Attentional control and control of attention

(Hommel)

Description

Models of human information processing commonly assume that incoming stimuli are selected for further processing by attending them, that is, by directing attention to their location. However, little is known about how this attentional process is controlled. We are particularly interested in the role of the task goal (selection-for-action à la Allport, Neumann, or van der Heijden) and assume that there are two different, but interacting control mechanisms. First, the direction of spatial attention is controlled by the content of working memory, a kind of goal representation. Indeed, we can show that presenting people with symbols that carry a spatial meaning (arrows or directional words) induces a tendency to shift attention to the thereby indicated location. Second, the access to working memory is controlled by task-specific attentional control settings (à la Folk, Remington & Johnston) that specify task-relevant stimulus and response dimensions. In other words, stimuli can take over attentional control to the degree that they match the individual's goals and interests.

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Publications

Hommel, B., Pratt, J., Colzato, L., & Godijn, R. (2001). Symbolic control of visual attention. Psychological Science, 12, 360-365.

Pratt, J., & Hommel, B. (2002). Symbolic control of visual attention: The role of working memory and attentional control settings. Manuscript submitted for publication.