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Measuring the Distinctiveness of Auditory Objects using Perceived Location

Auditory edges have been argued to be important to the formation of perceptual objects, and furthermore, they have further been proposed to exist in the spectral and temporal domains. However, the exact nature of what constitutes an auditory edge is currently under debate (Van Valkenburg and Kubovy, 2003). We propose that each separable auditory object does not necessarily have a distinct perceived location; however, perception of objects in distinct locations necessarily implies the distinctiveness of each of the auditory objects at different perceived locations. Based on this assumption and on the results of our recent experiments measuring auditory object localization, we propose a class of experiments to explore the distinctiveness and perceptual segregation of auditory objects by measuring the perceived location(s) of the perceived object(s) in a given sound mixture. Such an approach enables an objective exploration of the nature of auditory edges and how they influence auditory objecthood.

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