

Press Release

(Interdisciplinary Research Collaboration between the East Carolina University Visual Motor Laboratory and the School of Art and Design)

Tracking the Gaze In Museums

Dr. Cynthia Bickley-Green, Associate Professor and Coordinator Art Education, and Dr. Nicholas Murray, Associate Professor in the Department of Kinesiology and Director of the Visual Motor Laboratory at East Carolina University, are conducting an interdisciplinary study that shows relations between vision, cognition, and language. The project demonstrates the effect of language on beholders' gaze patterns. The findings are relevant to developing educational materials for typical and special populations

Data has been collected from picture viewing sessions at the Greenville Museum of Art, the Nasher Museum of Art at Duke University, and the Bechtler Museum of Modern Art, Charlotte, NC. Preliminary analysis of the data shows that the viewer's gaze pattern changes depending upon the cognitive goal of the viewer. The team used an Applied Science Laboratory Mobile Eye Tracker to collect data.

The following is a demonstration of how the gaze changes depending upon the cognitive goal of the viewer:

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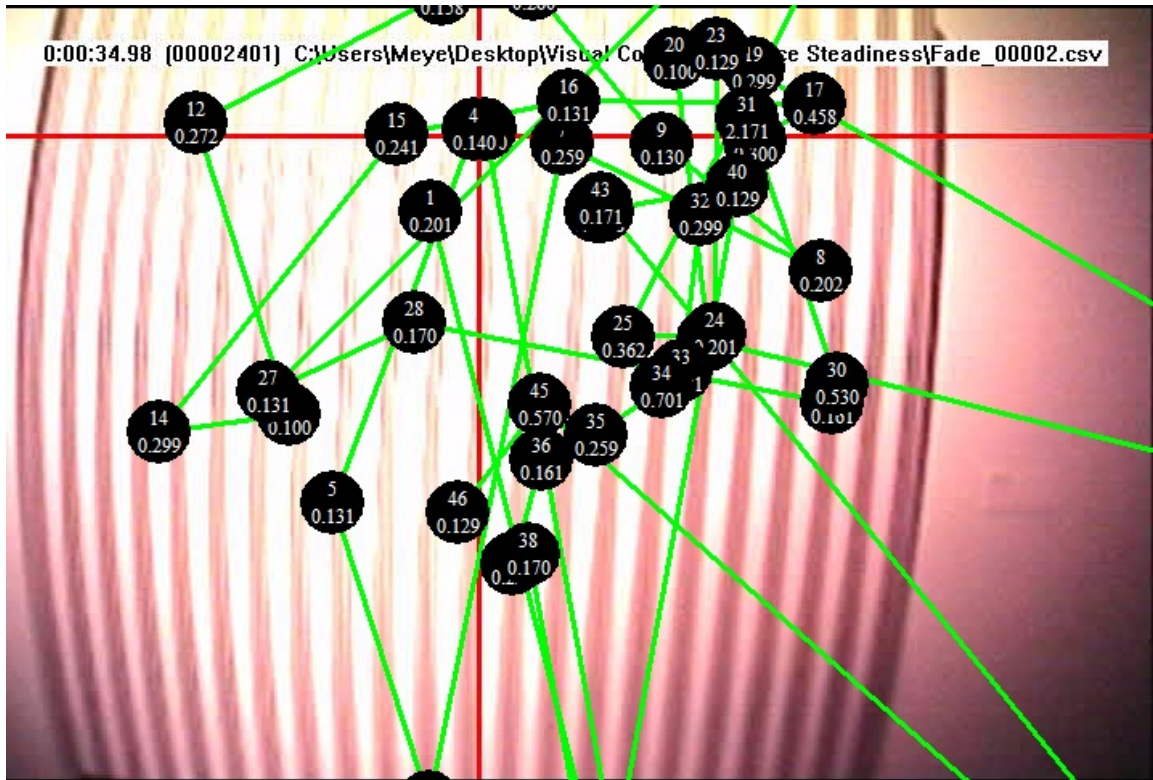


Figure 1. Gaze in Response to an Analytical (reflective) Question: Typical gaze pattern of a viewer looking at *Fade* by Bridget Riley in response to a reflective question. The black dots indicate an area of interest or a pause in the eye movement. The top number tells the order of the pause. The bottom number tells the length of the pause. The green lines show that the viewer gazed outside of the composition often. Viewer's areas of interest (black dots) are distributed in a wide curved area across the composition.

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painting *An Unexpected Visitor*, 1881, by Ilya. E. Repin. Using a minimal image such as Riley's *Fade* enables us to see the effect of the cognitive task on the gaze pattern more distinctly.

Studies such as this one contributes information for educators to improve instruction and develop pedagogy based on psychomotor research. See the website of Catherine Olander, School of Art and Design MAEd in Art Education, 2010, for an application in an elementary school art lesson <http://www.catherineolander.com/> Click on the research button. In conjunction with the Bechtler workshop during the fall 2011, Tyler Dockery, current MAEd student in Art Education, presented a research report about the use of the eye-tracker to assess young students' reading abilities.