

Auditory Modulation of Multisensory Representations

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Abstract. Motor control and motor learning are based on motor perception and emergent perceptual-motor representations. Even motor learning is based at least in early stages heavily on visual information in terms of observing others, also other perceptual modalities are tuned in more and more when a new motor pattern is established actively and getting obviously integrated into multisensory representations. As Sport Scientists with our main approach we are dedicated to multisensory enhancement of gross motor behavior in real world (like) settings. We try to address the mechanisms of multisensory integration to support learning [1] and modulate motor behavior by the configuration of additional feedback information in terms of kinematic real-time acoustics. Besides behavioral data own neurophysiological references are presented referring to certain multisensory brain areas which are closely related to the action observation system and even to the motor loop [2]. Observed activation pattern might be usable as partially explanation for the observed behavioral effects.

References

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