Rebecca A. Johnson

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Education/Positions

Assistant Professor (July 2020-), Quantitative Social Science, Dartmouth College

Ph.D. student, Demography, Social Policy, and Sociology, Princeton University (Sep 2014-June 2020)

- **Dissertation**: Zero-Sum Rights: Student Needs, Parental Intervention, and Hidden Rationing in K-12 Education

- **Committee:** Dalton Conley (chair), Brandon Stewart, Sara McLanahan, and Paul Starr

- **General examinations:** Demography; Law and Inequality; Medical Sociology

Associate Fellow (Oct. 2019-June 2020), Academic Affiliate (July 2020-), Office of Evaluation Sciences, U.S. General Services Administration (formerly: White House Social and Behavioral Sciences Team).

- Partnering with HUD, the Department of Education, the Census Bureau, and the VA healthcare system

Visiting Data Scientist (June 2019-), The Lab at DC, DC's Executive Office of the Mayor

Pre-Doctoral Fellow, NIH Department of Bioethics, 2012-2014

B.A. with Honors, Psychology (minors: Economics; Religious studies), M.A. (Modern Religious Thought, Ethics and Philosophy), Stanford University, 2012

Honors, Grants, & Awards

- **External:**

  - Faculty Scholar, American Bar Foundation Access to Justice Initiative

  - Co-PI, National Science Foundation Smart and Connected Communities Grant, Just Connect Us: A Community-Oriented Civil Justice Data Commons (Award # 1952067

  - Invited Participant, NSF-sponsored workshop on Big Data and Social Science, hosted by the Federal Interagency Social and Behavioral Science Working Group

  - Inter-Personnel Agreement, Office of Evaluation Sciences, General Services Administration

  - Invited Participant, NSF-sponsored workshop on Ethics in Data Science Pedagogy

  - Invited Participant, NSF-sponsored workshop on Data Science and Access to Justice

- Data Science for Social Good (DSSG) Summer Fellowship at the Center for Data Science and Public Policy, University of Chicago Harris School
- NSF Graduate Research Fellowship
- Social Security Administration/Mathematica Disability Research Consortium Summer Research Fellowship
- Young Scholar in Research Ethics, German Research and Education Ministry
- Pre-doctoral Research Fellowship, National Institutes of Health

- **Internal (Princeton and Stanford):**

  - Overdeck Education Innovation Fund ($3000)
  - Ethics of Artificial Intelligence Professional Development Cohort, Center for Information and Technology Policy
  - Lawrence S. Rockefeller Graduate Prize Fellowship, Center for Human Values ($\sim$ $36,000)
  - Center for Health and Wellbeing U.S. Health Policy Research Award ($\sim$ $5,000; 2 $\times$)
  - Marion Levy Fellow in Social Policy; Marvin Bressler Graduate Student Teaching Award (for teaching in undergraduate programming and quantitative methods)
  - Princeton Research in Experimental Social Science (PRESS) Research Award ($\sim$ $ 500)
  - Center for the Study of Social Organization (CSSO) Research Award ($\sim$ $2000)
  - Firestone Medal, best psychology honor's thesis/Stanford's highest honor for undergraduate thesis research

Publications (summarized on Google Scholar)

Forthcoming   Johnson, Rebecca and Tanina Rostain. "Tool for Surveillance or Spotlight on Inequality? Big Data and the Law." *Annual Review of Law and Social Sciences.*

2019   Ye, Teng, **Johnson, Rebecca A.**, Fu, Samantha, Copeny, Jerica, Donnelly, Bridgit, Freeman, Alex, Lima, Mirian, Walsh, Joe and Rayid Ghani. 2019. "Using Machine Learning to Help Vulnerable Tenants in New York City." In official proceedings of ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS) (COMPASS '19).

2018   Conley, Dalton, **Johnson, Rebecca A.**, Domingue, Ben, Dawes, Christopher, Boardman, Jason, and Mark Siegal "A sibling method for identifying vQTLs". *PloS One* 13(4).

2017   Stites, Shana, **Johnson, Rebecca A.**, Harkins, Kristin, Sankar, Pamela Xie, Dawei and Jason Karlawish. "Identifiable Characteristics and Potentially Malleable Beliefs Predict Stigmatizing Attributions Toward Persons With Alzheimer's Disease Dementia: Results of a Survey of the U.S. General Public." *Health Communication* 33(3): 264-273

2016   Johnson, Rebecca A., Annette Rid, Ezekiel Emanuel, and David Wendler. "Risks of Phase I Research with Healthy Participants: A Systematic Review." *Clinical Trials* 13(2): 149-160

Sisti, Dominic A., Segal, Andrea G., Siegel, Andrew M., **Johnson, Rebecca A.**, and John Gunderson. "Diagnosing, Disclosing, and Documenting Borderline Personality Disorder: A Survey of Psychiatrists' Practices." *Journal of Personality Disorders* 30: 848-56.

Stites, Shana D., **Rebecca A. Johnson**, Kristin Harkins, Pamela Sankar, Dawei Xie, and Jason

Karlawish. "Identifiable Characteristics and Potentially Malleable Beliefs Predict Stigmatizing Attributions Toward Persons With Alzheimer's Disease Dementia: Results of a Survey of the US General Public." *Health Communication*: 1-10

Wendler, David and **Rebecca A. Johnson**. "When Clinical Care is like Research: The Need for Review and Consent." *Theoretical Medicine and Bioethics* 37(3): 193-209.

2015   Johnson, Rebecca A., Kristin Harkins, Mark Cary, Pamela Sankar, and Jason Karlawish. "The relative contributions of disease label and disease prognosis to Alzheimer's stigma: A vignette-based experiment." *Social Science and Medicine* 143: 117-127.

Johnson, Rebecca A. and David Wendler. "Challenging the Sanctity of 'Donorism': Tissue Providers as Payment-worthy Contributors" *Kennedy Institute of Ethics Journal* 25: 291-333.

Sisti, Dominic and **Rebecca A. Johnson**. "Revision and Representation: The Controversial Case of DSM-5." *Public Affairs Quarterly*

Johnson, Rebecca A., Jonathan M. Lukens, Jonathan W. Kole, and Dominic A. Sisti. "Views about Personal Responsibility for Alcohol Addiction and Evaluations of Naltrexone." *Substance Abuse Treatment, Prevention, and Policy* 10: 10-23.

2014   Johnson, Rebecca A., Govind Persad, and Dominic Sisti. "The Tarasoff Rule: The Implications of Inter-State Variation *&* Gaps in Professional Training." *Journal of the American Academy of Psychiatry and the Law* 42 (4): 469-77.

Johnson, Rebecca A., Marion Danis, and Chris Hafner-Eaton. "U.S. State Variation in Autism Insurance Mandates: Balancing Access and Fairness." *Autism* (Autism and Society special theme issue).

Yeager, David S., Rebecca A. Johnson, Brian J. Spitzer, Kali Trzesniewksi, and Carol S. Dweck. 2014. "The Far-Reaching Effects of Believing People Can Change: Implicit Theories of Personality Shape Stress, Health, and Achievement during Adolescence." *Journal of Social and Personality Psychology*.

Johnson, Rebecca A., Lisa Block, and Marion Danis. "Optimizing the Involvement of Language Interpreters during the Clinical Encounter." *Journal of General Internal Medicine*. 29(2): 276-78.

2013   Johnson, Rebecca A., Marna Barrett, and Dominic Sisti. "The Ethical Boundaries of Patient and Advocate Influence on DSM-5." *Harvard Review of Psychiatry* 21(6): 334-44.

2012   Yeager, David S., Matthew J. Bundick, and **Rebecca Johnson**. "The Role of Future Work Goal Motives in Adolescent Identity Development: A Longitudinal Mixed-Methods Investigation." *Contemporary Educational Psychology* 37 (3): 206-17.

Under Review

Lundberg, Ian, Rebecca Johnson, and Brandon Stewart. "Setting the Target: Precise Estimands and the Gap Between Theory and Empirics." R*&*R.

Zhang, Simone and Rebecca Johnson. "Hierarchies in the Decentralized Welfare State" R*&*R.

Zhang, Simone, Rebecca A. Johnson, John Novembre, Edward Freeland, and Dalton Conley. "Public attitudes toward genetic risk scoring in medicine and beyond." Under review.

Johnson, Rebecca, Ramina Sotoudeh, and Dalton Conley. "Polygenic Scores for Plasticity: A New Tool for Studying Gene-Environment Interplay." Under review.

Stites, Shana, Emily A. Largent, Rebecca Johnson, Kristin Harkins, and Jason Karlawish. "Persons who Self-Identify as an Alzheimer's Caregiver Expect Persons with Dementia to Experience More Public Stigma." Under review.

Technical Skills

- **Programming (general):** Python (advanced); SQL (Redshift; Postgres) (advanced); R (advanced); Unix (Bash) (intermediate); Javascript (basic); genetic data analysis tools (`plink`, `gcta`)(advanced)

- **Programming (specific tools):** machine learning using `scikit-learn`, `rpart`, `biglasso`, etc.; text analysis using `nltk`, `tm`, `STM`, `pdfminer`, `shogun`, `difflib`; web scraping using `BeautifulSoup`, `urllib`, `rvest` etc.; interactive visualizations using `Shiny` and `Bokeh`; spatial data analysis using `sp`, `rgdal`, `rgeos`, `spdep`; visualization using `ggplot`; parallel processing using `multiprocessing` in Python and `doParallel` in R

- **Statistics:** machine learning (random forests; SVM; L1 and L2 regularization); causal inference (experiments; quasi-experimental designs like regression discontinuity, difference-in-differences, synthetic control; instrumental variables; matching); data visualization; linear and generalized linear models; slides covering methods as part of teaching and research groups include matching, the E-M algorithm for fitting mixture models, basic bash scripting and genetic data analysis, quantitative assessments of fairness in machine learning predictions

- **Other:** Qualtrics and Mechanical Turk for web-based experiments; git/github; AWS

Talks & Presentations (selected)

2020

Leveraging Big Data from a Messaging App to Understand and Intervene Upon Inequalities in Parent-School Interactions. Oral presentation at Population Association of America Meeting. Washington, DC. April 2020 (virtual).

- *With:* Katherine Gan; Chrysanthi Hatzimasoura

Parents, Policy Categories, and Predictive Models: Hidden Moral Logics of Prioritization in Schools. Oral presentation at Sociology of Education Association Conference. Asimolar, CA. February 2020.

2019

Manual Categories Versus Machine Learning in U.S. Social Policy: The Case of Housing Vouchers and School Districts. Oral presentation at APPAM Fall Research Conference. Denver, CO. November 2019.

- *With:* Simone Zhang

Using Machine Learning to Target Assistance: Identifying Tenants at Risk of Landlord Harassment. Oral presentation at APPAM Fall Research Conference. Denver, CO. November 2019.

- *With:* Jerica Copeny, Samantha Fu, Teng Ye, Bridgit Connelly, Alex Freeman, Joe Walsh, and Rayid Ghani

Precision Medicine and Black-White Health Disparities. Integrating Genetics and Social Science. Boulder, CO. October, 2019.

- *With:* Jeremy Freese, Ben Domingue, Sam Trejo

What is the Organizational Counterfactual? Categorical versus Algorithmic Prioritization in U.S. Social Policy. Oral presentation at Northeastern Information Ethics Roundtable on Justice and Fairness in Data Use and Machine Learning. Boston, NA. April 2019.

- *With:* Simone Zhang

Using Machine Learning to Target Assistance: Identifying Tenants at Risk of Landlord Harassment. Oral presentation at Population Association of America (PAA). Austin, TX. April 2019.

- *With:* Jerica Copeny, Samantha Fu, Teng Ye, Bridgit Connelly, Alex Freeman, Joe Walsh, and Rayid Ghani

Who Counts What as Consent? A New Approach to Understanding Estimates of the Prevalence of Sexual Victimization. Oral presentation at Population Association of America (PAA). Austin, TX. April 2019.

- *With:* Hannah Korevaar; Celeste Marin

2018   A Framework for Learning G × E and Application to Household Stress. Oral presentation at Integrating Genetics and Social Science. Boulder, CO. October, 2018.

Parents as Private Attorney Generals and a Leaky Pipeline of School Resource Allocations. Oral presentation at American Sociological Association. Session: Law and Social Welfare Distribution. Philadelphia, PA. August 2018.

Tags and a Leaky Pipeline in School Districts' Allocations to Students. Oral presentation at National Bureau on Economic Research. Session: Children and Education. Cambridge, MA. April 2018.

- *With*: Dalton Conley

Genetic Main Effects Versus Genetic Moderators: Gene-Environment Interactions in Child Problem Behaviors. Oral presentation at Population Association of America. Session: Genetics in Social Science Research. Denver, CO. April 2018.

- *With*: Lisa Schneper, Kalsea Koss, Brandon Wagner, Colter Mitchell, Jeanne Brooks-Gunn, Sara McLanahan, and Daniel A. Notterman

From Stigmatizing Marks to Media of Exchange: Disability and the the Allocation of Housing Vouchers. Oral presentation at Impairment in the Social World, Graduate student conference. Columbia University. March 2018.

- *With*: Simone Zhang