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Modulation of the voice-cuing effect on releasing speech from
informational masking

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In cocktail-party environments, familiarity or knowledge of target talker's voice is useful for reducing speech-on-speech masking (Yang et al., *Speech Communication*, 49, 892-904, 2007). In addition, the onset asynchrony between target speech and masking speech is an effective cue for unmasking target speech. The present study examined whether the voice-cuing effect can be modulated by either the degree of familiarity/knowledge of target talker's voice or the speech onset asynchrony. When target speech started 1 second after masking speech, pre-presenting a priming sentence voiced by the target talker significantly improved the recognition of the target speech which was co-presented with masking speech. However, reinforcing the familiarity/knowledge of the target-talker's voice did not further improve the recognition. When target speech and masking speech started at the same time, a single presentation of voice-priming speech did not change participants' speech recognition against masking speech unless the familiarity/knowledge of target-talker's voice was reinforced by either a learning procedure or repeated presentation of the target-talker's voice before testing. These results suggest that the voice-cuing effect on releasing speech from informational masking is graded, depending on both the degree of familiarity/knowledge of the target-talker's voice and the modulation by other cues such as speech-onset asynchrony.