Jonathan Tollefson

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EDUCATION

2019 -	Brown University / Ph.D., Sociology
	• Qualifying exam in Environmental Sociology
	• Qualifying exam in Urban Sociology
2016 - 2018	University of Vermont / M.S., Rubenstein School of Environment and Natural Resources
2011 - 2015	Brown University / Sc.B., Social Analysis and Research (with honors)

AREAS OF INTEREST

Environmental Inequality, Environmental Justice, Urban Sociology, Computational Sociology, Science and Technology Studies, Political Ecology, Climate Change

DISSERTATION RESEARCH

How industry segregated cities: The environmental dimensions of late 19th and early 20th century urban inequality. Three standalone papers presenting a comparative study of urban environmental inequality at the turn of the 20th century, drawing on an original computational approach to mapping urban industry in that period.

Committee:
- Scott Frickel (chair), Sociology and Institute at Brown for Environment and Society, Brown University
- Margot Jackson, Sociology and Population Studies and Training Center, Brown University
- Jennifer Candipan, Sociology and Population Studies and Training Center, Brown University

PUBLICATIONS

PEER REVIEWED ARTICLES

2023	**Tollefson, J.**, Frickel, S., Gonsalves, S., and Marlow, T. Parks, people and pollution: A relational study of socioenvironmental succession. *City and Community* special issue, "Environmentalizing Urban Sociology" 22(4): 286-307.
2023	**Tollefson, J.**, Frickel, S., Gonsalves, S., Marlow, T., Sucsy, R., Byrns, M., and Orpen-Tuz, M. Early childcare and education in a post-industrial landscape: Inequalities in exposure to active and relic manufacturing in metropolitan Providence, Rhode Island. *Environmental Justice* 16(4): 309-320.

Jonathan Tollefson

2022   Frickel, S., and **Tollefson, J.** When environmental inequality racialized: Historical evidence from Providence, Rhode Island. *Socius* 8: 1-14.

2021   **Tollefson, J.**, Frickel, S, and Restrepo, M. Feature extraction and machine learning techniques for identifying historic urban environmental hazards: New methods to locate lost fossil fuel infrastructure in US cities. *PLOS ONE* 16(8): e0255507. [Dissertation paper 1]
- Finalist – 2022 John Odland Award, American Association of Geographers, Spatial Analysis and Modeling Group

2020   **Tollefson, J.** and Panikkar, B. Contested extractivism: Impact assessment, public engagement, and environmental knowledge production in Alaska's Yukon-Kuskokwim Delta. *Journal of Political Ecology* 27(1): 1166-1188.
- Awarded – 2021 Graduate Student Paper Award, Rural Sociological Society, Natural Resources RIG

2020   **Tollefson, J.** Post-Fukushima discourse in the US press: Quantified knowledge, the technical object, and a panicked public. *Public Understanding of Science* 29(7): 670-687. [Undergraduate honors thesis]

2018   Panikkar, B. and **Tollefson, J.** Land as material, knowledge, and relationships: Resource extraction and subsistence imaginaries in Bristol Bay, Alaska. *Social Studies of Science* 48(5): 715-739.

INVITED CHAPTERS

Forthcoming   Candipan, J. and **Tollefson, J.** Machine learning and large-scale data for understanding urban inequality. Invited chapter for *The Oxford Handbook of the Sociology of Machine Learning* (Borch, C. and Pardo-Guerra, J.P., eds.).

MANUSCRIPTS

Under Review   **Tollefson, J.**, Frickel, S., Helgeson, J., and Gore, C. Siloed interdisciplinarity?: A multi-level computational text analysis of community resilience planning.

Working Papers   **Tollefson, J.** Environmental risk and the changing scale of urban inequality, 1880-1930. [Dissertation paper 2].
- Awarded – 2023 IPUMS USA Student Research Award
- Awarded – 2024 Brent K. Marshall Student Paper Award, Society for the Study of Social Problems, Environment and Technology Division
- Honorable Mention – 2024 Candace Rogers Award, Eastern Sociological Society
- Awarded – 2024 Graduate Student Paper Prize, Spatial Structures for the Social Sciences, Brown University

Tollefson, J. HOLC redlining as an environmental process. [Dissertation paper 3].

Tollefson, J., Frickel, S., Helgeson, J., and Gore, C. From adaptation to resilience: The evolution of a field.

Burns, A. and **Tollefson, J.** Inequality in the effects of pesticide exposure on infant health. *Delivered at Population Association of America (New Orleans, LA. Apr. 12-15, 2023) and American Sociological Association (Philadelphia, PA. Aug. 17-21, 2023).*

In Progress   **Tollefson, J.** Environmental roots of long-term trajectories of neighborhood inequality.

Tollefson, J. Suburban development and agricultural land conversion: New landscapes of environmental health inequality. *Delivered at Pacific Sociological Association (Sacramento, CA. Apr. 7-9, 2022).*

PUBLIC SCHOLARSHIP

2023   **Tollefson, J.** Redlining and segregation in Providence, RI. Essay for *Mapping Inequality: Redlining in New Deal America.* Richmond, VA: University of Richmond Digital Scholarship Lab.

2021   **Tollefson, J.** and Frickel, S. Gasworks, lost and found. *Urban Omnibus.* July 1.

2016   **Tollefson, J.** and Urso, M. Black Lives Matter at St. Patrick's Day Parade. Op-ed in the *Providence Journal.* April 2.

AWARDS

2024   Awarded – Brent K. Marshall Student Paper Award, Society for the Study of Social Problems, Environment and Technology Division

2024   Honorable Mention – Candace Rogers Award, Eastern Sociological Society

2024   Awarded – Graduate Student Paper Prize, Spatial Structures for the Social Sciences, Brown University

2023   Awarded – IPUMS USA Student Research Award

2022   Finalist – John Odland Student Paper Award, American Association of Geographers, Spatial Analysis and Modeling Group

2021   Awarded – Graduate Student Paper Award, Rural Sociological Society, Natural Resources RIG

2021   Awarded – First Place Poster Award, Dellinger Symposium (Superfund Research Program of the NIEHS)

FELLOWSHIPS AND GRANTS

2023 - 2024 Research Fellow: Community Resilience and Risk, *Georgetown University / NIST-PREP*
- Georgetown University / National Institute of Standards and Technology Professional Research Experience Program (Jan. – Jun. 2024).

2023 - 2024 Dissertation Writing Fellowship, *Brown University*
- Full academic funding (Sept. 2023 – May 2024).

2023 NIST-PREP Fellowship
- National Institute of Standards and Technology Professional Research Experience Program, full academic funding (Jan. – Jun. 2023).

2023 Graduate Research, Training, and Travel Award ($3,145), *Institute at Brown for Environment and Society*

2022 Finalist – Raskin Scholarship, *Earth Science Information Partners*

2021 NIEHS SRP Traineeship
- Superfund Research Program of the National Institute for Environmental Health Sciences, full academic funding (Jan. 2021 – Dec. 2021). Supported by NIEHS grant P42ES013660.

2021 Collaborative Research Award ($2,000), *Brown University Department of Sociology*

2021 Dellinger Symposium Travel Award, *Superfund Research Program of the NIEHS*

2020 Collaborative Research Award ($2,000), *Brown University Department of Sociology*

2019 - 2020 Graduate Fellowship, *Brown University*.
- Full academic funding (Sept. 2019 – Aug. 2020).

2016 - 2018 Governance of Large Mine Permitting Research Fellowship
- Full academic funding for the 2016-17 and 2017-18 academic years. Supported by National Science Foundation award #1642226 (PI: Bindu Panikkar).

2017 Florence Tinker Matteossian Memorial Grant ($4,214), *University of Vermont*

2017 Graduate Student Senate Mini-Grant, *University of Vermont*

2017 Rubenstein Graduate Student Association Mini-Grant, *University of Vermont*

2013 Karen T. Romer Undergraduate Teaching and Research Award ($3,000), *Brown University*

Travel Grants	2021, 2022, 2023, 2024: Graduate School Travel Grant, *Brown University* 2021, 2022, 2023, 2024: Sociology Dept. Travel Grant, *Brown University* 2022: GSC Travel Grant, *Brown University*

INVITED PRESENTATIONS

2024	Keynote lecture: What historic maps reveal about racial-environmental inequality in US cities. *Center for Urban and Regional Analysis Summer Speaker Series.* Ohio State University and Online. Jun. 14.
2023	Invited lecture. The development and transformation of community resilience planning research: Insights from domain-topic models with chained dimensions. *NIST Applied Economics Office Research Seminar Series.* Washington, DC. Nov. 3.
2023	Invited panelist. The environmental dimensions of urban inequality, 1880-1930. *Spatial Data Science Symposium.* Online. Sept. 6.
2022	Invited lecture. Energy geography and urban inequality: Computational techniques for historical research. *Computational Environmental STS Working Group (Laboratoire Interdisciplinaire Sciences Innovations Sociétés, Paris).* Paris, France. Jul. 10-13.
2020	Invited lecture. Manufactured gas and historic environmental inequality. *Urban Theory and Data Lab (Harvard University).* Cambridge, MA. Oct. 29.
2017	Invited lecture. Land use, power, and knowledge at the Northern resource frontier. *Rubenstein School of Environment and Natural Resources Graduate Symposium (University of Vermont).* Burlington, VT. Oct. 13.

CONFERENCE PRESENTATIONS

2024	Environmental risk and the reorganization of urban inequality in the late 19th and early 20th centuries. *Society for the Study of Social Problems.* Montreal, QC. Aug. 9-11.
2024	Urban environmental inequality from 1880 to 1930. *Population Association of America.* Columbus, OH. Apr. 17-20.
2024	The development and structure of community resilience planning research. *Eastern Sociological Society.* Washington, DC. Feb. 29 – Mar. 3.
2023	Urban fossil fuel production and the changing scale of racial segregation, 1880-1930. *International Association of Public Health Scholars.* Baltimore, MD. Oct. 2-5.
2023	Burns, A., and **Tollefson, J.** Inequality in the effects of pesticide exposure on infant health. *American Sociological Association.* Philadelphia, PA. Aug. 17-21.
2023	How industry segregated cities: Using computational data extraction to reexamine the formation of early-20th century segregation. *American Sociological Association.*

Philadelphia, PA. Aug. 17-21. (Paper accepted, could not attend due to scheduling conflict).

2023 Burns, A., and **Tollefson, J.** Inequality in the effects of pesticide exposure on infant health. *Population Association of America*. New Orleans, LA. Apr. 12-15.

2023 Environmental inequality and the changing scale of urban segregation in the early 20th century. *Pacific Sociological Association*. Bellevue, WA, Mar. 30 – Apr. 2.

2023 What was the role of environmental risk in the early formation of neighborhood-level segregation? *American Association of Geographers*. Denver, CO. Mar. 23-27.

2023 **Tollefson, J.** and Silberstein, S. Right-wing extremism online: A quantitative and critical discourse analysis of the Parler website. *American Association for Applied Linguistics*. Portland, OR. Mar. 18-21.

2022 Brownfields and green spaces: Neighborhood change and urban park access in a post-industrial city. *American Sociological Association*. Los Angeles, CA. Aug. 5-9.

2022 Frickel, S., and **Tollefson, J.** When environmental inequality racialized: Evidence from a historical case study. *American Sociological Association*. Los Angeles, CA. Aug. 5-9.

2022 Agricultural land conversion and new geographies of suburban environmental risk. *Pacific Sociological Association*. Sacramento, CA. Apr. 7-9.

2022 Gastown: Fossil fuels and the changing nature of urban environmental inequality at the turn of the 20th century. *Eastern Sociological Society*. Boston, MA. Mar. 10-13.

2022 New methods to locate historic fossil fuel infrastructures: How computational techniques can illuminate 19th century urban environmental hazards. *American Association of Geographers*. New York, NY and online. Feb. 25 – Mar 1.
- Presented as part of John Odland Award session.

2021 Urban environmental inequality in the 19th century and the toxic legacy of the manufactured gas industry: Unearthing early fossil fuel infrastructure in American cities (poster). *Dellinger Symposium of the Superfund Research Program*. Apr. 28.
- Awarded – First Place Poster Award

2021 Urban environmental inequality and the toxic legacy of the manufactured gas industry: Unearthing 19th century fossil fuel infrastructure in American cities. *Pacific Sociological Association*. Online. Mar. 17-21.

2018 Mining, public engagement, and contentious land imaginaries in Bristol Bay and the Yukon-Kuskokwim Delta, Alaska. *American Association of Geographers*. New Orleans, LA. Apr. 10-14.

2017	Knowledge, sovereignty, and resource extraction in rural Alaska: A case study of the Donlin Gold public comment process. *ArcticNet Annual Scientific Meeting.* Quebec City, QC. Dec. 11-15.
2017	Land as material, habitat and survival: Resource materiality and mining in Bristol Bay and the Yukon-Kuskokwim Delta, Alaska. *Society for the Social Studies of Science.* Boston, MA. Aug. 30 – Sept. 2.
2016	Resource materiality and resistance to mineral development in Bristol Bay, Alaska. *ArcticNet Annual Scientific Meeting.* Winnipeg, MB. Dec. 5-9.

WORKSHOPS AND PANELS ORGANIZED

2024	Panel organizer, "Community resilience planning: What new methods reveal about the formation and transformation of a field." *Disaster Research Center 60th Anniversary Workshop.* University of Delaware, Newark, DE. May 2-5.
2021 - present	Environmental Sociology Workshop, *Brown University.* • Brown University's Environmental Sociology Workshop brings together faculty and graduate students to discuss ongoing sociological research on environmental topics.

TEACHING EXPERIENCE

UNIVERSITY TEACHING

2023	I.E. Business School and Brown University / "Society and Culture in the Age of Globalization" / *Teaching Assistantship* / Professor Meghan Kallman
2022	Brown University, Sociology / "Organizations and Society" / *Teaching Assistantship* / Professor Rachel Wetts
2022	Brown University, Environmental Studies / "Environmental Studies of Pollution" / *Guest Lecturer* / Professors Meredith Hastings and Scott Frickel
2022	I.E. Business School and Brown University / "Society and Culture in the Age of Globalization" / *Teaching Assistantship* / Professor Meghan Kallman
2021	Brown University, Environmental Studies / "Environmental Studies of Pollution" / *Guest Lecturer* / Professors Meredith Hastings and Scott Frickel
2020	Brown University, Sociology / "Methods for Interdisciplinary Environmental Research" / *Teaching Assistantship* / Professor Rachel Wetts • Advised individual student research projects from conception to conclusion.

2018 University of Vermont, Environmental Studies / "Human Ecology, Health, and Sustainability in the Circumpolar Arctic" / Co-taught with Dr. Bindu Panikkar
- Co-taught a seminar-style discussion course on the Arctic.

2017 University of Vermont, Rubenstein School of Environment and Natural Resources / "Social Processes and the Environment" / *Teaching Assistantship* / Professor Cecilia Danks

2017 University of Vermont, Environmental Studies / "Environmental Policy and Activism" / *Teaching Assistantship* / Dr. Trish O'Kane
- Advised students on conceiving, writing, and publishing individual op-eds in local newspapers.

2016 University of Vermont, Rubenstein School of Environment and Natural Resources / "Race, Culture, and Natural Resources" / *Teaching Assistantship* / Professor Clare Ginger
- Designed discussion curriculum and led weekly discussion sections with entering first-year students.

COMMUNITY TEACHING

2015 - 2016 Extraordinary Youth Ensemble (Providence, RI) / *Administrator and teacher*
- Developed curriculum and successfully obtained biannual grants from the Rhode Island State Council for the Arts to provide weekly instrument and music history instruction to Providence area high school students.

2014 - 2015 Trinity Academy for the Performing Arts (Providence, RI) / *Visiting Artist, Music Instructor*

2014 - 2015 Breakthrough Providence (Providence, RI) / *Teacher, "Demonstration and Organizing"*
- Developed original student-centered curriculum for 7th-9th grade students. Taught weekly lessons and advised student projects on the role of organizing in bringing about social and political change. Advised teaching assistant.

SERVICE

2021 - present Graduate Student Council (Brown University), Department of Sociology representative.

2024 Presider, "Urban Environments" roundtable session, *American Sociological Association* annual meeting. Montreal, QC. Aug. 9-13.

2023 Poster Judge, *International Association of Public Health Scholars* annual meeting. Baltimore, MD. Oct. 2-5.

2023	Presider, "Urban Sociology" panel session, *American Sociological Association* annual meeting. Philadelphia, PA. Aug. 17-21. (Could not attend due to scheduling conflict).
2023	Presider, "Environmental Justice" panel session, *Pacific Sociological Association* annual meeting. Bellevue, WA. Mar. 30 – Apr. 2.
2022	Evaluated submissions for Rural Sociological Society NRRIG paper award.
Ongoing	Peer review for *American Sociological Review, Public Understanding of Science, Population and Environment, Journal of Political Ecology, Journal of Computational Social Science, PLOS ONE*.

AFFILIATIONS

INSTITUTES, LABS, AND WORKING GROUPS

2022 - present	Computational Environmental STS Working Group (Laboratoire Interdisciplinaire Sciences Innovations Sociétés Paris; Technical University Munich; Brown University)
2020 - present	Institute at Brown for Environment and Society (Brown University)
2020 - 2022	Urban Theory and Data Lab (Harvard University)
2017 - 2018	Gund Institute for Environment (University of Vermont)

PROFESSIONAL MEMBERSHIPS

American Sociological Association
  - Section memberships: Environmental Sociology; Community and Urban Sociology; Science, Knowledge, and Technology

American Association of Geographers
Eastern Sociological Society
Interdisciplinary Association for Population Health Science
Pacific Sociological Association
Population Association of America
Rural Sociological Society
Society for the Study of Social Problems

LANGUAGE AND TECHNICAL

Language: Japanese (conversational)

I use an array of computational tools in my research and teaching, including statistical analysis in **R, Stata**, *and* **SPSS***; spatial analysis in* **R, ArcGIS***, and* **QGIS***; automation, web scraping, text analysis, and machine learning applications in* **Python** *and* **R***; text analysis using the* **Sashimi** *toolset; and qualitative analysis in* **NVivo** *and* **HyperResearch***.*