

# Rebecca A. Johnson

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## Academic Appointments

**Assistant Professor, [Program in Quantitative Social Science](#), Dartmouth College**  
(July 2020-).

- **Affiliate**, Department of Sociology
- **Faculty Associate**, Dartmouth Consortium on Race, Migration, and Sexuality (RMS)

## Public Policy Roles/Affiliations

- **Faculty Affiliate**, American Bar Foundation (September 2021-)
- **Academic Affiliate, [Office of Evaluation Sciences](#)**, U.S. General Services Administration,  
(Fellow: October 2019-July 2020; Academic affiliate July 2020-)
- **Special Sworn Status**, U.S. Census Bureau, (March 2020-)
- **[Data Science Fellow, The Lab @ DC](#)**, DC's Executive Office of the Mayor, (June 2019-)
- **[Data Science for Social Good Summer Fellow](#), University of Chicago** (June 2018-August 2018)
- **Mathematica/Social Security Administration Disability Research Consortium Summer Research Fellow** (June 2015-August 2015)
- **[Pre-Doctoral Fellow, NIH Department of Bioethics](#)** (September 2012-August 2014)

## Education

**Ph.D., 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. Defended May 2020.
- **Committee:** Dalton Conley (chair), Brandon Stewart, Sara McLanahan, and Paul Starr
- **General examinations:** Demography; Law and Inequality; Medical Sociology

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

## Honors, Grants, & Awards

- **External:**

- **2021:** Department of Labor (DOL) [Summer Data Challenge on Equity and Underserved Communities](#) (\$21,844)
- **2021:** Time Sharing Experiments in the Social Sciences (TESS) Special Competition for Young Investigators Grant (study of algorithmic fairness in K-12 schooling)
- **2020-2021:** Faculty Scholar, [American Bar Foundation/JPB Foundation Access to Justice Initiative](#) (\$74,000)
- **2019-2020; 2020-2021:** Interpersonnel Act Agreement, General Services Administration (GSA) Office of Evaluation Sciences (\$59,600; 2 ×)
- **2020-2022:** Co-PI, [National Science Foundation Smart and Connected Communities Grant, Just Connect Us: A Community-Oriented Civil Justice Data Commons](#) (\$150,000; Award #1952067)
- **2020-2023:** Data Science Consultant, [National Science Foundation, Removing Barriers to Recovery: Community Partnering for Innovative Solutions to the Opioid Crisis](#) (\$27,000 sub-allocation; Award #2017068)
- **2019:** Invited Participant, NSF-sponsored workshop on Ethics in Data Science Pedagogy
- **2019:** Invited Participant, NSF-sponsored workshop on Data Science and Access to Civil Justice
- **2015:** NSF Graduate Research Fellowship
- **2013:** Young Scholar in Research Ethics, German Research and Education Ministry

- **Internal (Dartmouth; Princeton)**

- **2021:** Dartmouth Neukom Institute for Computational Science CompX Award (\$17,000)
- **2021:** Dartmouth Center for Social Impact (DCSI) Course Development Award (\$1,000)
- **Princeton grants:** Overdeck Education Innovation Fund (\$3,000); Lawrence S. Rockefeller Graduate Prize Fellowship, Center for Human Values (~ \$36,000); Center for Health and Wellbeing U.S. Health Policy Research Award (~ \$5,000; 2 ×); Research in Experimental Social Science (PRESS) Research Award (~ \$ 500); Center for the Study of Social Organization (CSSO) Research Award (~ \$2000)
- **Princeton awards:** Marion Levy Fellow in Social Policy; Marvin Bressler Graduate Student Teaching Award (for teaching in undergraduate programming and quantitative methods); Ethics of Artificial Intelligence Professional Development Cohort, Center for Information and Technology Policy;

## Peer-reviewed Publications (summarized on [Google Scholar](#))

Accepted

Johnson, Rebecca A.\*, Ramina Sotoudeh\*, and Dalton Conley. "Polygenic Scores for Plasticity: A New Tool for Studying Gene-Environment Interplay." *Demography*. Link to preprint: <https://www.biorxiv.org/content/10.1101/2020.08.30.274530v1.full>

- \*Equal first authorship

- Kappes, Heather, Mattie, Toma, Rekha Balu, Russ Burnett, Nuole Chen, **Rebecca A. Johnson**, Jessica Leight, Saad Omer, Elana Safran, Mary Steffel, Kris-Stella Trump, David Yokum, Pompa Debroy. "Lessons for COVID-19 Vaccination from Eight Federal Government Direct Communication Evaluations." *Behavioral Science and Policy*
- 2021 Lundberg, Ian, **Johnson, Rebecca A.**, and Brandon Stewart. "What is your estimand? Defining the target quantity connects statistical evidence to theory." *American Sociological Review*. Link: <https://journals.sagepub.com/doi/abs/10.1177/00031224211004187>
- Zhang, Simone, **Rebecca A. Johnson**, John Novembre, Edward Freeland, and Dalton Conley. "Public attitudes toward genetic risk scoring in medicine and beyond." *Social Science and Medicine*. Link: <https://www.sciencedirect.com/science/article/pii/S0277953621001283>
- 2020 Johnson, Rebecca A. and Tanina Rostain. "Tool for Surveillance or Spotlight on Inequality? Big Data and the Law." *Annual Review of Law and Social Sciences*. Link: <https://www.annualreviews.org/doi/abs/10.1146/annurev-lawsocsci-061020-050543>
- 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 Trzesniewski, 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.

## Revise and Resubmit

Zhang, Simone and Rebecca A. Johnson. “Hierarchies in the Decentralized Welfare State.” R&R at *American Sociological Review*.

## Policy Reports

2021 [Who Receives Access to Small Business Relief? A Simulation-Based Approach](#). Office of Evaluation Sciences Report (Collaboration with the federal Small Business Administration and three local economic development departments).

[Does Family Outreach Increase Engagement with Community-based Organizations and Improve School Attendance? An RCT](#). The Lab @ DC (Collaboration with DC’s Office of Victim Services and Justice Grants).

- [Pre-analysis plan](#)
- [GitHub replication repo \(primary contributor\)](#)

Leveraging Training and Technology to Improve Parent Engagement: An RCT. The Lab @ DC (Collaboration with DC’s Office of the Deputy Mayor for Education and an education technology

firm). [Pre-analysis plan](#).

Can we Use Local Outreach to Improve Equity in Federal Oversight? A Case Study with the H-2A Visa Program. Prepared for Department of Labor's Chief Evaluation Office (CEO) as part of Summer Data Challenge on Equity and Underserved Communities.

## Under review or working papers

### EDUCATION

Johnson, Rebecca A., Michael DiDomenico (government co-author), Rekha Balu (government co-author), Mary Clair Turner (government co-author). "Navigating to Opportunity? A Field Experiment of Placing Navigators in Public Housing."

- [Pre-analysis plan](#)
- Presented at: APPAM 2020; PAA 2021; ASA 2021

Johnson, Rebecca A. and Vicky Mei (government co-author). "Are Families Disappearing from Contact during COVID-19? Evidence from a Large-Scale Messaging Corpus."

- [Pre-analysis plan](#)
- Presented at: PAA 2020; Sociology of Education Association Meeting 2021; NYU PRIISM Seminar 2021

Johnson, Rebecca A. "The Unequal Distribution of Discretion: Parent Monitoring and Rationing in K-12 Education."

- Presented at: ASA 2017

### DISTRIBUTIVE JUSTICE

Johnson, Rebecca A., Heather Kappes, Crystal Hall, Simone Zhang, Elizabeth Bell, Miles Williams, Julia Brown, and Jasper Cooper. "Local Discretion and Organizational Deservingness: The Case of Small Business Relief."

- [Pre-analysis plan](#)

Hatzimasoura, Chrysanthi. **Rebecca A. Johnson**, Kevin H. Wilson, Robert P. Holman, Ryan T. Moore, David Yokum. "Equitable Diversion within the 911 system: A Field Experiment on Improving Care."

- [Pre-analysis plan](#)

## In preparation

Johnson, Rebecca A., Tyler Simko, Joshua Grossman, and Sharad Goel. "Complaint-Driven Enforcement? Using Data Science to Improve Civil Rights Oversight."

Imai, Kosuke\*, **Rebecca A. Johnson**\*. "An Experimental Evaluation of a Summer Bridge Program for First-Generation/Low-income Students"

- \*Equal authorship

- [Pre-analysis plan](#)

Cooper, Jasper\*, **Rebecca A. Johnson\***, Michael DiDomenico\* (government co-author). “Using Machine Learning to Predict Nonresponse and to Mitigate Nonresponse Bias.”

- \*Equal authorship

- [Pre-analysis plan](#)

- Presented at: PAA 2021

Johnson, Rebecca A., Simone Zhang, Kate Christie, and Leah Jones. “Optimizing Schools? Public Perceptions of Algorithmic versus Status Quo Prioritization in K-12 Schooling.”

- Funding: Time Sharing Experiments in the Social Sciences (TESS) Young Investigators Special Competition
- Presented at: Sociology of Education Association Meeting 2020

## Invited Talks

2021

Technology and Educational Triage: Pre and Post-COVID-19 evidence from a Large-Scale Messaging Corpus. NYU Steinhardt Center for Practice and Research at the Intersection of Information, Society, and Methodology (PRIISM). September 2021.

How can we More Equitably Allocate Small Business Relief? GovLabPHL Monthly Meeting. February 2021.

Text as Data: An Applied Introduction. American University Winter Data Science Institute. January 2021.

2020

Interfacing Between Small and Big Data: Social Interactions and Educational inequality. Oral presentation at Federal Interagency Conference on Social Science and Big Data. September 2020.

Applying Methods from Psychological Science to Experiments in Government: A Workshop. Association for Psychological Science. July 2020.

vPGS: A New Tool for G x E. University of Wisconsin Center for Demography of Health and Aging. July 2020.

Using Impact Evaluation to Improve Remedies. Department of Justice (DOJ) Civil Rights Division. June 2020.

## Conference Talks (selected)

- 2021: ASA (Inequality, Poverty, and Mobility Causes and Consequences of Educational Inequality session); PAA (session on simulation and machine learning in demography; session on inequality in the transition to adulthood); Sociology of Education Association meeting
- 2020: APPAM (session on “Nudging Whom?”); Sociology of Education Association meeting; PAA (session on innovative approaches to childhood inequality); Law and Society Association; Advances with Field Experiments (virtual flash poster)

- 2019: APPAM (session on big data and housing inequality; Session on Machine Learning); PAA (session on big data and demography; session on inequality and sexual victimization); Northeastern Information Ethics Roundtable; Integrating Genetics and Social Science
- 2018: ASA; NBER Economics of Education Meeting; PAA (session on genetics in social science research)

## Teaching

- Course developer/Instructor of record: Modern Statistical Computing (QSS20)
  - Developed new undergraduate course for QSS core curriculum covering Python for applications in public policy
  - Course website: <https://rebeccajohnson88.github.io/qss20/docs/index.html>
  - Course GitHub repo: [https://github.com/rebeccajohnson88/qss20\\_slides\\_activities](https://github.com/rebeccajohnson88/qss20_slides_activities)
  - Topics covered: data manipulation with pandas; exact and fuzzy/probabilistic matching; regular expressions; basic text analysis (sentiment analysis; topic modeling; named entity recognition); acquiring data via APIs; acquiring data via web scraping; basic data manipulation with SQL; LaTeX/Beamer
  - Connections between computational social science and public policy: featured in *Dartmouth News* for [student work on project that led to Department of Labor grant on equity and guestworker rights](#)
- Teaching Assistant
  - “Sociological Research Methods”(undergraduate statistics). Fall 2015. Assistant in Instruction for Professor Margaret Frye, Princeton University
  - “Sociology Statistical Programming and Math Camp.” One-week 20-hour course. Summer 2016. Primary Instructor. Supervised by Professor Brandon Stewart, Princeton University. [Course website](#).
  - “Advanced Social Statistics” (graduate statistics). Spring 2017. Assistant in Instruction for Professor Brandon Stewart, Princeton University. Example resources: [mixture models and the E-M algorithm](#); [binary model diagnostics and k-fold cross validation](#)
  - “Technology and Society.” Spring 2017. Assistant in Instruction for Dr. Lauren Senesac.

## Academic Service

- **Ad-hoc Reviewer Bioethics:** *Journal of Ethics and Mental Health*; *AJOB Empirical Bioethics*; *Journal of Law, Medicine, and Ethics*; *Journal of Alzheimer’s Disease*
- **Ad-hoc Reviewer Social Science/Policy:** *Organizational Behavior and Human Decision Processes*; *Journal of Behavioral Public Administration*; *Science Advances*; *Sociology of Education*; *Demography*
- **To the Profession:**
  - Selection Committee, ASA Sociology of Education Section James Coleman article award, 2021-2022
  - Selection Committee, ASA Sociology of Law Section Distinguished Graduate Student paper award, 2021-2022

- Roundtable presider, Sociology of Law Section Roundtable on Civil Justice and Inequality. August 2021.
- Panel organizer, “Nudging Whom? How Targeting Help to Different Student Populations Impacts Inequality in Postsecondary Attainment?” APPAM 2020 Fall Research Conference. November, 2020.
- Interview Panelist/Hiring Committee. DC Office of the Chief Technology Officer (OCTO) Senior Data Scientist search.

- **Dartmouth**

- 2020: QSS Postdoctoral Scholar Selection Committee
- 2020 onwards: Program in Quantitative Social Science Steering Committee
- **Undergraduate students mentored (11):**
  - \* Shengrou (Rosy) Zhong (Winter and Spring 2021 UGAR Undergraduate Research Scholar)
  - \* Jack Lauer (Winter and Spring 2021 UGAR Undergraduate Research Scholar)
  - \* Rijul Garg
  - \* Katherine Christie
  - \* Yuchuan Ma
  - \* Cameron Guage
  - \* Grant Anapolle
  - \* George Gerber (presidential scholar)
  - \* Julia Hermans (presidential scholar)
  - \* Molly McQuoid (presidential scholar)
  - \* Reilly Olinger (senior thesis)

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

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