

University of Montana

ScholarWorks at University of Montana

University of Montana Conference on Undergraduate Research (UMCUR)

Apr 28th, 3:00 PM - 4:00 PM

Auditory Processing in Fluency Disorders

Harley B. Kincheloe

University of Montana, harley.kincheloe@umconnect.umt.edu

Follow this and additional works at: <https://scholarworks.umt.edu/umcur>

Let us know how access to this document benefits you.

Kincheloe, Harley B., "Auditory Processing in Fluency Disorders" (2017). *University of Montana Conference on Undergraduate Research (UMCUR)*. 15.

<https://scholarworks.umt.edu/umcur/2017/pmposters/15>

This Poster is brought to you for free and open access by ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Conference on Undergraduate Research (UMCUR) by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

Auditory Processing in Fluency Disorders

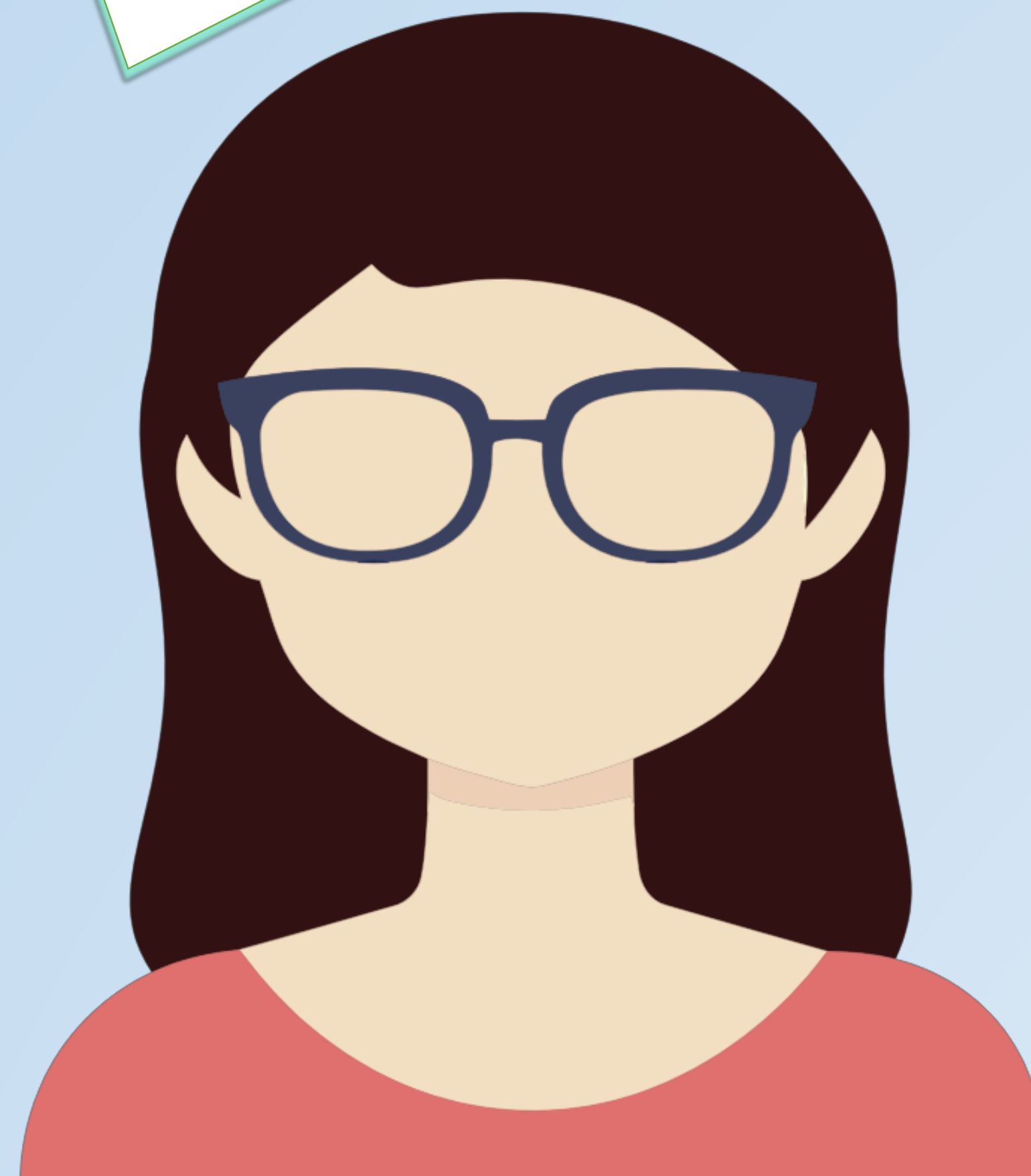
Harley Kincheloe

Department of Communicative Sciences and Disorders

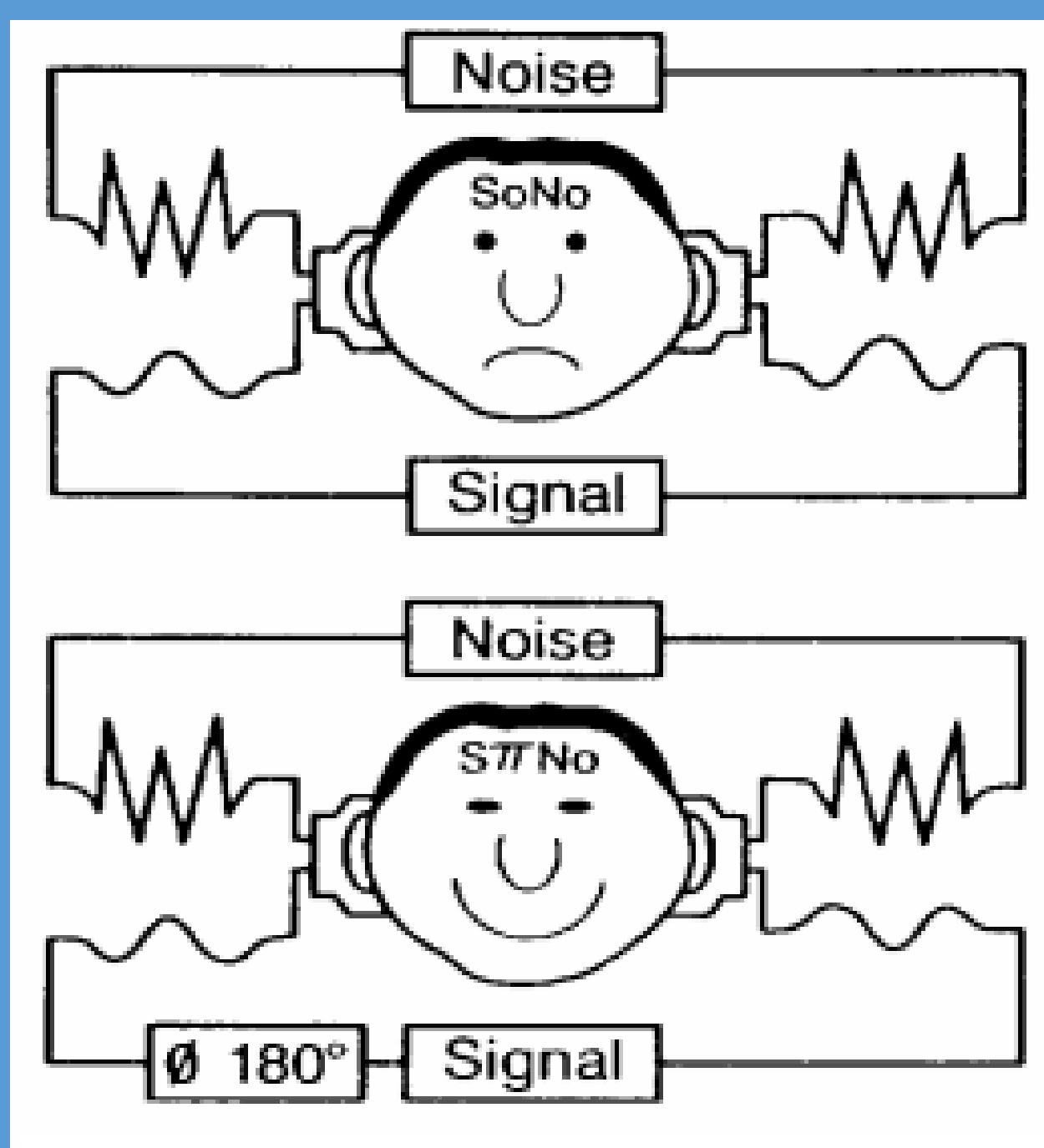
Mentor: Al Yonovitz, PhD



Is stuttering related to defective feedback in hearing your own voice?



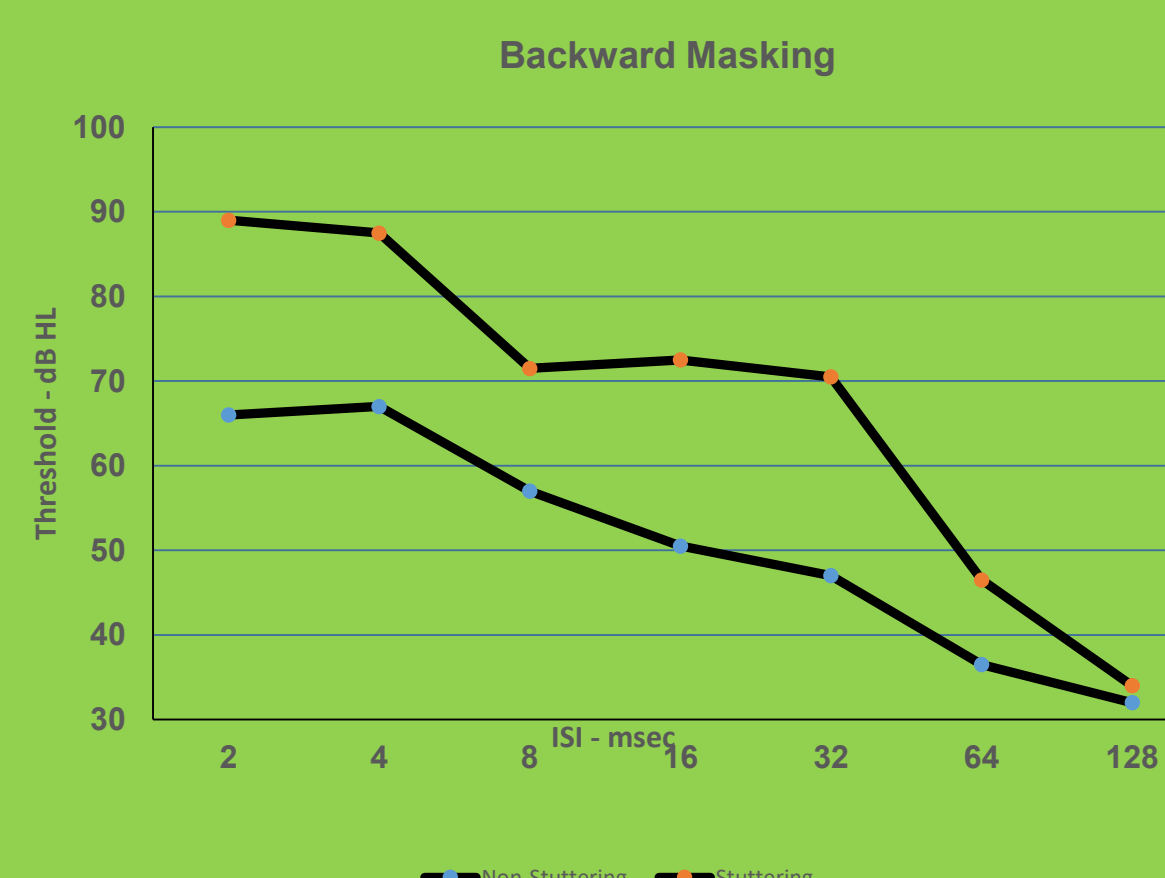
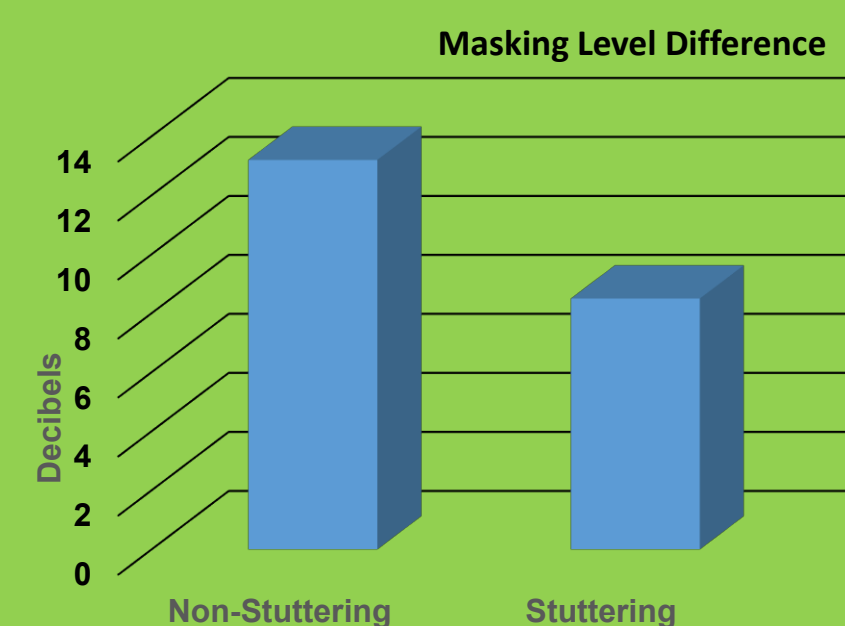
Masking Level Difference



Adapted from Olsen and Noffsinger, 1976

The Masking Level Difference (MLD) is a binaural phenomenon that is considered necessary for auditory processing. The MLD is not a test of hearing threshold. It relates to our ability to separate signals from background noise. It has been shown to have origins neuro-physiologically in the brainstem.

Results



Backward Masking

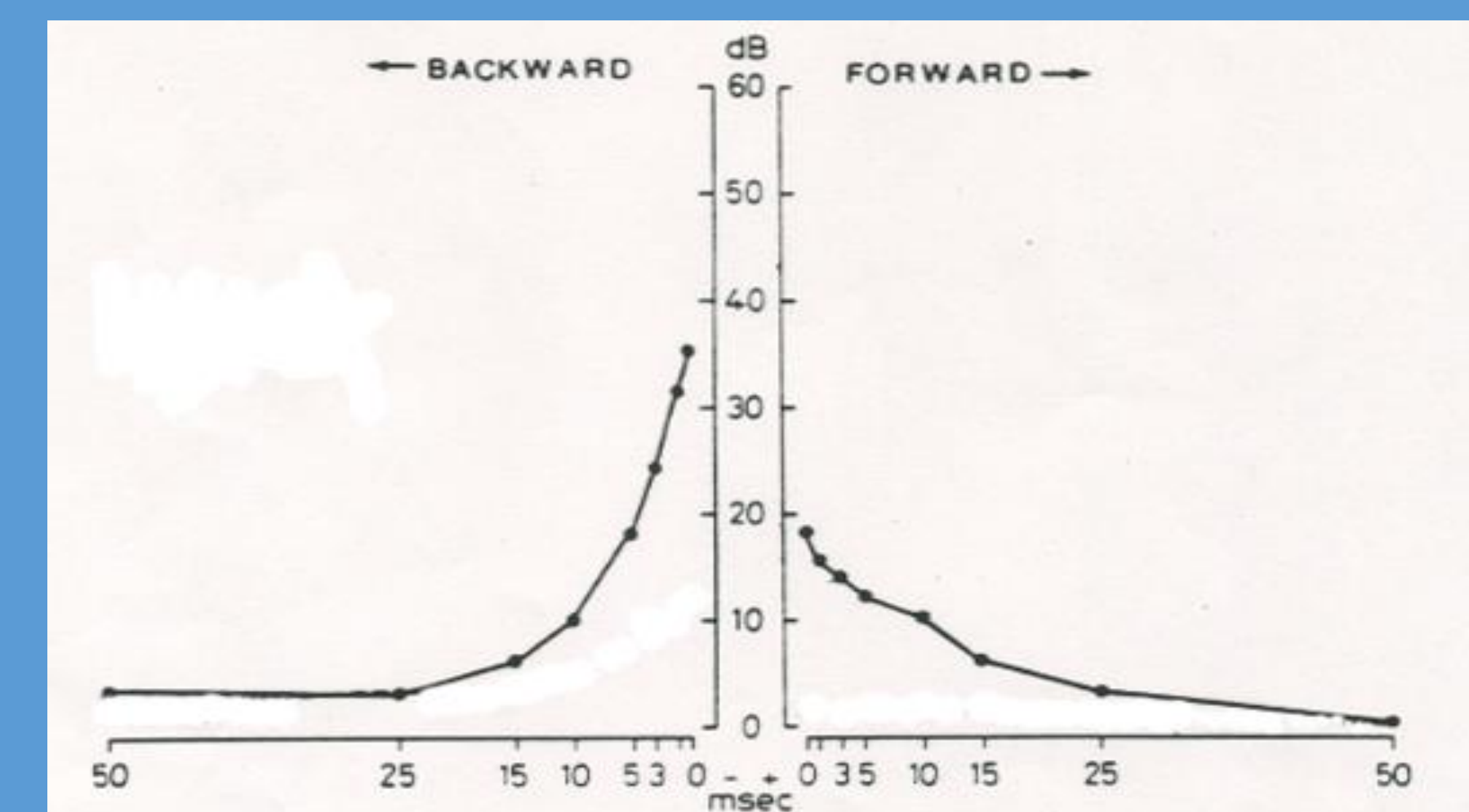


Figure 10.14 Temporal masking in decibels as a function of the interval between signal and masker. (Signal: 10 msec, 1000 Hz tone bursts; masker: 50 msec broad-band noise bursts at 70 dB SPL). (Adapted from Elliott [65], with permission of J. Acoust. Soc. Amer.)

Backward Masking (BM) is a monaural phenomenon that is considered necessary for auditory processing. BM disorders have been associated aging and lead-based perceptual problems in animal models and children. BM has its origins neuro-physiologically in the midbrain.

