

[3P1M111] The Influence of Familiar Size on Simple Reaction Times

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It has been shown that simple reaction times (SRTs) respond to the perceived rather than the retinal size of objects (Sperandio et al., 2009). It has also been shown, using a Stroop-like paradigm, a RT advantage to objects that are congruent to their real-world size (Konkle & Oliva, 2012). It is well known that familiar size influences the perceived size of objects, however, it remains unclear if and how SRTs are affected by object familiarity. Three experiments were carried out where participants were asked to react as fast as possible to pictures of familiar objects equated for luminance and angular size on the retina. A variety of objects were used with varying real-world sizes. Stimuli were observed under natural (experiment 1) and reduced viewing conditions (experiments 2 and 3). We found that SRTs decreased in response to objects that were presented at a size that was closer to their real-world size (experiment 2) and become progressively slower with increasing incongruence to their real-world size (experiment 3), but only under restricted conditions. These findings indicate that when visual and oculomotor cues are reduced, SRT is affected by previous knowledge of object size in a manner that reflects congruence with real-world information