

Instability in simple speech motor sequences – an overview of measures and what they really quantify

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Abstract

The sequencing of speech motor gestures may be impaired in patients with conditions that affect either the functioning of active articulators or regions in the brain involved in speech motor control. Oral diadochokinesis is an established tool for the assessment of speech motor function, and has primarily been studied in terms of rate and stability in the syllable productions. Syllable rate has achieved a coherent quantification across reports due to the simple nature of what is being quantified. Attempted quantifications of the concept of syllable production instability, however, are much more diverse, with most measures being incomparable to the others due to different underlying definitions of the concept of instability. In this talk, I will present and overview of recently used quantifications of instability or regularity of speech production, and illustrate which aspect of instability they could claim to quantify. Specific cases of measures that may either lead to erroneous conclusions to be drawn or be of reduced scientific value due to high levels of uncertainty in the interpretation will be highlighted.