

## AUDITORY FEEDBACK AS A FACTOR IN DISRUPTED SPEECH PRODUCTION

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The question how the perception of one's own speech may affect the ongoing speech production has been extensively discussed in connection with stuttering, with the effects of delayed auditory feedback and other sidetone monitoring phenomena. There are seemingly conflicting observations in this field: On the one hand stutterers tend to stop stuttering if they are prevented from hearing their own speech, which would suggest that feedback of their own speech is somehow interfering with the production process, whereas on the other hand stuttering tends to occur at the moments of initiation of speech units where auditory feedback is absent.

Most stutterers probably have acquired compensatory or alternative production routines from which it is difficult to disentangle the direct effects of auditory feedback. We therefore made use of subjects who were fluent speakers, in an experiment where we tried to elicit specific feedback effects making use of delayed auditory feedback (DAF).

The main question was: can specific parts of delayed speech be shown to re-enter the ongoing speech production process?

Listening to the performances of 12 subjects repeating a total of 28 three-syllable nonsense words each, there occurred 34 specific misproductions with earlier elements inserted in later parts of the word under production. These misproductions were repetitions of whole syllables and of single vowels. The inserted elements occurred between syllables (repeated syllables) or between C and V. An example of syllable repetitions would be /dadadada/ for /dadada/, and of vowel insertions: /patukui/ for /patuki/. The observed misproductions suggest that the length of the feedback loop determines the probability of a repetition, together with the spots in the articulatory programme where insertions are at all possible.

The main effect of DAF - lengthening - occurred only in second and third syllables. Lengthenings make identifiable impressions on the observer, but are otherwise difficult to interpret in terms of actual processes in the production mechanism.