

Do patients with speech production impairments benefit from auditory priming with a regular metrical pattern?

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Background – In earlier investigations based on repetition tasks we found that the regular metrical pattern in German (trochee), unlike the iambic pattern, facilitates articulation in patients with apraxia of speech (e.g. Aichert et al. 2016), confirming that segmental and prosodic aspects of speech production interact. In this presentation we investigated if articulation in apraxic speakers also benefits from auditory priming by regular metrical patterns.

Method – 12 patients with apraxia of speech, 12 aphasic patients with phonological impairment and 36 neurologically healthy speakers were examined. A sequential synchronization paradigm based on a sentence completion task was conducted in four different conditions:

- (1) Regular prime sentence, trochaic target word
- (2) Regular prime sentence, iambic target word
- (3) Irregular prime sentence, trochaic target word
- (4) Irregular prime sentence, iambic target word.

The participants' responses were phonetically transcribed. Speech errors were classified by error types (e.g. segmental errors, prosodic errors, groping). Furthermore, responses were analyzed for onset latencies of the target words and for metrical parameters.

Results – Data evaluation is still in progress.

Discussion – Results will be interpreted on the background of models of speech production and apraxia of speech and will be further discussed with reference to rhythmic synchronization accounts of between-speaker interaction (e.g., Cummins, 2009).

References

Aichert, I., Späth, M., Ziegler, W. (2016). The Role of Metrical Information in Apraxia of Speech. Perceptual and Acoustic Analyses of Word Stress. *Neuropsychologia*, 82, 171-178.

Cummins, F. (2009). Rhythm as entrainment: The case of synchronous speech. *Journal of Phonetics*, 37, 16-28.