Rebecca A. Johnson

37th and O Streets, NW Old North, Suite 100 Washington, DC 20057 U.S.A.

Phone: 847.414.4718 email: rj545@georgetown.edu uRL: www.rebeccajohnson.io GITHUB: https://github.com/rebeccajohnson88

Academic Appointments

Assistant Professor (Computational Social Science), McCourt School of Public Policy, Georgetown University

(August 2022-)

- Affiliate, Massive Data Institute (MDI)
- Affiliate, Department of Sociology

Assistant Professor, Program in Quantitative Social Science, Dartmouth College (July 2020-June 2022)

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

Public Policy Roles/Affiliations

- 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-)
- Volunteer Data Scientist, 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:
 - 2022-2024: National Academy of Education (NAEd)/Spencer Postdoctoral Fellowship Program (\$70,000)
 - 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
 - 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 allocated as a data science consultant; 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)

- Forthcoming 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." Forthcoming at *Behavioral Science and Policy*
- Zhang, Simone and Rebecca A. Johnson. "Hierarchies in the Decentralized Welfare State: Prioritization in the Housing Choice Voucher Program," *American Sociological Review*. Link: https://journals.sagepub.com/doi/full/10.1177/00031224221147899
- Debroy, Pompa, Rekha Balu, Russ Burnett, **Rebecca A. Johnson**, Heather Kappes, Joseph M. Wallace, Vincent C. Marconi, and Russell Burnett. "A Cluster Randomized Controlled Trial of a Modified Vaccination Clinical Reminder for Primary Care Providers." *Health Psychology.* Link: https://pubmed.ncbi.nlm.nih.gov/36227309/

Johnson, Rebecca A., and Simone Zhang. "What is the Bureaucratic Counterfactual? Categorical versus Algorithmic Prioritization in US Social Policy." In *2022 ACM Conference on Fairness, Accountability, and Transparency*, pp. 1671-1682. 2022. Link: https://dl.acm.org/doi/abs/10. 1145/3531146.3533223

Johnson, Rebecca A.*, Ramina Sotoudeh*, and Dalton Conley. "Polygenic Scores for Plasticity: A New Tool for Studying Gene-Environment Interplay." *Demography*. Link: https://pubmed.ncbi.nlm.nih.gov/35553650/

• *Equal first authorship

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

- 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
- 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).
- 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

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.

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.

- 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.
- 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 or Under Review

Wilson, Kevin H., **Rebecca A. Johnson** (equal first authorship), Chrysanthi Hatzimasoura, Robert P. Holman, Ryan T. Moore, David Yokum. "Evaluating the Effects of Nurse-Led Triage of 911 Calls: A Randomized Controlled Trial." Revise and Resubmit at *Nature Medicine*.

O'Neil, Meghan M., **Rebecca A. Johnson**, David Córdova, and Jenna Pryor. "A legal dispute resolution intervention for patients with substance use disorders: a study protocol for a randomized controlled trial." Revise and resubmit at *BMC Public Health*.

Not yet submitted

Education

Johnson, Rebecca A. "The Unequal Distribution of Discretion: K-12 Budget Pressures, Disability Categorization, and Parent Civil Rights Enforcement"

- Working paper
- Presented at: ASA 2017; ABF workshops

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

- Working paper
- Presented at: APPAM 2020; PAA 2021; ASA 2021; SEA 2023

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

- Working paper
- Presented at: PAA 2020; SEA 2021; ASA 2022

DISTRIBUTIVE JUSTICE / COMPUTATIONAL SOCIAL SCIENCE

Johnson, Rebecca A., Heather B. Kappes, Crystal Hall, Simone Zhang, Elizabeth Bell, Miles Williams. "Effects of and Beliefs about Demographic Preferences in Resource Allocations"

- Working paper
- Presented at: APPAM 2022; workshops with policy audiences

Rebecca A. Johnson. "A Large-Scale Field Experiment to Increase Response Rates and Decrease Nonresponse Bias: Machine Learning for Targeting versus Random Targeting"

- Working paper
- Presented at: PAA 2021; to be presented at PAA 2023

Rebecca A. Johnson, Tyler Simko, and Kosuke Imai. "A Summer Bridge Program for First-Generation Low-Income (FGLI) Students Stretches Academic Ambitions with No Adverse Impacts on GPA"

- Working paper
- Pre-analysis plan

Policy Reports

- Equity in the Distribution of the Emergency Rental Assistance Program. Partnership with the Department of Treasury. Contributed to geocoding and statistical methodology outlined in this technical appendix.
- ²⁰²¹Can we Use Local Outreach to Improve Equity in Federal Oversight? A Case Study with the H-2A Visa Program Report published as part of Department of Labor (DOL) Summer Data Challenge on Equity and Underserved Communities. Partnership with Texas Riogrande Legal Aide (TRLA).

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
- Policy report
- Summary

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
- Policy report
- Summary

Invited Talks

Forthcoming Computational social science colloquium series. United States Air Force Academy (USAFA).

²⁰²² Invited Panelist, Brown Policy Lab and White House Office of Science and Technology Policy (OSTP), Partnership Models to Strengthen Evidence-Informed Decision Making in the Federal Government

Invited Panelist, Opportunities and Barriers in Bridging Research and Practice, ACM conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'22)

SUNY-Stony Brook Colloquium on Big Data for Social Good. *Invite colloquium presenting college navigators RCT* + *text analysis*

American Bar Foundation Reimagining Justice: From Ideas to Impact. Invited panelist discussing IEPs and K-12 discretion research

2021

NYU Steinhardt Center for Practice and Research at the Intersection of Information, Society, and Methodology (PRIISM). *Invited speaker presenting large-scale parent-teacher text messaging work*

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

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

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)

- 2023: Sociology of education association; PAA
- 2022: Sociology of education association; PAA; ASA
- 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

2020

- Course developer/Instructor of Record: Data Science I / PPOL 564
- Course developer/Instructor of record: Modern Statistical Computing (QSS20)
 - Developed new undergraduate course for QSS core curriculum covering Python for "big data" social science research
 - Course website: https://rebeccajohnson88.github.io/qss20/docs/index.html
 - Course GitHub repo: 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/Methods: Science Advances; Sociology of Education; Sociological Methods and Research; Demography; Organizational Behavior and Human Decision Processes; Journal of Behavioral Public Administration; Social Science and Medicine: Social Epidemiology; The American Statistician

To the Profession:

- 2022: Discussant, APPAM 2022 Panel on "Impacts from Nudge Interventions on Student and Family Outcomes"
- 2022: Selection Committee for ASA Sociology of Education Section James Coleman Best Paper Award
- 2022: Selection Committee for ASA Sociology of Law best graduate student paper award
- 2022: Selection Committee for ASA Mathematical Sociology best graduate student paper award
- 2022: Discussant, ASA Paper Session on Sociology of Education
- 2021: Roundtable presider, Sociology of Law Section Roundtable on Civil Justice and Inequality.
- 2020: Panel organizer, "Nudging Whom? How Targeting Help to Different Student Populations Impacts Inequality in Postsecondary Attainment?," APPAM 2020 Fall Research Conference
- Interview Panelist/Hiring Committee. DC Office of the Chief Technology Officer (OCTO) Senior Data Scientist search.

Georgetown

- Fall 2022: McCourt Assistant Professor in Computational Social Science Search Committee
- Supervised two MDI scholars in fall 2022; three in spring 2023

• Dartmouth

- 2021-2022: QSS Assistant Professor in Race and Racism Search Committee
- 2020: QSS Postdoctoral Scholar Selection Committee
- 2020 -2022: Program in Quantitative Social Science Steering Committee
- Mentored 14 undergraduate students in theses or research

Technical Skills

- **Programming:** Python (advanced); SQL (Redshift; Postgres) (advanced); R (advanced); Unix (Bash) (intermediate); Javascript (basic); genetic data analysis tools (plink, gcta)(advanced)
- · Other: Qualtrics and Mechanical Turk for web-based experiments; git/Github; AWS

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