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Evaluation and modification of listener decision strategy in human gait perception

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Beyond obvious differences, there are many similarities in the challenges faced in studies of speech and natural (nonspeech) sounds. The source events are dynamic, complex and highly variable. Source properties map only statistically in the sounds produced, resulting in many acoustic properties that are only sometimes accurate indicators of specific source properties. Finally, beyond the nonlinear mapping of acoustic to perceptual properties, listeners vary in decision weights assigned to the perceived attributes of the sounds. Beginning with this complex conceptualization of source-sound-perception relationships, our research on the perception of human gait from walking sounds investigated the perception of walker posture. The current research extends this project on human gait perception, evaluating both the decision strategy of listener individual listeners and alternative approaches to improving that decision strategy. Implications for studying of both natural nonspeech and speech will be briefly discussed.