

## Predicting masking release of lateralized speech - DTU Orbit (08/11/2017)

### Predicting masking release of lateralized speech

Locsei et al. (2015) [Speech in Noise Workshop, Copenhagen, 46] measured " speech reception thresholds (SRTs) in anechoic conditions where the target speech and the maskers were lateralized using interaural time delays. The maskers were speech-shaped noise (SSN) and reversed babble with 2, 4, or 8 talkers. For a given interferer type, the number of maskers presented on the target's side was varied, such that none, some, or all maskers were presented on the same side as the target. In general, SRTs did not vary significantly when at least one masker was presented on the same side as the target. The largest masking release (MR) was observed when all maskers were on the opposite side of the target. The data in the conditions containing only energetic masking and modulation masking could be accounted for using a binaural extension of the speech-based envelope power spectrum model [sEPSM; Jørgensen et al., 2013, J. Acoust. Soc. Am. 130], which uses a short-term equalization-cancellation process to model binaural unmasking. In the conditions where informational masking (IM) was involved, the predicted SRTs were lower than the measured values because the model is blind to confusions experienced by the listeners. Additional simulations suggest that, in these conditions, it would be possible to estimate the confusions, and thus the amount of IM, based on the similarity of the target and masker representations in the envelope power domain.

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