Attempts to explain the unique listening problems of elderly persons in hostile listening environments have ranged along a continuum from peripheral sensory sensitivity loss to cognitive decline. Some have attributed the hearing-in-noise problems of seniors to the effects of high-frequency hearing loss and attendant deficits in frequency resolution; others have suggested problems in perceptual processing at more central levels; and still others have cited changes in cognitive dimensions like memory and speed of mental processing as primary factors.

In this issue of *JAAA*, two papers, approaching the question from somewhat different directions, appear to converge on an answer favoring a more central, as opposed to peripheral, explanation. Both papers involved a refreshingly large number of participants. Richard Wilson and Deborah Weakley of the James H. Quillen VA Medical Center in Mountain Home, Tennessee (“The 500 Hz Masking-Level Difference and Word Recognition in Multitalker Babble for 40- to 89-Year-Old Listeners with Symmetrical Sensorineural Hearing Loss”), compared the masking level difference (MLD) for a 500 Hz tone with word recognition in multitalker babble in 125 elderly listeners. They found “no systematic relationship” between MLD and word-recognition scores. Although thresholds for the 500 Hz tone, in both homophasic and antiphase conditions, were elevated in the elderly group compared to young normals, the magnitude of the MLD was not significantly decreased. Moreover, Wilson and Weakley found no relation between the MLD and word recognition in background noise. They concluded further that they could not explain variation in word-recognition scores in the presence of background competition from either the MLD or from pure-tone thresholds in the elderly group.

Taking a different approach, Maryanne Golding of the Australian National Acoustic Laboratories, Paul Mitchell of the University of Sydney, and Linda Cupples of Macquarie University (“Risk Markers for the Graded Severity of Auditory Processing Abnormality in an Older Australian Population: The Blue Mountains Hearing Study”), using a logistic regression model, analyzed the relation between degree of central processing abnormality (CAP), as defined by seven speech-based test outcomes and 16 independent variables in survey data from 1192 elderly participants. Independent variables included age, gender, cognitive status, and various self-report items concerning health history and perceived handicap. Based on the logistic regression findings, Golding et al noted the following:

1. There were no significant associations between central auditory processing abnormalities and any of the risk factors associated with peripheral hearing loss.
2. Age was not associated with mild abnormality but was associated with moderate and severe CAP abnormalities.
3. Cognitive function was associated with CAP abnormality.

Based on all of the data from this very extensive study, Golding et al concluded that “after adjusting for all other variables in the models, gender, cognitive decline, age, and HHIE-S score were the only CAP abnormality risk markers identified in this population” (p. 355).

The findings of these two very different studies, focused on the listening problems of elderly persons, seem to converge on that region of the continuum relating to central auditory processing and cognitive age-related changes, as opposed to the region emphasizing changes in the auditory periphery.