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Title: Speech rhythm is an epiphenomenon of gestural selection

We often have the impression that speech has a rhythm, i.e. a pattern repeated in time. Despite this intuition, there is no generally accepted procedure for quantifying the rhythm of speech. Even worse, there is no model or theory which generates rhythmic patterns that are realistic in comparison with those of spontaneous conversation. Why are measurement and theoretical understanding of speech rhythm so elusive?

I argue that current approaches misconstrue the mechanisms which give rise to temporal patterns in speech. These approaches take it for granted that there exists some mechanism or representation which serves the purpose of creating a rhythmic pattern. The alternative I propose is that rhythmic patterns arise indirectly from mechanisms which regulate the selection of articulatory and accentual gestures. Specifically, I present a new model of rhythm in the context of the selection-coordination framework (see Tilsen, 2016, *Selection and coordination: the articulatory basis for the emergence of phonological structure*; and 2018: *Three mechanisms for modeling articulation: selection, coordination, and intention*). This new model of rhythm is inspired by the approach in Goldsmith, 1994, *A Dynamic Computational Theory of Accent Systems*. I show how the new model can account for the typology of quantity insensitive accentual systems, and how it applies to understanding quantity sensitivity and other metrical phenomena.