Friday, April 8, 2005
The new and old data on visual direction continue to hit you right between the eyes.

Wade, Mapp, and I have uncovered English texts devoted to the analyses of visual direction by Wells (1757-1817), Towne (1806-1879), and LeConte (1823-1901) that have been woefully neglected. Their data clearly show that the visual directions of objects are perceived as though from the midpoint between the two eyes, a finding that applies equally to both monocularly and binocularly viewed stimuli. I will examine their experiments and will speculate as to why Hering gets all the credit for the principles of visual direction despite the extensive work by the three English speaking researchers. I will then discuss Erkelens's (2000) and Erkelens and van Ee's (2002) challenges of these ideas. Specifically, they argue that the visual directions of monocularly seen stimuli are specified from the viewing eye and that "perceived direction during monocular viewing is based on signals of the viewing eye only". Moreover, they argue that the concept of a cyclopean eye is irrelevant for vision. To counter these claims, I will discuss four experiments we have conducted that directly respond to their challenge.

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