted an experiment to obtain more insight in these questions by investigating articulation rate, which has previously been shown to show alignment, e.g. [1, 2].

The experiment consisted of a sentence completion task. Twenty-six native Dutch speakers interacted with a computer with the pre-recorded speech of two confederates. Participants started the experiment by completing a pre-test by themselves, after which they did three rounds: Round 1 (with Confederate 1), Round 2 (with Confederate 2) and Round 3 (with Confederate 1). This was then followed by a post-test in which they completed sentences by themselves again.

Articulation rates were measured over each round. Preliminary results indicate that participants spoke faster when speaking to a confederate than when they were speaking by themselves. This may be alignment because both confederates spoke more quickly than the participants in the pre-test. Interestingly, the higher Confederate 2's articulation rate, the slower participants spoke. This could be due to social factors. Lastly, the data suggest that articulation rate alignment lasts in the post-test: participants do not immediately return to their habitual articulation rate. This suggests alignment does not only consist of immediate priming of the preceding utterance.

### References

- [1] Levitan, R., & Hirschberg, J. (2011). Measuring acoustic-prosodic entrainment with respect to multiple levels and dimensions. In Twelfth Annual Conference of the International Speech Communication Association.
- [2] Schweitzer, A., & Lewandowski, N. (2013, August). Convergence of articulation rate in spontaneous speech. In INTERSPEECH(pp. 525-529).