

# RYAN P. THOMBS

Curriculum Vitae (Updated April 22, 2026)



## EMPLOYMENT

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Assistant Professor, Department of Agricultural Economics, Sociology, and Education, Penn State University 2024-Present

Research Scientist, Department of Earth & Environment, Boston University 2024

## AFFILIATIONS

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Faculty Affiliate, Transdisciplinary Research on Environment & Society (TREES) Program, Penn State University 2025-Present

Co-Fund, Social Science Research Institute, Penn State University 2024-Present

Faculty Associate, Population Research Institute, Penn State University 2024-Present

Institute of Energy & the Environment, Penn State University 2024-Present

## EDUCATION

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Boston College, PhD 2023

- Concentrations: Environmental Sociology and Quantitative Methods
- Dissertation: "Resource Dependency and Sustainability in the United States"
- Committee: Andrew Jorgenson (Chair), Juliet Schor, and Sarah Babb

The George Washington University, MPP 2017

- Concentrations: Urban and Environmental Political Economy

Otterbein University, BA 2015

- Economics and Political Science (with Distinction)

## RESEARCH AND TEACHING INTERESTS

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Climate Change, Political Economy, Environmental Health, Social Dimensions of Energy, Quantitative Methods

## JOURNAL ARTICLES (Underlined coauthors were students at the time of publication)

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[33] Price, Paige, Paige Kelly, and **Ryan P. Thombs**. "Visualizing the Spatial Distribution of Aging Places in the United States, 2000–2020." Forthcoming at *Socius*.

[32] Jorgenson, Andrew, Taekyeong Goh, Nicolas Viens, and **Ryan P. Thombs**. 2026. "Reducing Inequality is Not Antithetical to Solving the Climate Crisis: An Analysis of Disposable Income Shares and Carbon Emissions for Canada's Provinces." *Environmental Impact Assessment Review* 120.

[31] **Thombs, Ryan P.**, Benjamin K. Sovacool, Andrew K. Jorgenson, Mary D. Willis, Buonocore, Jonathan J. 2026. "A Not-So-Just Transition? Examining the Effects of Coal Sector Decline on Life Expectancy in U.S. Counties." *Rural Sociology* 91(1).

[30] **Thombs, Ryan P.** and Andrew Jorgenson. 2026. "Does Stringent Climate Policy Decouple Economic Growth from Greenhouse Gas Emissions?" *Social Forces*.

[29] **Thombs, Ryan P.** and Mary D. Willis. 2025. "Impact of Oil and Gas Boom and Busts on Working Age Mortality in the U.S." *Environmental Epidemiology* 9(6).

[28] **Thombs, Ryan P.** 2025. "Does International Trade Drive CO<sub>2</sub> Emissions at the U.S. State-Level?" *Social Problems*.

[27] Willis, Mary, Nina Cesare, Max Harleman, Flannery Black-Ingersoll, Jaimie Gradus, **Ryan Thombs**, Jonathan Buonocore, Joan Casey, Danielle Braun, Francesca Dominici, Amruta Nori-Sarma. 2025. "Impact of Boom-and-Bust Economies from Oil and Gas Development on Psychiatric Hospitalizations among Medicaid Beneficiaries." *Environmental Research: Health* 3(3).

[26] **Thombs, Ryan P.**, Andrew K. Jorgenson, and Brett Clark. 2025. "Reducing U.S. Military Spending Could Lead to Substantial Decreases in Energy Consumption." *PLOS Climate* 4(7).

- Received coverage in [BBC Science Focus](#), [Grist](#), [Newsweek](#), and [Phys.org](#)
- PLOS Climate Editors' Pick of 2025

[25] Jorgenson, Andrew, Brett Clark, **Ryan P. Thombs**, Jeffrey Kentor, [Taekyeong Goh](#), and [Vincentas Giedraitis](#). 2025. "Militarizing the Climate Crisis: An Analysis of the Short-Run and Long-Run Effects of Militarization on Nations' Carbon Emissions, 1990-2020." *Social Problems*.

[24] **Thombs, Ryan P.**, [Weimin Zhang](#), Benjamin K. Sovacool. 2025. "Do Industrial Decarbonization Policies Deliver? A Global Assessment of Policy Effectiveness Across 150 Nations, 1990-2020." *Environmental Research Letters* 20(4).

- Received the Roy C. Buck Faculty Award for the Best Refereed Article in the Social Sciences, Penn State, College of Agricultural Sciences.

[23] **Thombs, Ryan P.** 2025. "Does Renewable Energy Production Displace Fossil Fuel Production in the U.S.? A Panel Data Study of Fossil Fuel Producing U.S. States, 1997-2020." *Journal of Environmental Studies and Sciences*.

- Received coverage in [Penn State News](#) and on [Yale Climate Connections](#).

[22] Jorgenson, Andrew, [Taekyeong Goh](#), **Thombs, Ryan P.**, [Yasmin Koop-Monteiro](#), [Mark Shakespear](#), [Grace Gletsu](#), and [Nicolas Viens](#). 2025. "Income Inequality is Driving the Climate Crisis: A longitudinal Analysis of Province-Level Carbon Emissions in Canada, 1997-2020." *Energy Research & Social Science* 119.

[21] Jorgenson, Andrew, [Taekyeong Goh](#), **Ryan P. Thombs**, [Yasmin Koop-Monteiro](#), [Mark Shakespear](#), [Nicolas Viens](#), and [Grace Gletsu](#). 2024. "Economic Growth and Income Inequality Increase the Carbon Intensity of Human Well-Being for Canada's Provinces." *npj Climate Action* 3(58).

[20] Jorgenson, Andrew K., Brett Clark, **Ryan P. Thombs**, Jeffrey Kentor, Jennifer E. Givens, Xiaorui Huang, [Hassan El Tinay](#), Daniel Auerbach, and Matthew C. Mahutga. 2023. "Guns versus Climate: How Militarization Amplifies the Effect of Economic Growth on Carbon Emissions." *American Sociological Review* 88(3): 418-453.

- 2025 Honorable Mention for the ASA Environmental Sociology Outstanding Publication Award.
- 2024 Honorable Mention in the ASA Political Economy of the World System Paper Award Competition.
- Focus of *Contexts* 22(4):8 "Up Front In Brief" titled "The War on Climate."
- Featured on the [American Sociological Review](#) podcast.

[19] **Thombs, Ryan P.** 2022. "The Asymmetric Effects of Fossil Fuel Dependency on the Carbon Intensity of Well-Being: A U.S. State-Level Analysis, 1999-2017." *Global Environmental Change* 77: 1-11.

[18] **Thombs, Ryan P.** 2022. "A Guide to Analyzing Large  $N$ , Large  $T$  Panel Data." *Socius* 8: 1-15.

[17] **Thombs, Ryan P.**, [Xiaorui Huang](#), and Jared Berry Fitzgerald. 2022. "What Goes Up Might Not Come Down: Modeling Directional Asymmetry with Large  $N$ , Large  $T$  Data." *Sociological Methodology* 52(1): 1-29.

[16] Kelly, Orla, **Ryan P. Thombs**, and Andrew K. Jorgenson. 2021. "The Unsustainable State: GHG Emissions, Inequality, and Human Well-Being in the United States, 1913 - 2017." *Socius* 7: 1-14.

[15] **Thombs, Ryan P.**, Dennis L. Thombs, and Colleen A. Mahoney. 2021. "Trade and Health: A Cross-National Study of Global Economic Integration, Smoking Prevalence, and Gender, 2000 - 2015." *Sociology of Development* 7(1): 98-116.

- [14] **Thombs, Ryan P.**, [Xiaorui Huang](#), and Andrew K. Jorgenson. 2021. "It's About Time: How Recent Advances in Time Series Analysis Techniques Can Enhance Energy and Climate Research." *Energy Research & Social Science* 72: 101882.
- [13] Jorgenson, Andrew, **Ryan P. Thombs**, Brett Clark, Jennifer Givens, Terrence Hill, [Xiaorui Huang](#), [Orla Kelly](#), and [Jared Fitzgerald](#). 2021. "Inequality Amplifies the Negative Association Between Life Expectancy and Air Pollution: A Cross-National Longitudinal Study." *Science of the Total Environment* 758: 143705.
- [12] Jorgenson, Andrew, [Jared Fitzgerald](#), **Ryan P. Thombs**, Terrence Hill, Jennifer Givens, Brett Clark, Juliet Schor, [Xiaorui Huang](#), [Orla Kelly](#), and [Peter Ore](#). 2020. "The Multiplicative Impacts of Working Hours and Fine Particulate Matter Concentration on Life Expectancy: A Longitudinal Analysis of US States." *Environmental Research* 191: 110117.
- [11] **Thombs, Ryan P.**, Dennis L. Thombs, Andrew K. Jorgenson, and [Taylor Harris Braswell](#). 2020. "What is Driving the Drug Overdose Epidemic in the United States?" *Journal of Health and Social Behavior* 61(3): 275-289. (Lead Article).
  - Featured Coverage: [Journal of Health and Social Behavior Policy Brief](#) and [Journal of Health and Social Behavior](#) podcast.
- [10] **Thombs, Ryan P.** 2020. "In-and-Beyond State Power: How Political Equality Moderates the Economic Growth-CO<sub>2</sub> Emissions Relationship, 1990 – 2014." *The Sociological Quarterly* 62(3): 1-20.
- [9] Jorgenson, Andrew, Terrence Hill, Brett Clark, **Ryan P. Thombs**, [Peter Ore](#), Kelly Balistreri, and Jennifer Givens. 2020. "Power, Proximity, and Physiology: Does Income Inequality and Racial Composition Amplify the Impacts of Air Pollution on Life Expectancy in the United States?" *Environmental Research Letters* 15(2): 024013.
- [8] **Thombs, Ryan P.** and Andrew K. Jorgenson. 2020. "The Political Economy of Renewable Portfolio Standards in the United States." *Energy Research & Social Science* 62, 101379: 1-6.
- [7] **Thombs, Ryan P.** and Andrew K. Jorgenson. 2019. "Manufacturing the Urban Rift: Manufacturing as a Moderator of the Urbanization-CO<sub>2</sub> Emissions Relationship, 2000-2013." *Human Ecology Review* 25(2): 143-161.
- [6] **Thombs, Ryan P.** and [Xiaorui Huang](#). 2019. "Uneven Decoupling: The Economic Growth-CO<sub>2</sub> Emissions Relationship in the Global North, 1870 – 2014." *Sociology of Development* 5(4): 410-427.
- [5] **Thombs, Ryan P.** 2019. "When Democracy Meets Energy Transitions: A Typology of Social Power and Energy System Scale." *Energy Research & Social Science* 52: 159-168.
- [4] **Thombs, Ryan P.** and Allen Prindle. 2018. "Ohio LEED Schools and Academic Performance: A Panel Data Study, 2006 – 2016." *Sustainability* 10(10), 3783.
- [3] **Thombs, Ryan P.** 2018. "Has the Relationship Between Non-Fossil Fuel Energy Sources and CO<sub>2</sub> Emissions Changed Over Time? A Cross-National Study, 2000-2013." *Climatic Change* 148(4): 481-490.
- [2] **Thombs, Ryan P.** 2018. "The Transnational Tilt of the Treadmill and the Role of Trade Openness on Carbon Emissions: A Comparative International Study, 1965-2010." *Sociological Forum* 33(2): 422444.
  - Received the Severyn T. Bruyn Award for Outstanding Scholarship in Social Economy and Social Justice, Sociology, Boston College.
- [1] **Thombs, Ryan P.** 2017. "The Paradoxical Relationship Between Renewable Energy and Economic Growth: A Cross-National Panel Study, 1990-2013." *Journal of World-Systems Research* 23(2): 540-564.

## BOOK CHAPTERS

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Roberts, Anthony, Jeffrey Kentor, Rob Clark, Andrew Jorgenson, **Ryan Thombs**, and Taekyeong Goh. Submitted. "The Shifting Geography of Foreign Direct Investment & Economic Development in the 21<sup>st</sup> Century: A Regional Perspective." In *The Handbook of Contemporary Sociology of Development*, edited by Enrique Pumar and Heidi Rademacher. De Gruyter Brill.

Jorgenson, Andrew, Hassan El Tinay, Jared Fitzgerald, Jennifer Givens, Taekyeong Goh, Xiaorui Huang, Orla Kelly, Annika Rieger, and **Ryan P. Thombs**. 2024. "[Advances in Research on Anthropogenic Drivers of Climate Change](#)." In *Routledge Handbook of Climate Change and Society*, 2nd ed., edited by Stephen Brechin and Seungyun Lee. London: Routledge Press.

## OTHER SCHOLARLY PUBLICATIONS

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**Thombs, Ryan P.** 2023. [Review of \*Environmental Econometrics Using Stata\*](#), by Christopher F. Baum and Stan Hurn. *Stata Journal* 23(3): 897-900.

## SOFTWARE PROGRAMS

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**Thombs, Ryan P.** 2025. [xthpj](#) — High dimensional half-panel jackknife fixed effects estimation. Stata.

**Thombs, Ryan P.** 2024. [lrplot](#) — Plot long-run effects over time. Stata.

**Thombs, Ryan P.** 2022. [lreff](#) — Compute long-run effects after estimating a dynamic model. Stata.

**Thombs, Ryan P.** 2022. [xtasysum](#) — Generate, summarize, and visualize partial sums for modeling asymmetry with panel data. Stata.

**Thombs, Ryan P.** 2021. [eiwb](#) — Generate a variable for the ecological intensity of well-being. Stata.

**Thombs, Ryan P.** In progress. [xtdfet](#) — Estimate a dynamic fixed effects regression with time interactions. Stata.

## TECHNICAL REPORTS

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**Thombs, Ryan P.** 2020. [What is Driving the Drug Overdose Epidemic in the United States?](#) Journal of Health and Social Behavior Policy Brief.

Cheng, Yihan, David Meni, Lily Robin, **Ryan Thombs**, Maria Wimsatt, and Zhao Zhai. 2017. *A Program Evaluation and Policy Analysis of the Supermarket Tax Exemption Act of 2000*. Washington, DC: Office of the Deputy Mayor for Planning and Economic Development.

Halbert, Hannah, **Ryan Thombs**, and Chris Hileman. 2013. [Trade Adjustment Assessment 2013: Changes Loom as Number of Certified Workers Ticks Up](#). Policy Matters Ohio.

Patton, Wendy and **Ryan Thombs**. 2013. [Federal Sequester Keeps Hitting Ohio: Cuts to Head Start, Summer Lunches, Senior Services, R&D](#). Policy Matters Ohio.

## POPULAR PRESS

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**Ryan P. Thombs**. 2020. "[Journal of Health and Social Behavior Podcast – Interview with Julia Slater](#)." *Journal of Health and Social Behavior*.

**Ryan Thombs**. 2016. "[The Right to the City: Participatory Cooperatives, Housing and Budgets](#)." *Truthout*.

**Ryan Thombs**. 2015. "[Worker Self-Directed Enterprises – A New Way of Thinking About the Workplace](#)." *George Washington University's Trachtenberg School of Public Policy and Public Administration Brief Policy Perspectives Blog*.

## **RESEARCH FUNDING**

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### **Funded:**

Co-PI. "Children and Adolescents' Quality of Life in Aging Places: Differences by Aging-in-Place and Retirement Destinations." Seed Grant from the Population Research Institute. PI: Paige Kelly (Penn State). \$15,598.

Co-PI. "Quality of Life in Aging Places: Differences by Aging-in-Place and Retirement Destinations." Seed Grant from the Collaborative on Population Aging Disparities (CoPAD). PI: Paige Kelly (Penn State). \$7,494.

Co-PI. "Seniors' Quality of Life in Rural Communities: Differences by Aging in Place and Retirement Destinations." The Interdisciplinary Network on Rural Population Health and Aging (INRPHA). PI: Paige Kelly (Penn State). \$34,983.

### **Completed Support:**

Open Access Publishing Fund. 2022. Boston College.

Graduate Research Expense Grant. 2019. Boston College.

Open Access Publishing Fund. 2018. Boston College.

Graduate Research Expense Grant. 2018. Boston College.

## **PRESENTATIONS**

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Paige Kelly and **Ryan P. Thombs**. 2026. "Older Adults' Quality of Life in Rural Communities: Differences by Aging-in-Place and Retirement Destinations." The Interdisciplinary Network on Rural Population Health and Aging (INRPHA) Annual Meeting.

**Thombs, Ryan P.** 2025. "The Implications of Increased Global Militarization for Climate Scenarios and Modeling." Human Behavior in Global Change Models: Cross-Disciplinary Synthesis for Future Directions Workshop. Aspen Global Change Institute.

**Thombs, Ryan. P** and Andrew K. Jorgenson. 2025. "Does Stringent Climate Policy Decouple Economic Growth from Greenhouse Gas Emissions?" Global Political Economy Workshop.

**Thombs, Ryan P.** 2025. "A Not-So-Just Transition: Declining Coal Mining Employment Lowers Life Expectancy in U.S. Counties." Presented at the Environmental Sociology Mini-Conference: Fostering Solidarity for Sustainability and Environmental Justice, Eastern Sociological Society Annual Meeting.

**Thombs, Ryan P.** 2024. "A Not-So-Just Transition: Declining Coal Mining Employment Lowers Life Expectancy in U.S. Counties." Presented to the Rural Sociology Cluster, Penn State University.

**Thombs, Ryan P.**, Xiaorui Huang, and Andrew K. Jorgenson. 2020. "The Growth Question: What the Past Tells us About the Future and the Possibility of Green Growth." Presented at the Global Political Economy Workshop: Formal Comparative Studies of the Causes and Effects of Global Inequality, Institute for Research on World-Systems, University of California-Riverside.

**Thombs, Ryan P.** and Xiaorui Huang. 2019. "Uneven Decoupling: The Economic Growth CO<sub>2</sub> Emissions Relationship in the Global North, 1870-2014." Presented at the Annual Meetings of the American Sociological Association, New York City, New York.

Braswell, Taylor H., **Ryan P. Thombs**, and Jessica L. Bolin. 2019. "The Production of Space: The Social Determinants of Walkability in Fordist and Post-Fordist Cities in the United States." Presented at the Annual Meetings of the Eastern Sociological Society, Boston, Massachusetts.

**Thombs, Ryan P.** and Xiaorui Huang. 2019. "The Economic Growth-CO<sub>2</sub> Nexus in the Global North, 1870-2014." Presented at the Annual Meetings of the Eastern Sociological Society, Boston, Massachusetts.

**Thombs, Ryan P.** 2018. "Manufacturing the Urban Rift: A Cross-National Study of Urbanization, Manufacturing, and CO<sub>2</sub> Emissions, 2000-2013." Presented at the Annual Meetings of the Eastern Sociological Society, Baltimore, Maryland.

## **FELLOWSHIPS & AWARDS**

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Dissertation Fellowship, Boston College. 2023.

Benedict S. Alper Fellowship, Sociology, Boston College. 2022.

Ritchie P. Lowry Research Fellowship, Sociology, Boston College. 2021.

Summer Research Fellowship, Sociology, Boston College. 2021.

Summer Research Fellowship, Sociology, Boston College. 2020.

Summer Research Fellowship, Sociology, Boston College. 2019.

Summer Research Fellowship, Sociology, Boston College. 2019.

Center for Washington Area Studies Research Fellowship, George Washington University Institute of Public Policy. 2016-2017.

## **TEACHING**

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### **Penn State(Graduate):**

Multivariate Statistics for the Social Sciences (In-Person)

Spring 2025, Spring 2026

### **Penn State (Undergraduate):**

Environment and Society (In-Person)

Fall 2025

### **Boston College (Undergraduate):**

Environmental Sociology (In-Person)

Fall 2022

Environmental Sociology (Asynchronous Online)

Summer 2021, Summer 2022, Summer 2023

Introductory Sociology (Synchronous Online)

Fall 2020

Society and Environmental Transformations (In-Person)

Fall 2021, Spring 2022, Spring 2023

### **Northeastern University (Graduate):**

Introduction to Statistics in Health and Behavioral Science  
(In-Person)

Summer 2023

Introduction to Statistics in Health and Behavioral Science  
(Asynchronous Online)

Summer 2024

### **Other:**

Longitudinal Data Analysis Workshop. Boston College.

Summer 2022

## **Graduate Student Advising**

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Isaac Akintoye (Penn State, committee member, ongoing)

Ellie Martin (Penn State, committee member, ongoing)

Chanel Lange-Maney (Penn State, committee member, ongoing)

Akanimo Edo Udoekong (Penn State, committee member, ongoing)

J. Huntley Compton (Penn State, committee member, ongoing)

## **SERVICE**

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### **College/University Service:**

Community and Economic Vitality Committee

2026

Climate Consortium Faculty Advisory Committee

2025

SSRI Long Range Visioning Committee

2025

Graduate Student Competitive Grant Program

2025

**Department Service:**

Rural Sociology Seminar and Brown Bag Committee  
 Faculty Search Committee for Rural Sociology

2025-2026  
 2025

**Reviewer for (Number of times):**

*American Journal of Sociology* (1); *American Sociological Review* (1); *Atmospheric Pollution Research* (1); *Climatic Change* (1); *Energy and Climate Change* (1); *Energy & Environment* (3); *Energy Policy* (1); *Energy Research & Social Science* (6); *Energy Sources, Part B: Economics, Planning, and Policy* (1); *Environmental and Resource Economics* (1); *Environmental Research: Health* (2); *Environmental Research Letters* (1); *Environmental Sociology* (2); *Global Networks* (1); *Global Transitions* (1); *International Journal of Comparative Sociology* (2); *Journal of Cleaner Production* (1); *Journal of Environmental Studies and Sciences* (1); *Journal of Health and Social Behavior* (7); *Journal of Racial and Ethnic Health Disparities* (1); *Journal of World-Systems Research* (2); *Nature and Culture* (2); *npj climate action* (2); *Oxford Bibliographies* (1); *PLOS ONE* (2); *PNAS* (1); *Policy Sciences* (1); *Population & Environment* (1); *Research in Social Stratification and Mobility* (1); *Social Currents* (1); *Social Forces* (2); *Social Problems* (2); *Sociological Forum* (1); *Sociological Inquiry* (1); *Sociological Perspectives* (1); *Sociology of Development* (11); *Social Science Quarterly* (1); *Socius* (2); *SSM-Population Health* (1); *Social Science Research* (2); *Structural Change and Economic Dynamics* (1); *Sustainable Cities and Society* (1); *Sustainability: Science, Practice, and Policy* (1); *Sustainability Science* (1); *The Energy Journal* (2); *The Lancet Planetary Health* (1); *The Sociological Quarterly* (1)

**Conference Service:**

Co-organizer, Sociology of Development Roundtable Presentations, Annual Meetings for the American Sociological Association, New York City, New York.

2019

**ADDITIONAL METHODOLOGICAL AND PROGRAMMING TRAINING**

NetCourse 251: Writing Your Own Stata Commands, Stata (Online).

2022

Advanced Topics in Dynamic Panel Models, ICPSR Summer Program in Quantitative Methods (Vancouver, BC).

2019

**PROFESSIONAL MEMBERSHIPS**

American Sociological Association  
 American Association of Geographers  
 Eastern Sociological Society

**TECHNICAL SKILLS**

Stata (expert), Mata (proficient), R (proficient), LaTeX (proficient), GitHub (proficient), Python (beginner), Julia (beginner)