Daniel K. Wood

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EDUCATION

PhD Neuroscience 2009-2013
University of Western Ontario
"Reaching for the light: The prioritization of conspicuous visual stimuli for reflexive target-directed reaching." Thesis advisor: Melyvn A. Goodale

MSc Neuroscience 2007-2009
University of Western Ontario
"The effects of ambiguity and trial order on the selection of goal-directed actions." Thesis advisor: Melvyn A. Goodale

BA Philosophy 2001-2006
Brigham Young University
"Neuro-existentialism: The existential significance of the material body." Academic advisor: Mark A. Wrathall

EMPLOYMENT

Postdoctoral Fellow 2014-Present
Northwestern University

- Neurobiology (Mark Segraves) and Rehabilitation Institute of Chicago (Konrad Kording): Studying visual, motor, and attention-related processing in frontal eye fields of non-human primates (*macaca mulata*).
- Neurobiology (J.C. Cang and Mark Segraves): Studying cortical and subcortical oculomotor circuits in mice.

PEER-REVIEWED JOURNAL PUBLICATIONS [statistics]

14. *Wood, D.K.,*Chouinard, P.A., Major, A.J., and Goodale, M.A. (2016). "The selection of biomechanically viable grasp postures depends on posterior intraparietal sulcus.", *Cortex*, **In Press**, .

13. Gu, C., Wood, D.K., Gribble, P.L., and Corneil, B.D. (2016). "A trial-by-trial window into sensorimotor transformations in the human motor periphery.", *Journal of Neuroscience*, **36(31)**, pp. 8273-8282.

12. Ramkumar, P., Lawlor, P.N., Glaser, J.I., Wood, D.K., Phillips, A.N., Segraves, M.A., and Kording, K.P. (2016). "Feature-based attention and spatial selection in frontal eye fields during natural scene search.", *Journal of Neurophysiology*, **116(3)**, pp. 1328-1343.

11. *Glaser, J.I., *Wood, D.K. (Co-First Author), Lawlor, P.N., Ramkumar, P., Caddigan, S., Phillips, A.N., Kording, K.P., and Segraves, M.A. (2016). "The role of expected reward in frontal eye field during natural scene search", *Journal of Neurophysiology*, **116(2)**, pp. 645-657.

10. Goonetilleke, S.C., Katz, L., Wood, D.K., Gu, C., Huk, A., and Corneil, B.D. (2015). "Cross-species comparison of anticipatory and stimulus-driven neck muscle activity", *Journal of Neurophysiology*, **114(2)**, pp. 902-913.

9. Wood, D.K., Gu, C., Corneil, B.D., Gribble, P.L., and Goodale, M.A. (2015). "Transient visual responses reset the phase of low-frequency oscillations in the skeletomotor periphery", *European Journal of Neuroscience*, **42(3)**, pp. 1919-1932.

8. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Ansari, D., Culham, J.C., and Goodale, M.A. (2014). "Counting on the motor system: Rapid action planning reveals the format- and magnitude-dependent extraction of numerical quantity", *Journal of Vision*, **14**, pp. 1-19.

7. Milne, J.L., Chapman, C.S., Gallivan, J.P., Wood, D.K., Culham, J.C., and Goodale, M.A. (2013). "Object connectedness influences perceptual comparisons but not the planning or control of rapid reaches to multiple goals", *Psychological Science*, **24**, pp. 1456-1465.

6. Wood, D.K., Gallivan, J.P., Chapman, C.S., Milne, J.L., Culham, J.C., and Goodale, M.A. (2011). "Visual salience dominates early visuomotor competition in reaching behavior", *Journal of Vision*, **11**, pp. 1-11.

5. Gallivan, J.P., Chapman, C.S.,Wood, D.K., Milne, J.L., Culham, J.C., Ansari, D., and Goodale, M.A. (2011). "One to four, and nothing more: Non-conscious parallel object individuation in action", *Psychological Science*, **22**, pp. 803-811.

4. Wood, D.K. and Goodale, M.A. (2011). "Selection of wrist posture in conditions of motor ambiguity", *Exp Brain Res*, **208**, pp. 607-620.

3. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Culham, J.C., and Goodale, M.A. (2010). "Short-term motor plasticity revealed in a visuomotor decision-making task", *Behavioral Brain Research*, **214**, pp. 130-134.

2. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Culham, J.C., and Goodale, M.A. (2010). "Reaching for the unknown: multiple target encoding and real-time decision-making in a rapid reach task", *Cognition*, **116**, pp. 168-176.

1. Gallivan, J.P. and Wood, D.K. (2009). "Simultaneous encoding of potential grasping movements in macaque AIP", *Journal of Neuroscience*, **29**, pp. 12031-12032.

GRANTS

- National Institutes of Health (NIH) T32, "Cortical and subcortical mechanisms of reflexive orienting", $90,000 (Postdoctoral, 6/15 - 5/17).

- Queen Elizabeth II Graduate Scholarship in Science and Technology (QEIIGSST), "The neural correlates of motor ambiguity", $15,000 (PhD, 09/12 - 4/13).

- Canadian Institute of Health Research (CIHR) CGS Doctoral Research Award, "The effect of stimulus ambiguity on the selection of goal-directed actions", $105,000 (PhD, 09/09 - 4/12).

- Canadian Institute of Health Research (CIHR) CGS Master's Award, "The selection of grip posture while grasping objects at ambiguous orientations is susceptible to priming", $17,500 (MSc, 09/08 - 4/09).

INVITED/REFEREED TALKS

7. COSYNE (main meeting), Salt Lake City, 2/17.

6. Advanced Topics in Vision Seminar Series, Northwestern University, 10/15.

5. Gordon Research Conference on Eye Movements, Bentley University, 07/15. One of four postdocs invited to speak at the conference.

4. Advanced Topics in Vision Seminar Series, Northwestern University, 01/15.

3. Seminar at Center for Perceptual Systems, UT Austin, 09/13.

2. Canadian Action and Perception Network (CAPNET) conference, Adèle, Quebec, 09/11.

1. Society for Neuroscience Nanosymposium ("Neural Control of Grasping"), Chicago, IL, 10/09.

SELECTED POSTERS

9. Wood, D.K., Glaser, J., Ramkumar, P., Lawlor, P., Körding, K., & Segraves, M., 2016, Receptive field maintenance or compression? It depends on the saccadic intention. Gordon Research Conference on the Neurobiology of Cognition, Newry, Maine

8. Wood, D.K., Berthiaume, E., Ramkumar, P., Lawlor, P., Glaser, J., Phillips, A., Körding, K., & Segraves, M., 2015, The frontal eye fields read out, but do not construct, a priority map. SfN, Chicago

7. Wood, D.K., Ramkumar, P., Lawlor, P., Glaser, J., Phillips, A., Caddigan, S., Körding, K., & Segraves, M., 2014, Task-relevant features predict gaze behavior but not neural activity in FEF during natural scene search. SfN, Washington, D.C.

6. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2013, The temporal decay of visual salience in a compelled response task. Gordon Research Conference on Eye Movements, Stonehill College, Easton, MA

5. Wood, D.K., Cruse, D., & Goodale, M.A., 2012, Electrophysiological correlates of biomechanically induced bistability of preferred arm postures. SfN, New Orleans

4. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2012, Implicit extraction of probability in formation from arbitrary color cues. ECVP, Sardinia, Italy

3. Wood, D.K., Buckingham, G., Anwar, A., & Goodale, M.A., 2011, Foreknowledge of sequence optimizes fingertip force prediction in the absence of distinguishing visual cues. SfN, Washington, D.C.

2. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2010, Visual salience of potential targets overrides spatial probabilities in a rapid visuomotor task. SfN, San Diego

1. Wood, D.K., & Goodale, M.A., 2009, The effects of response ambiguity and trial order on the selection of goal-directed actions. VSS, Naples, Florida

THESES SUPERVISED

1. Asia Giammarco – MSc 04/16 "Measuring distractibility in a natural scene search task" *Northwestern University*
2. Karim Farrag – MSc 04/15 "How does filtered visual energy affect search strategies in natural scenes?" *Northwestern University*
3. Emily Berthiaume – MSc 04/15 "Impact of target presentation mode on Frontal Eye Field activity" *Northwestern University*
4. Alex Major – Honors BSc 04/13 "Localization of brain areas responsible for wrist posture selection in ambiguous situations" *University of Western Ontario*
5. Daryl Chambers – Honors BSc 04/11 "Lifting objects that vary in size and weight" *University of Western Ontario*

SYNERGISTIC ACTIVITIES

- *Referee*: European Journal of Neuroscience, Journal of Neurophysiology, Experimental Brain Research, Journal of Cognitive Neuroscience, Current Eye Research, Psychonomic Bulletin and Review, Frontiers in Human Neuroscience
- *Society Membership*: Society for Neuroscience, Vision Sciences Society, Society for the Neural Control of Movement
- Student-Hosted Seminar Series Committee, Northwestern University

TEACHING

@ Northwestern University, Neurobiology Dept.:

- Winter 2014, 2015: **Guest Lecturer, BIOL SCI 306 Fundamentals of Neurobiology II**
  Lecture topics: Dorsal extrastriate visual system, Sensorimotor integration

@ University of Western Ontario, Psychology Dept.:

- 2008: **Course coordinator, Psych 280E Research Methods**
  Designed curriculum and oversaw instruction in 10 labs.
- 2007-2009: **Teaching Assistant, Psych 280E Research Methods**
  Taught lab portion of course to 21 students. Lectured (two hours weekly) on experimental design, statistical analysis, and scientific writing.

@ Brigham Young University, Philosophy Dept.:

- 2006: **PHIL 305 Predicate Logic**
  Taught classes and held office hours weekly. Graded coursework and term papers.