Editorial

Temporal and Spectral Resolution

Translating the fruits of psychoacoustic research to the clinical setting has usually proven to be a difficult and time-consuming task. Devising test procedures suitable for untrained listeners, and within the time constraints imposed by the realities of the clinical arena, is always a daunting challenge. In this issue of JAAA, however, two Swedish investigators, Birgitta Larsby and Stig Arlinger, present a novel technique for evaluating both temporal and spectral resolution in hearing-impaired individuals. There is already a voluminous psychoacoustic literature on these two dimensions of auditory analysis, but because the exacting techniques employed by psychophysicists usually require a substantial degree of prior training and involve lengthy testing sessions, their basic findings have seldom been applied to clinical evaluation. Larsby and Arlinger, however, used the venerable Bekesy threshold tracking technique to measure release from masking when either temporal gaps, spectral gaps, or a combination of the two modulated the masking noise.

Results were consistent with expectation. Both temporal and spectral resolution were poorer in hearing-impaired listeners than in normal controls. Additionally, they showed that when both types of gap were present simultaneously, release from masking increased in the normal group but not in the hearing-impaired group.

The Larsby-Arlinger procedure appears to be feasible in the clinical setting. Its widespread use would provide us with a large database, hopefully leading to a better understanding of these two aspects of auditory resolution in hearing impairment, and the extent to which they are relevant to the speech understanding problems of our clients.

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