

University of California, Davis  
Departments of Computer Science and Communication

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Education	<b>Indiana University</b> Ph.D. Complex Systems (Informatics), 2024 Ph.D. Sociology, 2024 M.A. Sociology, 2020  <b>Reed College</b> B.A. Biology, 2016
Research Interests	social AI systems cultural sociology & cultural evolution complex networks & systems text mining & natural language processing organizational topology & decision-making AI in organizations & techno-bureaucracy
Dissertation	“Text, culture, time: Bringing complex systems to bear on cultural sociology through computational mixed methods”
Affiliations	<b>University of California, Davis</b> Post-doctoral Scholar, 2024–present Departments of Computer Science & Communication  <b>Mimbres School</b> Center for Humanistic Exploration of Complex Problems Teaching Fellow, 2021–2023, Mimbres Valley, NM  <b>Bloomington Cooperative Living</b> 70 member affordable housing collective Board President, 2019–2022, Bloomington, IN Board Member, 2017–2019
Publications <sup>1</sup>	<b>Dunivin, Z.O.</b> , Smaldino, P.E. 2025. “Correspondence: User control of search algorithms would improve science.” <i>Nature Human Behaviour</i> . <i>IF: 15.9; WoS: Q1 (98%, Psychology – Experimental)</i>  <b>Dunivin, Z.O.</b> 2025. “Scaling hermeneutics: A guide to qualitative coding with LLMs for reflexive content analysis.” <i>EPJ Data Science</i> . <i>IF: 3.0; WoS: Q1 (87%, Social Sciences – Mathematical Methods)</i>  <b>Dunivin, Z.O.</b> , Lanigan, A. 2025. “White genocide, ethnocrisis, and far-right identity politics: Constructing white nationalist identity through Twitter discourse.” <i>Oxford Intersections: Social Media in Society and Culture</i> .

<sup>1</sup>I publish across a variety of fields and it is unlikely that any single reader will be familiar with most of the publication venues. Despite their limitations, I have provided 2023 Journal Impact Factor (IF) and Web of Science (WoS) category ranking to contextualize journal standing across diverse disciplines.

- Publications**  
(continued)
- Berndt, C., Mempel, F., Werner, M., Shattuck, A., **Dunivin, Z.O.** 2025. “The generics revolution and the new economic geography of the global pesticide industry.” *Journal of Agrarian Change*.  
*IF: 2.4; WoS: Q2 (72%, Economics)*
- Dunivin, Z.O.**, Smaldino, P.E. 2024. “Dynamics of covert signaling: Modeling the emergence and extinction of identity signals.” *Psychological Review*.  
*IF: 5.8; WoS: Q1 (91%, Psychology – Multidisciplinary)*
- Dunivin, Z.O.**, Kaminski, P. 2024. “Path dependence, stigmergy, and memetic reification in the formation of the 27 Club myth.” *PNAS*.  
*IF: 9.4; WoS: Q1 (90%, Multidisciplinary Science)*
- Shattuck, A., Werner, M., Mempel, F., **Dunivin, Z.**, Galt, R. 2023. “Global Pesticide Use and Trade Database (GloPUT): Estimates for 147 countries show pesticide use trends in low-income countries substantially underestimated.” *Global Environmental Change*.  
*IF: 8.6; WoS: Q1 (99%, Geography)*
- Dunivin, Z.O.**, Yan, H.Y., Ince, J., Rojas, F. 2022. “Black Lives Matter protests shift public discourse.” *PNAS*.  
*IF: 9.4; WoS: Q1 (90%, Multidisciplinary Science)*
- van der Does, T., Galesic, M., **Dunivin, Z.O.**, Smaldino, P.E. 2022. “Strategic identity signaling in heterogeneous networks.” *PNAS*.  
*IF: 9.4; WoS: Q1 (90%, Multidisciplinary Science)*
- Dunivin, Z.**, Zadunayski, L., Baskota, U., Siek, K., Mankoff, J. 2020. “Gender, soft skills, and patient experience in online physician reviews: A large-scale text analysis.” *Journal of Medical Internet Research*.  
*IF: 5.8; WoS: Q1 (89%, Medical Informatics)*
- Publications in Progress**
- Dunivin, Z.O.**, Chronis, G. “Moving from bias reduction to bias negotiation: Leveraging sociocultural representations in LLMs for transformative social AI.” *In progress*.
- Erhard, L., Kaminski, P., **Dunivin, Z.O.**, ... Heiberger, R.H. “Are LLMs up to complex annotation tasks? The limits of generative AI for detecting references to social groups in multilingual texts.” *In progress*.
- Dunivin, Z.O.**, Boustani, K. “How to interview a robot: Qualitative methods for drawing the cognitive stuff out of LLMs.” *In progress*.
- Dunivin, Z.O.**, Sen, A., Bushouse, B., Atkisson, C. “High-information managers are more likely to rely on informal criteria in decision-making.” *In progress*.
- Dunivin, Z.O.**, Ince, J. “When do the politics of representation count? An industrial-scale analysis of Black film in the Black Lives Matter era.” *In progress*.
- Dunivin, Z.O.**, Ince, J., Rojas, F. “Vanguard cities: Protest diffusion and contagious mobilization in the Black Lives Matter Movement.” *Under review*.
- Dunivin, Z.O.**, Hicks, K., Ansdell, P. “Olympic sprinting data suggest detrimental effects of menstrual cycle on performance consistency.” *In progress*.

Awards and Fellowships	<b>Luddy Graduate Researcher of the Year</b> 2022, Informatics Department, Indiana University
	<b>Robinson Social Action Award</b> 2021, Sociology Department, Indiana University
	<b>Luddy Outstanding Teaching Award</b> 2021, Informatics Department, Indiana University
	<b>Reassessing Threat Assessment Graduate Fellowship</b> 2018, Tobin Project
	<b>Research Trainee Fellowship in Complex Systems and a Second Discipline</b> 2017–2019, NSF
	<b>Helen Stafford Post-Baccalaureate Research Fellowship</b> 2016, Reed College
Conference Presentations	<b>Earth Commons</b> 2024, Berkeley, CA “The current state of organizing collective ownership of a commons”
	<b>Rethinking Kinship</b> 2023, California College of the Arts, San Francisco, CA <i>Invited speaker</i>
	<b>Indiana Rural Development Conference</b> 2022, French Lick, IN “Housing cooperatives as a remedy to urban decay in towns and cities.”
	<b>American Sociological Association Annual Meeting</b> 2020, Online Refereed Roundtable on Methods and Culture “A semi-automated method for extracting group-specific lexicons from unlabeled text corpora.”
	<b>Santa Fe Institute Graduate Workshop on Computational Social Science 25<sup>th</sup> Anniversary Conference</b> 2019, Santa Fe, NM “Legal code is a complex system.”
	<b>Conference on Complex Systems</b> 2015, Tempe, AZ Evolution of Technology Satellite Session “Trait evolution in multi-parental technology innovation networks.”
	<b>Graduate Workshop in Computational Social Science and Complexity Methods and Analysis</b> 2018, Santa Fe Institute
Competitive Workshops	<b>Reassessing Threat Assessment</b> 2018, Tobin Project

## Teaching

### **Mimbres School**

Instructor, Introduction to Cybernetics, 2023

### **Santa Fe Institute**

Teaching Assistant, Humanities Analytics, 2021–22

### **Indiana University**

Teaching Assistant, Complex Systems Seminar I, 2023

Teaching Assistant, Data Fluency, 2021–22

Teaching Assistant, Introduction to Virtual Reality, 2021

### **Indiana University**

Co-instructor, Science as Process (Introduction to Informatics I), 2020–21

Teaching Assistant, Artificial Life in Virtual Reality, 2020

Co-instructor, Information Infrastructure II, 2019

### **Reed College**

Teaching Assistant, Computer Science Fundamentals II, 2016

Teaching Assistant, Genes, Genetics & Genomes, 2016

Teaching Assistant, Computational Biology, 2015

Teaching Assistant, Computer Science Fundamentals I, 2015

## Service

### **Collective Futures Land Project**

2023–2024, San Francisco, CA

Founding member of an affordable housing non-profit specializing in prison recovery. Transitioning from rentership to ownership.

### **DeepMay Tech Autonomy Boot Camp**

2022, Paoli, IN

Indiana University co-sponsor for 10-day living-working camp for adults to learn information-tech skills toward serving community autonomy projects.

### **Prison Recovery Mentorship**

2020–2022, Bloomington, IN

Provided support to two men recently released from prison. Support included housing, food, social services applications, transportation, crisis counseling, computer skills, and resocializing attitudes toward women.

### **Bloomington Cooperative Living**

*70 member low-income housing collective*

2017–2019, Bloomington, IN

Board Member

2019–2022, Bloomington, IN

Board President

2017–2020, Bloomington, IN

Membership Coordinator

### **Graduate Informatics Student Association**

2018, Indiana University

Institutional Voice Chair

Service (continued)	<b>Butter Bog Housing Collective</b> 2015–2017, Portland, OR Founding Member
	<b>Computing Policy Committee</b> 2013–2014, Reed College
Service Accomplish- ments	<b>Cooperative House Financing</b> 2020, Bloomington, IN Led a team of 3 volunteers to secure a \$950,000 financing package for a new 18-bedroom cooperative house. Completed in 2022.
	<b>Co-op Zoning Laws</b> 2019, Bloomington, IN Worked with City Council and Planning to expand the definition of Single-Family Housing to include cooperatively owned houses.
Expert Witness Testimony	<b>Statistical Analyst</b> <i>Racial Bias in Policing</i> Jan. 2021, Monroe County Circuit Court, IN
	<b>Expert “Twitness”</b> <i>Twitter, Information Ethics, Internet Surveillance</i> Oct. 2018, Monroe County Circuit Court, IN
Reviewer For	Social Problems; Journal of Mathematical Sociology; Global Networks; Mobilization; PNAS Nexus; Personality and Social Psychology Bulletin; Communications Psychology; Perspectives on Psychological Science (2); Qualitative Health Research; Journal of the American Medical Informatics Association