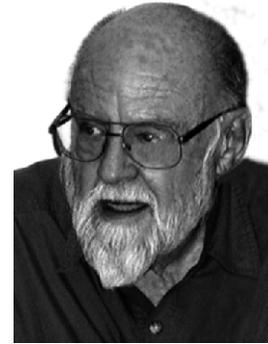


# Editorial

## Binaural Interference in Children?



There is mounting evidence that two impaired ears are not necessarily better than one. This comes as no surprise to our colleagues who work with the visually impaired. They have been aware of the phenomenon of binocular rivalry for more than 150 years. Indeed, the seminal observations were made by Sir Charles Wheatstone (of Wheatstone bridge fame) who first published his observations on binocular stereopsis in 1838. Interested readers will find a thorough discussion of the subject on the Web site of the Vanderbilt University Visual Research Center (<http://psych-s1.psy.vanderbilt.edu/faculty/blaker/rivalry/BR.html>).

In the auditory sphere, observations of binaural interference have, until now, been confined to adults, especially elderly hearing aid users. The basic observation is that, in some elderly persons, hearing aid satisfaction, in general, and speech understanding, in particular, are better when only one ear is aided than when both ears are aided. In this issue of *JAAA*, a study alerts us to the possibility of encountering the same phenomenon in the very young child. Janet Schoepflin of Adelphi University presents results of longitudinal observations over the age range of 1.6 to 5.3 years in a child with a substantial bilateral sensorineural loss. At age 1.6 years, in the absence of a complete audiometric picture, the right ear was fitted unilaterally; no problems were reported. Three years later, however, when a pure-tone audiogram showed a bilaterally symmetrical loss, the possibility of auditory deprivation on the left side was considered, and the left ear was fitted. The clinician noted, however, that unaided suprathreshold recognition of PBK-50 words was significantly poorer in the left ear (right ear . . . 88%, left ear . . . 40%). Over the next nine months, the child's mother and teachers noted significant

changes in the child's behavior. Problems included inattentiveness, temper tantrums, hyperactivity, distractibility, and disruptive outbursts. Audiological reevaluation at this point revealed no change in the pure-tone threshold levels or in unaided PBK-50 scores (right ear . . . 88%, left ear . . . 38%). Aided results were clearly consistent with binaural interference (right aided . . . 90%, left aided . . . 36%, bilateral aided . . . 56%). The bilateral aided score was better than the left ear alone but poorer than the right ear alone. The aid was removed from the left ear with apparent abating of the troublesome behavioral problems.

Author Schoepflin adds her voice to a small but growing number of audiologists who urge that the possibility of binaural interference be formally evaluated before a bilateral fitting is finalized. The issue appears to be important in young children as well as in elderly persons.

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