

A special class of English words with tense vowel/diphthong nuclei and liquid codas receive variable syllable count judgments (one or over-one syllables). Tilsen and Cohn (2016) showed that differences in judgments correlate with differences in production, in particular rime duration. In the present study, we further propose that syllable count judgments are related to subsegmental representations in the rime, and are independent of acoustic duration. We test the hypothesis by comparing English and German, chosen for their similar word structure and vowel length contrast, and their crucial difference in the gestural specification of coda liquids. The difference in the coda liquid composition between the two languages predicts that sesquisyllables should not emerge in German. Our predictions were confirmed by the results of parallel production (acoustic) and syllable count judgment experiments in English and German. We propose a model accounting for these results and we discuss its typological implications and its limitations.