### Reagan Mozer

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Professional

Bentley University, Waltham, Massachusetts

EXPERIENCE

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 sci-

ence, 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

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

SPONSORED RESEARCH

Developing a Blueprint to Implement Whole Health Clinical Care for Veterans with HIV

Department of Veterans Affairs HSR&D IIR 21-215 (Fix)

Role: Principal Statistician

Award period: 10/01/2023 - 09/30/2026

Evaluating Patient-centered Care: Patient, Provider and Organizational Views

Department of Veterans Affairs PEC 13-001 (Bokhour)

Role: Statistician

Award period: 10/01/2020 - 09/30/2022

Factors and Outcomes Associated with Inappropriate Prescribing of Phosphodiesterase-5-Inhibitors for Pulmonary Hypertension

Department of Veterans Affairs IIR HSR&D 15-115 (Wiener)

Role: Research Associate

Award period: 06/01/2016 - 11/30/2020

**PUBLICATIONS** 

Mozer, R., Miratrix, L., Relyea, J. E., and Kim, J. S. (2023; In press). Combining human and automated scoring methods in experimental assessments of writing: A case study tutorial. Journal of Educational and Behavioral Statistics

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

Bayli, 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 stratification introduction. In The Annual Meeting of the Psychometric Society, pages 11–23. Springer

Working papers REVIEW

Mozer, R., Kaufman, A. R., Celi, L. A., and Miratrix, L. Leveraging text data for causal inference AND PAPERS UNDER using electronic health records.  $arXiv\ preprint\ arXiv:2307.03687$ 

> Mozer, R. and Miratrix, L. More power to you: Using machine learning to augment human coding for more efficient inference in text-based randomized trials. arXiv preprint arXiv:2309.13666 (Under review at Annals of Applied Statistics)

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, J., Branson, Z., Mozer, R., Dwight, E., Kou, Z., and Miratrix, L. Assessing gender disparities in textual response on Reddit.com. *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.

### Honors and Awards

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

### 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)

### SELECTED TALKS

HiTEc Meeting on Complex Data in Econometrics and Statistics (Invited). Cyprus-Mar. 2024 International Conference on Statistics and Data Science (Invited). Lisbon, Portugal- Dec. 2023 Society for Research on Educational Effectiveness (SREE) Washington, DC, USA – Sep. 2023 New England Statistics Symposium (*Invited talk*). Boston, MA – June, 2023

Association for Public Policy Analysis & Management (APPAM) Conference – March 2022 Society for Research on Educational Effectiveness (SREE) 2021 (Virtual)—September 2021 International Conference on Health Policy Statistics (ICHPS). San Diego, CA – January 2020 New England Statistics Society (NESS) Data Science Day. Waltham, MA – November 2019

Harvard Data Science Conference. Cambridge, MA – October 2018

New Directions for Analyzing Text as Data. Seattle, WA – October 2018

Preconference on Politics and Computational Social Science (PACSS). Boston, MA – August 2018 Annual Meeting of the Society for Political Methodology (PolMeth). Salt Lake City, UT – July 2018 Joint Statistical Meetings (JSM). Baltimore, MD – July 2017

## ACTIVITIES

Other Academic 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

> Organizer of Causal inference in medicine: a toolkit for clinicians, a workshop hosted by the Laboratory of Computational Physiology at MIT Critical Data, November 2018

> Selected poster presentations: Atlantic Causal Inference Conference 2018, 2017, European Causal Inference, Meeting 2018, NIPS 2017, Promoting Statistical Insight 2016, JSM 2016

### Professional Memberships

American Statistical Association (AmStat) Association for Computational Linguistics (ACL)

New England Statistical Society (NESS) The Society for Political Methodology

Society for Research on Educational Effectiveness (SREE)

Society for Causal Inference

American Educational Research Association (AERA)

### 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

### Affiliations

Center for Integration of Science and Industry, Bentley University

Health Thought Leadership Network, Bentley University Institute for Quantitative Social Science, Harvard University

Miratrix C.A.R.E.S Lab, Harvard University

# 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/zen-odo.2626730)