

# THOMAS BRYAN SMITH

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R<sup>G</sup> [Research Gate](#)

G [Google Scholar](#)

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## Research Interests

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Machine learning, natural language processing, network science, criminal networks, social support, policing, science of science, computational social science, quantitative methods.

## Appointments

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2021 – Postdoctoral Associate, Bureau of Economic and Business Research (BEBR),  
University of Florida

## Education

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Ph.D UNIVERSITY OF FLORIDA (2015-2020)  
*Department of Sociology and Criminology & Law*

M.S. UNIVERSITY OF PENNSYLVANIA (2014-2015)  
*Department of Criminology*

B.A. UNIVERSITY OF BIRMINGHAM (2011-2014)  
*Department of Political Science and International Studies*

## Professional Experience

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2021 – 2022 Circular Health Fellow, One Health Center of Excellence, University of Florida

- 2018 – 2020 Graduate Research Assistant, Bureau of Economic and Business Research (BEBR), University of Florida
- 2014 – 2018 Graduate Teaching Assistant, Department of Sociology and Criminology & Law, University of Florida

## Dissertation

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“A Theory of Biosocial Support: An Integration of Social Support Theory and Behavioural Genetics”  
Committee: Chris L. Gibson, chair; Marvin Krohn, Abigail A. Fagan, and Gregory Webster.

## Publications

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### Peer Reviewed

- Smith, Thomas Bryan**, Raffaele Vacca, Luca Mantegazza, & Ilaria Capua (2021) Natural language processing and network analysis provide novel insights on policy and scientific discourse around Sustainable Development Goals. *Scientific Reports*, 11:22427. DOI: [10.1038/s41598-021-01801-6](https://doi.org/10.1038/s41598-021-01801-6).
- Smith, Thomas Bryan**, Till Krenz, Raffaele Vacca, & Christopher McCarty (2021). Great minds think alike, or do they often differ? Research topic overlap and the formation of scientific teams. *Journal of Informetrics*, 15(1): 101104. DOI: [10.1016/j.joi.2020.101104](https://doi.org/10.1016/j.joi.2020.101104).
- Smith, Thomas Bryan** (2021). Gang crackdowns and offender centrality in a countywide co-offending network: A networked evaluation of Operation Triple Beam. *Journal of Criminal Justice*, 73: 101755. DOI: [10.1016/j.jcrimjus.2020.101755](https://doi.org/10.1016/j.jcrimjus.2020.101755).
- Smith, Thomas Bryan** & Chris L. Gibson (2020). Marital Strain, Support, and Alcohol Use: Results from a Twin Design Statistically Controlling for Genetic Confounding. *Substance Use & Misuse*, 55(3): 429-440. DOI: [10.1080/10826084.2019.1683202](https://doi.org/10.1080/10826084.2019.1683202).
- Novak, Abigail, Brian B. Boutwell, & **Thomas Bryan Smith** (2023) Taking the problem of colliders seriously in the study of crime: A research note. *Journal of Experimental Criminology*. DOI: [10.1007/s11292-023-09565-x](https://doi.org/10.1007/s11292-023-09565-x)

### Revise & Resubmit

- Smith, Thomas Bryan**, Luca Mantegazza, Raffaele Vacca, & Ilaria Capua (2023) Identifying theoretical and conceptual bridges between the Sustainable Development Goals using a novel topic embedding model: a good health and well-being case study. *Globalization and Health*.
- Smith, Thomas Bryan**, Ruijie Mao, Stan Korotchenko, & Marv Krohn (2023) Partners in criminology: machine learning and network science reveal missed opportunities and inequalities in the study of crime. *Journal of Quantitative Criminology*.

### Under Review

- Ezenwa, Miriam O., **Thomas Bryan Smith**, Joyce Richie, Ukamaka Smith, Chanita Hughes-Halbart, Janice Krieger, Ken Redda, Mariana Stern, Renee Reams, Diana J. Wilkie, Folake Odedina, & John Carpten (2023) Social Network Analysis of the CPACHE-Funded CaRE<sup>2</sup> Center: Team Science in Full Display. *The American Journal of the Medical Sciences*.

### *Manuscripts in Preparation*

- Smith, Thomas Bryan**, Raffaele Vacca, & Yongseok Lee (2023) Emphasizing creativity? Evaluating the impact of translational research funding and services on scientific innovation in medical and public health research.
- Lee, Yongseok, **Thomas Bryan Smith**, & Raffaele Vacca (2023) Leveraging team science? Evaluating the impact of translational research funding and services on scientific collaboration.
- Himanshu, Yadav, **Thomas Bryan Smith**, & Christopher McCarty (2023) Engineering Innovation: applying topological data analysis to document and topic embeddings to identify persistent gaps in scientific knowledge. *Journal of Informetrics*.
- Novak, Abigail, **Thomas Bryan Smith**, Vitoria De Francisco Lopes, & Brian B. Boutwell (2023) On the growing divide between research on policing and the life-course.

### *Selected Other Publications*

- Smith, Thomas Bryan** & Raffaele Vacca (2018) “Creative solutions to elusive data: web-scraping online police reports to map co-offending networks in US cities”. Bureau of Economic and Business Research, University of Florida. Available at:  
<https://www.bebr.ufl.edu/networks/website-article/creative-solutions-elusive-data-web-scraping-online-police-reports-map-co>

### Grants

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#### *Awarded*

- 2019-2020. A Biosocially Informed Theory of Social Support (Co-PI).  
*Informatics Institute, University of Florida. \$10,452.*
- 2019-2020. The One Health Nexus: Mapping the evolution of scientific collaborations and research topics around UF One Health (Research Assistant; PI: Raffaele Vacca).  
*One Health Center of Excellence, University of Florida. \$20,201.*
- 2023-2024. Building a Natural Language Processing Framework for Evaluating the Coherence of Scientific Research and Judicial Decision Making (Co-PI).  
Data Science / Artificial Intelligence Seed Grant.  
*Institute for Data Science, University of Mississippi. \$30,000.*
- 2023-2024. Data Science / Artificial Intelligence Professional Development Grant.  
*Institute for Data Science, University of Mississippi. \$14,166.*

### Professional Presentations and Talks

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#### *Organized Panels*

- Smith, Thomas Bryan** (2023) “Team Science and Recombinant Innovation”. Full thematic symposium at *XLII Sunbelt Conference of the International Network for Social Network Analysis*. Portland, OR.  
*Upcoming.*

### *Conference Presentations*

- Smith, Thomas Bryan**, Mia A. Thomaidou, Brian B Boutwell, & Colleen Berryessa (2023) “Building a Natural Language Processing Framework for Evaluating the Coherence of Scientific Research and Judicial Decision Making”. Paper Presentation at *American Society of Criminology*. Philadelphia, PA.  
*Upcoming.*
- Smith, Thomas Bryan**, Raffaele Vacca, & Yongseok Lee (2023) “Emphasizing creativity? Evaluating the impact of translational research funding and services on scientific innovation in medical and public health research”. Paper Presentation at *XLII Sunbelt Conference of the International Network for Social Network Analysis*. Portland, OR.  
*Upcoming.*
- Lee, Yongseok, **Thomas Bryan Smith**, & Raffaele Vacca (2023) “Leveraging team science? Evaluating the impact of translational research funding and services on scientific collaboration”. Paper Presentation at *XLII Sunbelt Conference of the International Network for Social Network Analysis*. Portland, OR.  
*Upcoming.*
- Yadav, Himanshu, **Thomas Bryan Smith**, & Christopher McCarty (2023) “Engineering Innovation: applying topological data analysis to document and topic embeddings to identify persistent gaps in scientific literature”. Paper Presentation at *XLII Sunbelt Conference of the International Network for Social Network Analysis*. Portland, OR.  
*Upcoming.*
- Smith, Thomas Bryan** & Brian B Boutwell (2022) “The Growth of Knowledge in Criminology: Do Paradigms Shift or do Minds Change?”. Paper Presentation at *American Society of Criminology*. Atlanta, GA.
- Smith, Thomas Bryan**, Luca Mantegazza, Raffaele Vacca, & Ilaria Capua (2022) “Identifying theoretical and conceptual bridges between the Sustainable Development Goals using a novel topic embedding model: a good health and well-being case study”. Paper Presentation at *XLI Sunbelt Conference of the International Network for Social Network Analysis*. Cairns, Australia.
- McCarty, Christopher, **Thomas Bryan Smith**, & Till Krenz (2022) “Comparing strategies to incentivize cross-disciplinary collaboration: Arizona State University and the University of Florida”. Paper Presentation at *XLI Sunbelt Conference of the International Network for Social Network Analysis*. Cairns, Australia.
- Smith, Thomas Bryan**, Ruijie Mao, Stan Korotchenko, & Marv Krohn (2021) “Partners in criminology: leveraging machine learning and network science to study criminological topics and collaboration”. Paper Presentation at *American Society of Criminology*. Chicago, IL.
- Smith, Thomas Bryan** & Yanick Charette (2021) “Friends for a reason, or co-offenders for a season? Examining variation in and predictors of co-offending relationship duration”. Paper Presentation at *American Society of Criminology*. Chicago, IL.<sup>1</sup>
- Smith, Thomas Bryan** & Raffaele Vacca (2021) “Evaluating the impact of Clinical and Translational Science Awards on scientific collaboration, consensus, and innovation in

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<sup>1</sup> Panel cancelled by organizer due to COVID travel restrictions.

research on underserved and vulnerable populations”. Paper Presentation at *Networks 2021*. Virtual Delivery.

**Smith, Thomas Bryan**, Raffaele Vacca, & Ilaria Capua (2020) “Mapping interdependencies among the UN’s Sustainable Development Goals via semantic overlap in stated targets and current progress”. Paper Presentation at *XL Sunbelt Conference of the International Network for Social Network Analysis*. Paris, France. Virtual Delivery.

**Smith, Thomas Bryan** (2019) “Crackdowns and Co-offending: Examining the impact of “Operation Triple Beam” on county-wide co-offending network structure and centrality”. Paper Presentation at *American Society of Criminology*. San Francisco, CA.

**Smith, Thomas Bryan**, Till Krenz, Raffaele Vacca, & Christopher McCarty (2019) “Assembling the A(cademic) Team: analysing semantic similarity between researchers to map research topic networks”. Paper Presentation at *XXXIX Sunbelt Conference of the International Network for Social Network Analysis*. Montreal, Canada.

McCarty, Christopher, Giuseppe Labianca, Raffaele Vacca, **Thomas Bryan Smith** (2019) “Cross-University Network intervention using a Targeted Topic Model”. Paper Presentation at *XXXIX Sunbelt Conference of the International Network for Social Network Analysis*. Montreal, Canada.

**Smith, Thomas Bryan** & Lindsay Leban (2018) “Motivated Offenders or Unconventional Guardians? Using a decade of web scraped incident data to examine the association between co-offending network centrality and victimization”. Paper Presentation at *American Society of Criminology*. Atlanta, GA

**Smith, Thomas Bryan** & Daniel Acton (2017) “Network Centrality of Hot Spots: Generating Arrest Location Networks with the Police 2 Citizen Bulletin Data”. Paper Presentation at *American Society of Criminology*. Philadelphia, PA.

**Smith, Thomas Bryan** (2016) “Siblings, Sweethearts and Scotch: Controlling for Heritability in the Association between Marital Quality and Alcohol Problems”. Paper Presentation at *American Society of Criminology*. New Orleans, LA.

#### *Other Presentations*

Vacca, Raffaele, Kevin Tang, Till Krenz, & **Thomas Bryan Smith** (2020) COVID SEED Awardees Series: accelerator of science – Evidence from convergence in collaboration and language. University of Florida, FL.

Tang, Kevin, Raffaele Vacca, Till Krenz, & **Thomas Bryan Smith** (2020) College of Liberal Arts and Sciences AI Workshop: Natural Language Processing. University of Florida, FL.

## Teaching

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### *University Courses*

Research Methods in Criminology (CCJ 3701)

*Department of Sociology and Criminology & Law, University of Florida.*

*Instructor of Record (Spring 2017)*

*Lab Instructor/Teaching Assistant (Fall 2016; Fall 2017; Spring 2018)*

### *Guest Lectures*

Systems Thinking in One Health (PHC 6446)

*Department of Environmental & Global Health, University of Florida.*

*Topic: Emerging Interfaces – Discourse Analysis in SDGs policy and research.*

Data Science and Data Management (CJ 659)

*Department of Criminal Justice and Legal Studies, University of Mississippi.*

*Topic: Data management and processing in computational social science.*

### *Summer Schools and Short Courses*

Theory, Methods and Applications of Personal Networks (July 2019)

*Summer School at the Department of Social and Cultural Anthropology, Autonomous University of Barcelona, Spain.*

Introduction to R for the Social Sciences (Fall 2017; Fall 2018; Fall 2019)

*Department of Sociology and Criminology & Law and Informatics Institute, University of Florida*

### *Conference Workshops*

Workshop Session H: R Statistical Software (Fall 2016)

*The Florida Society of the Social Sciences 11<sup>th</sup> Annual Conference, University of Florida*

### **Professional Service**

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#### *Journal*

Ad hoc article reviewer for *Journal of Quantitative Criminology*, *Journal of Informetrics*, *Justice Quarterly*, *Scientific Reports*; *Journal of Criminal Justice*; *Scientometrics*; *Advances in Life Course Research*; *Connections (INSNA)*; *Asian Journal of Criminology*.

#### *Conference*

2020. Reviewer for the Science of Science organized session of the XL Sunbelt Conference of the International Network for Social Network Analysis.

*Paris, France.*

2018. Reviewer for the 2018 IEEE ACM International Conference on Advances in Social Networks and Mining (ASONAM).

*Barcelona, Spain.*

#### *National*

2023. Technical Evaluation Panel (TEP) Reviewer for the *National Institutes of Health* and *National Institute on Aging* solicitation ‘AI/ML Tool for Visualizing Behavioral and Social Science Research’.

#### *Institutional*

2017-2022. Teaching member of the UF R Social Sciences Interest Group (RSSIG).

*University of Florida.*

2017-2018. Treasurer, Criminology, Law and Society Syndicate (Graduate Student Organization)

*Department of Sociology and Criminology & Law*

2016-2017. President, Criminology, Law and Society Syndicate (Graduate Student Organization)

*Department of Sociology and Criminology & Law*

## Honors and Awards

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2020. Ronald L. Akers Graduate Student Paper Award  
*Department of Sociology and Criminology & Law, University of Florida.*
- 2018, 2019. Most Innovative Data Analysis.  
*Criminology, Law and Society Syndicate, University of Florida.*
- 2018, 2019. Most Innovative Data Collection.  
*Criminology, Law and Society Syndicate, University of Florida.*
- 2017, 2018. Outstanding Colleague.  
*Criminology, Law and Society Syndicate, University of Florida.*
2017. Outstanding Service.  
*Criminology, Law and Society Syndicate, University of Florida.*
2017. Gorman Award for Excellence in Quantitative Research  
*Department of Sociology and Criminology & Law, University of Florida.*
- 2015-2018. Graduate School Fellowship.  
*Department of Sociology and Criminology & Law, University of Florida.*

## Recent Media Exposure

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- Baker, Simon (2021) Slim overlap in research interests ‘sweet spot’ for collaboration. *Times Higher Education*. Available at: <https://www.timeshighereducation.com/news/slim-overlap-research-interests-sweet-spot-collaboration>
- Clancy, Matt (2021). Adjacent knowledge is useful. *New Things Under the Sun*. Available at: <https://www.newthingsunderthesun.com/pub/w2dpii85>

## Professional Affiliations

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- International Network for Social Network Analysis (INSNA)  
American Society of Criminology (ASC)