

CUED CHANGE BLINDESS: ATTRACTION OR DETRACTION OF ATTENTION FROM A TARGET OBJECT *L. Calderwood, J. Pelz**, *A. Herbert*†*,
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The phenomenon of “change blindness” demonstrates that our sense of the capacity of our visual memory is over-estimated. In a controlled experimental environment, change blindness was caused by a flicker paradigm, in which a blank screen flashes in between a set of two images. The images were pairs of real-world scenes with one object that was changed. In performing the basic change-blindness experiments a behavior we term pre-conscious change-detection was noted; the eyes were evidently drawn toward the region of the change before the individual was consciously aware of the change. In taking steps beyond the basic change-blindness experiment to test this theory, a “cue” was added to the flicker paradigm that flashed between the two images. The cues were one of two types: a “valid” cue flashed at the location of the changing object, while an “invalid” cue flashed at another location. By placing a cue near the threshold of detectability, this experiment was designed to test the benefits of a valid cue and the costs an invalid cue. The experiment was conducted using a video-based ASL eye tracker, which images the pupil and corneal reflection of the eye to determine where the eye is fixating in the image. The fixations are then “coded” or put into a text form to then be interpreted. With a valid cue, the eyes are expected to be more quickly drawn to the target, thereby decreasing detection latency. For an invalid cue, the eyes are drawn to the cue, away from the target, thereby increasing latency. From these data, it can be determined to what extent valid and invalid cues affected performance in the change-detection task.