

Cassie McMillan

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Appointments **Northeastern University**

Assistant Professor of Sociology and Criminology & Criminal Justice, 2020 –
Core Faculty, NULab for Texts, Maps and Networks, 2020 –
Affiliated Faculty, Network Science Institute, 2020 –
Faculty Scholar, Institute for Health Equity and Social Justice Research, 2022 –

Education **Pennsylvania State University**

Ph.D., Sociology and Demography, 2020

- Geoffrey Tootell Outstanding Dissertation in Progress Award, Mathematical Sociology Section, American Sociological Association, 2019

Minor in Social Data Analytics
M.A., Sociology and Demography, 2016

University of North Carolina-Chapel Hill

B.S., Sociology and Mathematical Decision Sciences (Statistics), 2013

Publications **Journal Articles**

*graduate student co-author; †equal authorship

McMillan, Cassie. 2024. “Connecting the Dots: Using Social Network Analysis to Untangle the Factors Driving International Migration.” *International Migration*. [\[article\]](#)

Francisco, Sara, and **Cassie McMillan**. 2024. “An Evolution of Hashtags: A Comparative Analysis of Hashtag Usage following the Deaths of Michael Brown and George Floyd.” *Race and Justice*. [\[article\]](#)

McMillan, Cassie, Brandon Craig*, Chaïm La Roi, and René Veenstra. 2023. “Adolescent Friendship, Cross-Sexuality Ties, and Attitudes Toward Sexual Minorities: A Social Network Approach to Intergroup Contact.” *Social Science Research* 114:102916. [\[article\]](#)

McMillan, Cassie and Brittany N. Freelin. 2023. “School Transitions, Peer Processes, and Delinquency: A Social Network Approach to Turning Points in Adolescence.” *Journal of Research in Crime and Delinquency*. [\[article\]](#)

Freelin, Brittany N.*, **Cassie McMillan**, Diane Felmlee, and D. Wayne Osgood. 2023. “Changing Contexts: A Quasi-Experiment Examining Adolescent Delinquency and the Transition to High School.” *Criminology* 61(1):40-73. [\[article\]](#)

McMillan, Cassie. 2022. “Worth the Weight: Conceptualizing and Measuring Strong versus Weak Tie Homophily.” *Social Networks* 68:139-147. [\[article\]](#) [\[github\]](#)

McMillan, Cassie, Diane Felmlee, and James R. Ashford*. 2022. “Reciprocity, Transitivity, and Skew: Comparing Local Structure in 40 Positive and Negative Social Networks.” *PLOS ONE* 17(5):e0267886. [\[article\]](#)

McMillan, Cassie. 2022. “Strong and Weak Tie Homophily in Adolescent Friendship: An Analysis of Same-Race and Same-Gender Ties.” *Network Science* 10(3):283-300. [\[article\]](#)

Corradi, Andrea*, **Cassie McMillan,** and Nick Dietrich. 2022. “A Hostile Reputation: A Social Network Approach to Interstate Hostility.” *Social Networks* 71:61-69. [\[article\]](#) [\[github\]](#)

McMillan, Cassie. 2022. “Who Run the World? Gender and the Social Network of R&B/Hip Hop Collaboration from 2012-2020.” *Applied Network Science* 7(69). [\[article\]](#) [\[github\]](#)

- Featured in Northeastern University’s Snell Library [\[link\]](#)

McMillan, Cassie, Derek Kreager, and René Veenstra. 2022. “Keeping to the Code: How Local Norms of Friendship and Dating Inform Macro-Structures of Adolescents’ Romantic Networks.” *Social Networks* 70:126-137. [\[article\]](#)

McMillan, Cassie and David R. Schaefer. 2021. “Comparing Targeting Strategies for Network-Based Adolescent Drinking Interventions: A Simulation Approach.” *Social Science & Medicine* 282:114136. [\[article\]](#)

Felmlee, Diane, **Cassie McMillan,** and Roger Whitaker. 2021. “Dyads, Triads, and Tetrads: A Multivariate Simulation Approach to Uncovering Network Motifs in Social Graphs.” *Applied Network Science* 6(63). [\[article\]](#)

- Distributed Analytics and Information Sciences (DAIS) Award for Best Interdisciplinary Collaboration and Advanced Science, 2021

Faris, Robert, Diane Felmlee, and **Cassie McMillan.** 2020. “With Friends Like These: Aggression from Amity and Equivalence.” *American Journal of Sociology* 126(3):673-713. [\[article\]](#)

- Roger V. Gould Prize for Outstanding Article Published in *American Journal of Sociology*, 2022
- Featured in “Bullies aren’t all sociopaths” *Salon*

McMillan, Cassie and Diane Felmlee. 2020. “Beyond Dyads and Triads: A Comparison of Tetrad Motifs in 20 Social Networks.” *Social Psychology Quarterly* 83(4):383-404. [\[article\]](#)

McMillan, Cassie, Diane Felmlee, and Dave Braines. 2020. “Dynamic Patterns of Terrorist Networks: Security versus Efficiency in the Evolution of Eleven Islamic Extremist Attack Networks.” *Journal of Quantitative Criminology* 36:559-581. [\[article\]](#)

McMillan, Cassie. 2019. “Tied Together: Adolescent Friendship Networks, Immigrant Status, and Health Outcomes.” *Demography* 56(3):1075-1103. [\[article\]](#)

- Graduate Student Paper Award, Honorable Mention, Inequality, Poverty, and Mobility Section, American Sociological Association, 2019

McMillan, Cassie, Diane Felmlee, and D. Wayne Osgood. 2018. “Peer Influence, Friend Selection, and Gender: How Network Processes Shape Adolescent Smoking, Drinking, and Delinquency.” *Social Networks* 55:86-96. [\[article\]](#)

Felmlee, Diane, **Cassie McMillan,** Paulina Inara Rodis*, and D. Wayne Osgood. 2018. “Falling Behind: Lingering Costs of the High School Transition for Youth Friendships and Grades.” *Sociology of Education* 91(2):159-182. [\[article\]](#)

Conference Proceedings

Felmlee, Diane, Dave Braines, Roger Whitaker **Cassie McMillan,** Chris Julien*, and Cheryl Giammanco. 2021. “From Social Networks to Negative Ties: Refining Analysis for Conflict and Adversarial Interaction.” In *SPIE Defense + Commercial Sensing, 2021*. [\[link\]](#)

Felmlee, Diane, Emil C. Lupu, **Cassie McMillan,** Erisa Karafili, and Elisa Bertino. 2017. “Decision-Making in Policy Governed Human-Autonomous System Teams.” In *IEEE Smart World Congress 2017*. [\[link\]](#)

Book Chapters

McMillan, Cassie, Daniel Ragan, and Alana Colindres*. 2023. “Variations in Network Processes across Community and School District Contexts.” In *Teen Friendship Networks, Development, and Risky Behaviors*, edited by M. E. Feinberg and D. W. Osgood. Oxford University Press.

Sun, Xiaoran†, and **Cassie McMillan**†. 2018. “Interplay between Families and Technology: Future Investigations.” Pp. 177-187 in *Families and Technology*, edited by J. Van Hook, S. McHale, and V. King. Springer. [\[link\]](#)

Felmlee, Diane, **Cassie McMillan,** Paulina Inara Rodis*, and D. Wayne Osgood. 2018. “The Evolution of Youth Friendships from 6th through 12th Grade: School Transitions, Popularity, and Centrality.” Pp. 161-84 in *The Life Course and Social Networks*, edited by D. F. Alwin, D. H. Felmlee, and D. A. Kreager. Springer. [\[link\]](#)

Manuscripts *Under Review*

McMillan, Cassie. “New destinations, adolescent friendship, and substance use: How network revitalization informs the Latinx paradox.” *Revise & resubmit at American Sociological Review*.

Kretschmer, David*, Lars Leszczensky, and **Cassie McMillan.** “Strong Ties, Strong Homophily? Variations in Homophily on Sociodemographic Characteristics by Relationship Strength.” *Revise & resubmit at Social Forces*.

In Progress

McMillan, Cassie, Brittany N. Freelin, and Kaley A. Jones*. “The impact of school transitions on adolescent substance use: Variations by network position and friendship stability.”

McMillan, Cassie, Derek Kreager, and René Veenstra. “From Peers to Partners: Testing Hypotheses for the Network Origins of Adolescent Heterosexual Romance.”

Eric Piza, **Cassie McMillan**, and Daniel Trovato*. “Are Hot Spots Networked? Incorporating Social Network Analysis and Ballistic Evidence to Explore Geographic Networks of Gun Violence.”

McMillan, Cassie, Kaley A. Jones*, Wade C. Jacobsen, Nayan Ramirez, and Mark E. Feinberg. “Best Friends Forever? An Analysis of the Correlates of Friendship (In)stability from Adolescence to Young Adulthood.”

Awards

Excellence in Graduate Teaching Award, Department of Sociology & Anthropology, Northeastern University, 2023.

Roger V. Gould Prize, Outstanding Publication in *American Journal of Sociology*, 2022.

Award for Best Interdisciplinary Collaboration and Advanced Science, Distributed Analytics and Information Sciences (DAIS), 2021.

Outstanding Graduate Student Paper Award, Honorable Mention, Inequality, Poverty, and Mobility Section, American Sociological Association, 2019.

Outstanding Dissertation in Progress Award, Mathematical Sociology Section, American Sociological Association, 2019.

Sociology Graduate Student Paper Award, Published Paper Category, Pennsylvania State University, 2019.

Alan Booth Graduate Student Award, Pennsylvania State University, 2019.

Alan Booth Graduate Student Award, Honorable Mention, Pennsylvania State University, 2018.

Population Association of America (PAA) Poster Award, Annual Meeting of the PAA, Chicago, IL, 2017.

Sociology Graduate Student Paper Award, Honorable Mention, Working Paper Category, Pennsylvania State University, 2017.

Funding

External

National Institute on Drug Abuse (NIDA), 2023-2025, “The impact of longitudinal social networks on young adult substance use and misuse,” R21DA057450, Total Costs: \$445,110. Role: PI (with Co-Is Wade Jacobsen and Nayan Ramirez).

P.E.O. Scholar Award, 2019-2020, \$15,000, International Chapter of the P.E.O.

SECU People Helping People Scholarship, 2009-2013, \$10,000, State Employees Credit Union, North Carolina.

Internal

NULab Seed Grant Recipient, 2021, \$5,000, NULab for Texts, Maps and Networks, Northeastern University.

Sheila Burkett and Douglas T. Noakes Graduate Fellowship, 2018-2019, \$20,520, College of Liberal Arts, Pennsylvania State University.

NSF Big Data Social Science IGERT Traineeship, 2015-2018, \$85,000, Pennsylvania State University.

Herbert J. Bailey Endowed Graduate Fellowship, 2015-2017, \$5,000, Pennsylvania State University.

Presentations *Invited Talks and Workshops*

2023 “New destinations, adolescent friendship, and substance use: How network revitalization informs the immigrant paradox.” Mannheim Centre for European Social Research (MZES), University of Mannheim.

“New destinations, adolescent friendship, and substance use: How network revitalization informs the immigrant paradox.” Maryland Population Research Center Seminar, University of Maryland.

“School transitions, peer processes, and adolescent delinquency: A social network approach to turning points in adolescence.” Social Contexts of Adolescent Well-Being Symposium, University of Maryland.

2022 “Time Heterogeneity in Stochastic Actor-Oriented Models.” Social Networks & Health Workshop, Duke Network Analysis Center, Duke University.

2021 “Stochastic Actor-Oriented Model Advanced Techniques I: Asymmetric Peer Influence and Simulations” (with David Schaefer). Social Networks & Health Workshop, Duke Network Analysis Center, Duke University. [\[link to video\]](#)

2020 “Comparing Targeting Strategies for Network-Based Health Interventions: A Simulation Approach.” Department of Sociology, University of South Carolina.

2019 “Connecting the Dots: Using Social Network Analysis to Untangle the Factors Driving International Migration.” Population Research Institute Brown Bag, Pennsylvania State University.

“Variations in Peer Influence and Friend Selection: Implications for Network-Based Prevention Campaigns.” Edna Bennett Pierce Prevention Research Center, Pennsylvania State University.

Conference Presentations

2023 **McMillan, Cassie.** “New destinations, adolescent friendship, and substance use: How network revitalization informs the immigrant paradox in rural America.” Presented at the annual meetings of the ASA, Philadelphia, PA.

McMillan, Cassie. “New destinations, adolescent friendship, and delinquency: How network revitalization informs the immigrant paradox.” Presented at the annual meetings of the ASC, Philadelphia, PA.

- McMillan, Cassie.** “New Latinx destinations, adolescent friendship, and substance use: How network revitalization informs the immigrant paradox.” Presented at the INSNA Sunbelt Social Networks Conference, Portland, OR.
- 2022 **McMillan, Cassie,** Wade C. Jacobsen, Erin Tinney, and Nayan Ramirez. “Turning Points, Friendship (In)stability, and Substance Use from Adolescence to Young Adulthood.” Presented at the annual meeting of the American Society of Criminology, Atlanta, GA.
- McMillan, Cassie** and Brittany Freelin. “School transitions, peer processes, and adolescent delinquency: A social network approach to turning points in adolescence.” Paper presented at the annual meeting of the American Sociological Association, Los Angeles, CA.
- McMillan, Cassie,** Brandon Craig, Chaïm La Roi, and René Veenstra. “Adolescent friendship, cross-sexuality ties, and attitudes toward sexual minorities: A social network perspective of intergroup contact.” Paper presented at the INSNA Sunbelt Social Networks Conference, Cairns, Australia.
- McMillan, Cassie,** Brandon Craig, Chaïm La Roi, and René Veenstra. “Adolescent friendship, cross-sexuality ties, and attitudes toward sexual minorities: A social network perspective of intergroup contact.” Paper presented at the annual meeting of the ASA, Los Angeles, CA.
- 2021 **McMillan, Cassie,** Diane Felmlee, and James Ashford. “Local Structures in Positive and Negative Social Networks: A Comparison of 40 Graphs.” Paper presented at the annual meeting of the American Sociological Association, Chicago, IL (virtual).
- McMillan, Cassie.** “Strong and Weak Tie Homophily in Adolescent Friendship: An Analysis of Same-Race and Same-Gender Ties.” Roundtable at the annual meeting of the American Sociological Association, Chicago, IL (virtual).
- McMillan, Cassie,** Brittany Freelin, and Alana Colindres. “Moving on up: How social networks and school transitions shape adolescent delinquency.” Paper presented at the annual meeting of the American Society of Criminology, Chicago, IL.
- McMillan, Cassie,** Diane Felmlee, James Ashford, and Chris Julien. “A Comparison of Local Structure in Positive and Negative Social Networks.” Poster presented at the Networks conference Washington, DC (virtual).
- Freelin, Brittany N., **Cassie McMillan,** Diane Felmlee, and D. Wayne Osgood. “Changing Contexts: A Quasi-Experiment Adolescent Delinquency and the Transition to High School.” Paper presented at the annual meeting of the American Society of Criminology, Chicago, IL.
- 2020 Freelin, Brittany N., **Cassie McMillan,** Diane Felmlee, and D. Wayne Osgood. “Changing Contexts: A Quasi-Experiment Adolescent Delinquency and the Transition to High School.” Roundtable at the annual meeting of the American Sociological Association, San Francisco, CA (virtual).
- McMillan, Cassie.** “Connecting the Dots: A Social Network Perspective to International Migration.” Presented at INSNA Sunbelt Social Networks Conference, Paris, France (virtual).

- McMillan, Cassie**, Diane Felmlee, and James R. Ashford. "A Comparison of Local Structure in Positive and Negative Social Networks." Accepted for presentation at ASC (cancelled due to COVID-19).
- 2019 Osgood, D. Wayne and **Cassie McMillan**. "Influenced by How Many Friends? A Pervasive Methodological Artifact and How to Solve It." Presented at the annual meeting of the American Society of Criminology, San Francisco.
- McMillan, Cassie**. "Worth the Weight: Conceptualizing and Measuring Homophily in Weighted Social Networks." Paper presented at the annual meeting of the American Sociological Association, New York, NY.
- McMillan, Cassie** and Sarah Miller. "Connecting the Dots: A Social Network Perspective to International Migration." Roundtable at the annual meeting of the American Sociological Association, New York, NY.
- McMillan, Cassie**. "Worth the Weight: Conceptualizing and Measuring Homophily in Weighted Social Networks." Paper presented at the INSNA Sunbelt Social Networks Conference, Montreal, QC.
- McMillan, Cassie** and Diane Felmlee. "Beyond Dyads and Triads: A Comparison of Tetrad Motifs across 20 Social Networks." Paper presented at the INSNA Sunbelt Social Networks Conference, Montreal, QC.
- McMillan, Cassie**. "Connecting the Dots: Using Social Network Analysis to Untangle the Factors Driving International Migration." Paper presented at the annual meeting of the Population Association of America, Austin, TX.
- 2018 **McMillan, Cassie**, Diane Felmlee, and Dave Braines. "Tetrad Motifs: A Comparison of Local Structures in 20 Social Networks." Poster presented at the annual meeting of the Population Association of America, Austin, TX.
- Felmlee, Diane, **Cassie McMillan**, Don Towsley, and Roger Whitaker. "Social Network Motifs: A Comparison of Social Groups." Paper presented at the annual meeting of the American Sociological Association, Philadelphia, PA.
- Felmlee, Diane, **Cassie McMillan**, Don Towsley, and Roger Whitaker. "Common Subgraphs in Social Networks: A Comparison of Motifs." Paper presented at the INSNA Sunbelt Social Networks Conference, Utrecht, Netherlands.
- McMillan, Cassie** and David R. Schaefer. "Network-Based Prevention Campaigns: A Simulation Approach." Paper presented at the INSNA Sunbelt Social Networks Conference, Utrecht, Netherlands.
- 2017 **McMillan, Cassie**, Diane Felmlee, Roger Whitaker, and Dinesh Verma. "Dynamic Patterns of Terrorist Networks: A Comparison of Common Structures among Terrorist Group Ties." Paper presented at the annual meeting of the American Society of Criminology, Philadelphia, PA.
- Felmlee, Diane, **Cassie McMillan**, Paulina Inara Rodis, and D. Wayne Osgood. "School Transitions: Effects of Youth Friendship Networks and GPA from 6th to 12th Grade." Roundtable session at the annual meeting of the American Sociological Association, Montreal, QC.

Faris, Robert, Diane Felmlee, and **Cassie McMillan**. “With Friends Like These: Aggression from Equivalence and Amity.” Paper presented at the North American Social Networks Conference of the International Network for Social Network Analysis, Washington, DC.

Faris, Robert, Diane Felmlee, and **Cassie McMillan**. “With Friends Like These: Aggression, Friendship, and Structural Equivalence.” Paper presented at the annual meeting of the American Sociological Association, Montreal, QC.

Felmlee, Diane, **Cassie McMillan**, Paulina Inara Rodis, and D. Wayne Osgood. “Falling off Track: The Negative Impact of School Transitions on Youth Friendship Networks and GPA from Sixth through Twelfth Grade.” Poster presented at the annual meeting of the Population Association of America, Chicago, IL.

- Recipient of PAA Poster Award.

McMillan, Cassie. “Homophily on Immigrant Generation Status: How do Adolescent Friendships Relate to Immigrant Assimilation?” Paper presented at the annual meeting of the Population Association of America, Chicago, IL.

2016 **McMillan, Cassie**. “Gender Differences in Friend Selection and Peer Influence: Applying a Dynamic Network Approach to Study Adolescent Problem Behavior.” Paper presented at the INSNA Sunbelt Social Networks Conference, Newport Beach, CA.

McMillan, Cassie. “Gender Differences in Peer Influence and Friend Selection for Adolescent Delinquency, Drinking, and Smoking.” Roundtable session at the annual meeting of the American Sociological Association, Seattle, WA.

McMillan, Cassie, Clio Andris, James O’Dwyer, and Jeremy Van Cleve. “Geocomputational Methods for Modeling Dyadic Relationships in an Urban Context.” Paper presented at annual meeting of the American Association of Geographers, San Francisco, CA.

Teaching

Northeastern University

CRIM 5900: Youth Crime, Gangs, and Networks (Fall 2023, Fall 2022, Fall 2021)

INSH 1500: Digital Methods for Social Sciences and Humanities (Fall 2020)

INSH 5304: Social Network Analysis (Spring 2022, Spring 2021)

INSH 6304: Modeling and Analyzing Social Networks (Spring 2023, Spring 2024)

SOCL 1101: Introduction to Sociology (Fall 2022, Fall 2021, Spring 2021, Fall 2020)

Pennsylvania State University

SOC 580: Social Network Analysis, Lab Instructor (Fall 2019)

SOC 207: Research Methods in Sociology (Summer 2019)

SOC 001: Introduction to Sociology (Summer 2018)

Advising

PhD Advisees

Jamie Hanna, Sociology (In Progress - Field Statement Committee Chair)

Brandon Craig, SCCJ (In Progress - Dissertation Committee Member)

Yutong Si, Public Policy (In Progress - Dissertation Committee Member)

Kaley Jones, SCCJ (In Progress - Qualifying Exam Committee Member)

Alexi Quintana Mathé, Network Science (In Progress - Dissertation Committee Member)
Xena Itzkowitz, Sociology (In Progress - Field Statement Committee Member)
Chetna Kuanr, Sociology (In Progress - Field Statement Committee Member)
Heather Paterson, SCCJ (2023 - Publishable Paper Committee Member)
Heather Paterson, SCCJ (2023 - Qualifying Exam Committee Member)
Callie Hanson, SCCJ (2022 - Publishable Paper Committee Member)
Ben Piazza, Network Science (2022 - Qualifying Exam Committee Member)
Callie Hanson, SCCJ (2022 - Qualifying Exam Committee Member)
Kevin Ha, Sociology (2022 - 1st Field Statement Committee Member)
Matthew Simonson, Network Science (2021 - Dissertation Committee Member)

Undergraduate Advisees

Jenn Hong, Sociology (2022 - Honors Thesis Adviser)

Service

Departmental Service

Faculty Affairs Committee, Sociology and Anthropology Department, Northeastern University, 2022-present.

Graduate Committee, School of Criminology & Criminal Justice, Northeastern University, 2020-2023.

Merit Review Committee, Sociology and Anthropology Department, Northeastern University, 2022.

Undergraduate Committee, Sociology and Anthropology Department, Northeastern University, 2020-2022.

Faculty Search Committee, Student Representative, Department of Sociology and Criminology, Penn State University, 2018-2019.

Peer Mentor, Demography Graduate Program, Penn State University, 2018.

Graduate Recruitment Committee, Department of Sociology and Criminology, Penn State University, 2014-2019. *Committee Chair 2017-2018.*

Graduate Student Concerns Committee, Department of Sociology and Criminology, Penn State University, 2015-2020.

Social Committee, Department of Sociology and Criminology, Penn State University, 2014-2018. *Committee Co-Chair 2017-2018.*

Service to the Discipline

Chair of Geoffrey Tootell Outstanding Dissertation in Progress Award Committee, Mathematical Sociology Section, American Sociological Association, 2023.

Council Member, Mathematical Sociology Section, American Sociological Association, 2022-2025.

Committee on Nominations, Mathematical Sociology Section, American Sociological Association, 2019-2020.

Student Representative, Mathematical Sociology Section, American Sociological Association, 2018-2019.

Ad hoc reviewer for *American Journal of Sociology*, *American Sociological Review*, *Connections*, *Demography*, *Ethnic and Racial Studies*, *European Sociological Review*, *Journal of Gender Studies*, *Journal of Health and Social Behavior*, *Journal of Quantitative Criminology*, National Science Foundation, *PLOS ONE*, *Social Forces*, *Social Network Analysis and Mining*, *Social Networks*, *Social Problems*, *Social Psychology Quarterly*, *Social Science & Medicine*, *Social Science & Medicine: Population Health*, *Social Science Research*, *Sociological Focus*, *Sociology Compass*, *Socius*, and *Youth & Society*.