

Time-course of auditory repetition vs. morphological priming

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A major issue in lexical processing concerns the interplay between episodic (e.g., voice) and abstract components (e.g., morphological identity) of spoken words. Some research (Goldinger 1996) highlights episodic components while others advocate hybrid models combining both types (Pierrehumbert 2006).

Kouider & Dupoux 2009 (K&D) examine the time-course of abstract versus episodic effects. Their experiments compare long-distance repetition (*dog* → *dog*) and morphological (*dogs* → *dog*) auditory priming using French gender-inflected words. Repetition was stronger than morphological priming at mean distances of 18 and 72 intervening words. This difference collapsed at a distance of mean 144 words and with a voice switch between prime and target. K&D conclude that with increased distance and diminished token similarity, episodic components of priming are eliminated, leaving only the abstract components.

We investigate priming decay of four conditions over exact distances of 5, 10, & 20 intervening words. Repetition/morphological condition targets were identical, allowing for direct comparisons between conditions. Focusing on the time-course, we removed the voice switch component. Our repetition condition varied tokens between prime and target to remove the confound of low-level phonetic facilitation.

48 participants completed an auditory lexical decision task. Compared to the phonological condition, mixed-effects models reveal that repetition and morphological targets were faster at all distances ($p < 0.001$, $p = 0.004$). A separate model of just repetition & morphological conditions showed morphological targets were significantly slower than repetition targets across all distances ($p = 0.047$).

At all distances, morphological priming is reduced compared to repetition priming. Careful comparisons reveal that differences between repetition and morphological conditions did not interact with distance. Further work will investigate whether an interaction between condition and distance is found at additional distances.

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