

ACOUSTICS2008/909
Across-frequency integration of speech information in listeners
with sensorineural hearing loss

Joseph Hall, Emily Buss and John Grose
University of North Carolina, School of Medicine, 1115 Bioinformatics. Bldg., CB7070, 130 Mason Farm
Rd., Chapel Hill, NC 27599, USA

At very poor signal-to-noise ratios, good speech perception may depend critically upon the ability of the listener to combine relatively brief glimpses of the signal that are separated both in terms of frequency and time. This presentation will review past research that has addressed the ability of normal-hearing and hearing-impaired listeners to integrate speech information in this way. The presentation will also consider recent studies from our laboratory that have investigated spectral/temporal integration of speech signals in listeners with mild-to-moderate sensorineural hearing losses. One of these studies focused upon the integration of speech information that was asynchronous across frequency and the other focused upon the integration of synchronous information arising from two relatively narrow bands that were widely separated in frequency. The results from these studies indicated that although the hearing-impaired listeners exhibited some characteristics suggestive of poor processing of speech, there was little indication of essential deficits in the ability to integrate synchronous or asynchronous across-frequency speech information.