

Bethany Leap

Ph.D Student, American University School of Public Affairs

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Research Interests

Political Violence:

- Radicalization; Deradicalization; Extremist Behavior; Right-Wing Extremism; Terrorism.

Methodology:

- Bayesian Modeling; Markov chain Monte Carlo; Text as Data; Causal Inference; Measurement; Missing Data.

Data Science:

- Big Data; High Performance Computing; Imbalanced Classification; Semi-Supervised Machine Learning.

Education

American University, Ph.D. Justice, Law, and Criminology 2024
Fields: Justice; Political Methodology

American University, M.S. Data Science 2022
Track: Computer Science

Gardner-Webb University, B.A. Global Studies 2019

Additional Training

Graduate Certificate in Analytics and Management, American University 2022
School of Public Affairs Analytics and Management Institute (SAMI)

ICPSR Summer Program, Institute for Social Research, University of Michigan 2021
Maximum Likelihood Estimation II: Advanced Topics, Session II (with Dr. David Darmofal)

Research Experience

Center for Data Science, American University
Graduate Research Fellow 2021 - Present

Polarization and Extremism Research Innovation Lab (PERIL), American University
Graduate Research Fellow 2020 - Present

American University School of Public Affairs
Graduate Research Assistant 2019 - Present

University of North Carolina at Charlotte
Project Data Scientist 2018 - 2019

Teaching Experience

Teaching Assistant

SPA 614: Conduct of Inquiry III, American University, Fall 2021 (with Dr. Claudia Persico)

Data Science and Text Analysis, ICPSR Summer Program, Institute for Social Research, University of Michigan, Summer 2021 (with Dr. Matthew Denny and Dr. Kelsey Shoub)

JLC 681: Introduction to Justice Methods II, American University, Spring 2020/2021 (with Dr. Joe Young)

SPA 300: Experimenting with Violence (Honors Colloquium), American University, Fall 2020 (with Dr. Joe Young)

Guest Lecturer

"Methods for Researching the Far Right." *GLST 490: The Rise of Authoritarian Populism*, Department of Social Sciences, Gardner-Webb University, Spring 2021.

Publications

Book Chapters

Leap, B., & Young, J. Radicalization and deradicalization. (2021). *Oxford Research Encyclopedia of International Studies*. Oxford University Press. doi: 10.1093/acrefore/9780190846626.013.601

Manuscripts in Progress

"Terrorizing Democracy? A Bayesian Analysis of Terrorism's Effects on Democratic Institutions," with Erica Chenoweth and Joe Young.

"A Machine Learning Approach to Predicting Behavioral Radicalization among the Far Right."

"A Computational Approach to Combating the Pitfalls of Terrorism Data"

"Using Computational Text Analysis to Analyze Trends in the Radicalization Literature."

"Mapping the Far Right," with Joe Young and Cynthia Miller-Idriss.

Conferences and Talks

"A Computational Approach to Combating the Pitfalls of Terrorism Data". *Midwest Political Science Association Annual Meeting*, Chicago, IL. Upcoming.

"Death & Math; or Why We Like Terrorism... Research," with Joe Young. *Admitted Doctoral Student Day*, School of Public Affairs, American University, Washington, DC. March 2021.

"Terrorizing Democracy? A Bayesian Analysis of Terrorism's Effects on Democratic Institutions." *Tri-School Doctoral Research Conference*, Washington, DC. March 2021.

"Ticking Time Bombs: The Effects of Indiscriminate Violence on Civil War Outcomes." *Midwest Political Science Association Annual Meeting*, Chicago, IL. April 2019.

"Ticking Time Bombs: The Effects of Indiscriminate Violence on Civil War Outcomes." *Life-of-the-Scholar Multidisciplinary Conference*, Boiling Springs, NC. March 2019.

Selected Awards

Summer Research Award. American University (\$5,200). 2021.

Summer Research Award. American University (\$5,200). 2020.

Graduate Assistantship. American University. 2019 - 2024.

Region III Graduate Scholarship. Alpha Chi National College Honor Society (\$1,000). 2019.

Summer Scholars Undergraduate Research Award. Gardner-Webb University (\$2,000). 2018.

Skills

Analysis: Bayesian inference, regression (parametric/non-parametric), Markov chain Monte Carlo (MCMC), Gibbs Sampling, Metropolis Sampling, multiple imputation, experimental design, probability, prediction, sampling, clustering, matching, panel and longitudinal data, factor analysis, supervised/unsupervised machine learning, content analysis, natural language processing.

Programming: R (scripts, projects, package development), Python, Scala, JAGS, Stan, Mark-down, C/C++

Other software: Stata, L^AT_EX, SPSS, SQL, Git, Hadoop, Qualtrics, Databricks

Operative Systems: MacOS (advanced), Windows

Languages: English (native), Russian (intermediate proficiency), German (basic), Spanish (basic)

Professional Services and Memberships

Professional Service

Reviewer for *Political Analysis*

Memberships

International Studies Association (ISA), Midwest Political Science Association, Society for Political Methodology, Royal Statistical Society.

References

Available upon request.