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Bridging Visual and Executive Attention

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Abstract: Attention is divided by scholars such as Parasuraman (2000) into loosely related kinds of attention, such as visual attention and executive attention. The distinction between exogeneity and endogeneity is well-known in visual attention work, such as Prinzmetal's (2009) finding that exogenous and endogenous cues had opposite interactions with search task difficulty. In a new experiment, we examined this effect by introducing multiple levels of stimulus-onset asynchrony to cues. Our work has implications for other forms of attention: another experiment investigates the effect of exogenous/endogenous cues on a decision-making task requiring executive attention. Prinzmetal proposed voluntary and involuntary mechanisms at work in visual attention; we propose that these mechanisms should be extended to higher-level attentional processes as well. While the standard taxonomy is ambiguous about connections between attentional processes, we may be able to understand attention in general with a unified approach drawing upon commonalities between different sorts of attention.