Zackary Okun Dunivin

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Education	**Indiana University** Ph.D. Complex Systems (Informatics), 2024 Ph.D. Sociology, 2024 M.A. Sociology, 2020 **Reed College** 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	**University of California, Davis** Post-doctoral Scholar, 2024–present Departments of Computer Science & Communication **Mimbres School** Center for Humanistic Exploration of Complex Problems Teaching Fellow, 2021–2023, Mimbres Valley, NM **Bloomington Cooperative Living** 70 member affordable housing collective Board President, 2019–2022, Bloomington, IN Board Member, 2017–2019

Publications

Dunivin, Z.O., Smaldino, P.E. 2025. "Correspondence: User control of search algorithms would improve science." Nature Human Behaviour.

Dunivin, Z.O. 2025. "Scaling hermeneutics: A guide to qualitative coding with LLMs for reflexive content analysis." EPJ Data Science.

Dunivin, Z.O., Lanigan, A. 2025. "White genocide, ethnocrisis, and far-right identity politics: Constructing white nationalist identity through Twitter discourse." Oxford Intersections: Social Media in Society and Culture.

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.

Dunivin, Z.O., Smaldino, P.E. 2024. "Dynamics of covert signaling: Modeling the emergence and extinction of identity signals." Psychological Review.

Publications
(continued)

Dunivin, Z.O., Kaminski, P. 2024. "Path dependence, stigmergy, and memetic reification in the formation of the 27 Club myth." PNAS.

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.

Dunivin, Z.O., Yan, H.Y., Ince, J., Rojas, F. 2022. "Black Lives Matter protests shift public discourse." PNAS.

van der Does, T., Galesic, M., **Dunivin, Z.O.**, Smaldino, P.E. 2022. "Strategic identity signaling in heterogeneous networks." PNAS.

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.

**Publications
in Progress**

Dunivin, Z.O., Ince, J., Rojas, F. "Vanguard cities: Protest diffusion and contagious mobilization in the Black Lives Matter Movement." *R&R at American Sociological Review.*

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.*

**Awards and
Fellowships**

Luddy Graduate Researcher of the Year
2022, Informatics Department, Indiana University

Robinson Social Action Award
2021, Sociology Department, Indiana University

Luddy Outstanding Teaching Award
2021, Informatics Department, Indiana University

Reassessing Threat Assessment Graduate Fellowship
2018, Tobin Project

**Research Trainee Fellowship in Complex Systems
and a Second Discipline**
2017–2019, NSF

Helen Stafford Post-Baccalaureate Research Fellowship
2016, Reed College

Conference Presentations	**Earth Commons** 2024, Berkeley, CA "The current state of organizing collective ownership of a commons"
	Rethinking Kinship 2023, California College of the Arts, San Francisco, CA *Invited speaker*
	Indiana Rural Development Conference 2022, French Lick, IN "Housing cooperatives as a remedy to urban decay in towns and cities."
	American Sociological Association Annual Meeting 2020, Online Refereed Roundtable on Methods and Culture "A semi-automated method for extracting group-specific lexicons from unlabeled text corpora."
	Santa Fe Institute Graduate Workshop on Computational Social Science 25th Anniversary Conference 2019, Santa Fe, NM "Legal code is a complex system."
	Conference on Complex Systems 2015, Tempe, AZ Evolution of Technology Satellite Session "Trait evolution in multi-parental technology innovation networks."
Competitive Workshops	**Graduate Workshop in Computational Social Science and Complexity Methods and Analysis** 2018, Santa Fe Institute
	Reassessing Threat Assessment 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 Co-instructor, Science as Process (Introduction to Informatics I), 2020–21 Co-instructor, Information Infrastructure II, 2019
	Reed College Teaching Assistant, Computer Science Fundamentals II, 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 **Butter Bog Housing Collective** 2015–2017, Portland, OR Founding Member
Service Accomplishments	**Cooperative House Financing** 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. **Co-op Zoning Laws** 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	**Statistical Analyst** *Racial Bias in Policing* Jan. 2021, Monroe County Circuit Court, IN **Expert "Twitness"** *Twitter, Information Ethics, Internet Surveillance* Oct. 2018, Monroe County Circuit Court, IN

Reviewer For	**Psychology** — Perspectives on Psychological Science (2); Personality and Social Psychology Bulletin; Communications Psychology
	Sociology — Social Problems; Journal of Mathematical Sociology; Mobilization
	Health — Qualitative Health Research; Journal of the American Medical Informatics Association
	Other Social Science — PNAS Nexus; Global Networks; Regulation and Governance
Press Coverage	**The 27 Club myth isn't true, but it is real** Scientific American, ABC Radio[*], LA Times[*†], The Telegraph[†], The Times[†], El Pais[†], Der Standard[†], Público[†], Daily Mail, Daily Star, National Geographic (Hungary), Superinteressante
	Black Lives Matter protests shift public discourse Reddit (front page), NYT, Washington Post, Forbes, Counter Punch, Truthout, LSE USAPP, KNKX (NPR)
	Bloomington Cooperative Living Indiana Public Media, City of Bloomington, Limestone Post

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[*]Preferred coverage.
[†]Primary coverage by newspaper of record.