Reagan Mozer

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PROFESSIONAL EXPERIENCE

Bentley University, Waltham, Massachusetts

Assistant Professor   **July 2019 - present**
Department of Mathematical Sciences

Harvard University, Cambridge, Massachusetts

Postdoctoral Research Fellow   **May - June 2019**
Department of Statistics, Supervisor: Mark Glickman

EDUCATION

Harvard University, Cambridge, Massachusetts

Ph.D. in Statistics, May 2019

> Thesis title: *New directions for causal inference with complex data in health care, social science, and beyond*
> Advisors: Luke Miratrix, Mark Glickman, and Fabrizia Mealli

M.A., Statistics, May 2016

University of Southern California, Los Angeles, California

B.S., Applied and Computational Mathematics, May 2014

GRANTS AND FUNDING

Practical Tools for Large-Scale Evaluation of Text Data in Randomized Trials in Education
> Institute of Education Sciences (R305D220032)
> Role: Co-PI with Luke Miratrix and Shireen Al-Adiemi
> Award amount: $894,352; Award period: 7/1/2022 – 6/30/2025

Department of Veterans Affairs, VA Bedford Healthcare System, Center for Healthcare Organization and Implementation Research (CHOIR). Intergovernmental Personnel Act (IPA) Mobility Assignment. (Total: $96,690)

IPA supported in part by:

> VA HSR&D IIR 21-215 (PI: Fix; $1,094,523)
>
> > *Developing a Blueprint to Implement Whole Health Clinical Care for Veterans with HIV*
> > Award period: 10/01/2023 – 09/30/2026
> > Role: Co-I (Statistician)
>
> VA PEC 13-001 (PI: Bokhour; $1,800,000)
>
> > *Evaluating Patient-centered Care: Patient, Provider and Organizational Views*
> > Award period: 10/01/2020 – 09/30/2022
> > Role: Co-I (Statistician)

How Jurors Use Character Evidence: A Randomized Controlled Trial
> Bentley University Research Council
> Role: Co-PI with Hillel Bavli
> Award amount: $7,500; Award period: 9/1/2022 – 8/31/2023

2023 Outstanding Scholarly Contribution Award, Bentley University

2021 Miller Prize, Society for Political Methodology

2021 Gregory J. Hall Advisor of the Year Award, Bentley University Honors Program

2019 Pickard Teaching Fellow Award, Harvard University Department of Statistics

2018 Jeanne Humphrey Block Dissertation Award

2018–2019 Pedagogy Fellow in Statistics, Harvard University Derek Bok Center

2015–2019 Certificate of Distinction in Teaching, Harvard University Derek Bok Center

Publications

Rupcic, S., Tam, M. Z., DeLaughter, K., Gifford, A. L., Barker, A., Bokhour, B. G., Xu, C., Dryden, E., Anderson, E., Jasuja, G. K., Boudreau, J., Douglas, J. H., Hyde, J., **Mozer, R.**, Zeliadt, S., and Fix, G. M. (*In press*). Co-designing a blueprint for spreading person-centered, whole health care to hiv specialty care settings: A mixed methods protocol. *BMC Health Services Research*

Mozer, R. and Miratrix, L. (*In press*). More power to you: Using machine learning to augment human coding for more efficient inference in text-based randomized trials. *Annals of Applied Statistics*

Mozer, R., Miratrix, L., Relyea, J. E., and Kim, J. S. (2024). Combining human and automated scoring methods in experimental assessments of writing: A case study tutorial. *Journal of Educational and Behavioral Statistics*, 49(5):780–816

Mozer, R. and Glickman, M. E. (2023). Bayesian analysis of longitudinal studies with treatment by indication. *Health Services and Outcomes Research Methodology*, 23(4):468–491

Anderson, E., Dvorin, K., Etingen, B., Barker, A. M., Rai, Z., Herbst, A. N., **Mozer, R.**, Kingston, R. P., and Bokhour, B. G. (2022b). "It Makes You Sit Back and Think Where You Wanna Go": Veteran experiences in virtual whole health peer-led groups. *Health Expectations*, 25(5):2548–2556

Rahman, N., **Mozer, R.**, McHugh, R. K., Rockett, I. R., Chow, C. M., and Vaughan, G. (2022). Using natural language processing to improve suicide classification requires consideration of race. *Suicide and Life-Threatening Behavior*, 52(4):782–791

Anderson, E., Dvorin, K., Barker, A., Herbst, A., Bowen, M., Etingen, B., **Mozer, R.**, Kingston, R., and Bokhour, B. (2022a). Lessons learned from vhas rapid implementation of virtual whole health peer-led groups during the covid-19 pandemic: Staff perspectives. *Global Advances in Health and Medicine*, 11:1–12

Mozer, R., Miratrix, L., Kaufman, A. R., and Anastasopoulos, L. J. (2020a). Matching with text data: An experimental evaluation of methods for matching documents and of measuring match quality. *Political Analysis*, 28(4):445–468

Mozer, R., Rubin, D. B., and Zubizarreta, J. R. (2020b). Statistical inference for causal effects in clinical psychology: Fundamental concepts and analytical approaches. In Wright, A. C. and Halquist, M. N., editors, *The Cambridge Handbook of Research Methods in Clinical Psychology*, chapter 31, pages 415–425. Cambridge University Press, Cambridge, UK

Mozer, R. (2019). Replication Data for: Matching with Text Data: An Experimental Evaluation of Methods for Matching Documents and of Measuring Match Quality

Bavli, H. J. and **Mozer, R.** (2019). The effects of comparable-case guidance on awards for pain and suffering and punitive damages: Evidence from a randomized controlled trial. *Yale Law and Policy Review*, 37(405)

Kessels, R., **Mozer, R.**, and Bloemers, J. (2019). Methods for assessing and controlling placebo effects. *Statistical Methods in Medical Research*, 28(4):1141–1156

Mozer, R., Kessels, R., and Rubin, D. B. (2017). Disentangling treatment and placebo effects in randomized experiments using principal stratificationan introduction. In *The Annual Meeting of the Psychometric Society*, pages 11–23. Springer

WORKING
PAPERS

Mozer, R., Kaufman, A. R., Celi, L. A., and Miratrix, L. Leveraging text data for causal inference using electronic health records. *Journal of Biomedical Informatics*. (Under review)

Kim, Y., **Mozer, R.**, Miratrix, L., and Al-Adeimi, S. ChatGPT vs. Linear Regression: Assessing the Efficacy and Accuracy of Large Language Models for Automated Essay Scoring. *Working paper*.

Guo, G., Branson, Z., and **Mozer, R.** Doubly robust causal inference with text-based confounding: An application to gender disparities in online forums. *Working paper*.

Bavli, H.J. and **Mozer, R.** The Evidence on Character Evidence in Jury Trials: Findings from a Randomized Controlled Trial. *Paper in progress*.

Hsin, L., Al-Adeimi, S., **Mozer, R.**, Miratrix, L., and Kim, Y. Improving Writing Without Teaching It: Impacts and Demographic Variation in Adolescents' Writing Following a Discussion-Based Academic Language Intervention. *Paper in progress*.

OTHER
PUBLICATIONS

Mozer, R., and Rubin, D.B. Evaluating PML Risk for Multiple Sclerosis Patients Receiving Tysabri. *Technical report*.

Osuna, B.L, and **Rose, R.** (2013). Applying Quantitative Content Analysis and Factor Scoring: A Comparison of Pre- and Post-9/11 Song Lyrics. Proceedings of the Joint Statistical Meetings, Statistical Computing Section.

SOFTWARE AND
COMPUTING

`rcttext`: an R package for planning and analyzing randomized experiments with text-based outcomes

`textmatch`: an R package for matching text documents and performing quality and balance assessments in studies where covariates and/or outcomes are defined by text (doi: 10.5281/zenodo.2626730)

CONFERENCE
PRESENTATIONS

"Statistical Innovation with Text as Data in Causal Inference Contexts: Emerging Trends and Future Directions". Joint Statistical Meetings, Portland, OR. Aug. 2024.

"More power to you: Using machine learning to augment human coding for more efficient inference in text-based randomized trials" (*Invited*). American Causal Inference Conference, Seattle, WA. May 2024.

"Matching with Text Data Methods for matching text documents and measuring match quality in causal analyses"(*Invited*). HiTEc Meeting on Complex Data in Econometrics and Statistics, Cyprus. Mar. 2024.

"Decreasing the human coding burden in randomized trials with text-based outcomes via model-assisted impact analysis" (*Invited*). International Conference on Statistics and Data Science, Lisbon, Portugal. Dec. 2023.

"Decreasing the human coding burden in randomized trials with text-based outcomes via mod-elassisted impact analysis". New Directions in Analyzing Text as Data, Amherst, MA. Nov. 2023.

"Using machine learning to decrease the human coding burden in randomized trials with text-based outcomes". Society for Research on Educational Effectiveness, Washington DC. Sep. 2023.

"Using machine learning to decrease the human coding burden in randomized trials with text-based outcomes" (*Invited*). New England Statistics Symposium (*Invited talk*). Boston, MA. June, 2023.

"Leveraging text data for causal inference using electronic health records" (Co-author, with Aaron Kaufman). American Causal Inference Conference, Austin, TX. May 2023.

"Bridging human and machine scoring in experimental assessments of writing". APPAM Fall Conference, Austin, TX. Mar. 2022

"Bridging human and machine scoring in experimental assessments of writing: Tools, tips, and lessons learned from a field trial in education". Society for Research on Educational Effective-ness, Virtual. Sep. 2021.

"Analysis of longitudinal studies with treatment by indication". International Conference on Health Policy Statistics, San Diego, CA. Jan. 2020.

"Matching with Text Data An Experimental Evaluation of Methods for Matching Documents and of Measuring Match Quality" Harvard Data Science Initiative Workshop on Causal Inference and Machine Learning, Cambridge, MA. Oct. 2018.

"Matching with Text Data: An Experimental Evaluation of Methods for Matching Documents and of Measuring Match Quality". New Directions for Analyzing Text as Data, Seattle, WA. Sep. 2018.

"Matching with Text Data: An Experimental Evaluation of Methods for Matching Documents and of Measuring Match Quality". Preconference on Politics and Computational Social Science, Boston, MA. Aug. 2018.

""Matching with Text Data: An Experimental Evaluation of Methods for Matching Documents and of Measuring Match Quality". Annual Meeting of the Society for Political Methodology, Salt Lake City, UT. July 2018.

INVITED TALKS & PANELS

Moderator for "From Theory to Practice: Navigating the Path to Actionable AI Solutions" panel at Bentley Global AI Summit, Waltham, MA. May 2024.

Panelist for "Careers in Academia: A Panel Discussion by NESS NextGen" at New England Statistics Symposium, Storrs, CT. May 2024.

Invited talk "More power to you: A model-assisted approach for more efficient causal inference in text-based experiments". Bentley University Mathematical Sciences Research Seminar, Waltham, MA. April 2024.

Invited talk on "Using machine learning to augment human coding for more efficient inference in text-based randomized trials". Google Research Causal Inference Discussion Group, New York, NY. Feb. 2024

Panelist for "Beyond Buzzwords: A Critical Look at Intersectionality in Data Analysis". Bentley University MLK Day, Waltham, MA. Jan. 2024.

Invited talk on "Learning from language: New approaches for causal inference with text as data". Wellesley College Mathematics Department Colloquium, Wellesley, MA. May 2021.

Panelist for "Careers in Data Science" panel at NESS NextGen Data Science Day (Virtual). Nov. 2020.

Invited talk "Recent adventures in causal-ish inference with text as data". Research Seminar Series at Harvard Institute for Quantitative Social Sciences, Cambridge, MA. Sep. 2020.

Panelist for "Challenges in Data Science" session at NESS Data Science Day, Waltham, MA. Nov. 2019.

Co-organizer and instructor for "Causal inference in medicine: a toolkit for clinicians" workshop at MIT Critical Data, November 2018

TEACHING EXPERIENCE

Courses taught at Bentley University (as Instructor)

MA 252: Regression Analysis
MA 255: Design of Experiments
MA 706: Design of Experiments for Business (Graduate-level)

Courses taught at Harvard University (as a Teaching Fellow)

Stat 98: Junior Tutorial
Stat 109: Introduction to Statistical Modeling
Stat 139: Statistical Sleuthing through Linear Models *(Head TF)*
Stat 186: Statistical Methods for Evaluating Causal Effects
Stat 211: Statistical Inference (Graduate level)
Stat 286: Causal Inference and Program Evaluation (Graduate level)
Stat 303: The Art and Practice of Teaching Statistics (Graduate level)

UNIVERSITY & DEPARTMENTAL SERVICE

Bentley University

2023–Present	Member of the Academic Integrity Council
2023	Member of the Equitable Return to Work PET Project Working Group
2020–2021	Faculty Advisor, Honors Program Capstone
2021–Present	Faculty Advisor, Liberal Studies Major - Quantitative Perspectives
2020–2021	Faculty Advisor, Valente Center for Undergraduate Research

Department of Mathematical Sciences

2023–2024	Co-organizer of the Data Analytics Academic Spotlight and mock class sessions
2021–2022	Member of the tenure-track search committee
2021–Present	Member of the graduate curriculum committee
2020–Present	Member of the undergraduate curriculum committee

PROFESSIONAL SERVICE

Member of the 2024-2025 AERA Division D (Educational Measurement and Research Methodology) Award Committee

Member of the 2023 grant review panel for the National Center for Education Research (NCER) at the Institute of Education Sciences

Referee for *Nature Communications*, *Educational Researcher*, *Journal of Research on Educational Effectiveness*, *BMJ Open*, *Journal of Data Science*, *Journal of Educational and Behavioral Statistics*, *Biostatistics*, the *Journal of the Royal Statistical Society (Series B)* and *Stat*

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

American Educational Research Association (AERA)
American Statistical Association (AmStat)
Association for Computational Linguistics (ACL)
Bentley University Center for Health and Business (CHB) New England Statistical Society (NESS)

Society for Causal Inference (SCI)
Society for Political Methodology
Society for Research on Educational Effectiveness (SREE)

CONSULTING
EXPERIENCE

Pacific Clinics Asian Pacific Family Center, Rosemead, CA

Carnegie Mellon Hoover Institution, Pittsburgh, PA

New Hampshire Public Defender's Office, Concord, NH

Biogen, Cambridge, MA

Emotional Brain, B.V., Almere, The Netherlands