

Benjamin Campbell

Social, Political, Data, & Network Scientist

about

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programming

Python
L^AT_EX
Gephi
SQL/NoSQL
Stan

interests

methods: natural language processing, network inference, node-based clustering, survival analysis, machine learning, multivariate time series analysis

substantive: organizational psychology, organizational network analysis, role analysis, network diffusion, socialization, community norms, interstate conflict, international institutions, alliance politics

education

- | | | |
|------|--|------------------------------|
| 2019 | Ph.D., Political Science
Dissertation: <i>Supervised and Unsupervised Machine Learning Strategies for Modeling Military Alliances.</i> | The Ohio State University |
| 2016 | M.A., Political Science
Subfields: International Relations and Methodology | The Ohio State University |
| 2014 | B.A., Political Science
Summa Cum Laude, Honors Degree | Southern Illinois University |

experience

- | | | |
|-----------|---|--------------------------------|
| 2022- | Aware
<i>Lead strategic planning of product data science organization, oversaw direct reports and people leaders, worked with product team, sales, engineering leadership, and customers to develop and deliver data science roadmap.</i> | Manager, Core Machine Learning |
| 2022-2022 | Aware
<i>Lead Data Science Team operations and tactical execution, oversaw 6 direct reports, worked with product team and customers to develop and maintain data science solutions.</i> | Data Science Team Lead |
| 2021-2022 | Aware
<i>Worked with product team and customers to develop and maintain data science solutions.</i> | Senior Data Scientist |
| 2019-2022 | The Ohio State University
<i>Researcher in statistics and political methodology.</i> | Visiting Fellow |
| 2019-2021 | CoverMyMeds
<i>Developed data science products, worked with multiple verticals to develop and integrate machine learning strategies to improve products.</i> | Data Scientist |
| 2018-2019 | Program in Statistics and Methodology (PRISM)
<i>Consulted with faculty and graduate students on methods-related issues, provided technical assistance and advice, and planned workshops and speakers.</i> | Senior Fellow |
| 2015-2018 | The Ohio State University, Prof. Box-Steffensmeier
<i>Collaborated on multiple projects using network, event history, and time series analysis. Supervised graduate and undergraduate researchers.</i> | GRA |
| 2015-2018 | The Ohio State University, Prof. Cranmer
<i>Collaborated on multiple projects using network analysis. Conducted a pilot study.</i> | GRA |

2012-2014	Southern Illinois University, Prof. Comparato <i>Assisted in the preparation of a relational database on state supreme court citations for the 2000 court term. Dataset yielded two conference papers.</i>	URA
2012-2013	Southern Illinois University <i>Course in Foundations of Inquiry: Academic Success Seminar.</i>	TA

refereed publications

1. Whealdon, Jordan, Keith Warren, **Benjamin Campbell**, Uwe Wernekinck. 2023. "Who is a role model? An analysis of role model nomination networks in two therapeutic communities." *The Therapeutic Community: Research and Practice*, ed. Carole Harvey. London: Academic Press.
2. **Campbell, Benjamin**, Keith Warren, Mackenzie Weiler, George De Leon. 2021. "Eigenvector Centrality Defines Hierarchy and Predicts Graduation in Therapeutic Community Unit." *PLOS ONE*, 16(12).
 - Five Year Impact Factor (2020): 3.3727
3. Baumgartner, Frank R., Janet M. Box-Steffensmeier, **Benjamin Campbell**, Christian Caron, and Hailey Sherman. 2020. "Learning to kill: Why a small handful of counties generates the bulk of US death sentences." *PLOS ONE*, 15(10).
 - Five Year Impact Factor (2018): 3.337
4. Warren, Keith, **Benjamin Campbell**, and Skyler Cranmer. 2020. "Tightly bound: the relationship of network clustering coefficients and reincarceration at three therapeutic communities." *Journal of Studies on Alcohol and Drugs*, 81(5): 673-680.
 - Five Year Impact Factor (2018): 2.812
5. Podob, Andrew W. **Benjamin W. Campbell**, and Jan Box-Steffensmeier. 2020. "I Get By With a Little Help from My Friends: Leveraging Campaign Resources to Maximize Congressional Power." *American Journal of Political Science*, 64(4): 1017-1033.
 - Five Year Impact Factor (2018): 7.324
6. Frank W. Marrs, **Benjamin W. Campbell**, Bailey K. Fosdick, Skyler J. Cranmer, and Tobias Böhmelt. 2020. "Inferring Influence Networks from Longitudinal Bipartite Relational Data." *Journal of Computational and Graphical Statistics*, 29(3): 419-431.
 - Five Year Impact Factor (2018): 2.497
7. Warren, Keith, **Benjamin Campbell**, Skyler Cranmer, George De Leon, Nathan Doogan, Mackenzie Weiler, and Fiona Doherty. 2020. "Building the Community: Endogenous Network Formation, Homophily, and Prosocial Sorting Among Therapeutic Community Residents." *Drug and Alcohol Dependence*, 207(1).
 - Five Year Impact Factor (2018): 3.989
8. Cranmer, Skyler, Bruce Desmarais, and **Benjamin W. Campbell**. 2019. "The contagion of democracy through international networks." *Social Networks*, 61: 87-98.
 - Five Year Impact Factor (2018): 3.781
9. Box-Steffensmeier, Jan, **Benjamin W. Campbell**, Dino Christenson, and Jason Morgan. 2019. "Substantive implications of unobserved heterogeneity: Testing the frailty approach to exponential random graph models." *Social Networks*, 59:141-153.
 - Five Year Impact Factor (2018): 3.781
10. **Campbell, Benjamin W.**, Frank W. Marrs, Tobias Böhmelt, Bailey K. Fosdick, and Skyler J. Cranmer. 2019. "Latent influence networks in global environmental politics." *PLOS ONE*, 14(3).

- Five Year Impact Factor (2018): 3.337
11. **Campbell, Benjamin W.**, Skyler Cranmer, Nathan Doogan, Carole Harvey, and Keith Warren. 2019. "Relationship between network clustering in a therapeutic community and reincarceration following discharge." *Journal of Substance Abuse Treatment*, 97: 14-20.
 - Five Year Impact Factor (2018): 2.753
 12. **Campbell, Benjamin W.** 2018. "Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Networks." *Political Analysis*, 26(3): 292-311.
 - Five Year Impact Factor (2017): 7.033
 - Best Poster in Methodology, Political Networks Conference 2018.
 13. Baumgartner, Frank, Jan Box-Steffensmeier, and **Benjamin W. Campbell**. 2018. "A Power Law of Death: Event Dependence in Death Penalty Executions." *PLOS ONE*, 13(1).
 - Five Year Impact Factor (2017): 3.352
 - Covered in *The Washington Post*, *Medium*, and *New Scientist*.
 14. **Campbell, Benjamin W.**, Skyler J. Cranmer, Carole Harvey, and Keith Warren. 2018. "Therapeutic community graduates cluster together in social networks: Evidence for spatial selection as a cooperative mechanism in therapeutic communities." *Addictive Behaviors*, 79: 74-80.
 - Five Year Impact Factor (2017): 3.146
 15. Box-Steffensmeier, Jan, **Benjamin W. Campbell**, Dino Christenson, and Zack Navabi. 2018. "Role Analysis Using the Ego-ERGM: A Look at Environmental Interest Group Coalitions." *Social Networks*, 52: 213-227.
 - Five Year Impact Factor (2017): 3.569
 16. Braumoeller, Bear F. and **Benjamin W. Campbell**. 2017. "Logics of Systemic Theory: Making International Relations International Again." *Encyclopedia of Empirical International Relations Theory*, ed. William Thompson. Oxford: Oxford University Press.

working papers

1. Box-Steffensmeier, Jan, Benjamin W. Campbell, Dino P. Christenson, Ryan Dawe, and Eli Kravitz. "Frailty Exponential Random Graph Models to Account for Unobserved, Unmeasured Heterogeneity in Network Health Applications."

pre-prints

1. **Campbell, Benjamin W.**, Keith Warren. "Social Network Conceptualization and Operationalization of Hierarchy Within Therapeutic Communities" *Archived at arXiv*.
2. **Campbell, Benjamin W.** "Measuring and Assessing Latent Variation in Alliance Design and Objectives." *Archived at arXiv*.
3. **Campbell, Benjamin W.** "Alliances and Conflict, or Conflict and Alliances? Appraising the Causal Effect of Alliances on Conflict." *Archived at arXiv*.
4. **Campbell, Benjamin W.**, Skyler J. Cranmer, and Bruce Desmarais. "Triangulating War: Network Topology and the Democratic Peace." *Archived at arXiv*.

software

1. **Benjamin W. Campbell [cre, aut]**. 2019. "coxtools: Tools for Cox Proportional Hazards Models."

2. Marrs, Frank W. [aut, cre], **Benjamin W. Campbell [aut]**, Bailey K. Fosdick [aut], Skyler J. Cranmer [aut], and Tobias Böhmelt [aut]. 2018. “`blin`: Bipartite Longitudinal Influence Network (BLIN) Estimation.”
3. **Campbell, Benjamin W. [aut, cre]**, Michael Salter-Townshend [ctb], and T. Brendan Murphy [ctb]. 2018. “`egoTERGM`: Estimation of ego-Temporal Exponential Random Graph Models (ego-TERGM) via Expectation Maximization (EM).”
4. Morgan, Jason W. [aut], **Benjamin W. Campbell [aut, cre]**, Dino P. Christenson [aut], and Jan M. Box-Steffensmeier [aut]. 2017. “`fergm`: Estimation and Fit Assessment of Frailty Exponential Random Graph Models.”

conference presentations

1. Warren, K., **Campbell, B.**, Cranmer, S., Weiler, M., & Doherty, F. “Building the Community: Endogenous Network Formation, Homophily, and Prosocial Sorting Among Therapeutic Community Residents.” Presentation at the 12th annual Behavior, Biology and Chemistry: Translational Research in Addiction Conference, San Antonio, TX, March, 2020.
2. **Campbell, Benjamin W.**, Mackenzie Weiler, Keith Warren, and Skyler Cranmer. “Community Composition Matters: Explaining Variation in Recidivism.” Poster presented at the annual meeting of the APSA Political Networks Section, Durham, NC, June, 2019.
3. **Campbell, Benjamin W.** “Measuring and Assessing Latent Variation in Alliance Design and Objectives.” Paper presented at the annual meeting of the MPSA, Chicago, IL, April, 2019.
4. **Campbell, Benjamin W.** “Measuring and Assessing Latent Variation in Alliance Design and Objectives.” Paper presented at the annual meeting of the ISA, Toronto, ON, March, 2019.
5. **Campbell, Benjamin W.** “Measuring and Assessing Latent Variation in Alliance Design and Objectives.” Paper presented at the annual meeting of the APSA, Boston, MA, August/September, 2018.
6. Andrew W. Podob, **Benjamin W. Campbell**, and Jan Box-Steffensmeier “The Sharing of Donor and Supporter Personal Information Among Congressional Campaigns: A Coordination and Collaboration Network Analysis.” Paper presented at the annual meeting of the APSA, Boston, MA, August/September, 2018.
7. **Campbell, Benjamin W.** “Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Networks.” Paper presented at the Preconference on Politics and Computational Science, Northeastern University, Boston, MA, August, 2018.
8. **Campbell, Benjamin W.**, Skyler Cranmer, Nathan Doogan, Carole Harvey, and Keith Warren. “I get by with a little help from my friends: Triadic closure predicts reincarceration following termination from a therapeutic community.” Paper presented at the Society for Chaos Theory in Psychology and Life Sciences, Raleigh, NC, August 2018.
9. **Campbell, Benjamin W.** “Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Networks.” Poster presented at the annual meeting of the Society of Political Methodology, Provo, UT, July, 2018.
10. **Campbell, Benjamin W.** “Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Networks.” Poster presented at the annual meeting of the APSA Political Networks Section, Washington D.C., June, 2018.
 - *Best Poster in Methodology.*
11. **Campbell, Benjamin W.**, Skyler Cranmer, and Bruce Desmarais. “Triangulating Peace: Network Topology and the Democratic Peace” Paper presented at the annual meeting of the APSA Political Networks Section, Washington D.C., June, 2018.

12. Andrew W. Podob, **Benjamin W. Campbell**, and Jan Box-Steffensmeier "The Sharing of Donor and Supporter Personal Information Among Congressional Campaigns: A Coordination and Collaboration Network Analysis." Paper presented at the annual meeting of the APSA Political Networks Section, Washington D.C., June, 2018.
13. **Campbell, Benjamin W.**, Skyler Cranmer, and Bruce Desmarais. "Triangulating Peace: Network Topology and the Democratic Peace" Paper presented at the annual meeting of the SPSA, New Orleans, LA, January, 2018.
14. **Campbell, Benjamin W.** "Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Networks Using the Ego-TERGM." Paper presented at the annual meeting of the SPSA, New Orleans, LA, January, 2018.
15. **Campbell, Benjamin W.** "Measuring and Assessing Latent Variation in Alliance Design and Objectives." Paper presented at the annual meeting of the SPSA, New Orleans, LA, January, 2018.
16. Marrs, Frank, **Benjamin W. Campbell**, Bailey Fosdick, Skyler Cranmer, and Tobias Böhmelt. "Inferring Influence Networks from Longitudinal Bipartite Relational Data." Paper presented at the annual meeting of the APSA Political Networks Section, Columbus, OH, June, 2017.
17. Böhmelt, Tobias, **Benjamin W. Campbell**, Skyler Cranmer, Bailey Fosdick, and Frank Marrs. "Latent Influence Networks in Global Environmental Politics" Paper presented at the annual meeting of the APSA Political Networks Section, Columbus, OH, June, 2017.
18. **Campbell, Benjamin W.**, Skyler Cranmer, and Bruce Desmarais. "Triangulating Peace: Network Topology and the Democratic Peace." Poster presented at the annual meeting of the APSA Political Networks Section, Columbus, OH, June, 2017.
 - *Honorable mention for Best Poster.*
19. Cranmer, Skyler, Bruce Desmarais, and **Benjamin W. Campbell**. "Indirect Effects and Network Pressures Towards Democracy." Paper presented at the annual meeting of the MPSA, Chicago, IL, April, 2017.
20. Cranmer, Skyler, Bruce Desmarais, and **Benjamin W. Campbell**. "Network Pressures Towards Democracy." Poster presented at the annual meeting of the APSA Political Networks Section, St. Louis, MO, June, 2016.
21. Box-Steffensmeier, Jan, **Benjamin W. Campbell**, Dino Christenson, and Zack Navrabi. "Role Analysis and Environmental Interest Groups." Paper presented at the annual meeting of the MPSA, Chicago, IL, April, 2016.

invited talks and presentations

1. Presenter, invited by The Erdős Institute, "Journey to Industry," March 2, 2023.
2. Roundtable Guest, invited by the American Political Science Association, "Careers Diversity Committee: Careers in Industry," September 2022.
3. Presenter, invited by The Erdős Institute, "Data Science Workflows with Cloud v. On-Prem Infrastructure," April 12, 2022.
4. Roundtable Guest, invited by the American Political Science Association, "Alt-Ac Careers Roundtable," September/October 2021.
5. Presenter, invited by Higher-Order Models in Network Science (HONS) Group of NetSci, "Detecting Heterogeneity and Inferring Latent Roles in Longitudinal Military Alliance Data," September 17, 2020.
6. Seminar Speaker, invited by The Erdős Institute, "Invitations to Industry," March 27, 2020.

7. Presenter, invited by the Center for Peace and Conflict Studies at Wayne State University, "The Evolution and Future Roles of NATO," July 25, 2019.
8. Presenter, invited by the Mathematical Biosciences Institute for Modeling and Analysis of Dynamic Social Networks Workshop, "Detecting Heterogeneity and Inferring Latent Roles in Networks," November 7-9, 2018.
9. Presenter, invited by The Institute for Population Research for seminar. "Role Analysis Using the Ego-ERGM: A Look at Environmental Interest Group Coalitions". February 7, 2017.
10. Presenter, invited by Morris Library for Constitution Day Event. "Debating the Second Amendment," September 17, 2013.
11. Lecturer, invited by the Paul Simon Public Policy Institute. "Public Speaking: Helpful Reminders and Common Mistakes," April 2, 2013.
12. Presenter, invited by Morris Library for Constitution Day Event. "The Right to Hate Speech? Debating the First Amendment," September 17, 2011.

major grants and awards (> \$100,000)

1. "Development of a statistical framework for the analysis of social network predictors of therapeutic community outcomes." 2018-2021. *National Institutes of Health, National Institute on Drug Abuse*, Award #R34DA04307901A1, \$689,370.74. PI with Keith Warren, Skyler Cranmer, Nathan Doogan, and George De Leon.

minor grants and awards (< \$100,000)

1. Francis Aumann Award for Best Paper in Political Methodology, Department of Political Science, The Ohio State University, Fall 2018, \$500.00.
2. Cavanaugh Scholar, Outstanding Graduate Student, Department of Political Science, The Ohio State University. Summer 2018, \$1,500.00.
3. John T. Williams Dissertation Prize Nominee, Best Dissertation in Political Methodology, The Society for Political Methodology, May 2018.
4. Travel Fellowship, National Science Foundation & Political Networks APSA Section, \$800.00, Summer 2018.
5. Departmental Travel Grant, Department of Political Science, The Ohio State University, \$1250.00, Spring 2018.
6. Prestage-Cook Travel Grant, Southern Political Science Association, \$300.00, Winter 2018.
7. Francis Aumann Award for Best Paper in Political Methodology, Department of Political Science, The Ohio State University, Fall 2017.
8. Travel Fellowship, National Science Foundation & Political Networks APSA Section, \$250.00, Summer 2017.
9. Departmental Travel Grant, Department of Political Science, The Ohio State University, \$620.00, Spring 2017.
10. Social and Behavioral Sciences Fellow, College of Arts and Sciences, The Ohio State University, \$5,100.00, Summer 2016.
11. Travel Fellowship, National Science Foundation & Political Networks APSA Section, \$900.00, Summer 2016.
12. Departmental Travel Grant, Department of Political Science, The Ohio State University, \$800.00, Spring 2016.

13. University Fellow, The Graduate School, The Ohio State University, \$26,400, Fall 2014-Summer 2015.
14. Departmental Training Grant, Department of Political Science, The Ohio State University, \$2,300.00, Spring 2015.
15. Peace Research Grant, The Mershon Center for International Security Studies, The Ohio State University, \$2,000.00, Fall 2014.
16. National Champion, National Parliamentary Debate Association National Tournament, Spring 2014.
17. Levina Micken Scholar, Department of Speech Communication, Southern Illinois University, \$200.00, Spring 2012-Spring 2014.
18. Senator Paul Simon Debate Fellow, Saluki Debate Team, Southern Illinois University, \$38,580.00, August 2012-Spring 2014.
19. John and Nancy Jackson Scholar, Department of Political Science, Southern Illinois University, \$4,500.00, Fall 2011-Spring 2014.
20. Nick P. and Kimberly K. Calamos Scholar, College of Liberal Arts, Southern Illinois University, \$2,500.00 Fall 2012-Spring 2013.
21. Saluki Scholar Research Opportunity (SSRO) Grant, University Honors Program, The Ohio State University, \$3,600.00, Fall 2013.
22. Debater, Chosen to Represent the United States at the World Universities Debating Championship in Berlin, December 2012.

service

1. Program Advisor, Mentor, and Teaching Assistant, The Erdős Institute.
2. Computational Social Science Steering Committee Member, Translational Data Analytics Institute at The Ohio State University.
3. Ask a Practitioner Program Volunteer, American Political Science Association.
4. Careers Committee Member, American Political Science Association.
5. Reviewer for *Oxford University Press*, *International Studies Quarterly*, and *American Political Science Review*.
6. POLNET Planning Committee Member, Social Chair, Political Networks Conference 2017.

professional training

2021	Workshop Attendee Re:Invent Workshops.	Amazon Web Services
2021	Workshop Attendee High Tech Anthropology 2 Day Workshop.	Menlo Innovations
2018	Student Data Scientist with Python track completed.	DataCamp
2018	Workshop Attendee Green Dot Bystander Training	The Ohio State University Title IX Office
2015	Workshop Attendee New Teachers Training Workshop	University Center for the Advancement of Teaching (UCAT)
2015	Workshop Attendee Courses in Game Theory and Bayesian Statistics	ICPSR Summer Program

references

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Carter Philips and Sue Henry Professor
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