Robert Thorstad

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RESEARCH OVERVIEW

Human psychology is manifest online every day, as when people write on social media, click on ads, shop for products, and make and receive recommendations. The long-term goal of my research is to build psychological accounts suitable for explaining the problems that people face online every day, using people's natural online behavior as a psychological laboratory. Building such accounts involves two steps. First, this research involves expanding the problem space of psychology to problems de facto studied in computer science, but which are truly psychological in nature. Second, this research involves adopting new methods suitable for understanding large amounts of online behavior, especially machine learning, data mining, and natural language processing. To date, I have applied these methods to use the future thinking implicit in people's tweets to predict their decision-making in laboratory choice games (Thorstad & Wolff, 2018), to use the words in people's everyday writing on Reddit to predict whether they have a mental illness (Thorstad & Wolff, resubmitted), and to use the schemas implicit in people's blog posts to understand the cognitive processes people use to think about the past and future (Thorstad & Wolff, in prep).

EDUCATION

Emory University 2014-present
PhD student in Psychology
Advisor: Phillip Wolff

University of North Carolina Chapel Hill 2012-2014
Research Assistant in Psychology
Advisor: Neil Mulligan

Haverford College 2012
BA in Philosophy with high honors

JOURNAL PUBLICATIONS

Thorstad, R. & Wolff, P. (2018). A big data approach to future thinking and decision-making. Proceedings of the National Academy of Sciences, 115(8): E1740-E1748.

Wolff, P. & **Thorstad, R.** (2017). Force dynamics. In M. Waldman (Ed.) Oxford Handbook of Causal Reasoning. Oxford, UK: Oxford University Press.

REFEREED CONFERENCE PROCEEDINGS

Thorstad, R. & Wolff, P. (2018). Using Big Data Methods to Identify Conceptual Frameworks. In T.T. Rogers, M. Rau, X. Zhu, & C. W. Kalish (Eds.) Proceedings of the 40th Annual Meeting of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Thorstad, R. & Wolff, P. (2016). What causal illusions might tell us about the identification of causes. In A. Papafragou, D. Grodner, D. Mirman, & J.C. Tueswell (Eds.), Proceedings of the 38th Annual Meeting of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Thorstad, R. & Wolff, P. (2016). Temporal horizons and decision-making: a big data approach. In A. Papafragou, D. Grodner, D. Mirman, & J.C. Tueswell (Eds.), Proceedings of the 38th Annual Meeting of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Thorstad, R., Nie, A., & Wolff, P. (2015). Representations of time affect willingness to wait for future rewards. Proceedings of the 37th Annual Meeting of the Cognitive Science Society. (pp. 2392-2397). Austin, TX: Cognitive Science Society.

MANUSCRIPTS

Thorstad, R. & Wolff, P. (Revise and resubmit). Predicting Future Mental Illness from Social Media: A Big Data Approach.

Thorstad, R. & Wolff, P. (In Prep.). What causal illusions might tell us about the identification of causes.

TALKS

Thorstad, R. "Does culture 'get in the head?' determinants of the emotional arc of narratives." Presentation at Emory University Graduate Research Team of Interdisciplinary Scholars (GRITS). October 2018. Atlanta, GA

Thorstad, R. "Predicting Mental Illness from Social Media." Presentation at Emory University Quantitative Methods Chalk Talk Series. October 2018. Atlanta, GA

Thorstad, R. "Mental Disorders and Natural Language: A Big Data Approach." Presentation at Emory University Graduate Research Team of Interdisciplinary Scholars (GRITS). February 2018. Atlanta, GA

Thorstad, R. Combining Big Data and the Lab to Study Future Thinking and Decision-Making. Presentation at Emory University Institute for Quantitative Theory and Methods. March 2017. Atlanta, GA.

Graci, M., **Thorstad, R.**, Waters, T., Fivush, R., & Wolff, P. Insights into narrative coherence and wellbeing using neural networks. Symposium presentation. January 2017. SARMAC, Sydney, Australia.

Thorstad, R. & Wolff, P. Temporal horizons and decision-making: a big data approach. Presentation at the 38th Annual Meeting of the Cognitive Science Society. August 2016. Philadelphia, PA.

Thorstad, R. & Wolff, P. What causal illusions might tell us about the identification of causes. Presentation at the 38th Annual Meeting of the Cognitive Science Society. August 2016. Philadelphia, PA.

Wolff, P., Shepard, J., & **Thorstad, R.** Social media and people's representations of the future: a big data approach. Presentation at the International Conference on Thinking & Reasoning. August 2016. Providence, RI.

POSTERS

Graci, M., **Thorstad, R.**, Haardoerfer, R., & Fivush, R. (2018, May). Extracting Emotional Arcs from Distressing Memories Using Deep Recursive Sentiment Analysis. Association for Psychological Science, San Francisco, CA.

Thorstad, R. & Wolff, P. (2017) Predicting future behaviors from social media: the effect of time horizon on decision-making. Poster presented at 4th Annual Mechanisms of Learning Forum. Queretaro, Mexico.

Graci, M., **Thorstad, R.**, Waters, T., Fivush, R., & Wolff, P. (2017). Deriving semantic coherence of personal memory using neural networks. Poster presented at 4th Annual Mechanisms of Learning Forum. Queretaro, Mexico.

Thorstad, R. & Wolff, P. (2016). Temporal horizons and decision-making: a big data approach. Poster presented at Emory University Psychology Department Research Festival. Atlanta, GA.

Thorstad, R. & Wolff, P. (2016). The Temporal Dynamics of Causal Illusions. Poster presented at 3rd Annual Mechanisms of Learning Forum. Atlanta, GA.

Graci, M., **Thorstad, R.**, Fivush, R., & Wolff, P. (2016). Extracting Coherence of Trauma Memories Using Neural Networks. Poster presented at 3rd Annual Mechanisms of Learning Forum. Atlanta, GA.

Wolff, P., Copley, B., Agichtein, E., **Thorstad, R.**, Nie, A., & Kilgore, R. (2015). Future Orientation and Wellbeing at the Population Level: A Preliminary Analysis based on Twitter Posts. Poster presented at Atlanta Computational Social Science Workshop. Atlanta, GA.

Thorstad, R. & Wolff, P. (2015). The Temporal Dynamics of Causal Illusions. Poster presented at the Psychonomics Society Annual Meeting. Chicago, IL.

Thorstad, R., Nie, A., & Wolff, P. (2015). Representations of Time Affect Willingness to Wait for Future Rewards. Poster presented at Annual Meeting of the Cognitive Science Society. Pasadena, CA.

AWARDS

Emory College Collaborative Research Catalyst Award in Neural and Behavioral Mechanisms of Learning 2016-2018
2 year funded research fellowship, total $3,500 for research and travel on big data approaches to psychology.

Travel Award: Cognitive Science Society Annual Meeting 2016

Phi Beta Kappa 2012

Departmental Prize in Philosophy 2012
Haverford College

Magill-Rhoads (Merit) Scholarship 2009-2012
Haverford College

TEACHING EXPERIENCE

Graduate Co-Instructor Fall 2016-Spring 2017
Mechanisms of Learning Graduate Training Grant Seminar

Lab Instructor Fall 2016
Research Methods. Emory University

Teaching Assistant Spring 2016
Introduction to Psychology. Emory University

Teaching Assistant Fall 2015
Perception and Action. Emory University.

SERVICE

Undergraduate Research Grant Review (Emory SIRE program) 2018-present
3x/year review of undergraduate research grant applications.

Undergraduate Research Poster Judge 2015, 2017, 2018
Emory University undergraduate research presentations.
Emory University STEM Symposium (Fall 2017)

Undergraduate Research Poster Judge 2017
Spelman College undergraduate research presentations.

Abstract Review 2017
Emory University STEM Symposium for underrepresented undergraduate students.

Graduate Research Talks Organizing (Emory GRITS program) 2016-present
Emory University. Graduate student committee to organize interdisciplinary graduate student lecture series.

Ethics Committee 2016-present
Emory University. Psychology department ethics committee.

OUTREACH

Python Programming Group 2018-present
Founder and leader. Scientific programming group for graduate students and postdocs at Emory University.

Software Carpentry Workshop 2018-present
Volunteer at Emory University scientific programming workshop for graduate students.

Data Fest 2018
Volunteer at Emory University undergraduate festival for computer-oriented data analysis.

PEER REVIEW

Reviews for: Journal of Economic Psychology

SKILLS

Computer Programming
Strong proficiency with Python, both machine learning libraries (scikit-learn) and data manipulation libraries (PANDAS) as well as manipulating large natural language datasets. Moderate proficiency with Java, especially natural language processing with Stanford CoreNLP.

Animation
Animation creation for psychology experiments in 3D studio MAX advanced animation software, proficient with Mental Ray and VRAY advanced rendering.

NON-ACADEMIC WRITING

Contract Bridge Articles
Assistant Editor for District 7 Bridge Bulletin, a bimonthly newsletter on the card game contract bridge with roughly 12,000 readers.