

JOSHUA BECKER

ANNENBERG SCHOOL FOR COMMUNICATION, UNIVERSITY OF PENNSYLVANIA

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EDUCATION

PhD Candidate (ABD)

Annenberg School for Communication, University of Pennsylvania

Dissertation: Network Dynamics of Social Influence in the Wisdom of Crowds

Committee: Damon Centola (chair), Sandra Gonzalez-Bailon, Michael Delli-Carpini

Expected Graduation: May, 2018

MA Communication

Annenberg School for Communication, University of Pennsylvania

Thesis: The Influence of Hubs: Network Structure and the Quality of Collective Decisions

BA Liberal Arts (Philosophy / History of Math and Science)

St. Johns College, Annapolis

PUBLICATIONS

Guilbeault, D., **Becker, J.** & Centola, D.. (2018). Complex Contagions: A Decade in Review. In Yong Yeol Ahn & Sune Lehmann (Eds.) *Spreading Dynamics in Social Systems*. Springer Nature.

Becker, J., Brackbill, D., & Centola, D. (2017). Network Dynamics of Social Influence in the Wisdom of Crowds. *Proceedings of the National Academy of Science*, 14 (26), 5070–5076

Zhang, J., Brackbill, D., Yang, S., **Becker, J.**, Herbert, N., & Centola, D. (2016). Support or competition? How online social networks increase physical activity: A randomized controlled trial. *Preventive Medicine Reports*, 4, 453-458.

WORKING PAPERS

Becker, J. (2017). Network Dynamics of Equilibrium Selection in Coordination Decisions.

Guilbeault, D., **Becker, J.**, & Centola, D. (2017). Using Social Networks to Mitigate Motivated Reasoning in Climate Change Communications.

FUNDING & CURRENT RESEARCH

- 2017 Becker, J. *Can Social Influence Improve Financial Forecasting?* (\$2,500) Russell Ackoff Doctoral Fellowship, Wharton Risk Center. (Currently collecting data)
- Becker, J. and Porter, E. *Harnessing the Wisdom of Crowds to Increase Political Knowledge.* (\$7,800) Russell Sage Foundation grant through Summer Institute for Computational Social Science. (Currently collecting data)
- 2016 Centola, D., Zhang, J., Aysola, J., **Becker, J.**, and Brackbill, D. *Improving Medical Decisions Making Trough the Wisdom of Crowds.* (\$390,041) Robert Wood Johnson Pioneer Grant. (Currently collecting data)

CONFERENCE PRESENTATIONS

- Becker, J. Brackbill, D. Centola, D. Harnessing the Wisdom of Crowds to Improve Group Decisions, *Wharton Innovation Doctoral Symposium*, Wharton School, Philadelphia, October 2017.
- Becker, J. Brackbill, D. Centola, D. The Network Dynamics of Social Influence in the Wisdom of Crowds, *Annual Meeting of the American Sociological Association*, Montreal, Canada, August 2017.
- Becker, J. Brackbill, D. Centola, D. The Network Dynamics of Social Influence in the Wisdom of Crowds, *International Conference on Computational Social Science*, Cologne, Germany, July 2017.
- Becker, J., Brackbill, D., Centola, D. An Experimental Study of Critical Mass. *International Conference on Computational Social Science*, Chicago, IL, June 2016.
- Becker, J., On Centralization and Collective Decision-Making. *Penn Network Visualization Program*, University of Pennsylvania, June 2016.
- Becker, J., Brackbill, D., Centola, D. An Experimental Study of Collective Intelligence. *Collective Intelligence Conference*, New York, NY, June 2016.
- Becker, J. & Centola, D., Coordination, exploration, and collective decisions, *Workshop on Information and Networks*, New York, NY, October, 2015.
- Becker, J., Collective Decisions as Coordination Processes: The Influence of Hubs, *NetSci 2015*, Zaragoza, Spain, June, 2015.
- Becker, J., Collective Decisions as Coordination Processes: The Influence of Hubs, *Computational Social Science Summit*, Chicago, IL, May, 2015

TEACHING EXPERIENCE

- 2016-2017 Teaching assistant and curriculum design for Damon Centola
Online course: The Network Dynamics of Social Behavior (in development)
- 2015 Teaching Assistant for Sandra Gonzalez-Bailon
Undergraduate course: Big Data and Social Networks
- 2008-2013 Skills Trainer, Interpersonal Communication Skills
Community Mediation Maryland, Kimmel Center Philadelphia
- 2005-2011 Youth Educator
Daniel Rothman Religious School, Epigenesis Program

ADDITIONAL TRAINING

- 2017 Summer Institute in Computational Social Science
Russell Sage Foundation, Princeton University
- 2013-2017 Research Assistant for Damon Centola
Conducted research using web-based experiments and agent-based models
- 2015-2016 Research Assistant for Sandra Gonzalez-Bailon
Analyzed Turkish political influence networks on Twitter

TECHNICAL SKILLS

- Coding R, Java, NetLogo, full stack web development
- Data Analysis Network analysis, statistics, machine learning