

Gustavo Diaz

Department of Political Science · Northwestern University

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Positions

Northwestern University

Assistant Professor of Instruction, Department of Political Science

2024 -

McMaster University

Postdoctoral Fellow, Department of Political Science

2022 - 2024

Tulane University

Postdoctoral Fellow, Center for Inter-American Policy and Research

2021 - 2022

Education

University of Illinois Urbana-Champaign

PhD in Political Science

2021

MA in Political Science

2017

Pontificia Universidad Católica de Chile

BA in Political Science

2014

Publications

2025. [“Balancing Precision and Retention in Experimental Design”](#) *Conditionally accepted at Political Analysis* (with Erin Rossiter)
2025. [“Ignoring Female Performance: A Survey Experiment on Policy Implementation in Argentina.”](#) *British Journal of Political Science* 55: e54 (with Virginia Oliveros, Rebecca Weitz-Shapiro, and Matthew S. Winters)
2024. [“Assessing the Validity of Prevalence Estimates in Double List Experiments.”](#) *Journal of Experimental Political Science* 11(2): 162-174
2024. [“Data Sources for the Study of Gender and Corruption.”](#) In *Handbook on Gender and Corruption in Democracies*, edited by Emily Beaulieu Bacchus and Tiffany Barnes. Edward Elgar Publishing (with Kelly Senters Piazza)
2022. [“Women Held Back: The Depressing Effect of Institutional and Norms-Based Barriers on Female Representation in Corrupt Contexts.”](#) In [Norms, Gender and Corruption: Understanding the Nexus](#), edited by Ina Kubbe and Ortrun Merkle. Edward Elgar Publishing (with Kelly Senters Piazza)
2020. [“Light in the Midst of Chaos: COVID-19 and Female Political Representation.”](#) *World Development* 136: 105125 (with Kelly Senters Piazza)
2020. [“Survey Experiments and the Quest for Valid Interpretation.”](#) In [The SAGE Handbook of Research Methods in Political Science and International Relations](#), edited by Luigi Curini and Robert Franzese. London: Sage (with Christopher Grady and James H. Kuklinski)
2014. [“Civic Education and Voter Turnout Under Voluntary Voting.”](#) *Política* 52(1): 61-91 (In Spanish)

Under Review

[“Two-Sided Sensitivity Bias in List Experiments: Support for Same-Sex Marriage in Argentina”](#) (with Jordi Díez and Michelle Dion)

Under review at Research & Politics (submitted in May 2025)

Working Papers

[“Combining List Experiments and the Network Scale-Up Method to Improve Prevalence Estimates of Sensitive Attitudes and Behaviors.”](#) (with Ines Fynn, Verónica Pérez Bentancur, and Lucía Tiscornia)

[“In the Crevices of the State: Criminal Governance in Unexpected Contexts.”](#) (with Ines Fynn, Verónica Pérez Bentancur, and Lucía Tiscornia)

Submitted European Research Council grant Application in October 2024

Teaching

Northwestern University

Machine Learning (Graduate) TBD

[Evidence-Informed Decision-Making](#) Spring 2025

[Introduction to Empirical Methods in Political Science](#) Winter, Spring 2025

[Probability and Statistics \(Graduate\)](#) Fall 2024

[Social Science Math Camp](#) Summer 2024

[R Workshop](#) AY 2024-25

McMaster University

[Research Design for Public Opinion and Public Policy](#) Spring 2023-24

Tulane University

[Politics of Developing Democracies](#) Spring 2022

[Comparative Politics](#) Fall 2021

Grants and Awards

2025-2026. Farrell Fellowship Program. Northwestern University

2019-2020. Werner Baer Dissertation Writing Fellowship. Lemann Center for Brazilian Studies, University of Illinois

2019. Best Poster Award. Latin American Political Methodology Meeting. Montevideo, Uruguay

2016. Rita and Leonard Ogren Award for Academic Excellence. Department of Political Science, University of Illinois

Selected Talks

2025. [“Balancing Precision and Retention in Experimental Design.”](#) Texas Methods Meeting

2024. [“Combining List Experiments and the Network Scale-Up Method.”](#) Annual Meeting of the International Society of Political Psychology

2024. [“The Merits of Externally Invalid Survey Experiments.”](#) MapleMeth

2024. [“How the Presence of Others Can Bias Survey Responses.”](#) Midwest Political Science Association Conference

Additional Training and Skills

2023. Grant writing workshop for junior faculty. McMaster University

2019. Empirical Implications of Theoretical Models Summer Institute. Emory University

2014. Summer School on Mixed Methods. Pontificia Universidad Católica de Chile

Languages: Spanish, French, Portuguese **Software:** R, STATA, GIS, GitHub, LaTeX, Markdown, Typst, Quarto

Assistant Professor Search, UIC Common Curriculum

Dear Members of the Search Committee,

I write to express my interest in your call for an Assistant Professor of Research Design and Quantitative Methods. I am an Assistant Professor of Instruction in the Department of Political Science at Northwestern University, where I teach courses on statistics, statistical computing, and computational social science and conduct research on quantitative methods in the social sciences. My work is published or forthcoming in leading political science outlets, including *Political Analysis*, the *British Journal of Political Science*, *World Development*, and the *Journal of Experimental Political Science*.

My research agenda focuses on using statistics to improve research design before data collection. My current focus is on statistical precision. This is overlooked in the statistics, econometrics, and political methodology literature in favor of identifying unbiased estimators. Implicitly, this literature assumes that one can improve statistical precision by just increasing sample size. This is not feasible in many social science applications due to practical or ethical considerations.

Focusing on survey and experimental data, this agenda seeks to shape applied research by focusing on cases where one can seemingly improve statistical precision without sacrificing unbiasedness. As I show in my work, this usually implies unforeseen costs in other dimensions.

For example, in “Balancing Precision and Retention in Experimental Design” (*conditionally accepted at Political Analysis*), we discuss how implementing alternatives to the standard experimental design, such as block randomization or repeated measures, may attenuate expected precision gains via explicit or implicit sample loss, a concern that prevents researchers from applying these techniques widely. Through three replications and six reanalyses of previously published experiments in leading political science journals, we show how precision gains from alternative designs can withstand significant degrees of sample loss.

As another example, in a solo-authored publication in the *Journal of Experimental Political Science*, I discuss the unforeseen costs of implementing double list experiments. This is a variant of the list experiment that promises narrower confidence intervals but comes with under-explored questionnaire design complications in the form of carryover design effects, a special kind of question order effect. I introduce statistical tests to diagnose this effect, which in turn facilitate the implementation of a more efficient technique.

One of the core lessons from my research program on statistical precision is that combining different techniques helps overcome their respective limitations. For example, in work in progress, we combine list experiments with questions from the network scale up method (NSUM), a popular technique in the health sciences, to improve the estimation of sensitive attitudes and behaviors. On the one hand, list experiments suffer from low statistical precision. On the other hand, generalizing to a population of interest through NSUM requires assumptions that are untenable in social science applications. By using NSUM questions as auxiliary information to the list experiment, we improve precision without introducing cumbersome assumptions.

My research also influences substantive work in the social sciences. In a working paper, we follow on our efforts to incorporate NSUM into social science applications by documenting the prevalence of criminal governance strategies in Uruguay. This is the basis of an European Research Council grant application (*PI Lucia Tiscornia at UCD, interview scheduled in June*) seeking to understand criminal governance in least-expected contexts from a comparative perspective, which will in turn serve as a platform for further methodological innovation.

My teaching focuses on making quantitative methods accessible to diverse audiences through a combination of flexibility and accountability. At Northwestern, I am the central person teaching methods courses in the department. I teach the first course in the PhD methods sequence, focusing on probability and statistical inference, and an undergrad-level introductory course that helps political science majors become informed consumers of data analysis. I also lead the math camp for incoming political science and sociology students and run a year-long statistical computing workshop that introduces cutting-edge statistical programming practices. This quarter, I am teaching a seminar on evidence-informed decision making, focusing on how experimentation and machine learning are used in academia, government, and industry to justify organizational change. Next year, I will add a postgraduate seminar on machine learning to my portfolio.

Before joining Northwestern, I taught data analysis for public policy and public opinion at McMaster and evidence-based policy to address social and political challenges in developing democracies at Tulane. Both courses emphasized the use of applied statistics to generate credible evidence. Beyond the classroom, my previous role as the methods editorial assistant for the *American Political Science Review* gave me the opportunity to shape and influence the development of cutting-edge methods in the field, a goal that I continue to pursue through service and mentoring.

I am prepared to teach courses on research design, quantitative methods, statistical computing, machine learning, causal inference, and survey methods. You can find copies of current and future syllabi in my website.

I believe my expertise makes me an excellent fit at Yonsei. Moreover, this position is highly attractive to me due to family circumstances. If you have any questions, you can contact me via email or phone.

Sincerely,

Gustavo Diaz
Assistant Professor of Instruction
Northwestern University