

Metrical segmentation in a cross-linguistic perspective

Within the framework of a larger project on metrical segmentation this study presents the results of a cross-linguistic experiment with Dutch, Turkish, Polish and Hungarian¹ native listeners. The experiment investigates the languages-specificity of the Metrical Segmentation Hypothesis (Cutler & Norris, 1988), which predicts that listeners have and use a parsing ability based on edge-aligned stress. Most empirical evidence supporting this hypothesis comes from languages with (statistically dominant)² word-initial stress, such as English (Cutler & Norris, 1988), and Dutch (Vroomen & de Gelder, 1995). Evidence for a facilitatory effect of right-edge aligned stress is sparse (although see Kabak et al., 2010). With a non-word spotting experiment we address the issue of language-specificity in metrical segmentation, as well as the question of whether listeners can use metrical patterns to *anticipate* a word boundary. Participants learned two new words in an artificial language and, in the next stage, reacted to these two words, now embedded in context. The stress pattern of strings preceding the target was manipulated, in such a way that the only factor distinguishing the conditions was stress. A mixed-effects model of the results shows that the native pre-target stress pattern had a facilitating effect on segmentation in Turkish ($p < 0.005$) and Dutch ($p < 0.05$). The native stress pattern on the target, on the other hand, had a facilitating effect in Turkish ($p < 0.05$) and Polish ($p < 0.001$). The results support the hypothesis that native metrical cues facilitate segmentation. Furthermore, they lead to questions on the role of regularity in metrical segmentation.

References

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- Kabak, B., Maniwa, K. & Kazanina, N. 2010, "Listeners use vowel harmony and word-final stress to spot nonsense words: A study of Turkish and French", *Laboratory Phonology*, vol. 1, no. 1, pp. 207-224.
- Vroomen, J. & de Gelder, B. 1995, "Metrical Segmentation and Lexical Inhibition in Spoken Word Recognition", *Journal of Experimental Psychology: Human Perception and Performance*, vol. 21, no. 1, pp. 98-108.

¹ Hungarian results are pending; participants will be tested in October 2012

² Dutch has predominant prefinal stress (Kager 1989; Trommelen & Zonneveld 1989), but with many exceptions. Statistically it is a hybrid between initial and prefinal stress (Vroomen & de Gelder 1995).