

Tal Yarkoni

Curriculum Vitae

University of Colorado at Boulder
Department of Psychology and Neuroscience
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Education

Ph.D. Psychology, Washington University, 2009

Thesis advisor: Todd Braver

M.A. Psychology, Washington University, 2006

B.A. (Hons) Psychology, Carleton University, 2003

Academic Experience

NRSA Postdoctoral Fellow, 2009 - present

Advisor: Tor Wager

University of Colorado at Boulder (2010 -)

Columbia University (2009 - 2010)

Awards & Honors

Named a "Rising Star" by the Association for Psychological Science (APS), 2011

NINR National Research Service Award (NRSA) Individual Post-Doctoral Fellowship, 2009 - 2012

Washington University Dissertation fellowship, 2008

Fellow, Summer Institute in Cognitive Neuroscience, University of California at Santa Barbara, 2007

Natural Sciences and Engineering Research Council of Canada (NSERC) Post Graduate Fellowship, 2003-2005 (declined; untenable in U.S.)

Ontario Graduate Scholarship, 2003-2004 (declined; untenable in U.S.)

Senate Medal for Outstanding Academic Achievement, Carleton University, 2003

Grants Pending

National Institutes of Health. *Large-scale automated synthesis of human functional neuroimaging data*. \$2,538,000 total cost. Role: PI. Collaborators: T. D. Wager, R. A. Poldrack, M. N. Jones, K. M. Verspoor. Initial submission: June 2011; received impact score of 36 (27th percentile). Target resubmission date: November 2011.

Publications

Journal Articles

Yarkoni, T., Poldrack, R. A., Nichols, T. E., Van Essen, D. C., & Wager, T. D. (2011). Large-scale automated synthesis of human functional neuroimaging data. *Nature Methods*, *8*, 665-670.

Rodebaugh, T. L., Klein, S. R., **Yarkoni, T.,** & Langer, J. K. (2011). Measuring interpersonal constraint with the flexible iterated prisoner's dilemma. *Journal of Anxiety Disorders*, *25*, 427-436.

Holtzman, N. S., Schott, J. P., Jones, M. N., Balota, D. A., & **Yarkoni, T.** (2011). Exploring media bias using text-analysis, with general methods to quantify discrepancies in semantics across texts. *Behavior Research Methods*, *43*, 193-200.

Yarkoni, T., Poldrack, R. A., Van Essen, D. C., & Wager, T. D. (2010). Cognitive neuroscience 2.0: Building a cumulative science of human brain function. *Trends in Cognitive Sciences*, *14*, 489-496.

Yarkoni, T. (2010). Personality in 100,000 words: A large-scale analysis of personality and word use among bloggers. *Journal of Research in Personality*, *44*, 363-373.

Braver, T. S., Cole, M. W., & **Yarkoni, T.** (2010). Vive les differences! Individual variation in neural mechanisms of executive control. *Current Opinion in Neurobiology*, *20*, 1-9.

Yarkoni, T. (2010). The abbreviation of personality, or how to measure 200 scales with 200 items. *Journal of Research in Personality*, *44*, 180-198.

- Yarkoni, T.,** Barch, D. M., Gray, J. R., Conturo, T. E., & Braver, T. S. (2009). BOLD correlates of trial-by-trial reaction time variability in gray and white matter: a multi-study fMRI analysis. *PLoS ONE*, *4*, e4527.
- Yarkoni, T.,** Balota, D. A., & Yap, M. J. (2008). Beyond Coltheart's N: A new measure of orthographic similarity. *Psychonomic Bulletin & Review*, *15*, 971-979.
- Yarkoni, T.,** Speer, N. K., Balota, D. A., McAvoy, M. P., & Zacks, J. M. (2008). Pictures of a thousand words: Investigating the neural mechanisms of reading with extremely rapid event-related fMRI. *NeuroImage*, *42*, 973-987.
- Yarkoni, T.,** Speer, N. K., & Zacks, J. M. (2008). Neural substrates of narrative comprehension and memory. *NeuroImage*, *41*, 1408-1425.
- Schaefer, A., Braver, T.S., Reynolds, J.R., Burgess, G.C., **Yarkoni, T.**, & Gray, J.R. (2006). Individual differences in amygdala activity predict response speed during working memory. *Journal of Neuroscience*, *26*, 10120-10128.
- Yarkoni, T.,** Braver, T.S., Gray, J.R., & Green, L. (2005). Prefrontal brain activity predicts temporally extended decision-making behavior. *Journal for the Experimental Analysis of Behavior*, *84*, 537-554.
- Gray, J.R., Burgess, G.C., Schaefer, A., **Yarkoni, T.**, Larsen, R.J., & Braver, T.S. (2005). Personality differences in neural processing efficiency confirmed using fMRI. *Cognitive, Affective & Behavioral Neuroscience*, *5*, 182-190.
- Yarkoni, T.,** Gray, J.R., Chrastil, E., Barch, D.M., Green, L., & Braver, T.S. (2005). Sustained neural activity associated with cognitive control during temporally-extended decision making. *Cognitive Brain Research*, *23*, 71-84.

Chapters, Commentaries, & Other Contributions

- Yarkoni, T.** (in press). Functional MRI in health psychology and beyond: A call for caution. *European Health Psychologist*.
- Yarkoni, T.,** & Braver, T. S. (2010). Functional neuroimaging approaches to individual differences in working memory and executive control: Conceptual and methodological considerations. In: *Handbook of Individual Differences in Cognition*. Gruszka, Matthews, & Szymura, Eds.
- Holtzman, N. S. & **Yarkoni, T.** (2010). More residues of personality in language use: A primer. *P: The Newsletter for the Association for Research in Personality*.
- Yarkoni, T.** (2009). Big correlations in little studies: Inflated fMRI correlations reflect low statistical power—Commentary on Vul et al (2009). *Perspectives on Psychological Science*, *4*, 294-298.

Manuscripts Submitted and in Preparation

Yarkoni, T. Designing next-generation platforms for evaluating scientific output: what scientists can learn from the social web. *Submitted.*

Cole, M. W., **Yarkoni, T.**, Repovs, G., Anticevic, A., & Braver, T. S. Global connectivity of prefrontal cortex predicts cognitive control and intelligence. *Submitted.*

Chang, L. J., **Yarkoni, T.**, Khaw, M. W., & Sanfey, A. G. Decoding the role of the insula in human cognition: Functional parcellation and large-scale reverse inference. *Submitted.*

Westbrook, A., Martins, B. S. **Yarkoni, T.**, & Braver, T. S. Living on the Edge: How strategic insight and aging influence risky decision-making. *Submitted.*

Yarkoni, T. What's not to like?: Agreeableness indiscriminately enhances trust during social decision-making. *In preparation.*

Yarkoni, T., & Braver, T. S. Is the prefrontal cortex rational? Evidence from decision-making under risk. *In preparation.*

Yarkoni, T. & Wager, T. D. Statistical power in functional neuroimaging studies: problems and solutions. *In preparation.*

Poldrack, R. A., Mumford, J., Kalar, D., Barman, B., & **Yarkoni, T.** Topic mapping: A literature-wide analysis of mind-brain relationships. *In preparation.*

Scientific Software & Websites

NeuroSynth: A suite of tools for extracting and synthesizing data from published fMRI studies (<http://neurosynth.org>; Yarkoni et al., 2011).

Contrast Analysis of Semantic Similarity (CASS): a Ruby implementation of a semantic space model (<http://casstools.org>; Holtzman et al., 2011).

Flexible Iterated Prisoner's Dilemma (FIPD): A Windows application for development and presentation of flexible variants of the Prisoner's Dilemma (Rodebaugh et al., 2011).

GAAbbreviate: a genetic algorithm-based toolkit for abbreviating personality measures (<http://shortermeasures.com>; Yarkoni, 2010).

LDCalc: A Windows utility for computing Levenshtein distance-based string similarity metrics (Yarkoni, Balota, & Yap, 2008, PB&R).

E-xperiments.org (<http://e-xperiments.org>). Ruby on Rails-based platform for online experiment presentation (e.g., Yarkoni, 2010).

failuretoreplicate.com (<http://failuretoreplicate.com>). Prototype of an online database for tracking unpublished study findings.

Organizations

Association for Psychological Science

Organization for Human Brain Mapping

Society for Neuroscience

Cognitive Neuroscience Society

International Neuroinformatics Coordinating Facility

Ad-hoc Peer Review

NeuroImage (x10); *Journal of Research in Personality* (x4); *Social Psychology and Personality Science* (x2); *Cognitive, Affective, and Behavioral Neuroscience* (x2); *NSF electronic review* (x2); *Journal of Neuroscience* (x2); *Nature Neuroscience*; *PLoS Computational Biology*; *Human Brain Mapping*; *Neuropsychologia*; *Journal of Personality*; *PLoS ONE*; *Quarterly Journal of Experimental Psychology*; *Journal of Experimental Psychology: Human Perception and Performance*; *Journal of Experimental Psychology: Learning, Memory, & Cognition*; *Journal of the Experimental Analysis of Behavior*; *Journal of Cognitive Neuroscience*; *Cognitive Neuroscience*; *Psychiatry Research*; *Cognitive Brain Research*; *Brain Research*; *Brain and Cognition*; *Journal of Behavioral Decision Making*; *BMC Research Notes*

Invited Talks

September, 2011. Dartmouth College.

June, 2011. Georgetown University.

March, 2011. University of Colorado Denver.

April, 2010. Carleton University.

September, 2009. Dartmouth College.

Conference Presentations

Yarkoni, T., Poldrack., R. A., Nichols, T. E., Van Essen, D. C., & Wager, T. D. (2011, September). Towards large-scale automated synthesis of human brain activity. Poster presented at the Neuroinformatics 2011 Congress, Boston, MA.

Yarkoni, T., Poldrack, R. A., Nichols, T. E., Van Essen, D. C., & Wager, T. D. (2011, June). Towards large-scale automated synthesis of human brain activity. Talk presented at the 17th annual meeting of the Organization for Human Brain Mapping, Quebec City, Canada.

Yarkoni, T., Poldrack, R. A., Nichols, T. E., Van Essen, D. C., & Wager, T. D. (2011, April). Large-scale automated synthesis of human brain activity. Poster presented at the 18th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Andrews, J. A., **Yarkoni, T.**, Wager, T. D., Arbuckle, M., Saxe, R., & Buckner, R. L. (2011, April). Default network subsystems contribute differentially to episodic memory and theory of mind. Slide session talk presented at the 18th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Chang, L. J., **Yarkoni, T.**, Khaw, M. W., & Sanfey, A. G. (2011, April). Functional parcellation of the human right insula using resting state fMRI. Poster presented at the 18th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Cole, M. W., **Yarkoni, T.**, Repovs, G., & Braver, T. S. (2011, April). Flexible hubs: Global brain connectivity correlates of human intelligence. Poster presented at the 18th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Yarkoni, T. (2010, November). Science by synthesis: using a cumulative approach to overcome methodological limitations in neuroimaging studies. Invited talk presented at the Biennial Meeting of the Philosophy of Science Association, Montreal, Canada.

Holtzman, N. S., Schott, J. P., Jones, M. N., Balota, D. A., & **Yarkoni, T.** (2010, November). Exploring Media Bias with Semantic Space Models. Poster presented at the 51st annual meeting of Psychonomic Society, St. Louis, MO.

Reinen, J. M., **Yarkoni, T.**, Abraham, D., & Wager, T. D. (2010, April). Dissociations in the experience, recall, and valuation of pain. Poster presented at the 17th annual meeting of the Cognitive Neuroscience Society, Montreal, Canada.

Yarkoni, T. (April, 2010). Symposium: Motivating a cumulative cognitive neuroscience (chair and speaker). 17th annual meeting of the Cognitive Neuroscience Society, Montreal, Canada.

Yarkoni, T., & Braver, T. S. (2009, May). Strategic modulation of cognitive control during decision-making under risk. Poster presented at the 16th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Yarkoni, T., & Braver, T. S. (2008, November). Strategic modulation of cognitive control during decision-making under risk. Talk presented at the 38th annual meeting of the Society for Neuroscience, Washington, D. C.

Yarkoni, T., & Braver, T. S. (2008, September). Strategic modulation of cognitive control in decision-making under uncertainty. Poster presented at the annual meeting

of the Society for Neuroeconomics, Park City, UT.

Yarkoni, T., & Braver, T. S. (2008, April). Dissociable contributions of probability, magnitude, and expected value on decision-making. Poster presented at the 15th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Yarkoni, T., Barch, D. M., Conturo, T. E., & Braver, T. S. (2007, November). Neural correlates of trial-by-trial variability in reaction time: A multi-study analysis. Talk presented at the 37th annual meeting of the Society for Neuroscience, San Diego, CA.

Yarkoni, T. (October, 2007). What can functional neuroimaging tell us about decision-making? Invited talk presented at the Mid-American Association for Behavior Analysis 2007 meeting, Milwaukee, WI.

Yarkoni, T. (2007, July). Neural mechanisms of single-word processing during narrative reading. Talk given at the Tsinghua University workshop on interdisciplinary perspectives in memory and language, Tsinghua University, Beijing, China.

Yarkoni, T., Barch, D. M., Conturo, T. E., & Braver, T. S. (2007, May). Neural correlates of trial-by-trial variability in reaction time: A meta-analysis. Poster presented at the 14th annual meeting of the Cognitive Neuroscience Society, New York, New York.

Yarkoni, T., Gray, J. R., & Braver, T. S. (2006, April). Precuneus activation predicts working memory performance within and across subjects. Poster presented at the 13th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Speer, N. K., Yarkoni, T., & Zacks, J. M. (2006, April). Neural correlates of the processes involved in narrative comprehension and memory for narrated events. Poster presented at the 13th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Yarkoni, T., & Barch, D. M. (2005, November). Individual differences in neural reactivity to emotional stimuli. Talk presented at the 35th annual meeting of the Society for Neuroscience, Washington, D. C.

Yarkoni, T., Gray, J.R., & Braver, T.S. (2005, June). Neural mechanisms of cognitive energy and fatigue. Poster presented at the 11th annual meeting of the Organization for Human Brain Mapping, Toronto, Canada.

Yarkoni, T., Braver, T.S., Schaefer, A., Burgess, G.C., & Gray, J.R. (2005, April). Beyond reward: Neural correlates of extraversion during a cognitive task. Poster presented at the 12th annual meeting of the Cognitive Neuroscience Society, New York, New York.

Yarkoni, T., Gray, J., Green, L., Schaefer, A., Locke, H.S., Chrastil, E., & Braver, T.S. (2004, October). Neural mechanisms of cognitive control predict performance in

temporally-extended decision-making. Poster presented at the 34th annual meeting of the Society for Neuroscience, San Diego, California.

Yarkoni, T., Gray, J., & Braver, T.S. (2004, August). Deactivation in the resting-state network predicts neuroticism and state anxiety. Poster presented at the conference on the Biological Basis of Personality and Individual Differences, Stony Brook University, New York.

Yarkoni, T., & Zelenski, J.M. (2004, January). Too much emotion or too little? Modeling the relationship between alexithymia, negative affect, and verbal expressivity. Poster presented at the 5th annual meeting of the Society for Personality and Social Psychology, Austin, Texas, January 31, 2004.

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