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**Magnitude judgments of loudness change for discrete, dynamic,  
and hybrid stimuli**

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Recent investigations of loudness change across dynamically varying stimuli have identified differences between increasing versus decreasing power that depends upon stimulus complexity and intensity range [e.g., Canévet, *Acustica*, 62, 2136-2142 (1986); Neuhoff, *Nature*, 395(6698), 123-124, (Sep 1998)]. Some explanations of these findings are based upon known psychophysical effects [Teghtsoonian, Teghtsoonian & Canévet, *Perception & Psychophysics*, 67(4), 699-712 (2005)], whereas others posit qualitative differences in the perception of discrete laboratory and dynamic natural sound structures (Neuhoff, 1998). For discrete, static stimuli, the relationship between loudness and power is dependant upon a number of factors, including frequency, intensity range, perceptual anchoring, temporal order, and integration of power across time. The current investigation examines listener perception of loudness for sound structures that vary systematically from discrete to dynamic changes in power, allowing evaluation of the contributions of static versus dynamic change, as well as other factors in the perception of loudness change within complex stimuli. Relevant methodology, as well as commonalities and differences with predictions of traditional psychophysics, are discussed.