Episodic Theory of the Dynamics of Spatial Attention
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Previous measurements of visual attention in simple reaction time, choice reaction time and complex discrimination experiments in which attention was purported to move continuously across space are reanalyzed. These data and data from attention gating experiments are quantitatively predicted by an episodic (quantal) theory of spatial attention that proposed instead: (1) visual attention can be resolved into a sequence of discrete attentional acts (episodes), (2) each attentional episode is defined by its spatial faciliation function $f(x,y)$, (3) the smooth transition at time $t0$ between episodes is described by a temporal transition function $G(t-t0)$, and f and G are space-time separable. In new experiments, which use a concurrent motor reaction time task to control for nonattentional factors, the duration of attention transition is shown to be independent of the distance traversed and of the presence of interposed visual obstacles.