

WHITAKER BIOMEDICAL ENGINEERING INSTITUTE

DEPARTMENT OF BIOMEDICAL ENGINEERING FRIDAY SEMINAR SERIES

Daphne Bavelier, PhD

Associate Professor
Brain and Cognitive Sciences
University of Rochester

“Effects of Deafness and Sign Language on Visual Cognition”

DATE: December 3, 2004
TIME: 1:00 p.m. – 2:00 p.m.
PLACE: **Traylor 709**
HOST: Simil Roupe

Abstract:

Do deaf individuals have better vision? A review of the existing evidence suggests that deaf individuals do not have better vision overall. Rather, only some aspects of visual attention appear modified in the deaf. In particular, deaf individuals exhibit enhanced peripheral visual attention. This change seems mediated by the parietal cortex, a known center of visual attention. This change is quite specific to deafness as it is not observed in hearing signers or in hearing individuals who rely heavily on their peripheral vision, such as action video game players. This is not to say that these two kinds of experience, signing and video game playing, do not affect visual cognition. Videogame playing enhances several different aspects of visual selective attention, such as the number of objects that can be apprehended at once and one's ability at processing fast occurring information in the visual scene. Similarly, signing leads to changes of its own. Motion processing becomes more left lateralized in native signers. The use of signs also leads to marked changes in short-term memory capacity. Overall, our work highlights the specificity of plastic changes, calling for careful investigations of the role of the type of experience, brain systems modified and age of exposure in plastic changes

Any questions, contact 410-955-3132.

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**JOHNS HOPKINS UNIVERSITY
720 RUTLAND AVENUE, BALTIMORE, MD 21205**

For Disability Access Information
Contact: Joyce Bankert: 410-955-3132: jbankert@bme.jhu.edu