

Nicholas Beauchamp

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Employment

Associate Professor, Department of Political Science and Network Science Institute, Northeastern University, 2022 – present

Assistant Professor, Department of Political Science and Network Science Institute, Northeastern University, 2013 – 2022

Lecturer in Discipline, Department of Political Science and Quantitative Methods in the Social Sciences program, Columbia University, 2012 – 2013

Education

Ph.D. Political Science, New York University, 2012.

M.A. Literature in English, Johns Hopkins University, 2001.

B.A. Philosophy and English, Yale University, 1996.

Publications

Peer-reviewed Journals and Proceedings

“How expertise mediates the effects of numerical and textual communication on individual and collective accuracy,” (N. Beauchamp, S. Shugars, B. Swire-Thompson, D. Lazer) *Decision*. 2023.

“A Generative Entity-to-Entity Stance Detection Framework,” (X.F. Zhang, N. Beauchamp and L. Wang) *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pp. 9950-9969, 2022.

“Sentence-level Media Bias Analysis Informed by Discourse Structures,” (Y. Lei, R. Huang, N. Wang and N. Beauchamp) *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pp. 10040-10050, 2022.

“‘This Candle Has No Smell:’ Detecting the effect of Covid anosmia on Amazon review using Bayesian Vector Autoregression,” (N. Beauchamp) *Proceedings of the International AAAI Conference on Web and Social Media*, 16(1), 1363-1367. 2022.

- “POLITICS: Pretraining with Same-story Article Comparison for Ideology Prediction and Stance Detection,” (Y. Liu, X. F. Zhang, D. Wegsman, N. Beauchamp, L. Wang) *Findings of the North American Association for Computational Linguistics (NAACL)*, pp. 1354-1374, 2022
- “A Multisource Database Tracking the Impact of the COVID-19 Pandemic on the Communities of Boston, MA” (A. Ristea, R. Tucker, S. You, M. Amiri, N. Beauchamp, E. Castro, Q. Chen, A. Ciomek, B. Das, J. de Benedictis-Kessner, S. Gibbons, F. Hangen, B. Montgomery, P. Papadopoulos, C. Robinson, S. Sheini, M. Shields, X. Shu, M. Wood, B. Heydari, D. O’Brien). *Nature Scientific Data*, 9(1), p.330, 2022
- “DebateVis: Visualizing Political Debates for Non-Expert Users,” (L. South, M. Schwab, N. Beauchamp, L. Wang, J. Wihbey and M.A. Borkin) *IEEE VIS*, 2020.
- “Educational Accountability and State ESSA Plans,” (J. Portz and N. Beauchamp) *Education Policy*, 36(3), 717-747, 2020.
- “Why Keep Arguing? Predicting Engagement in Political Conversations Online,” (S. Shugars and N. Beauchamp) *Sage Open*, 9(1) 2019.
- “Microblog Conversation Recommendation via Joint Modeling of Topics and Discourse,” (X. Zeng, J. Li, L. Wang, N. Beauchamp, S. Shugars and K.F. Wong) *Proceedings of the North American Association for Computational Linguistics (NAACL)*, V1 pp. 375-385, 2018.
- “Winning on the Merits: The Joint Effects of Content and Style on Debate Outcomes,” (L. Wang, N. Beauchamp, S. Shugars and K. Qin) *Transactions of the Association for Computational Linguistics (TACL)*, 5, pp. 219-232, 2017.
- “Predicting and Interpolating State-level Polls using Twitter Textual Data,” (N. Beauchamp) *American Journal of Political Science*, 61(2), pp. 490-503. 2017.
- “What Terrorist Leaders Want: A Content Analysis of Terrorist Propaganda Videos,” (M. Abrahms, N. Beauchamp and J. Mroszczyk) *Studies in Conflict and Terrorism*, 40(11), pp. 899-916. 2016.
- “A Bottom-up Approach to Linguistic Persuasion in Advertising,” (N. Beauchamp) *The Political Methodologist*, 19(1). 2011.

Book Chapters

- “Modeling and Measuring Deliberation Online,” (N. Beauchamp) Book chapter, *Oxford Handbook of Networked Communication*. pp. 321-349. Oxford University Press, 2020.
- “Measuring Public Opinion with Social Media Data,” (M. Klačnja, P. Barberá, N. Beauchamp, J. Nagler and J.A. Tucker) Book chapter, *Oxford Handbook of Polling and Polling Methods*. pp. 555-582. Oxford University Press, 2015.

Computational Tools, Research Reports, and other Creative Activity

Research Reports

- “The State of the Union Address in a Single Image,” *Washingtonpost.com*, January 2015.
- “A Network Analysis of the Ferguson Witness Reports,” *Washingtonpost.com*, December 2014.

“The Ideological Position of Obama’s SOTU Relative to Past Presidents,” *Washingtonpost.com*, January 2012.

“Findings of an independent panel on allegations of statistical evidence for fraud during the 2004 Venezuelan Presidential recall referendum,” (H. Brady, R. Fowles, A. Rubin, J. Taylor and N. Beauchamp) in *Observing the Venezuela Presidential Recall Referendum: Comprehensive Report*, pp. 127-134, The Carter Center, 2004.

Computational and Visualization Tools

[DebateViz](#), for visualizing televised debates (L. South, M. Schwab, N. Beauchamp, L. Wang, J. Wihbey and M.A. Borkin)

[Plotmapper](#), for visualizing single documents

Autoscale, for visualizing multiple documents; QuickTopics, for content topic analysis of multiple documents; Clichéscore, Textpredictor, Motifator, etc, for analyzing humanities texts ([nickbeauchamp.com](#))

Blossom.R, a general-purpose algorithm for optimization over rough, discontinuous and multimodal objective functions

Gallery/Exhibition

“Visualizing Biographies of Artists of the Middle East,” MENAM Art Map Exhibition. (D. Offenhuber, N. Beauchamp and C. Riedl) *The Amory Art Show*, New York, March 2015

Presentations

“A Deep Learning Model for Ideology Prediction across Multiple Genres of Text,” (1) Politics and Computational Social Science, June 2022; (2) APSA Annual Conference, September 2022

“‘This Candle Has No Smell:’ Detecting the effect of Covid anosmia on Amazon review using Bayesian Vector Autoregression” *International Conference on Web and Social Media (ICWSM)*, June 2022

“A Bayesian Transition Network Topic Model for Inferring Conceptual Networks,” (1) APSA Annual Conference, September 2020; (2) New Directions in Text as Data, October 2019; (3) Society for Political Methodology Annual Conference, July 2019; (4) Political Networks, June 2019

“Has President Trump Changed the Way Americans Talk About Immigration On Twitter?,” MPSA Annual Conference, April 2020

“Deep Voting: Using Neural Networks to Predict Votes on Congressional Bills,” (1) APSA Annual Conference, September 2019; (2) MPSA Annual Conference, April 2019; (3) New Directions in Text as Data, September 2018.

“Why Keep Arguing? Predicting Engagement in Political Conversations Online,” APSA Annual Conference, 2018.

“Trajectories of Hate,” (1) APSA Annual Conference, September 2018; (2) Fake News / Real Knowledge, NULab Spring Conference, March 2018

“The Light and Dark Side of Social Media,” APSA Preconference on Politics and Computational Social Science, September 2018.

- “Mapping Conceptual Networks,” (1) New Directions in Text as Data conference, October 2017; (2) Political Networks, July 2017.
- “Winning on the Merits: The Joint Effects of Content and Style on Debate Outcomes,” (1) APSA Annual Conference, September 2017; (2) MPSA Annual Conference, April 2017.
- “Here’s Where You’re Wrong: The Joint Effects of Content and Style on Debate Outcomes,” (1) New Directions in Analyzing Text as Data, October 2016; (2) Society for Political Methodology Annual Conference, July 2016.
- “Climbing Mount Obamacare: Experimentally Optimized Textual Treatments,” (1) New Directions in Analyzing Text as Data, October 2015; (2) APSA Annual Meeting, September 2015; (3) Society for Political Methodology Annual Conference, July 2015; (4) MPSA Annual Conference, July 2015.
- “Visualizing and Modeling Document-Scale Semantic Structure,” (1) New Directions in Analyzing Text as Data, September 2014; (2) APSA Annual Meeting, September 2014.
- “Scaling Appeals Court Judges using Unanimous Decisions,” (1) APSA Annual Meeting, September 2014; (2) MPSA Annual National Conference, March 2014.
- “Someone is Wrong on the Internet: Deliberation as the Exchange of Networked Ideas”, (1) Political Networks, June 2014; ICA, May 2014; (2) MPSA Annual National Conference, March 2013.
- “Predicting and Interpolating State-level Polling Using Twitter Textual Data,” (1) MPSA Annual National Conference, March 2014; (2) New Directions in Analyzing Text as Data, September 2013; (3) APSA Annual Meeting, August 2013.
- “Blossom: A new evolutionary strategy optimizer with applications to matching and sampling,” (1) APSA Annual Meeting, August 2013; (2) Society for Political Methodology Summer Conference, July 2013
- “Many Paths to an Opinion: Using the Text of Briefs and Oral Arguments to Predict and Explain Supreme Court Decisions,” (1) MPSA Annual National Conference, March 2013; (2) APSA Annual Meeting, September 2012.
- “A Hidden Markov Topic Model for Predicting Ideology and Opinion Change,” (1) Society for Political Methodology Summer Conference, July 2012; (2) MPSA Annual National Conference, March 2012; (3) Society for Political Methodology Summer Conference, July 2011.
- “A Bottom-up Approach to Linguistic Persuasion in Advertising,” (1) APSA Annual Meeting, August 2011; (2) St Louis Area Methods Meeting, April 2011; (3) MPSA Annual National Conference, March 2011; (4) Society for Political Methodology Summer Conference, July 2010.
- “How to Scale Legislatures with Text: A comparison of methods, with applications to the US Congress and UK House of Commons,” Text as Data 2nd Annual Conference, Northwestern University, March 2011

Invited Presentations

- “‘This Candle Has No Smell:’ Detecting the effect of Covid anosmia on Amazon review using Bayesian Vector Autoregression,” Monell Chemical Senses Center, May 2022
- “Trump Talk: Computational Models of Presidential Speeches, Tweets and Debates,” President’s Day Lecture, Northeastern University, February 2022

- “Asymmetries in Sharing on Facebook and Twitter,” New York University Center for Social Media and Political Participation annual conference, April 2021
- “Mapping Conceptual Networks,” International Conference on Computational Social Science, *Keynote Speaker*, July 2020.
- “Using Molecular Profiles to Diagnose Disease,” Monell Chemical Senses Center, April 2020
- “Trajectories of Hate,” College of Social Sciences and Humanities Works-in-Progress series, Northeastern University, October 2019
- “A Bayesian Model of Engagement in Online Arguments,” Social Media and Political Participation Global, New York University, October 2017.
- “Clinton Hate Trumps Love,” Social Media and Political Participation global, NYU Abu Dhabi, February 2017
- “Someone is Wrong on the Internet: Deliberation as the Exchange of Networked Ideas,” University of Pennsylvania, April 2016
- “Exploring Conceptual Structures of Smell and Taste via Computational Text Analysis,” Monell Chemical Senses Center, March 2016
- “Text, Opinion and Persuasion,” Social Media and Political Participation global, New York University, October 2015.
- “Predicting and Interpolating State-level Polling Using Twitter Textual Data,” Applied Statistics workshop at the Institute for Quantitative Social Sciences, Harvard University, April 2014.
- “Persuasion, Ideology, and Speech: Using automated text analysis to model opinion formation and change,” (1) Visual Design research group, Northeastern University, November 2013; (2) Quantitative Methods in the Social Sciences research seminar, New York University, March 2013; (3) Social Media and Political Participation research group, New York University, December 2012.

Grants

External

- “Reverse-engineering the News: Entity- and Event-driven Media Bias Detection,” NSF IIS-2127749, 2021-2024, \$500,000. PI: Lu Wang, Co-PIs: Ruihong Huang, Nick Beauchamp.
- “Applying geo-spatio-temporal monitoring and mapping, with predictive analytics and privacy protection: Anticipating the next virus hot spot,” IARPA-BAA-20-01, \$900,000, 2021-2022. PI: Cordula Robinson. Co-PIs: Nick Beauchamp, Dan O’Brien and Ryan Wang.
- “Automated Ethical Persuasion,” *Data for Progress* and Northeastern University Alpha Fund for early-stage commercial products, \$3000, 2021. PI: Nick Beauchamp. Co-PIs: Jason Radford and Jon Green.
- “Measuring the Effects of Peer Sharing on Fake and Polarized News Consumption,” Facebook / Social Science Research Council, \$50,000, 2019-2021. PI: Nick Beauchamp. Co-PIs: Donghee Jo, Lu Wang, Kenny Joseph and David Lazer.

“Do Fact-Checks Slow the Spread of Misinformation on Facebook and Twitter?,” Facebook / Social Science Research Council, \$50,000, 2019-2020. PI: Matthew Baum. Co-PIs: David Lazer, Nir Grinberg, Briony Swire-Thompson, Nick Beauchamp and Nic Dias.

“Hybrid Forecasting Competition,” IARPA-BAA-16-02. Year 1: \$628,000, 2017-2018. PI: Hughes Research Labs. Co-PIs: MIT, Harvard, and at Northeastern: David Lazer, Nick Beauchamp, Alex Vespignani. Year 2: \$400,000, 2018-2020. PI: USC. Co-PIs: David Lazer, Nick Beauchamp, Ryan Kennedy.

Internal

“Automatic Mining of Project Risk Data from News Articles with NLP.” Northeastern University *Tier 1*, \$50,000, 2021-2022. PI: Ali Touran. Co-PIs: Nick Beauchamp and Ryan Wang.

“Decision Support in Combating Covid-19: Anticipating the next virus hot spot using geolocated social media data,” NU COVID-19/SARS-CoV-2 Crisis Seed Funding. \$21,660, 2020-2021. PI: Cordula Robinson. Co-PIs: Nick Beauchamp, Ryan Wang and Dan O’Brien.

“Inferring Argument Structure from Online and Live Conversations,” Northeastern University *Tier 1*, \$50,000, 2017-2018. PI: Michelle Borkin. Co-PIs: Nick Beauchamp and Lu Wang.

“Visualization of Text-based Networks,” Northeastern University *Tier 1*, \$50,000, 2014-2015. PI: Christoph Riedl. Co-PIs: Nick Beauchamp and Dietmar Offenhuber.

Teaching and Advising

Courses

Northeastern

- *Introduction to Computational Statistics* (G. S 2023: 18; F2021: 26; F2020: 24; F2019: 26; F2017: 25; S2016: 27; Su2015: 10; S2015: 19 - newly designed)
- *Social Network Analysis* (G. F2022: 16; F2020: 14; S2018: 6; S2015: 8 - newly designed)
- *Bayesian and Network Statistics* (G. S2022:16; S2019: 9; S2017: 11 - newly designed)
- *Bostonography: Int. to Computational Social Science and Digital Humanities* (UG. S2020: 46; S2018: 43 - newly designed)
- *Congress* (UG. F2022: 33; S2020: 22; S2019: 24; F2016: 26; F2014: 13; S2014: 13 - newly designed)
- *Quantitative Techniques* (UG. F2013: 17)

Columbia

- *Social Network Analysis* (G. 2013: 20 - newly designed)
- *Mathematics for Political Scientists* (G. 2012: 30)
- *Data Analysis for the Social Sciences* (G. 2012, 2013: 20)
- *Mathematics Boot Camp* (G. 2012: 15)

New York University

- *Power and Politics in America* (TA, UG. 2011: 300)
- *Math for Political Scientists* (TA, G. 2008: 20)
- *Game Theory 1* (TA, G. 2008: 20)
- *Quantitative Methods 1* (TA, G. 2007: 20)

Johns Hopkins

- *Politics, Science and Fiction* (UG. 2001, 2002: 20 - newly designed)
- *Postmodern Political Fictions*, (UG. 1999, 2000: 20 - newly designed)
- *19th Century Literature* (TA, UG. 1999: 100)
- *American Literature* (TA, UG. 1998: 100)

Graduate Advising

Toshiaki Yoshida (Political Science, PhD, NU Expected 2024 *), Lucas Almeida (Network Science PhD, NU, Expected 2023 *), Stefan McCabe (Network Science PhD, NU, 2022 *), Nan Gao (Engineering, PhD, NU 2022 *), David Casale (Economics PhD, NU, 2022 *), Hanyu Chwe (Network Science PhD, NU, Departed 2021 *), Sarah Shugars (Network Science PhD, NU, 2020 †), Ieke De Vries (Criminology PhD, NU, 2020 *), Jaclyn Northrup (Political Science PhD, NU, 2020 *), Sang Won Han (Sociology Ph.D., Columbia U., 2013 *), H. Seung Cho (Politics Ph.D., Columbia U., 2013 *), Benjamin Crumpler (QMSS Politics, Columbia U., 2013 †), Kyle Ueyama (QMSS Politics, Columbia U., 2013 †)

* *Committee Member*; † *Advisor or Co-Advisor*

Service

Northeastern University

Political Science Department

Department of Political Science, Faculty, 2013 – present

Ph.D. Committee, 2013 – 2017, 2022 – present

MA committee, 2018 – 2022

Merit criteria reevaluation group, 2014 – 2015

Network Science Institute

Network Science Institute, Core Faculty, Northeastern University, 2014 – present

Ph.D. Admissions and Comprehensive Exams, 2015 – present

Seed Grant Committee, 2020 – present

Speakers and Events Committee, 2018 – 2020

Ph.D. Committee, 2015 – 2017

Ph.D. program development, 2013 – 2015

College of Social Sciences and Humanities

NULab for Texts, Maps and Networks, Core Faculty, 2013 – present

Tier 1 Selection Committee, 2017, 2020

Steering Committee on MS in Data Analytics, 2020

NULab Fellows Program Advisor, 2016 – 2017

Quantitative Graduate Methods Committee, 2016 – 2018

Quantitative Methods Cluster Search Committee, 2015 – 2016

Quantitative Methods in the Social Sciences task force, 2014 – 2015

MA in Data Analytics Committee, 2013 – 2015

Computational Social Science search committee, 2013 – 2014

University

Huntington 100 Selection Committee, 2020, 2021, 2022

ADVANCE Office of Faculty Development: Rising to the Racial Justice Call to Action: “Race in the 2020 Election,” 2020

Information Technology Policy Committee, Faculty Senate, 2017 – 2020. *Chair*, 2019-2020

Provost/CSSH Resolution Committee, 2018

Service to Profession

Social Media and Political Participation research group, New York University, 2012 – present

Society for Political Methodology Software Award committee, 2019 – present

Institute for Quantitative Social Science associate, Harvard University, 2015-2019

Seventh Annual New Directions in Analyzing Text as Data conference, Co-host/co-organizer, 2016

Reviewer for *American Political Science Review*, *American Journal of Political Science*, *Political Analysis*, *Journal of Politics*, *Nature Communications*, *PLOS One*, *Political Behavior*, *Legislative Studies Quarterly*, *Comparative Political Studies*, *Mass Communication and Society*, *Political Science Research and Methods*, *Psychological Science*, *Politics and the Life Sciences*, *Nature Climate Change*, *Behavioral Sciences of Terrorism and Political Aggression*, *SocInfo*, *WebSci*, *IC2S2*, *NSF*

Selected Media Coverage

Rachel Maddow, *MSNBC*, opening segment; Customers are Flooding Yankee Candle's Amazon reviews with claims that the candles have no scent, but the surge in Omicron cases may be to blame, *Business Insider*; Well, People Can't Smell their Candles Again, *Gawker*; Hmm, Angry Reviews of Candles are Spiking Again, *Input*; Brace yourselves, one-star candle reviews are spiking again, *BoingBoing* (2021)

Moving through a 'space of hate', *NiemanLab* (2018)

This algorithm identifies the key ingredients to winning a debate, *Digital Trends* (2018)

Inside the Message Machine that Could Make Politicians More Persuasive NPR's *All Things Considered*; An Algorithm to Help Politicians Pander *Wired magazine*; “The Persuasion Principle,” *Impact: Journal of the Market Research Society*; How to Make Your Speeches Better, *Automatically Pacific Standard magazine*. (2015-2016)

News@Northeastern (45 appearances, 2014-2022)