

Sperandio, Irene, Savazzi, Silvia, Marzi, Carlo Alberto and Gregory, Richard (2008) *Does reaction time depend upon perceived or retinal stimulus size?* Perception. ISSN 1468-4233

Abstract

Size constancy is a property of the visual perceptual system that can keep relatively constant the perceived size of an object despite the size of the retinal image. The relationship between size and reaction time (RT) is well known: RT is faster in response to larger than smaller stimuli. The two studies reported here aimed to verify whether this effect depends upon retinal or perceived stimulus size. In Experiment 1, we found that the larger stimuli were responded to faster than the smaller ones even when they were positioned at a different distance so as to subtend the same retinal image. Clearly, this effect can be attributed to size constancy affecting RT. In Experiment 2, the role of size constancy cues was removed by using a pinhole for stimulus viewing. As a consequence, RT depended on stimulus retinal size. In sum, these results demonstrate that simple RT reflects perceived rather than retinal size.