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'Behavioral Relevance' as a guiding principle in investigating the
perception of sound source properties

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Perceiving a sounding object is the result of a complex interaction between physical, physiological, and cognitive factors. However, early in the history of modern psychacoustics, the difficulty in generating complex, controlled, dynamic stimuli limited many investigations of auditory perception to monaural presentation of static sine wave tones or bursts of noise. Thus, very influential models of auditory processing were developed using sounds that are not frequently encountered in a natural listening environment. Although this approach was useful in developing models of the function of the peripheral auditory system, it was less so in developing models of auditory cognition and behavior. If one accepts the position that our perceptual abilities have evolved specifically to help us survive and deal with the stimuli that occur in a natural environment, perhaps it is not surprising that there are differences in processing naturally occurring stimuli and those that are more artificial. Recent paradigmatic shifts spurred by technical innovations have spawned more ecologically valid investigations of complex auditory perception and cognition that include the perception of sound source properties. The future for this approach is promising if "behavioral relevance" can serve a guiding principle.