

Do External Stimuli Affect Voluntary Task Switching?

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Abstract

In a multi-task environment, the tasks we choose to perform at a given moment may be influenced by both our internal goals and the environment. The use of the voluntary task switching procedure can further understanding of cognitive processes associated with task choice. Global-local stimuli (e.g. a big “H” composed of small “T” elements) are processed such that global aspects of stimuli are processed faster by the right hemisphere while local aspects are processed faster by the left. The present experiment uses the voluntary task switching procedure to test the hypothesis that such processing differences influence voluntary choice. Participants chose to perform local or global judgments of stimuli that were presented to the left (LVF), right (RVF), or center (CVF) of the visual field. Choice of task was influenced by the underlying perceptual processes associated with the global-local stimuli reflecting hemisphere asymmetries, with global discriminations performed more often for LVF presentations and local for RVF. These results suggest an intricate interaction of internal processes and environmental factors in behavioral choice in multi-task environments.