

**CHANGE BLINDNESS: THE WORLD WE FAIL TO SEE.** *M. Curtis, J. Pelz\**, *A. Herbert\*<sup>†</sup>*, *Center for Imaging Science,* *<sup>†</sup>Department of Psychology,* [mrc2354@rit.edu](mailto:mrc2354@rit.edu), [pelz@cis.rit.edu](mailto:pelz@cis.rit.edu), [amhgss@rit.edu](mailto:amhgss@rit.edu)

When viewing pictures of a natural scene one generally has the impression of perceiving a rich representation, and that detecting a change in that scene would be easy. However, results of previous experiments have shown that this is not the case. This phenomenon is known as “change blindness”. The “flicker paradigm” technique was used to determine how a changing scene is viewed and perceived. This technique shows a real world picture for one second (A) followed by a brief gray screen for 20ms (B), a version of the original picture with a change for one second (A’), and then another gray screen (B). This sequence (A, B, A’, B) is repeated until the change is detected. The participant’s eye movements while viewing the pictures on a computer screen are tracked by a video-based ASL eye tracker. The question at hand is whether participants begin to detect a change in the picture at a preconscious level before they can identify the change. While performing this task, observers tend to move their eyes around, or near the object changing previous to identifying the actual change. One hypothesis of how a change is detected is that a person’s gaze searches randomly though a picture until they fixate on the change. Another suggestion is that people are preconsciously detecting a change in the picture and therefore moving their gaze gradually closer to that change. To determine which possibility is the case, data were collected and plotted in a manner that viewed the distance from the change throughout each trial. If people in fact first detect a change preconsciously, moving closer to the change before recognizing the change, it would produce a pattern of fixations that oscillate between the change and other locations in the image.