

Devon Brackbill

Annenberg School for Communication
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RESEARCH INTERESTS

Computational Social Science, Network Dynamics, Collective Intelligence, Quantitative Methods, Social Networks, Web-based Experiments

EDUCATION

- | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PhD | Communication (focus: Computational Social Science), University of Pennsylvania, Annenberg School for Communication, 2016 (expected)
Thesis: The Network Structure of Collective Innovation |
| MA | Communication, University of Pennsylvania, 2013 |
| MA | English (focus on Rhetoric), The Pennsylvania State University, 2011 |
| BA | Philosophy/Logic, <i>Summa Cum Laude</i> , McDaniel College, 2009 |

GRANTS

National Science Foundation. Doctoral Dissertation Improvement Grant, Sociology (\$11,912), March 2015. PI: **Devon Brackbill** and Damon Centola
“Designing Collaboration Networks to Optimize Collective Problem-Solving”

Russell Ackoff Doctoral Student Fellowship for Research on Human Decision Processes and Risk Management, Wharton, University of Pennsylvania (\$3,500 direct), April 2015
Devon Brackbill
“Designing Collaboration Networks to Optimize Collective Problem-Solving”

Annenberg National Health Communication Study Seed Grant for Innovative Health Research (\$35,000 direct), Fall 2013.
“How Online Networks Impact Health Outcomes: An Experimental Approach”
PI, Damon Centola; Co-Investigators, **Devon Brackbill**, Sijia Yang, Jingwen Zhang

PUBLICATIONS

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, Damon Centola. (2015). Efficacy and Causal Mechanism of an Online Social Media Intervention to Increase Physical Activity: Results of a Randomized Controlled Trial. *Preventative Medicine Reports*, 2, 651-657.

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, Damon Centola. (2015). Identifying the effects of social media on health behavior: Data from a large-scale online experiment. *Data in Brief*, 5, 453-457.

Edward D. Mansfield, Diana C. Mutz, and **Devon Brackbill**. “Effects of the Great Recession on American Attitudes toward Trade.” *British Journal of Political Science* (forth coming).

WORKING PAPERS

Devon Brackbill, Joshua Becker, and Damon Centola. “Improving Collective Wisdom with Social Influence.”

Devon Brackbill, and Damon Centola. “The Network Structure of Collective Innovation.”

Devon Brackbill, Joshua Becker, and Damon Centola. “The Collective Dynamics of Committed Minorities.”

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, Joshua Becker, Natalie Herbert, and Damon Centola. “Support or Competition? How Social Media Reduces Sedentary Lifestyle.”

PRESENTATIONS

Devon Brackbill, Joshua Becker, and Damon Centola. “The Danger of Opinion Leaders: How Social Influence Affects the Wisdom of Crowds.” American Sociological Association: Mathematical Sociology. Seattle, WA. August, 2016 (accepted talk).

Devon Brackbill, Joshua Becker, and Damon Centola. “The Danger of Opinion Leaders: How Social Influence Affects the Wisdom of Crowds.” International Conference on Computational Social Science. Kellogg School of Management, Northwestern University, Evanston, IL. June 24-26, 2016 (accepted talk).

Devon Brackbill, Joshua Becker, and Damon Centola. “The Danger of Opinion Leaders: How Social Influence Affects the Wisdom of Crowds.” Collective Intelligence Conference. New York University, NY. June 1-3, 2016 (accepted talk).

Devon Brackbill, “The Network Structure of Collective Innovation.” Network Science Institute, Northeastern University. Boston, MA. March, 16, 2016 (invited talk).

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, Damon Centola. “Efficacy and Causal Mechanism of an Online Social Network Intervention to Increase Physical Activity.” American Public Health Association. Chicago, IL. November, 2015 (talk).

Devon Brackbill, Joshua Becker, Natalie Herbert, and Damon Centola. “The Danger of Opinion Leaders: How Centralization Undermines the Wisdom of Crowds.” Workshop on Information in Networks. New York, NY. October, 2015 (talk).

Devon Brackbill. “Engineering Behavior Change through Social Media.” International Conference on Computational Social Science. Helsinki, Finland. June, 2015 (talk).

<https://youtu.be/auvv9MHTzfs?t=59m5s>

Devon Brackbill. “Designing Collaboration Networks for Collective Problem Solving.” NetSci. Zaragoza, Spain. June, 2015 (poster).

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, and Damon Centola. “The Causal Impact of Social Media on Physical Activity: A Randomized Controlled Trial.” International Communication Association. San Juan, Puerto Rico. May, 2015 (talk).

Jingwen Zhang, **Devon Brackbill**, Sijia Yang, and Damon Centola. “A social media intervention to increase physical activity.” International Workshop on Big Data and Modeling Methods in Communication Research. Beijing, China, July 14-18, 2014 (talk).

Diana C. Mutz, Edward Mansfield, and **Devon Brackbill.** “Origins of American Attitudes Toward Globalization: The Role of Mass Media.” American Political Science Association Annual Meeting. Chicago, IL. August 31, 2013 (talk).

Devon Brackbill, Andrew Daniller, Alex Garlick, and Laura Silver. “Why Do People Hate the Media: A Survey-Experimental Investigation.” Midwest Political Science Association. Chicago, IL. April 12, 2013 (talk).

Doug Allen, **Devon Brackbill**, Andrew Daniller, Alex Garlick, Diana C. Mutz, Laura Silver, and Ashley Tallevi. “A Re-examination of Waning Trust in the News Media.” Annenberg Colloquium (Invited Talk). University of Pennsylvania, Philadelphia, PA. November, 2012 (talk).

RESEARCH EXPERIENCE

Research Fellow with Damon Centola, Fall 2013-present

- Developed 3 web-based platforms for experiments.
- Developed field experiment to assess the effect of social influence on exercise behavior. Paper published in *Preventative Medicine Reports*.
- Sole project manager overseeing two developers to design experimental platforms.

Research Fellow with Diana C. Mutz and Edward D. Mansfield, Spring 2012

- Analyzed survey data using panel fixed effects models to examine changes in trade attitudes during the Great Recession. Paper presented at American Political Science Association.

Research Team with Diana C. Mutz, Spring 2012

- Designed and implemented population-based survey experiment.

Research Fellow with Michael X. Delli Carpini, Fall 2011

- Developed and implemented survey experiment on attitudes toward healthcare policy.

TEACHING EXPERIENCE

Center for Teaching and Learning, Teaching Certificate, April 2015

Teaching Fellow for Amy Jordan, University of Pennsylvania, Fall 2013

Teaching Fellow for Peter D. Hart, University of Pennsylvania, Fall 2012

Teaching Fellow, the Pennsylvania State University, Fall 2009 – Spring 2011

- Independently taught 6 semester-long classes.

ADDITIONAL FELLOWSHIPS, HONORS, AND AWARDS

GAPSA Travel Funding, April 2015. (\$450)

Penn Public Policy Challenge, 2013

Finalist.

COMPASS Fellowship, Summer 2013

\$7,000 for a fellowship in Washington, D.C., University of Pennsylvania (declined).

Doctoral Fellowship, Annenberg School for Communication, University of Pennsylvania, 2011-16

Phi Beta Kappa, Delta of Maryland, member, 2009

ACADEMIC SERVICE

Reviewer for EPJ Data Science

Composition Representative, English Graduate Organization, Penn State. Represented graduate student interests to the Composition Committee. Designed and led professionalism workshop for graduate students.

TRAINING AND ADDITIONAL SKILLS

Software: R, Python, SQL, Stata, Git, Bash/Shell, caret, scikit-learn, numPy, pandas

Data Visualization: ggplot2, HTML, CSS

Computing: AWS (EC2), DigitalOcean, Linux (Ubuntu), Apache web server

Statistics: Experimental Design & Potential Outcomes, Hypothesis Testing, OLS, Fixed Effects Panel Analysis, Network Analysis, Matching / Propensity Score, Multilevel Modeling

Machine Learning: Random Forests, Gradient Boosting, Support Vector Machines, Neural Networks / Deep Learning

Workshop Attendance: Tools for Big Data Analysis (Spring 2014), Big Data in Public Health (Spring 2013), Monitoring and Evaluation of Media Programs in Conflict-Affected Regions, US Institute of Peace (Spring 2013).

IRB Human Subjects Research Certificate