

Rhythm is gradient: evidence from *-ative* and *-ization*

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The rhythmic constraints *CLASH and *LAPSE are commonly assumed to evaluate syllable-sized constituents: a sequence of two adjacent stressed syllables (σσ) violates *CLASH, while a sequence of two stressed syllables, separated by two stressless syllables (σσσσ), violates *LAPSE (see e.g. Prince 1983, Gordon 2002 for *CLASH; Green & Kenstowicz 1995, Gordon 2002 for *LAPSE). In this talk I propose that *CLASH and *LAPSE can be evaluated gradiently: speakers calculate violations off of a phonetically realized output representation. The closer to the two stressed syllables, the greater the violation of gradient *CLASH; the further away the two stressed syllables, the greater the violation of gradient *LAPSE.

The first portion of this talk focuses on evidence from English words ending in *-ization*. Production data from Forvo (forvo.com), collected in February 2019, suggests that whether or not the inner suffix *-ize* bears stress depends on the stem's rhythmic profile. As shown in Table 1, *-ize* stress is least frequent when it results in a violation of *CLASH, more frequent when it resolves a violation of *LAPSE, and most frequent when it resolves a violation of *EXTLAPSE (Gordon 2002).

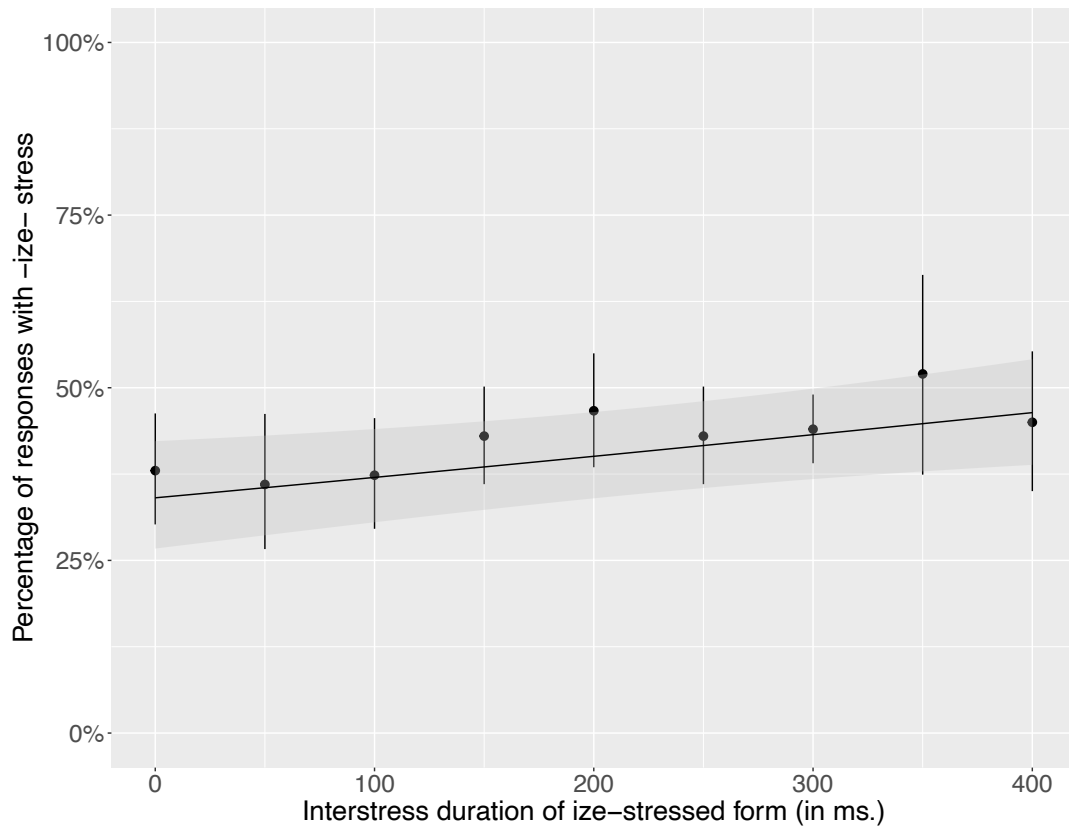
Table 1 (data from Forvo)

Effect of stressing <i>-ize</i>	Stressed <i>-ize</i>	Stressless <i>-ize</i>	% stressed
*CLASH violation	<i>rèalìzátion</i> (n=4) (user: TastiestofCakes)	<i>tàblòidizátion</i> (n=21) (user: ceilidhmac)	19% (4/25)
*LAPSE resolution	<i>fòssilìzátion</i> (n=49) (user: dezzy)	<i>demòbilizátion</i> (n=151) (user: bigbadjohn)	24.5% (49/200)
*EXTLAPSE resolution	<i>àctualizátion</i> (n=21) (user: ceruleanbill)	<i>làbializátion</i> (n=51) (user: npcarey)	29.2% (21/72)

Data from the OED suggests that there is variance within these categories. For example, *-ize* stress in the *CLASH-violating context is more common when a cluster intervenes between the two stressed vowels (as in *bàptization*; 56% of relevant forms), less common when a singleton obstruent intervenes (as in *yòtìzátion*; 47% of relevant forms), and least common when a singleton sonorant intervenes (as in *xènìzátion*, 44% of relevant forms). Assuming that consonant clusters are longer on average than obstruents, and that obstruents are on average longer than singletons (Stanton 2019), the picture is that *-ize* stress increases in frequency as its distance from the rightmost preceding stress increases. Results from a judgment task, with stimuli rhythmically similar to those in Table 1, confirms this impression: the greater the duration between the rightmost root stress and *-ize*, the greater the preference for stress on *-ize* (Figure 1, next page).

Following this, I focus on how the evidence from *-ization* relates to what we know about the phonology of stress, both in English and more broadly. First, I show that the patterns observed for *-ization* are similar in many ways to those observed for *-ative* (Stanton 2019) and develop a unified analysis of these findings. Second, I explain why *-ative* and *-ization* serve as particularly good case studies for gradient rhythmic effects, and discuss the relationship between the analysis developed in this talk and that of the larger English system. Time permitting, I discuss how the present analysis can be extended to rhythmic phenomena in other languages, including a case of gradient clash avoidance in Russian (Gouskova & Roon 2013).

Figure 1: preference for *ize*-stress grows as interstress duration increases



References

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