Abstract **795**, Date **1:00 pm Monday, February 24, 2003 (24 hours)**
Session **J1: Psychophysics: Pitch**

Effects of Pitch-Altered Auditory Feedback on Budgerigar Vocal Production

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Birds rely on auditory feedback (AF) to develop and maintain a normal vocal repertoire. Most of what is known about this phenomenon comes from deafening studies in young and adult birds. Recent work, however, has uncovered intricate effects of AF on vocal production. For instance, altering or disrupting AF in zebra finches generally results in the production of abnormal songs in which new syllables are created and existing syllables are multiplied, distorted, or deleted entirely. Because of the obvious parallels between birdsong and human speech and language, there is considerable interest in understanding the mechanisms whereby AF allows a bird to learn and produce stable song throughout its life. Previous work has shown that budgerigars increase the intensity of their contact calls in the presence of increasing levels of background noise, a phenomenon known in humans as the Lombard effect (Manabe et al., 1997). Here we extend these experiments to the pitch-shift reflex, an involuntary raising or lowering of a speaker's voice pitch in response to a reciprocal raising or lowering of the AF pitch. We trained budgerigars to produce contact calls for food reinforcement in the presence of pitch-shifted AF. Results suggest that these birds, like humans, can adjust the pitch of their calls to compensate for the presence of altered feedback.