
Does the processing of segmental durations in speech engage a general timer?

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Abstract

The duration of speech segments plays a critical role in the perceptual identification of these segments, and therefore in that of spoken words. Although it is obvious that timing is necessary for its perception and production, this temporal dimension has often been ignored in the study of language. Therefore, an important question is whether these mechanisms are specific to speech, or whether the perceptual handling of segment duration is accomplished by means of central timing mechanisms. Here, we will present and discuss some data centered on this question. In the first study, we investigated whether attentional manipulations known to affect explicit temporal processing similarly affect the perception of duration of speech, and in the second one, we studied effects of hyperstimulation of striatal dopamine receptors induced by sleep deprivation. Results suggest that duration perception in language share common mechanisms with explicit temporal processing. In addition, the durations involved in speech perception being sub-second durations, these results also provide arguments to propose that sub- and supra-seconds durations could share common mechanisms.

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