

# 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

Ph.D., Sociology and Demography, Pennsylvania State University, 2020.  
M.A., Sociology and Demography, Pennsylvania State University, 2016.  
B.S., Sociology and Statistics, University of North Carolina-Chapel Hill, 2013.

## Publications

\*co-author was a student during the research process; tequal authorship

### Journal Articles

- 2024 **McMillan, Cassie**. 2024. "Connecting the Dots: Using Social Network Analysis to Untangle the Factors Driving International Migration." *International Migration*. [article] [github]
- 2024 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]
- 2023 **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]
- 2023 **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]
- 2023 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]
- 2022 **McMillan, Cassie**. 2022. "Worth the Weight: Conceptualizing and Measuring Strong versus Weak Tie Homophily." *Social Networks* 68:139-147. [article] [github]

- 2022 **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]
- 2022 **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]
- 2022 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]
- 2022 **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]
- 2022 **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]
- 2021 **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]
- 2021 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
- 2020 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 *Salon's* "Bullies aren't all sociopaths" [link]
- 2020 **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]
- 2020 **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]
- 2019 **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
- 2018 **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]
- 2018 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

- 2021 Felmlee, Diane, Dave Braines, Roger Whitaker **Cassie McMillan**, Chris Julien\*, and Cheryl Gi-  
ammanco. 2021. "From Social Networks to Negative Ties: Refining Analysis for Conflict and  
Adversarial Interaction." In *SPIE Defense + Commercial Sensing, 2021*. [link]
- 2017 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

- 2023 **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.
- 2018 Sun, Xiaorant†, 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]
- 2018 Felmlee, Diane, **Cassie McMillan**, Paulina Inara Rodis\*, and D. Wayne Osgood. 2018. "The Evolu-  
tion of Youth Friendships from 6th through 12th Grade: School Transitions, Popularity, and Central-  
ity." 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 Migration  
Inspires Network Revitalization." *Revise & resubmit*.

Kretschmer, David\*, Lars Leszczensky, and **Cassie McMillan**. "Strong Ties, Strong Homophily?  
Variations in Homophily on Sociodemographic Characteristics by Relationship Strength." *Revise &  
resubmit*.

**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."

### In Progress

**McMillan, Cassie**, Derek Kreager, and René Veenstra. "From Peers to Partners: The Network Origins  
of Adolescent Heterosexual Romance."

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

Piza, Eric, **Cassie McMillan**, and Daniel Trovato\*. "Geographic Networks of Gun Violence: Incorporating  
Social Network Analysis and Ballistic Evidence to Explore Spatial Connections."

Jacobsen, Wade C., Guyu Sun\*, Erin Tinney\*, **Cassie McMillan**, and Nayan G. Ramirez. "Stuck  
in the Same Old Crowd? Adolescent Arrest, Institutional Participation, and Friendship Stability in  
Emerging 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.

## Grants and Fellowships

### *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.” 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.
- “New Destinations, Adolescent Friendship, and Substance Use: How Network Revitalization Informs the Immigrant Paradox.” Mannheim Centre for European Social Research (MZES), University of Mannheim.
- 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.” ASA, Philadelphia, PA.
- McMillan, Cassie.** “New Destinations, Adolescent Friendship, and Delinquency: How Network Revitalization Informs the Immigrant Paradox.” ASC, Philadelphia, PA.
- McMillan, Cassie.** “New Latinx Destinations, Adolescent Friendship, and Substance Use: How Network Revitalization Informs the Immigrant Paradox.” Sunbelt, 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.” ASC, Atlanta, GA.
- McMillan, Cassie** and Brittany Freelin. “School Transitions, Peer Processes, and Adolescent Delinquency: A Social Network Approach to Turning Points in Adolescence.” ASA, 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.” ASA, 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.” Sunbelt, Cairns, Australia.
- 2021 **McMillan, Cassie,** Diane Felmlee, and James Ashford. “Local Structures in Positive and Negative Social Networks: A Comparison of 40 Graphs.” ASA, Virtual.

- McMillan, Cassie.** "Strong and Weak Tie Homophily in Adolescent Friendship: An Analysis of Same-Race and Same-Gender Ties." ASA, Virtual.
- McMillan, Cassie,** Diane Felmlee, James Ashford, and Chris Julien. "A Comparison of Local Structure in Positive and Negative Social Networks." Sunbelt/NetSci, Virtual.
- McMillan, Cassie,** Brittany Freelin, and Alana Colindres. "Moving on up: How Social Networks and School Transitions Shape Adolescent Delinquency." ASC, Chicago, IL.
- Freelin, Brittany N., **Cassie McMillan,** Diane Felmlee, and D. Wayne Osgood. "Changing Contexts: A Quasi-Experiment Adolescent Delinquency and the Transition to High School." ASC, 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." ASA, Virtual.
- McMillan, Cassie.** "Connecting the Dots: A Social Network Perspective to International Migration." Sunbelt, Virtual.
- McMillan, Cassie,** Diane Felmlee, and James R. Ashford. "A Comparison of Local Structure in Positive and Negative Social Networks." 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." ASC, San Francisco, CA.
- McMillan, Cassie.** "Worth the Weight: Conceptualizing and Measuring Homophily in Weighted Social Networks." ASA, New York, NY.
- McMillan, Cassie** and Sarah Miller. "Connecting the Dots: A Social Network Perspective to International Migration." ASA, New York, NY.
- McMillan, Cassie.** "Worth the Weight: Conceptualizing and Measuring Homophily in Weighted Social Networks." Sunbelt, Montreal, QC.
- McMillan, Cassie** and Diane Felmlee. "Beyond Dyads and Triads: A Comparison of Tetrad Motifs across 20 Social Networks." Sunbelt, Montreal, QC.
- McMillan, Cassie.** "Connecting the Dots: Using Social Network Analysis to Untangle the Factors Driving International Migration." PAA, Austin, TX.
- McMillan, Cassie,** Diane Felmlee, and Dave Braines. "Tetrad Motifs: A Comparison of Local Structures in 20 Social Networks." PAA, Austin, TX.
- 2018 Felmlee, Diane, **Cassie McMillan,** Don Towsley, and Roger Whitaker. "Social Network Motifs: A Comparison of Social Groups." ASA, Philadelphia, PA.
- Felmlee, Diane, **Cassie McMillan,** Don Towsley, and Roger Whitaker. "Common Subgraphs in Social Networks: A Comparison of Motifs." Sunbelt, Utrecht, Netherlands.
- McMillan, Cassie** and David R. Schaefer. "Network-Based Prevention Campaigns: A Simulation Approach." Sunbelt, 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." ASC, 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." ASA, Montreal, QC.
- Faris, Robert, Diane Felmlee, and **Cassie McMillan.** "With Friends Like These: Aggression, Friendship, and Structural Equivalence." ASA, Montreal, QC.

Faris, Robert, Diane Felmlee, and **Cassie McMillan**. "With Friends Like These: Aggression from Equivalence and Amity." North American Social Networks Conference, Washington, DC.

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." PAA, Chicago, IL.

◆ Recipient of PAA Poster Award

**McMillan, Cassie**. "Homophily on Immigrant Generation Status: How do Adolescent Friendships Relate to Immigrant Assimilation?" PAA, Chicago, IL.

2016 **McMillan, Cassie**. "Gender Differences in Friend Selection and Peer Influence: Applying a Dynamic Network Approach to Study Adolescent Problem Behavior." Sunbelt, Newport Beach, CA.

**McMillan, Cassie**. "Gender Differences in Peer Influence and Friend Selection for Adolescent Delinquency, Drinking, and Smoking." ASA, Seattle, WA.

**McMillan, Cassie**, Clio Andris, James O'Dwyer, and Jeremy Van Cleve. "Geocomputational Methods for Modeling Dyadic Relationships in an Urban Context." AAG, 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 2024, Fall 2022, Fall 2021, Spring 2021, Fall 2020)

### *Pennsylvania State University*

SOC 001: Introduction to Sociology (Summer 2018)

SOC 207: Research Methods in Sociology (Summer 2019)

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

## Advising

### *PhD Advisees*

J.D. Foster, Sociology (In Progress - Dissertation Committee Member)

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

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

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

Guyu Sylvia Sun, Criminology, University of Maryland (In Progress - Master's Committee Member)

Alexi Quintana Mathé, Network Science (In Progress - Dissertation Committee Member)

Heather Paterson, SCCJ (In Progress - Publishable Paper Committee Member)

Xena Itzkowitz, Sociology (2024 - Field Statement Committee Member)

Chetna Kuanr, Sociology (2024 - Field Statement Committee Member)

Yutong Si, Public Policy (2024 - Dissertation 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 - 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 & Anthropology Department, Northeastern, 2022-present.  
Graduate Committee, School of Criminology & Criminal Justice, Northeastern, 2020-2023.  
Merit Review Committee, Sociology & Anthropology Department, Northeastern, 2022.  
Undergraduate Committee, Sociology & Anthropology Department, Northeastern, 2020-2022.  
Faculty Search Committee, Student Representative, Department of Sociology and Criminology, Penn State, 2018-2019.  
Graduate Recruitment Committee, Department of Sociology and Criminology, Penn State, 2014-2019.  
*Committee Chair 2017-2018.*  
Graduate Student Concerns Committee, Department of Sociology and Criminology, Penn State, 2015-2020.  
Social Committee, Department of Sociology and Criminology, Penn State, 2014-2018. *Committee Co-Chair 2017-2018.*

### *Service to the Discipline*

Chair of Geoffrey Tootell Outstanding Dissertation in Progress Award Committee, Mathematical Sociology Section, ASA, 2023.  
Council Member, Mathematical Sociology Section, ASA, 2022-2025.  
Member of Committee on Nominations, Mathematical Sociology Section, ASA, 2019-2020.  
Student Representative, Mathematical Sociology Section, ASA, 2018-2019.  
Ad hoc reviewer for *American Journal of Criminal Justice*, *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*.