

GWEN OTTINGER

Department of Politics
Center for Science, Technology, and Society
Drexel University
3101 Market St., Room 217
Philadelphia, PA 19104

215-571-4823 (o)
610-608-2146 (c)
ottinger@drexel.edu

EDUCATION

Ph.D., Energy and Resources, University of California, Berkeley
M.A., Energy and Resources, University of California, Berkeley
B.S., Science, Technology, and Culture, Georgia Institute of Technology
B. Aerospace Engineering, Georgia Institute of Technology

POSITIONS

Drexel University

Associate Professor, Center for Science, Technology, and Society and Dept. of Politics 2016 –
Assistant Professor, Center for Science, Technology, and Society and Dept. of Politics 2014 – 2016

University of Washington-Bothell

Assistant Professor, School of Interdisciplinary Arts and Sciences 2010 – 2014

Chemical Heritage Foundation

Research Fellow, Center for Contemporary History and Policy 2008 – 2010

University of Virginia

Lecturer, Department of Science, Technology, and Society 2006 – 2008

PUBLICATIONS

Books

- 2013 Gwen Ottinger, *Refining Expertise: How Responsible Engineers Subvert Environmental Justice Challenges*. New York: New York University Press.
Reviewed in *Antipode*, *The Journal of Responsible Innovation*, and *Social Anthropology*.
Rachel Carson Prize, 2015. Awarded by the Society for Social Studies of Science.
- 2011 Gwen Ottinger and Benjamin R. Cohen, editors, *Technoscience and Environmental Justice: Expert Cultures in a Grassroots Movement*. Cambridge, MA: MIT Press, Urban and Industrial Environments Series.
Reviewed in *Organization and Environment*, *The Social Science Journal*, *Choice*, and *Chemical Heritage*.

Peer-Reviewed Articles

- 2017 Gwen Ottinger and Elisa Sarantschin, "Exposing Infrastructure: How Activists and Experts Connect Ambient Air Monitoring and Environmental Health," *Environmental Sociology* 3(2): 155 – 165.
- 2014 Gwen Ottinger, Timothy Hargrave, and Eric Hopson, "Procedural Justice in Wind Facility Siting: Recommendations for State-led Siting Processes," *Energy Policy* 65: 662 – 669.
- 2013 Gwen Ottinger, Richard Worthington, Warren Gold, Kern Ewing, James Fridley, Rodney Pond, and Brooke Kiener, "Interdisciplinary CBR with Disciplinary Expertise: Bridging Two (or more) Cultures in Undergraduate Projects," *Currents in Teaching and Learning*, 5(1-2): 4 – 16
- 2013 Gwen Ottinger, "The Winds of Change: Environmental Justice in Energy Transitions," *Science as Culture* 22(2): 222 – 229.
- 2013 Gwen Ottinger, "Changing Knowledge, Local Knowledge, and Knowledge Gaps: STS Insights into Procedural Justice," *Science, Technology, and Human Values* 38(2): 250 – 270.
- 2012 Gwen Ottinger and Benjamin R. Cohen, "Environmentally Just Transformations of Expert Cultures: Toward the Theory and Practice of a Renewed Science and Engineering," *Environmental Justice* 5(3): 158 – 163.
- 2011 Gwen Ottinger, "Environmentally Just Technology," *Environmental Justice* 4(1): 81 – 85.
- 2010 Gwen Ottinger, "Constructing Empowerment through Interpretations of Environmental Surveillance Data," *Surveillance and Society*, 8(2): 221 – 234.
- 2010 Scott Frickel, Sahra Gibbon, Jeff Howard, Joanna Kepner, Gwen Ottinger, and David Hess, "Undone Science: Charting Social Movement and Civil Society Challenges to Research Agenda Setting," *Science, Technology, and Human Values*, 35(4): 444 – 473.
- 2010 Gwen Ottinger, "Buckets of Resistance: Standards and the Effectiveness of Citizen Science," *Science, Technology, and Human Values* 35(2): 244 – 270.
- 2009 Gwen Ottinger, "Epistemic Fencelines: Air Monitoring Instruments and Expert-Resident Boundaries," *Spontaneous Generations* 3(1): 55 – 67.

Book Chapters

- forthcoming Gwen Ottinger, "Reconstructing or Reproducing? Scientific Authority and Models of Change in Two Traditions of Citizen Science," in *The Routledge Handbook of the Political Economy of Science*, edited by David Tyfield, Rebecca Lave, Samuel Randalls, and Charles Thorpe. Routledge.
- forthcoming Gwen Ottinger, "Opening Black Boxes: Environmental Justice and Injustice through the Lens of Science and Technology Studies," in *Handbook of Environmental Justice*, edited by Ryan Holifield, Jayajit Chakraborty, and Gordon Walker. Routledge.
- 2016 Gwen Ottinger, Javiera Barandiarán, and Aya H. Kimura, "Environmental Justice: Knowledge, Technology, and Expertise," pp. 1029 – 1058 in *The Handbook of Science and Technology Studies, 4th Edition*, edited by Ulrike Felt, Clark A. Miller, Rayvon Fouché, and Laurel Smith-Doerr. Cambridge, MA: MIT Press.
- 2016 Gwen Ottinger, "Social Movement-Based Citizen Science." In *The Rightful Place of Science: Citizen Science*, edited by Darlene Cavalier and Eric B. Kennedy, 89-104. Tempe, AZ: Consortium for Science, Policy, and Outcomes.

- 2011 Gwen Ottinger, "Rupturing Engineering Education: Opportunities for Transforming Expert Identities through Community-based Projects," pp. 229 – 248 in *Technoscience and Environmental Justice: Expert Cultures in a Grassroots Movement*, edited by Gwen Ottinger and Benjamin R. Cohen. Cambridge, MA: MIT Press.
- 2006 Gwen Ottinger, "Belief in 'Cancer Alley': Church, Chemicals, and Community in New Sarpy, Louisiana," pp. 153 – 166 in *Dispatches from the Field: Neophyte Ethnographers in a Changing World*, edited by Andrew M. Gardner and David M. Hoffman. Long Grove, IL: Waveland Press.

Reviews

- 2015 Gwen Ottinger. "Comments," on Christopher F. Jones, *Routes of Power* in H-Environment Roundtable Reviews 5(9). <https://networks.h-net.org/jones-routes-power-roundtable-review-vol-5-no-9-2015>
- 2014 Gwen Ottinger. "Absence and Expectation," Response to Special Issue on "Absences," in *Social Epistemology Review and Reply Collective* 3(8): 10-12.
- 2013 Gwen Ottinger, "Peopling Petrochemical America," Review of Richard Misrach and Kate Orff, *Petrochemical America*, in *Southern Spaces*, 26 November 2013.
- 2012 Gwen Ottinger, Review of Edward Snajder, *Nature Protests: The End of Ecology in Slovakia*, in *Political and Legal Anthropology Review* 35(1): 147 – 148.

GRANTS AND FELLOWSHIPS

- Early Career Development (CAREER) Award, National Science Foundation, Science, Technology and Society Program with co-funding from Engineering Education; and Science of Broadening Participation:
"Environmental Justice and the Ethics of Science and Technology," \$515,800, 2014 – 2019
- Worthington Distinguished Scholar Award, University of Washington-Bothell:
"Community-Based Air Monitoring: A Demand for Epistemic Justice?," \$16,400, 2013 – 2014
- Collaboration Studio Grant, Simpson Center for the Humanities, University of Washington, co-investigators Tim Hargrave and Lauren Hartzell-Nichols:
"Climate Ethics, Environmental Justice, and Wind Energy: Toward an Interdisciplinary, Multi-scale Framework," \$20,500, 2013 – 2014.
- Biological Futures in a Globalized World Faculty Fellowship, University of Washington, \$10,000, 2011
- Collaborative Undergraduate Research Grant, University of Washington-Bothell:
"Environmental Justice and Alternative Energy Policy," \$3000, 2011 – 2012
- Professors as Writers Program Writing Grant, University of Virginia, \$1000, 2007 – 2008
- John C. Haas Fellowship, Chemical Heritage Foundation, 2005 – 2006
- Chancellor's Dissertation Year Fellowship, University of California, Berkeley, 2004 – 2005
- CITRIS Social Science Dissertation Fellowship, University of California, 2002 – 2004
- Jacob K. Javits Fellowship, US Department of Education, 1998 – 2002

CONFERENCE ACTIVITIES

Papers Given

- 2015 "Epistemic Recognition and Democratic Legitimacy." *Society for Social Studies of Science*.
- 2014 "Expecting the Unexpected: Proactive, Participatory Knowledge Production for Next Generation Technology." *Society for Social Studies of Science*.
- 2014 "Epistemic Injustice, and What Engineers Can Do to Help." *Network for Engineering, Social Justice, and Peace*.
- 2014 "Accidental Regulation: How Refinery Disasters Spur New Environmental Rules." *American Society for Environmental History*.
- 2013 "Categorically Social: Expert Authority and the Re-interpretation of Citizen Participation in Science." *Society for Social Studies of Science*.
- 2011 "'The Cuyahoga River Doesn't Catch Fire Anymore': Representing Environmental Responsibility in the Petrochemical Industry." *Society for Social Studies of Science*.
- 2010 "Just Technology for Healthy and Just Societies." *Workshop for the Next Generation of Science and Technology Policy Leaders* (in conjunction with *The Rightful Place of Science?* Conference), Arizona State University.
- 2010 "The Borderland Science of Air Monitoring: Putting the Instruments of Environmental Justice in Historical Context." *American Society for Environmental History*.
- 2009 "Making Place-Based Technology Travel: The Story of the Buckets." *Society for the History of Technology*.
- 2009 "From Infallibility to Responsibility: The Reconstruction of Chemical Industry Expertise." *Society for Social Studies of Science*.
- 2008 "Supporting the Supporters: A Role for STS Engagement in Environmental Justice Activism." *STS in Action*, Pomona College.
- 2007 "Environmental Justice Engineers: Engaging Students and Social Movements through Activist-Inspired Term Projects." *Society for Social Studies of Scienc*.
- 2007 "'When You're Blown out of Bed, You Don't Forget': Petrochemical Accidents and Industry Obligation in St. Charles Parish, Louisiana." *Society for the Anthropology of North America*.
- 2006 "But for Buckets: Regulatory Standards and the Undoing of Citizen Science." *Society for Social Studies of Science*.
- 2005 "Being a Good Neighbor: The Liberal Logic of Dialogue in Relations between Petrochemical Facilities and their Residential Neighbors." *American Anthropological Association*.
- 2005 "Down-to-Earth Authorities: Establishing Expertise and Responsibility in Community Advisory Panels." *Society for Social Studies of Science*.
- 2003 "'Representative Data': Strategies for Monitoring Air Quality in Norco, LA." *Society for Social Studies of Science*.
- 2001 "Expert-Led Participation: Scientific Authority and the (Changing) Meanings of the Public's Role in Environmental Responsibility." *Taking Nature Seriously*, Eugene, Oregon. (With Reuben Deumling)

- 2000 "Understanding Public/Expert Relations: A Critique of Current Approaches to the 'Public Understanding of Science.'" *Society for Social Studies of Science/European Association for Studies of Science and Technology*.
- 2000 "Being Informed: Complexity of Socio-technical Systems in the Construction of Risk and Safety." *Social Construction of Risk and Safety Workshop*, Kolmården, Sweden, 2000. (With Alexandra von Meier)
- 1999 "Reconstructing Science through Science Education." *Society for Social Studies of Science*.

Panels Organized

- 2015 International Perspectives on Environmental Justice and STS. With Javiera Barandiarán. *Society for Social Studies of Science*.
- 2013 Not Just Participation, Influence: Rethinking the Power Relations between Academic and Extramural Science. With Rebecca Lave. *Society for Social Studies of Science*.
- 2011 Temporalities of Technoscientific Ethics. *Society for Social Studies of Science*.
- 2011 Supporting Non-Academic Careers from within the Academy: A Roundtable Discussion. *Society for Social Studies of Science*.
- 2010 Technology and the Development of Environmental Sciences. With Kristoffer Whitney. *American Society for Environmental History*.
- 2009 Contemporary Constructions of Expertise. *Society for Social Studies of Science*.
- 2007 Technological Disasters: Memory and Imagination. *Society for the Anthropology of North America*.
- 2003 Environmental Representations. *Society for Social Studies of Science*.
- 1999 Constituting Relations between Science Studies and Science Education. *Society for Social Studies of Science*.

INVITED LECTURES

- Cutting through Environmental Conflict: An Experimental Approach. Lehigh University, January 2016. Invited.
- Accidental Regulation?: The Role of Technological Development in Shaping Regulatory Response to Refinery Disasters. University of Pennsylvania, History and Sociology of Science Colloquium, February 2015.
- Addressing "Unintended Consequences" through Participatory, Proactive Knowledge Production. Virginia Polytechnic Institute and State University, Science and Technology in Society Seminar Series, December 2014.
- Citizen Science in Two Cities: How Social Capital and Technological Choice Shape the Influence of Community-Based Air Monitoring. University of Washington, Geography Department Research Colloquium, November 2013.
- The Biopolitics of the Fenceline. University of Washington-Bothell, Interdisciplinary Arts and Sciences Research Colloquium, May 2011.

Oxbows and Eddies: Understanding How Community-Based Air Monitoring Has Affected Environmental Policy and Practice. Indiana University Sawyer Seminar – “Rupture and Flow: The Circulation of Technoscientific Facts and Objects,” April 2011.

Black Boxes and Clear Buckets: Environmental Justice and the Politics of Scientific Instruments. University of Pennsylvania, March 2010.

On Black Boxes and Clear Buckets: The Politics of Air Monitoring Instruments in the Environmental Justice Movement. Georgia Institute of Technology, April 2009.

Black-Boxing Citizen Science: The Evolution of Community-Friendly Air Monitors in the Environmental Justice Movement. National Museum of American History, Smithsonian Institution, July 2008.

Bucket Power? Community-based Air Monitoring and the Reassertion of Expert Authority. Olin College, April 2008.

Environmental Justice as a Design Criterion: The Evolution of Community-Friendly Air Monitors. University of Virginia and Chemical Heritage Foundation, Spring 2008.

Working Across Worlds as a Feature of Anthropological Engagement. Graduate Symposium on Engaged Anthropology, University of Virginia, October 2007.

Buckets of Resistance: How Standards Constrain Community-Based Air Monitoring’s Challenges to Expertise. Rensselaer Polytechnic Institute, Arizona State University, and University of Virginia, Spring 2007.

Engineering Responsibility: Air Monitoring and Ethical Obligations in Technical Practice. University of Virginia, June 2006.

“We Were Here First!” Temporal Narratives in Relations between Petrochemical Facilities and Their Residential Neighbors. Chemical Heritage Foundation, May 2006.

Just Science: Representations of Air Quality in the Quest for Environmental Justice. Pennsylvania State University, March 2006, and Wellesley College, December 2005.

Representing Responsibility: The Role of Citizen Science in Environmental Justice Controversy. University of California, Berkeley, April 2005.

Defining Public Space: The Petrochemical Industry’s Struggle to Engage Residential Neighbors in St. Charles Parish, Louisiana. Chemical Heritage Foundation, July 2003.

PUBLIC SCHOLARSHIP

Publications

- 2016 Gwen Ottinger, “A Missing Link in Making Meaning from Air Monitoring,” *Backchannels* (Society for Social Studies of Science Blog), April 16.
http://www.4sonline.org/blog/post/a_missing_link_in_making_meaning_from_air_monitoring
- 2016 Gwen Ottinger, “Technology that ‘works for us and not against us’,” *The Science, Knowledge, and Technology Section of the American Sociological Association Blog*, March 4.
<https://asaskat.com/2016/03/04/working-for-all-of-us-we-need-democratic-control-over-technology/>
- 2016 Gwen Ottinger, “Citizen Engineers at the Fenceline,” *Issues in Science and Technology*, Winter: 72-78.

- 2015 Gwen Ottinger, "Is it good science? Activism, values, and communicating politically relevant science." *Journal of Science Communication* 14 (2).
- 2014 Gwen Ottinger, "Groundbreaking Air Quality Study Demonstrates the Power of Citizen Science," *PLOS Blogs – Citizen Science*, November 6. <http://blogs.plos.org/citizensci/>
- 2014 Gwen Ottinger, "Residents must be integral part of any monitoring system," *Contra Costa Times*, September 5.
- 2014 Gwen Ottinger, "Creative Collaborations: How do two experts fashion one narrative?" *ThinkWritePublish.org*.
- 2012 Lee Gutkind, David Guston, and Gwen Ottinger, "To Think, To Write, To Publish: Science and Innovation Policy through the Looking Glass of Creative Nonfiction," *The Cairo Review of Global Affairs*, April.
- 2011 Gwen Ottinger with Rachel Zurer, "Drowning in Data," *Issues in Science and Technology*, Spring.
- 2011 Gwen Ottinger, *Community-Based Science: A Strategy for Achieving Environmental Justice and Improving Environmental Knowledge*, Studies in Sustainability White Paper Series. Philadelphia, PA: Chemical Heritage Foundation.
- 2010 Robert Brzozowski, Gwen Ottinger, Adam Cutler, Kate Zaidan, Douglas Lisk, and Matthew Hill, *Characterizing Airborne Particulates in Hunting Park*. Philadelphia, PA: Chemical Heritage Foundation.
- 2009 Allen A. Denio, Gwen Ottinger, and Jim Black, *Burning Biomass in Delaware? Energy Needs and Environmental Impacts*. Philadelphia, PA: Chemical Heritage Foundation.
- 2009 Gwen Ottinger, "When the Clunker is Greener," *Washington Post*, p. A17, August 4.
- 2008 Gwen Ottinger, "Assessing Community Advisory Panels: A Case Study from Louisiana's Industrial Corridor," Studies in Sustainability White Paper Series. Philadelphia, PA: Chemical Heritage Foundation.

Lectures and Interviews

- 2014 "Managing the Unintended Consequences of Green Energy." Part of *Revisiting Frankenstein: Innovation and Contemporary Monsters*, presented by the Drexel Alumni Association, September 16.
- 2013 "Community-Industry Dialogue: An Effective Way to Resolve Environmental Justice Controversy?" Presentation at EPA Region 10, May 28.
- 2012 "Science as Storytelling, Scientists as Storytellers." Radio interview featured on WORT's *Perpetual Notion Machine*, November 29.
- 2011 "Community-Based Science." Presentation to EPA Region 10 Environmental Justice Stakeholders Monthly Conference Call, December 8.
- 2011 "Getting Creative." Presentation at The DuPont Summit 2011 (Science, Technology, and Environmental Policy: Pressing Issues, Little Time), December 3.
- 2010 "What's in your Air? Low-tech Tools for Finding out." Presentation at *Science on Tap*, Philadelphia Science Café, April.
- 2009 "Did Cash for Clunkers Make Cents?" Interview with Sea Change Radio, August 26.

- 2009 "What Citizens Know that Scientists Don't: Environmental Justice and the Challenge of 'Local Knowledge.'" Lecture at the American Association for the Advancement of Science, AAAS-CHF History Seminar, June.
- 2008 "Gwen Ottinger Studies Technology's Role in Environmental Justice." Interview for *Prototype Online: Inventive Voices* Podcast, Lemelson Center, Smithsonian Institution, August.

PEDAGOGY

Courses

Drexel University

- Science, Technology, and Public Policy (undergraduate)
- Science and Technology Policy (graduate)

Interdisciplinary Arts and Sciences Program, University of Washington-Bothell

- Environmental Justice
- Science, Technology, and Society
- Interdisciplinary Inquiry
- Science, Expertise, Public Policy

Department of Science, Technology, and Society, University of Virginia

- Technology and Environmental Justice
- The Engineer, Ethics, and Society
- Western Technology and Culture

Curricular Activities

UW-Bothell Science, Technology, and Society Curriculum Area Working Group

UW Science Studies Network Graduate Certificate Steering Committee

UW-Bothell Undergraduate Research Steering Committee

Master of Arts in Policy Studies Curriculum Area Working Group

Environmental Studies Curriculum Area Working Group

Graduate Advising

Drexel University

Derek Parrott, "Energy Eventually? Big Science, Commercialization, and the Anomalous Case of Justificatory Policy Discourse around Fusion Energy Research in the U.S.," June 2016. Master of Science in Science, Technology, and Society Master's Project Advisor.

University of Washington-Bothell

Bogdana Manole, "Strategies of Recognition: An Analysis of Two Haida Corporations," May 2014. Master of Arts in Cultural Studies (MACS) Capstone Advisor.

Bob Congleton, "The Tribal Energy Program and Enhancement of Capabilities," May 2013. Master of Arts in Policy Studies (MAPS) Capstone Advisor.

Alison McNee, "Disciplinary Policy in Southeast Seattle Schools," May 2013. MAPS Capstone Advisor.

Cynthia Reese, "An Analysis of Qualifications-Based Selection in Washington State," May 2012. MAPS Capstone Second Reader

Jody Rauch, "Place, Identity, and Environmental Justice." Fall 2012 Master of Arts in Cultural Studies Directed Reading.

Outside Reader

Kirk Jalbert, "Promising Data for Public Empowerment: Data Cultures and Infrastructure in the Macellus Shale Water Monitoring Community," August 2015. Ph.D. in Science, Technology and Society, Rensselaer Polytechnic University.

Undergraduate Advising

University of Washington-Bothell

Shawn Friang, "Distribution of Wind Farms and Waste Facilities in the Pacific Northwest," May 2012. Recipient of a UWB Undergraduate Research Award.

SELECTED PROFESSIONAL SERVICE

University

Member, Science, Technology and Society Search Committee, Drexel University, 2016

Member, Sociology Department Head Search Committee, Drexel University College of Arts and Sciences, 2015

Coordinator, UW-Bothell Science, Technology, and Society Curriculum Area Working Group 2011 – 2013

Profession

Member, Society for Social Studies of Science (4S) Council, 2015-2018

- Chair, Publications Committee
- Member, Web Committee
- Member, 2016 and 2017 Infrastructure Award Committees
- Chair, 2017 Edge Prize Committee

Editorial Board Member, *Energy Research and Social Science*

Editorial Board Member, *Citizen Science: Theory and Practice*

Panelist, National Science Foundation Directorate for Social, Economic, and Behavioral Sciences

Program Committee Member, Society for Social Studies of Science 2011 Annual Meeting

Peer Reviewer for journals including *Energy Policy*; *Environmental Justice*; *Environmental Sociology*; *International Journal of Engineering, Social Justice and Peace*; *Journal of Environmental Policy and Planning*; *Social Studies of Science*; *Social Problems*; *Sociological Inquiry*; *Science as Culture*.

PROFESSIONAL MEMBERSHIPS

Society for Social Studies of Science

Western Political Science Association

International Network for Engineering Studies

Network for Engineering, Social Justice, and Peace

Science and Democracy Network