

# Arthur Spirling

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updated: August 15, 2024

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## Position

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| <b>Princeton University</b>  | Princeton, NJ |
| <i>Class of 1987</i> Professor of Politics   | 2023–current  |
| Director of Graduate Studies of Politics   | 2024–current  |
| <b>New York University</b>   | New York, NY  |
| Professor of Politics and Data Science   | 2019–2023     |
| Associate Professor of Politics and Data Science                                       | 2015–2019     |
| Department of Politics, Center for Data Science (tenured)                              |               |
| Chair, Steering Committee, Moore-Sloan Data Science Environment                        | 2018–2022     |
| Chair, Education Working Group, Moore-Sloan Data Science Environment                   | 2015–2022     |
| Deputy Director and Director of Graduate Studies (MSDS) of the Center for Data Science | 2016–2022     |
| <b>Harvard University</b>  | Cambridge, MA |
| John L. Loeb Associate Professor of the Social Sciences                                | 2012–2015     |
| Department of Government (untenured)   |               |
| Assistant Professor, Department of Government  | 2008–2012     |
| Director, <i>Program on Text Research</i> (IQSS)                                       | 2009–2015     |

## Education

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|---|------------------------|
| <b>University of Rochester</b>                                      | Rochester, NY          |
| PhD, Political Science  | April, 2008            |
| Fields: Methods, Comparative Politics                               |                        |
| Interests: GLM, applied Bayesian statistics, ideal point estimation |                        |
| <b>Oxford University</b>  | Oxford, United Kingdom |
| Nuffield College, DPhil student in Politics                         | 2001–2003              |
| <b>London School of Economics</b>                                   | London, United Kingdom |
| MSc Public Administration and Public Policy (Distinction)           | 2000–2001              |
| BSc Government and Economics (1st Class Honors)                     | 1997–2000              |

## Prizes and Honors

- **Golden Dozen Teaching Award** (2019, one of 12 winners) from College of Arts and Sciences at NYU which “recognizes faculty for their outstanding contribution to learning in the classroom.”
- **Society for Political Methodology Emerging Scholar Award** (2018), which “honors a young researcher, within ten years of their degree, who is making notable contributions to the field of Political Methodology”
- **Roslyn Abramson Award** for “excellence and sensitivity in teaching undergraduates”, awarded by Harvard College (one of two winners), 2014.
- **Emerging Scholars Best Paper award**, European Political Science Association, 2013.
- **Clark award** for research, from Dean of FAS, Harvard University, 2012.
- **Everett Mendelsohn Excellence in Mentoring Award**, awarded by Harvard University’s Graduate Student Council (one of four winners, 104 nominees), 2012.
- **John T. Williams prize**, awarded by the Society for Political Methodology for best dissertation prospectus, 2007.

## Grant Activity

- Steering committee chair/member for **Moore Sloan Data Science Environment**: grant total of \$37.8M (with UC Berkeley and University of Washington), of which \$12.6M to be spent at NYU (2014–2019)
- Co-PI for **NRT-HDR: FUTURE Foundations, Translation, and Responsibility for Data Science Impact** from the *National Science Foundation*. Total of \$3,000,000 (award #1922658) (2019–2024)
- Principal investigator for **Computational and Historical Resources on Nations and Organizations for the Social Sciences (CHRONOS)** from the *National Science Foundation*, collaboration with Columbia University: total of \$749,615 of which \$269,127 to be spent at NYU (awards #1637159 and #1637108) (2016–2019)

## Professional Service

- **President of Society for Political Methodology**, head of APSA Section 10. (July 2024–current)
- **Advisory/Executive Panel Member**, Princeton Language and Intelligence, Princeton Data Driven Social Science, LSE Data Science Institute.
- **Advisory Panel Member**, National Science Foundation, Methodology, Measurement, and Statistics (MMS). 2020–2021.
- **Host/Co-organizer**, ‘New Directions in Text Analysis’ conference, 2010, ’11, ’12, ’13, ’14, ’15. Weatherhead Westminster Systems Conference, 2013.
- **Reviewer**, *American Journal of Political Science*, *American Political Science Review*, *British Journal of Political Science (Editorial board)*, *Canadian Journal of Political Science*, *Comparative Politics, Economics and Politics*, *Electoral Studies*, *European Journal of Political Research*, *European Political Science Review*, *Government and Opposition*, *Journal of Comparative Economics*, *Journal of Conflict Resolution*, *Journal of the American Statistical Association*, *Journal of Politics*, *Journal of Social and Political Psychology*, *International Organization*, *Legislative Studies Quarterly (Editorial Board)*, *Parliamentary Affairs*, *Political Analysis (Editorial board)*, *Political Communication*, *Political Research Quarterly*, *Political Science Research and Methods (Editorial board)*, *Politics & Policy*, *Public Choice*, *Public Opinion Quarterly*, *Social Networks*, *World Politics*.
- **Managing Contributor/Editor** for the Special Issue on British Political Development at *Legislative Studies Quarterly* (Fall 2014).
- **Director** of the ‘Text as Data Association’ (professional association, founded 2015), 2015–2018
- **Chair** of the Gabriel A. Almond prize committee (American Political Science Association, 2016)

## Refereed Publications

36. Measuring Distances in High Dimensional Spaces Why Average Group Vector Comparisons Exhibit Bias, And What to Do About it. *Political Analysis*, accepted for publication. *with Breanna Green, William Hobbs, Sofia Avila, Pedro Rodriguez, Brandon M. Stewart*
35. What Good is a Regression? Inference to the Best Explanation and the Practice of Political Science Research. *Journal of Politics*, accepted for publication. *with Brandon Stewart*.
34. Large Language Models Can Argue in Convincing Ways About Politics, But Humans Dislike AI Authors: implications for Governance. *Political Science* (<https://doi.org/10.1080/00323187.2024.2335471>) *with Alexis Palmer*
33. Multilanguage Word Embeddings For Social Science: Estimation, Inference and Validation Resources for 157 Languages. *Political Analysis*, accepted for publication *with Pedro Rodriguez, Brandon Stewart and Elisa Wirsching*.
32. Embedding Regression: Models for Context-Specific Description and Inference. *American Political Science Review* (2023). *with Pedro Rodriguez and Brandon Stewart*
31. Word Embeddings: What works, what doesn’t, and how to tell the difference for applied research. *Journal of Politics*, Volume 84, Issue 1, 101–115 (2022). *with Pedro Rodriguez*
30. Turning History into Data: Data Collection, Measurement, and Inference in HPE. *Journal of Historical Political Economy*, Volume 1, Issue 1, 127–154 (2021). *with Alexandra Cirone*
29. Understanding Agency Incentives in Intelligence Failures: A Text-as-Data Analysis of the Iranian Revolution. *Intelligence and National Security*, Volume 36, Issue 6, 781–806 (2021). *With Matthew J. Connelly, Raymond Hicks and Robert Jervis*

28. Diplomatic Documents Data for International Relations: The Freedom of Information Archive (FOIArchive) Database. *Conflict Management and Peace Science*, Volume 38, issue 6, 762–781. *With Matthew J. Connelly, Raymond Hicks, Robert Jervis and Clara H. Suong*
27. A General Model of Author “Style” with Application to the UK House of Commons, 1935–2018. *Political Analysis*, Volume 28, Issue 3: 412-434 (2020). *with Leslie Huang and Patrick O Perry.*
26. Measuring and Explaining Political Sophistication Through Textual Complexity. *American Journal of Political Science*, Volume 63, Issue 2: 491–508. *With Ken Benoit and Kevin Munger*
25. Conditional Word Embedding and Hypothesis Testing via Bayes-by-Backprop. *Proceedings of EMNLP, 2018.* *With Kyunghyun Cho, Rujun Han and Michael Gill*
24. Text Preprocessing For Unsupervised Learning: Why It Matters, When It Misleads, And What To Do About It *Political Analysis*, Volume 26, Issue 2: 168–189 *with Matthew Denny.*
23. The Shadow Cabinet in Westminster Systems: Modeling Opposition Agenda Setting in the House of Commons, 1832–1915, *British Journal of Political Science*, Volume 48, Issue 2: 343–368, *with Andrew Eggers.*
22. Classification Accuracy as a Substantive Quantity of Interest: Measuring Polarization in Westminster Systems. *Political Analysis*, Volume 26, Issue 1: 120-128 (2018) *with Andrew Peterson.*
21. Asking Too Much? The Rhetorical Role of Questions in Political Discourse. *Proceedings of EMNLP, 2017.* *With Justine Zhang and Cristian Danescu-Niculescu-Mizil.*
20. Incumbency effects and the strength of party preferences: evidence from multiparty elections in the United Kingdom. *Journal of Politics*, Vol 79, no. 3: 903-920 *with Andrew Eggers.*
19. Party Cohesion in Westminster Systems: Inducements, Replacement and Discipline in the House of Commons, 1836–1910. *British Journal of Political Science* Vol 46, No 3, 567–589 (2016). *with Andrew Eggers*
18. Democratization and Linguistic Complexity: The Effect of Franchise Extension on Parliamentary Discourse, 1832–1915, *Journal of Politics*, 78(1): 120–136.
17. Estimating the Severity of the WikiLeaks US Diplomatic Cables Disclosure. *Political Analysis*, 23(2):299-305 (2015), *with Michael Gill*
16. Modeling ‘Effectiveness’ in International Relations. *Journal of Conflict Resolution*, Vol 52 (2), 207–238 (2015), *with Jonathan Renshon*
15. British Political Development: A Research Agenda. Introduction to the Special Issue. *Legislative Studies Quarterly*, Vol 9, No 4, 435–437 (2014).
14. Electoral Security as a Determinant of Legislator Activity, 1832–1918: New Data and Methods for Analyzing British Political Development. *Legislative Studies Quarterly*, Vol 9, No 4, 593–620 *with Andrew Eggers.*
13. Ministerial Responsiveness in Westminster Systems: Institutional Choices and House of Commons Debate, 1832–1915. *American Journal of Political Science*, Vol 58, 873–887, *with Andrew Eggers*
12. Guarding the Guardians Legislative Self-Policing and Electoral Corruption in Victorian Britain. *Quarterly Journal of Political Science*, 9, no. 3 (2014): 337–370, *with Andrew Eggers*
11. Radical Moderation: Recapturing Power in Two-party Parliamentary Systems. *American Journal of Political Science*, Vol 56, No 2, 413–432 *with Tasos Kalandrakis.*
10. US Treaty-making with American Indians: Institutional Change and Relative Power, 1784–1911. *American Journal of Political Science*, Vol 56, No 1, 84–97.
9. Testing the Power of Arguments in Political Science: A Bradley-Terry Approach. *Electoral Studies*, Vol 31, No 1, 212–221, *with Peter Loewen and Daniel Rubenson.*
8. Strategic Opposition and Government Cohesion in Westminster Democracies. *American Political Science Review*, Vol 105, No 2, 337–358 *with Torun Dewan.*
7. Scaling the Critics: Uncovering the Latent Dimensions of Movie Criticism with An Item Response Approach. *Journal of the American Statistical Association*, 105 (489), *with Michael Peress.*
6. Identifying Intra-Party Voting Blocs in the UK House of Commons. *Journal of the American Statistical Association*, 105 (490), *With Kevin Quinn.*
5. ‘Turning Points’ in Iraq: Reversible Jump Markov Chain Monte Carlo in Political Science. *The American Statistician*, 61:4, 2007.
4. Bayesian Approaches for Limited Dependent Variable Change Point Problems. *Political Analysis*, 15(4), 2007.
3. UK OC OK? Interpreting Optimal Classification Scores for the U.K. House of Commons. *Political Analysis*, 15(1), 2007, *with Iain McLean.*

2. Under the Influence? Intellectual Exchange in Political Science. *PS: Political Science and Politics*. With David Carter, 41(2), 2007.
1. None of the above: The UK House of Commons votes on reforming the House of Lords, 2003. *The Political Quarterly*, 74, 298–310. With Iain McLean and Meg Russell.

## Other Academic Output: Notes, Comments, Miscellany

9. “Using proprietary language models in academic research requires explicit justification” *Nature Computational Science* (2023) <https://doi.org/10.1038/s43588-023-00585-1> With Alexis Palmer and Noah A Smith.
8. “Open generative AI models are a way forward for science” *Nature (World View)*. Vol 616, April 2023, p413.
7. “Dumbing Down? Trends in the Complexity of Political Communication” *Chapter 9 of “Can America Govern Itself?” Frances E Lee and Nolan McCarty (Eds), Cambridge University Press, 2019* With Kenneth Benoit and Kevin Munger
6. Response to “Statistical modelling of citation exchange between statistics journals” by Varin, C, Cattelan, M and Firth, D. *Journal of the Royal Statistical Society, Series A*, 179(1): 56–57.
5. “Comment” [on “Political Polarization and the Dynamics of Political Language: Evidence from 130 Years of Partisan Speech”]. *Brookings Papers on Economic Activity*, Fall 2012.
4. *tapiR* and The Public Whip: Resources for Westminster Voting. *The Political Methodologist* 14(2), with David Firth.
3. International Encyclopedia of Political Science. (*Contributor.*)  
*Sage (2011). Bertrand Badie, Dirk Berg-Schlosser and Leonardo Morlino (eds.)*
2. Encyclopedia of Power. (*Contributor.*)  
*Sage (2010). Keith Dowding and Nick Miller (eds.)*
1. The Rights and Wrongs of Roll Calls. *Government and Opposition* 41(4), 561–568, (2006) with Iain McLean.

## In Progress

3. Replication for Large Language Models  
Problems, Principles, and Best Practice for Political Science with Christopher Barrie and Lexi Palmer
2. Model Complexity for Supervised Learning: Why Simple Models Almost Always Work Best, And Why It Matters for Applied Research with Marco Morucci
1. The Levellers in Context: Equals, Peers and Free-born Englishmen. with Melissa Schwartzberg

## Teaching

UG, Harvard Gov 98 (Junior Seminar, Fall '08,'09, '10) Voters, Parties and Elections in Comparative Perspective. Gov 50 (Spring '09,'10,'11, Fall '12, 13): Introduction to Political Science Research Methods. Gov 61: Research Practice in Quantitative Methods (Spring '13).

Grad, Harvard Gov 2002 (Spring '11, Fall '11,'12, '13): Topics in Political Methodology

UG, NYU POL 800 (Fall '16), 850 (Fall '17, '18), DS 111 (Fall '19, '20, '21)

Grad, NYU ‘Dissertation Seminar’ (Fall, 16). ‘Text as Data’ (Spring '16, '17, '18, '19, '20, '21, '23). ‘Intro Data Science’ (MS) (Spring '17), ‘Intro Data Science (PhD) (Fall '20, '21),

Grad, Princeton ‘Text as Data’ (Fall, '23)

## Software

- *tapiR*: Tools for Accessing Parliamentary Information in *R*. Designed with David Firth.
- *preText*: Diagnostics to Assess the Effects of Text Preprocessing Decisions. Designed with Matthew Denny.
- *stylest*: *R* package for estimating speaker style distinctiveness in texts. Designed with Leslie Huang and Patrick O Perry.
- *sophistication*: *R* package associated with Benoit, Munger and Spirling paper(s) on textual complexity
- *conText*: *R* package associated with Rodriguez, Spirling and Stewart paper(s) on embedding regressions