

# Matthew William Geoffrey Dye

Department of Brain and Cognitive Sciences • University of Rochester • Rochester NY 14627-0268  
(585) 275-0759 • mdye@bcs.rochester.edu • <http://www.bcs.rochester.edu/people/mdye/>

## EDUCATION

- 2002-2005 *Postdoctoral Fellowship, University of Rochester, USA*  
1995-2001 *Ph.D. Psychology, University of Southampton, UK*  
1992-1993 *M.Sc. Neural Computation, University of Stirling, UK*  
1989-1992 *B.Sc. (Hons) Psychology, Manchester Metropolitan University, UK*

## RESEARCH AND TEACHING EXPERIENCE

- 2008-Now *Senior Lecturer, University of Rochester, USA*  
2005-Now *Research Associate, University of Rochester, USA*  
2002-2005 *Postdoctoral Fellow, Laboratory of Daphne Bavelier, University of Rochester, USA*  
1999-2002 *Lecturer (Assistant Professor), University of Bristol, UK*  
1998-1999 *Research Officer, Deaf Studies Trust, UK*  
1995-2001 *Ph.D. Student, Laboratory of Stevan Harnad, University of Southampton, UK*  
1994-1995 *Technical Demonstrator, Department of Psychology, University of Kent at Canterbury, UK*  
1992-1993 *M.Sc. Student, Laboratory of Lindsay Wilson, Department of Psychology, University of Stirling, UK*

## PROFESSIONAL ACTIVITY

### Ad-hoc Journal Reviewing

*Acta Psychologica; Applied Cognitive Psychology; Brain; Brain and Language; Child Development; Cognition; Cognitive Development; Developmental Psychology; Developmental Science; Ear Nose & Throat; Human Brain Mapping; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory and Cognition; Journal of Memory and Language; The Journal of Neuroscience; Language and Cognitive Processes; Nature Neuroscience; NeuroImage; Neuron; Neuropsychologia; Psychological Bulletin; Psychological Science; Restorative Neurology and Neuroscience; Trends in Neurosciences; Vision Research.*

### Grant Reviewing

*British Academy (UK); Department of Trade & Industry (UK); Economic & Social Research Council (UK); National Science Foundation.*

### Academic Governance

*[All at University of Bristol]: Faculty of Social Sciences Board; Social Sciences Graduate Studies Committee; Social Sciences Teaching and Learning Committee; Centre for Deaf Studies Research Director; Research Assessment Exercise Coordinator (Centre for Deaf Studies); Director of Graduate Studies (Centre for Deaf Studies); Member of Management Committee (Centre for Deaf Studies).*

### Professional Memberships

*Association for Psychological Science*

# Matthew William Geoffrey Dye

Page Two

## AWARDS & SCHOLARSHIPS

- 2008-2009 National Science Foundation, Visual Language and Visual Learning SLC Grant (\$108,000; PI: Dye)  
2005-2008 Charles A. Dana Foundation Research Grant (\$100,000; PIs: Dye and Bavelier)  
2004 John F. Merck Summer Institute in Developmental Disabilities Scholarship (PI: Dye)  
2001-2005 ESRC Postgraduate Training Recognition, Centre for Deaf Studies, University of Bristol (Director of Graduate Studies: Dye)  
1995-1998 Faculty of Social Sciences Graduate Scholarship, University of Southampton (PI: Dye)  
1992-1993 High Technology National Training Scholarship, University of Stirling (PI: Dye)

## TEACHING EXPERIENCE

### Courses Taught

- 2009 BCS/ASL 270 *Psychological Perspectives on Deafness*, Undergraduate, University of Rochester, USA  
2009 BCS208 *Cognition and Perception Laboratory*, Undergraduate, University of Rochester, USA  
2008 BCS 200L *Research Design and Statistics Laboratory*, Undergraduate, University of Rochester, USA  
2008-2009 BCS/PSY 111 *Foundations of Cognitive Neuroscience*, Undergraduate, University of Rochester, USA  
2008 BCS/PSY153 *Cognition*, Undergraduate, University of Rochester, USA  
2006-2008 BCS/PSY172 *Development of Mind and Brain*, Undergraduate, University of Rochester, USA  
2001-2002 DEAF30009 *Psychology of Deafness*, Undergraduate, University of Bristol, UK  
1999-2002 DEAF30007 *Processes of Sign Language Interpreting*, Undergraduate, University of Bristol, UK  
1999-2002 DEAFM1004 *Research Methods*, Graduate, University of Bristol, UK  
1994-1995 *Research Methods & Statistics*, Undergraduate, University of Southampton, UK  
1994-1995 *Psychological Research Laboratory*, Undergraduate, University of Southampton, UK  
1994-1995 *General Psychology*, Adult Education, Thanet College, UK

### Guest Lectures

BCS110 *Neural Foundations of Behavior*; BCS152 *Language & Psycholinguistics*; BCS153 *Cognition*; BCS511 *Behavioral Methods in Cognitive Science*; ASL280 *Current Trends in Deaf-related Careers*.

### Academic Responsibilities

- 2008 *Undergraduate Advisor*, B.S. and B.A. in Brain and Cognitive Sciences, University of Rochester  
2000-2002 *Doctoral Programme Director*, Ph.D. in Deaf Studies, University of Bristol  
2000-2002 *Course Director*, M.Sc. in Deaf Studies, University of Bristol  
1999-2002 *Ph.D. Thesis Supervision* (2 students); *M.Sc. Thesis Supervision* (6 students), University of Bristol

# Matthew William Geoffrey Dye

Page Three

## PUBLICATIONS

### Peer-Reviewed Journal Articles

- Dye, M.W.G.** & Bavelier, D. (submitted). Development of visual attention skills in school-age children who play or do not play action video games. *Vision Research. Special Issue on Perceptual Learning*.
- Dye, M.W.G.** & Bavelier, D. (submitted). Attention in deaf populations: Temporal versus spatial selection. *Restorative Neurology and Neuroscience. Special Issue on Development and Plasticity of Multisensory Functions*.
- Dye, M.W.G.**, Hauser, P.C. & Bavelier, D. (in press). Is visual attention in deaf individuals enhanced or deficient? The case of the Useful Field of View. *PLoS ONE*.
- Dye, M.W.G.**, Green, C.S. & Bavelier, D. (in press). Increasing speed of processing with action video games. *Current Directions in Psychological Science*.
- Dye, M.W.G.**, Green, C.S. & Bavelier, D. (in press). The development of attention skills in action video game players. *Neuropsychologia*.
- Dye, M.W.G.**, Hauser, P.C. & Bavelier, D. (2008). Visual skills and cross-modal plasticity in deaf readers: Possible implications for acquiring meaning from print. *Annals of the New York Academy of Sciences*, 1145, 71-82.
- Hauser, P.C., **Dye, M.W.G.**, Boutla, M., Green, C.S. & Bavelier, D. (2007). Deafness and visual enumeration: Not all aspects of attention are modified by deafness. *Brain Research*, 1153, 178-187.
- Hauser, P.C., Cohen, J., **Dye, M.W.G.** & Bavelier, D. (2007). Visual constructive and visual-motor skills in Deaf native signers. *Journal of Deaf Studies and Deaf Education*, 12 (2), 148-157.
- Dye, M.W.G.**, Baril, D.E. & Bavelier, D. (2007). Which aspects of visual attention are changed by deafness? The case of the Attentional Network Test. *Neuropsychologia*, 45 (8), 1801-1811.
- Bavelier, D., **Dye, M.W.G.** & Hauser, P.C. (2006). Do deaf individuals see better? *Trends in Cognitive Sciences*, 10(11), 512-518.
- Agrafiotis, D., Canagarajah, N., Bull, D.R., Kyle, J., Seers, H. & **Dye, M.** (2006). A perceptually optimised video coding system for sign language communication at low bit rates. *Signal Processing: Image Communication*, 21 (7), 531-549.
- Vinson, D.P., Vigliocco, G., Woolfe, T., **Dye, M.W.G.** & Woll, B. (2005). Language and imagery: Effects of language modality. *Proceedings of the Royal Society B*, 272, 1859-1863.
- Agrafiotis, D., Canagarajah, N., Bull, D.R. & **Dye, M.** (2003). Perceptually optimised sign language video coding based on eye tracking analysis. *Electronics Letters*, 39 (24), 1703-1705.

### Book Chapters

- Bavelier, D., Green, C.S. & **Dye, M.W.G.** (due 2009). Exercising your brain: Training-related plasticity. To appear in M. Gazzaniga (Ed.), *The Cognitive Neurosciences IV*. Cambridge, MA: MIT Press.
- Dye, M.W.G.** (due 2009). Sign language processing. To appear in R. Pfau, M. Steinbach & B. Woll (Eds), *Sign Language: An International Handbook*. Berlin: Walter de Gruyter.
- Bavelier, D. & **Dye, M.W.G.** (due 2009). Loss of a sense: Effect on others, psychological. To appear in B. Goldstein (Ed.), *Encyclopedia of Perception*. Thousand Oaks, CA: Sage Publications.
- Dye, M.W.G.**, Hauser, P.C. & Bavelier, D. (2008). Visual attention in deaf children and adults: Implications for learning environments. In M. Marschark & P.C. Hauser (Eds), *Deaf Cognition: Foundations and Outcomes*. OUP: New York, NY.
- Dye, M.W.G.** & Shih, S. (2006). Phonological priming in British Sign Language. In L. M. Goldstein, D. H. Whalen and C. T. Best (Eds.), *Laboratory Phonology 8*. Berlin: Mouton de Gruyter.

# Matthew William Geoffrey Dye

Page Four

## Authored Reports

**Dye, M.W.G. & Kyle, J.G.** (2001). *Deaf People in the Community: Disability and Health*. Bristol: Deaf Studies Trust.

**Dye, M.W.G. & Kyle, J.G.** (2000). *Deaf People in the Community: Demographics of the Deaf Community in the UK*. Bristol: Deaf Studies Trust.

## Selected Conference Presentations & Proceedings

Hirshorn, E.A., **Dye, M.W.G.**, Hauser, P.C. & Bavelier, D. (March, 2009). Relative contribution of phonological skills and memory in reading: The case of profoundly deaf individuals. Poster presented at the *16th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA*.

Hirshorn, E.A., **Dye, M.W.G.**, Hauser, P.C. & Bavelier, D. (April, 2008). Neurodiversity of reading networks: The case of profoundly deaf native signers. Poster presented at the *15th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA*.

**Dye, M.W.G. & Green, C.S.** (August, 2007). Brain plasticity and multiple object tracking. Symposium on Mental Processes in Multiple Object Tracking at the *XXIV Annual BPS Cognitive Section Conference, Aberdeen, UK*.

Bavelier, D. & **Dye, M.W.G.** (March, 2007). Development of visual attention skills in school-age children who play or do not play action videogames. Poster presented at the *2007 Society for Research in Child Development Biennial Meeting, Boston, MA*.

**Dye, M.W.G. & Bavelier, D.** (March, 2007). The development of visual attention skills in deaf and hearing school children. Poster presented at the *2007 Society for Research in Child Development Biennial Meeting, Boston, MA*.

**Dye, M.W.G. & Bavelier, D.** (October, 2006). Selective effects of deafness on the development of visual attention skills. Poster presented at the *25th Rodin Remediation Academy Conference, Washington, DC*.

**Dye, M.W.G. & Bavelier, D.** (October, 2004). Playing video games enhances visual attention in children [Abstract from *Fall Vision Meeting 2004*]. *Journal of Vision, 4* (11), 40a, <http://journalofvision.org/4/11/40/>, doi: 10.1167/4.11.40.

**Dye, M.W.G. & Bavelier, D.** (April, 2004). The development of visual attention skills in school children. Poster presented at the *11th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA*.

**Dye, M.W.G. & Bavelier, D.** (December, 2004). Playing video games enhances visual attention in children. *Power Users of Information and Communication Technology Summit, United Nations Headquarters, New York, NY*.

Agrafiotis, D., Canagarajah, N., Bull, D.R., Kyle, J., Seers, H. & **Dye, M.** (2004). A video coding system for sign language communication at low bit rates. *International Conference on Image Processing 2004, Vol. 1, 441-444*.

Agrafiotis, D., Canagarajah, C.N., Bull, D.R., **Dye, M.**, Twyford, H., Kyle, J. & How, J.C. (2003). Optimized sign language video coding based on eye-tracking analysis. In T. Ebrahimi & T. Sikora (Eds.), *Visual Communications and Image Processing 2003: Proceedings of SPIE, Vol. 5150, 1244-1252*.

**Dye, M.W.G. & Shih, S.** (June, 2002). MOCK ATTITUDES and OLD CHAIRS: Phonological priming in British Sign Language. *LabPhon 8, Yale University & Haskins Laboratory, New Haven, CT, USA*.

**Dye, M.W.G. & Shih, S.** (July, 2000). Sign-based formational priming in a lexical decision task. Poster presented at *Theoretical Issues in Sign Language Research 7, Universiteit van Amsterdam, The Netherlands*.

**Dye, M.W.G.** (July, 1999). The relevance of memory research to the education of deaf children. *Deaf Nation 2, University of Central Lancashire, Preston, U.K.*

**Dye, M.W.G.** (October, 1999). Cognitive psychology and deaf people: Looking to the future. *Deafpeople@2000, University of Bristol, Bristol, UK*.

**Dye, M.W.G.** (February, 1999). Cross-modal interference in list order retention for deaf signers of British Sign Language. *Research and Practice in Deaf Education, School of Education, University of Birmingham, Birmingham, U.K.*

**Dye, M.W.G. & Shih, S.** (November, 1998). Formational and motivational codes in the short-term memory of deaf signers of British Sign Language. *Theoretical Issues in Sign Language Research 6, Gallaudet University, Washington, DC, USA*.

# Matthew William Geoffrey Dye

Page Five

## INVITED PRESENTATIONS

*Compensation vs. deficit: Dissociating the effects of deafness on temporal and spatial attention.* Gallaudet University, Visual Language & Visual Learning Science & Learning Center, February 2009

*Spatial redistribution of visual attention following early auditory deprivation.* Gallaudet University, Visual Language & Visual Learning Science & Learning Center, October 2008

*Selective effects of deafness on visual attention.* Gallaudet University, Visual Language & Visual Learning Science & Learning Center, March 2008

*Deafness and cross-modal plasticity: Implications for learning and development .* Nazareth College, Department of Communication Sciences & Disorders, February 2008

*The development of visual attention skills in deaf children.* Rochester Institute of Technology, NTID, Department of Research and Teacher Education, 2006

*Contrasting effects of deafness and video game playing on attentional skills.* Université du Quebec à Montreal, Departments of Psychology and Linguistics, 2004

*Effects of video games on the development of visual attention.* State University of New York (Binghamton), Department of Psychology, 2003

*Lexical access in British Sign Language.* University of Central Lancashire, Department of Education, 2001

*Phonological processing in sign languages.* University of Leiden, Department of Linguistics, 1999

## LANGUAGES

*English (native); British Sign Language (professional); American Sign Language (advanced); Modern Greek (basic); French (basic).*

## REFERENCES

Professor Richard Aslin  
Department of Brain and Cognitive Sciences  
University of Rochester  
Meliora Hall, RC 270268  
Rochester, NY 14607  
UNITED STATES OF AMERICA  
Email: [aslin@cvs.rochester.edu](mailto:aslin@cvs.rochester.edu)  
Phone: +1 (585) 275-8687

Professor Daphne Bavelier  
Department of Brain and Cognitive Sciences  
University of Rochester  
Meliora Hall, RC 270268  
Rochester, NY 14607  
UNITED STATES OF AMERICA  
Email: [daphne@bcs.rochester.edu](mailto:daphne@bcs.rochester.edu)  
Phone: +1 (585) 275-8714

Professor David Corina  
Center for Mind and Brain  
University of California, Davis  
267 Cousteau Place  
Davis, CA 95618  
UNITED STATES OF AMERICA  
Email: [dpcorina@ucdavis.edu](mailto:dpcorina@ucdavis.edu)  
Phone: +1 (530) 297-4651