Benjamin O. Turner

Dept. of Psychological & Brain Sciences   805–893–6190
Santa Barbara, CA 93106   ben.turner@psych.ucsb.edu

Education

2012	Ph.D., Psychology
	Ph.D. Emphasis, Quantitative Methods in the Social Sciences
	Advisor: F. Gregory Ashby
	Thesis: *Long-term retention in the cortical and subcortical procedural category-learning systems*
	University of California, Santa Barbara
2007	B.S., Psychology (with Honors, with Research Distinction, Magna Cum Laude)
	Advisor: Julian F. Thayer
	Thesis: *Effects of varying degrees of musical complexity on human psychophysiological measures*
	The Ohio State University
	B.M., Music Theory (with Honors, Magna Cum Laude)
	The Ohio State University

Research Interests

Neuroimaging Methods; Computational Modeling; Procedural and Episodic Long-Term Memory

Teaching Interests

Undergraduate and graduate level courses in: fMRI Methods; fMRI Data Analysis; Statistics; Research Design; Learning and Memory

Research Experience

2012–curr. Dr. Michael Miller, Miller Memory Lab
University of California, Santa Barbara

2007–2012 Dr. F. Gregory Ashby, Laboratory for Computational Cognitive Neuroscience
University of California, Santa Barbara

2006–2007 Dr. Julian Thayer, Emotions and Quantitative Psychophysiology Laboratory
The Ohio State University

2005–2006 Dr. Mari Jones, Research on Attention and Rhythmicity Laboratory
The Ohio State University

2005 Dr. Peter Desain, Music, Mind, Machine Group
Radboud Universiteit

2004–2007 Dr. David Huron, Laboratory for Cognitive and Systematic Musicology
The Ohio State University

Teaching Experience

2011 Lab Instructor, Laboratory in Advanced Research Methods (undergraduate)
Department of Psychological & Brain Sciences, UCSB
Instructor: Heejung Kim

2010 Lab Instructor, Introductory Statistics (undergraduate)
Department of Psychological & Brain Sciences, UCSB
Instructor: Miguel Eckstein

2009–2010 Lab Instructor, Design and Measurement (graduate)
Department of Psychological & Brain Sciences, UCSB
Instructor: F. Gregory Ashby

2009	Lab Instructor, Statistical Analysis of fMRI Data (graduate) Department of Psychological & Brain Sciences, UCSB Instructor: F. Gregory Ashby
2008	Teaching Assistant, Cognitive Neuroscience (undergraduate) Department of Psychological & Brain Sciences, UCSB Instructor: Michael Miller

Publications

Turner, B.O., Lopez, B., Santander, T., & Miller, M.B. (2015). One dataset, many conclusions: BOLD variability's complex relationships with age and motion artifacts. *Brain Imaging and Behavior*, *9*, 115–127.

Weber, R., Huskey, R., Mangus, M., Westcott-Baker, A., & **Turner, B.O.** (2015). Neural predictors of counterarguing in antidrug campaigns. *Communication Monographs*, *82*, 4–30.

Marinsek, N., **Turner, B.O.**, Gazzaniga, M., & Miller, M.B. (2014). Divergent hemispheric reasoning strategies: reducing uncertainty versus resolving inconsistency. *Frontiers in Human Neuroscience*.

Turner, B.O., & Miller, M.B. (2013). Number of events and reliability in fMRI. *Cognitive, Affective, and Behavioral Neuroscience*, *13*, 615–626.

Turner, B.O., Mumford, J.A., Poldrack, R.A., & Ashby, F.G. (2012). Spatiotemporal activity estimation for multivoxel pattern analysis with rapid event-related designs. *NeuroImage*, *62*, 1429–1438.

Mumford, J.A., **Turner, B.O.**, Poldrack, R.A., & Ashby, F.G. (2012). Deconvolving BOLD activation in event-related designs for multivoxel pattern classification analyses. *NeuroImage*, *59*, 2636–2643.

Ashby, F.G., **Turner, B.O.**, & Horvitz, J.C. (2010). Cortical and basal ganglia contributions to habit learning and automaticity. *Trends in Cognitive Science*, *14*, 191–232.

Publications Under Review

Paul, E.J., Smith, J.D., Valentin, V., **Turner, B.O.**, Barbey, A., & Ashby, F.G. (*under review*). Neural networks underlying the metacognitive uncertainty response. *Cortex.*

Turner, B.O., Marinsek, N., Ryhal, E., & Miller, M.B. (*under review*). Hemispheric lateralization in reasoning. *Annals of the New York Academy of Sciences.*

Invited Talks

Turner, B.O. (2013). Using neural stability and its interactions to fractionate memory processes. Bay Area Memory Meeting 10.

Poster Presentations

Turner, B.O., Davison, E.N., Schlesinger, K.J., Lynall, M.-E., Grafton, S.T., Carlson, J.M., Bassett, D.S., & Miller, M.B. (2015). Individual differences in recognition memory: Relating theory, behavior, and neural measures. Cognitive Neuroscience Society Annual Meeting.

Crossley, M.J., **Turner, B.O.**, & Ashby, F.G. (2015). Neural mechanisms of switching between procedural and declarative categorization. Cognitive Neuroscience Society Annual Meeting.

Lopez, B.A., **Turner, B.O.**, Santander, T., Schubert, M., & Miller, M.B. (2015). The uncertain relationship between BOLD variability and age. Cognitive Neuroscience Society Annual Meeting.

Marinsek, N., **Turner, B.O.**, Steindam, C., & Miller, M.B. (2015). Tracking the neural dynamics of hypothesis evaluation with model-based fMRI. Cognitive Neuroscience Society Annual Meeting.

Schubert, M.L., Kantner, J., Vettel, J.M., **Turner, B.O.**, Bullock, T., Elliott, J.C., Giesbrecht, B., & Miller, M.B. (2015). Conservative response bias and the successful memory effect in recognition memory: An EEG in-

vestigation. Cognitive Neuroscience Society Annual Meeting.

Weber, R., **Turner, B.O.**, Huskey, R., & Mangus, J.M. (2015). Individual differences in neural processing of persuasive messages: Implications for message tailoring. Cognitive Neuroscience Society Annual Meeting.

Kantner, J., Vettel, J.M., **Turner, B.O.**, Schubert, M.L., Elliot, J.C., Giesbrecht, B., & Miller, M.B. (2014). The extent and neural basis of inadequate criterion placement in recognition memory. Association for Psychological Science Annual Convention.

Lopez, B.A., **Turner, B.O.**, Santander, T., Schubert, M., & Miller, M.B. (2014). The uncertain relationship between BOLD variability and age. Bay Area Memory Meeting.

Marinsek, N., **Turner, B.O.**, & Miller, M.B. (2014). Expectation violation in the brain. Bay Area Memory Meeting.

Turner, B.O., Nisbet, A., & Miller, M.B. (2014). Separating decisional and mnemonic processes in recognition memory. Cognitive Neuroscience Society Annual Meeting.

Kantner, J., Vettel, J.M., **Turner, B.O.**, Schubert, M.L., Elliot, J.C., Giesbrecht, B., & Miller, M.B. (2014). Electrophysiological correlates of induced liberal versus conservative decision states in recognition memory. Cognitive Neuroscience Society Annual Meeting.

Li, J., **Turner, B.O.**, Risko, E., Kingstone, A., & Miller, M.B. (2014). Awareness of observation affects resting state brain activity. Cognitive Neuroscience Society Annual Meeting.

Marinsek, N., **Turner, B.O.**, & Miller, M.B. (2014). Components of belief updating and their neural correlates. Cognitive Neuroscience Society Annual Meeting.

Turner, B.O., & Miller, M.B. (2014). Using neural stability to dissociate memory processes. New Horizons in Human Brain Imaging.

Li, J., **Turner, B.O.**, Risko, E., Kingstone, A., & Miller, M.B. (2013). Modulation of default mode network activity by the knowledge of observation. Society for Neuroscience Annual Meeting.

Marinsek, N., **Turner, B.O.**, & Miller, M.B. (2013). The neural correlates of hypothesis formation and evaluation. Society for Neuroscience Annual Meeting.

Li, J., **Turner, B.O.**, Risko, E., Kingstone, A., & Miller, M.B. (2013). Modulation of default mode network activity by the knowledge of observation. Bay Area Memory Meeting.

Marinsek, N., **Turner, B.O.**, & Miller, M.B. (2013). The neural correlates of hypothesis formation and evaluation. Bay Area Memory Meeting.

Turner, B.O., & Miller, M.B. (2013). Using cross-map classification accuracy to quantify informational similarity. Organization for Human Brain Mapping Annual Meeting.

Turner, B.O., Donovan, C.-L. & Miller, M.B. (2013). Dissociating memory processes by their differences in neural stability. Cognitive Neuroscience Society Annual Meeting.

Turner, B.O., Paul, E.J., Ramasamy, D., Wadhwa, A., Ashby, F.G., & Madhow, U. (2012). Spatial coherence in fMRI: New paradigms for data processing and experimental design. Society for Neuroscience Annual Meeting.

Turner, B.O., Paul, E.J., Hélie, S., & Ashby, F.G. (2012). Multiple functions of dopamine during human category learning: A genetic triple dissociation. Cognitive Neuroscience Society Annual Meeting.

Mumford, J.A., Ashby, F.G., **Turner, B.O.**, & Poldrack, R.A. (2011). Comparison of methods for trial specific activation estimation. Organization on Human Brain Mapping Annual Meeting.

Hélie, S., Paul, E.J., **Turner, B.O.**, Foley, N.C., Gerber, C., Chen, A., & Ashby, F.G. (2011). Parsing the effect of COMT genotype on dimension selection and criterion learning in rule-based categorization. Cognitive Neu-

roscience Society Annual Meeting.

Turner, B.O. (2010). A comparison of methods for the use of pattern classification on rapid event-related fMRI data. Society for Neuroscience Annual Meeting.

Turner, B.O., & Ashby, F.G. (2009). Separate systems in attentional switching and selection: Evidence from fMRI. Cognitive Neuroscience Society Annual Meeting.

Turner, B.O., Ellis, R.J., Sollers III, J.J., & Thayer, J.F. (2007). Musical complexity is associated with greater relative sympathetic nervous system activation. Society for Psychophysiological Research Annual Meeting.

Ad Hoc Reviewing

Annals of the New York Academy of Sciences
Human Brain Mapping
NeuroImage
Proceedings of the National Academy of Sciences
Brain and Cognition
Frontiers in Neuroscience

Professional Affiliations

Member: American Association for the Advancement of Science, Cognitive Neuroscience Society, Society for Neuroscience

Public Service

2010–2011   Mentor, Summer Research Mentorship Program, UCSB
              Director: Miriam Polne-Fuller

Special Skills

Proficient with MATLAB, FSL, SPSS, Python, LaTeX, **R**, Julia, Processing
Conversant in French, Dutch