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# Reduced phonological processing during speech-planning

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## Abstract

In conversation, interlocutors rapidly exchange well-timed turns-at-talk, generally starting to plan their contributions already during the incoming turns. Previous research showed that while this early-planning-strategy supports fast turn-taking, it comes with increased planning difficulty compared to planning after the incoming turn. The present study investigates whether concurrent planning is also detrimental to speech input comprehension, targeting the level of phonological processing. 60 subjects conducted a dual-task experiment, verbally responding to auditorily presented quiz-questions while simultaneously monitoring them for pre-specified target phonemes (60% present), pressing the space-bar upon encounter. Subjects' monitoring performance for phonemes encountered during response planning was significantly worse than for phonemes encountered when response planning was not yet possible. Additionally, phoneme detection latencies were significantly longer when concurrently planning a verbal response than in a single-task phoneme-detection control experiment. Thus, results indicate that parallel speech planning, while common, leads to decreased input processing, possibly due to interference effects.