

Jonathan Tollefson

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Brown University Department of Sociology
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EDUCATION

- 2019 -** Brown University / Ph.D. Candidate, Sociology (degree expected spring 2024)
- Qualifying exam in Urban Sociology
 - Qualifying exam in Environmental 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 Justice, Urban Sociology, Computational Sociology, Science and Technology Studies, Political Ecology

DISSERTATION RESEARCH

“How industry segregated cities: The environmental dimensions of late 19th and early 20th century urban inequality.” Four 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

ACADEMIC 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” (online first, forthcoming in print).
- 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 for the 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.
- Winner of the 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.** “Cities.” Invited chapter for *The Oxford Handbook of the Sociology of Machine Learning* (Borch, C. and Pardo-Guerra, J.P., eds.).

WORKING PAPERS

- Tollefson, J.** “Environmental risk and the changing scale of urban inequality, 1880-1930.” [Dissertation paper 2]. *Working paper, in preparation for submission to American Sociological Review.*
- Tollefson, J.** “Environmental roots of long-term trajectories of neighborhood inequality.” [Dissertation paper 3]. *In preparation.*
- Tollefson, J.** “HOLC Redlining as an environmental process.” *Working paper, in preparation for submission to Urban Studies.*
- Tollefson, J.**, Frickel, S., Helgeson, J., and Gore, C. “From adaptation to resilience: The evolution of a field.” *Working paper, in preparation for submission to Environmental Research Letters.*
- Tollefson, J.**, Frickel, S., Helgeson, J., and Gore, C. “The development and structure of community resilience planning research.” *Working paper, in preparation for submission to npj Natural Hazards.*

Jonathan Tollefson

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

Tollefson, J. “Suburban development and agricultural land conversion: New landscapes of environmental health inequality.” *Working paper, delivered at Pacific Sociological Association (Sacramento, CA. Apr. 9, 2022).*

PUBLIC SCHOLARSHIP

Forthcoming **Tollefson, J.** “Redlining and segregation in Providence, RI.” Essay for *Mapping Inequality: Redlining in New Deal America*.

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.

SOFTWARE DEVELOPED

2021 *Detect_MGP*. Github (https://github.com/TollefsonJ/Detect_MGP).

AWARDS

2022 Finalist - John Odland Student Paper Award

- Spatial Analysis and Modeling Group, American Association of Geographers

2021 Winner - Graduate Student Paper Award

- Natural Resources RIG, Rural Sociological Society

2021 Winner – First Place Poster Award

- Dellinger Symposium, Superfund Research Program

FELLOWSHIPS AND GRANTS



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).

Jonathan Tollefson

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| 2023 | Graduate Research, Training, and Travel Award (\$3,145), <i>Institute at Brown for Environment and Society</i> |
| 2022 | Finalist: Raskin Scholarship (\$5,000), <i>Earth Science Information Partners</i> (not awarded) |
| 2021 |  NIEHS SRP Traineeship <ul style="list-style-type: none"> • 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), <i>Brown University Dept. of Sociology</i> |
| 2021 | Dellinger Symposium Award, <i>Superfund Research Program of the NIEHS</i> |
| 2020 | Collaborative Research Award (\$2,000), <i>Brown University Dept. of Sociology</i> |
| 2019-2020 | Graduate Fellowship, <i>Brown University</i> . <ul style="list-style-type: none"> • Full academic funding (Sept. 2019 - Aug. 2020). |
| 2016-2018 |  Governance of Large Mine Permitting Research Fellowship <ul style="list-style-type: none"> • Full academic funding for the 2016-17 and 2017-18 academic years. Supported by National Science Foundation award #1642226. |
| 2017 | Florence Tinker Matteossian Memorial Grant (\$4,214), <i>University of Vermont</i> |
| 2017 | Graduate Student Senate Mini-Grant, <i>University of Vermont</i> |
| 2017 | Rubenstein Graduate Student Association Mini-Grant, <i>University of Vermont</i> |
| 2013 | Karen T. Romer Undergraduate Teaching and Research Award (\$3,000), <i>Brown University</i> |
| Travel Grants | <ul style="list-style-type: none"> • 2022: GSC Conference Travel Grant, <i>Brown University</i> • 2021, 2022: Graduate Travel Grant, <i>Brown University</i> |

TEACHING EXPERIENCE

UNDERGRADUATE TEACHING

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| 2023 | Instituto de Empresa Business School and Brown University / “Society and Culture in the Age of Globalization” / <i>Teaching Assistantship</i> / Professor Meghan Kallman |
| 2022 | Brown University, Sociology / “Organizations and Society” / <i>Teaching Assistantship</i> / Professor Rachel Wetts |

Jonathan Tollefson

- 2022** Brown University, Environmental Studies / “Environmental Studies of Pollution” / *Guest Lecturer* / Professors Meredith Hastings and Scott Frickel
- 2022** Instituto de Empresa 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, Rubenstein School of Environment and Natural Resources / “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, Rubenstein School of Environment and Natural Resources / “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 Instruction*
- 2014-2015** Breakthrough Providence (Providence, RI) / *Teacher, “Demonstration and Organizing” Section*

Jonathan Tollefson

- 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.

WORKSHOPS AND PANELS ORGANIZED

- 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.

INVITED PRESENTATIONS

- 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 in the Northern resource frontier." *Rubenstein School of Environment and Natural Resources Graduate Symposium (University of Vermont)*. Burlington, VT. Oct. 13.

CONFERENCE PRESENTATIONS

- 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 "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." *American Sociological Association*. Philadelphia, PA. Aug. 17-21.
- 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.

Jonathan Tollefson

- 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.
- 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.
- 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 “Resource materiality and mining 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.

SERVICE

Jonathan Tollefson

2021 -	Graduate Student Council (Brown University), Department of Sociology representative.
2023	Poster Judge, <i>International Association of Public Health Scholars</i> annual meeting. Baltimore, MD. Oct. 2-5.
2023	Presider, “Environmental Justice” panel session, <i>Pacific Sociological Association</i> annual meeting. Bellevue, WA. Apr. 1.
2023	Presider, “Urban Sociology” panel session, <i>American Sociological Association</i> annual meeting. Philadelphia, PA. Aug. 12.
2022	Evaluated submissions for Rural Sociological Society NRRIG paper award.
Ongoing	Peer review for <i>American Sociological Review</i> , <i>Public Understanding of Science</i> , <i>Population and Environment</i> , <i>Journal of Political Ecology</i> , <i>PLOS ONE</i> .

AFFILIATIONS AND PROFESSIONAL MEMBERSHIPS

2022 -	Computational Environmental STS Working Group (Laboratoire Interdisciplinaire Sciences Innovations Sociétés, Technical University Munich, Brown University)
2020 -	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)
2017 -	American Association of Geographers
2019 -	American Sociological Association
2021 -	Pacific Sociological Association
2021 -	Rural Sociological Society
2022 -	Eastern Sociological Society

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**.*