

Precue validity affects the performance of perceptual tasks. These spatial attention effects have been variously attributed to facilitation of processing, capacity allocation, or noise reduction. We use a new attention plus external (stimulus) noise paradigm and model (Doshier & Lu, 1997; Lu & Doshier, 1998) to identify the mechanisms of attention in cue validity paradigms. A new phenomenon is reported: a large effect of location cue validity in an orientation identification task which specifically occurs when the stimulus is embedded in external (environmental or stimulus) noise. This identifies the mechanism of the effect as external noise exclusion, distinguished from stimulus enhancement which manifests itself only in noiseless stimulus environments.