# The precedence effect in budgerigars (*Melopsittacus undulatus*) (A)

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When localizing sounds in a reverberant environment, the precedence effect allows us to localize direct sounds accurately while disregarding the many echoes in that environment. The precedence effect has been well studied behaviorally in humans and behaviorally and physiologically in other animals. Until now, however, precedence effect experiments in birds have been limited to barn owls. These birds have highly specialized auditory systems; nothing is really known about how unspecialized birds deal with competing sound sources. Budgerigars (*Melopsittacus undulatus*) are excellent subjects for this type of investigation since so much is known about their hearing. These birds have unremarkable sound localization abilities, but exhibit free-field binaural unmasking at amounts similar to those found in humans with much larger heads. We examined whether budgerigars exhibit the precedence effect, and if the phases of the precedence effect were similar to those found in humans and other animals. Psychoacoustic methods were used to measure the discrimination performance of click pairs from different locations separated by a short delay. The results suggest that budgerigars exhibit the precedence effect and that the time-courses are similar to those found in humans and other animals. [Work supported by NIH MH12698 to MLD and DC00198 to RJD.]