

LISA RUTH RAND

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CURRENT POSITION

University of Wisconsin-Madison Institute for Research in the Humanities

A.W. Mellon Postdoctoral Fellow, 2016-2018

Department of History and the Nelson Institute for Environmental Studies
Associate, Center for Culture, History, and Environment
Member, Holtz Center for Science & Technology Studies

EDUCATION

University of Pennsylvania

Ph.D. History and Sociology of Science, 2016.

Dissertation: "Orbital Decay: Space Junk and the Environmental History of Earth's Planetary Borderlands."

Graduate Certificate in Gender, Sexuality, and Women's Studies, 2015.

M.A. History and Sociology of Science, 2011.

New York University School of Continuing and Professional Studies

Certificate in Copyediting, 2007.

Barnard College, Columbia University

B.A. *cum laude*, English Literature and Creative Writing, minor in Astronomy, 2005.

PROFESSIONAL APPOINTMENTS

2014-present Research Associate, Department of Space History
 Smithsonian National Air and Space Museum

2013-present Adjunct Research Associate
 RAND Corporation

PUBLICATIONS

Books

Space Junk: A History of Waste in Orbit. Under review at University of Chicago Press and the University of Washington Press

Refereed

“Falling Cosmos: Nuclear Reentry and the Environmental History of Earth Orbit.” Accepted to *Environmental History*, forthcoming January 2019.

With Dave Baiocchi. *Good Seeing: Best Practices for Sustainable Operations at the Air Force Maui Optical and Supercomputing Site*. Santa Monica, CA: RAND Corporation, 2016.

Articles in Preparation

“Space Craft, Space Junk: Early Artificial Satellites as Global Boundary Objects.” In preparation for submission to *Technology and Culture*.

Book Chapters

“Technodiplomacy of the Planetary Periphery” with Nina C. Wormbs. In *ITU as Actor, Arena, and Antenna of Longue Durée Techno-Diplomacy*, Gabriele Balbi and Andreas Fickers, eds. In preparation.

“Beyond the Biosphere: Expanding the Limits of the Human World.” In *Living in the Anthropocene: Earth in the Age of Humans*, W. John Kress and Jeffrey K. Stine, eds. Washington, DC: Smithsonian Institution, 2017.

Digital Publications

“When the Sky Fell Over Wisconsin.” In *Edge Effects*. Forthcoming.

“Colonizing Mars: Practicing Other Worlds on Earth.” *Origins: Current Events in Historical Perspective* 11 no. 2 (November 2017).

“Biosphere 2: Why an Eccentric Ecological Experiment Still Matters 25 Years Later.” Editor and contributor of roundtable, *Edge Effects*. December 2016.

“The Case for Female Astronauts: Reproducing Americans in the Final Frontier.” *The Appendix* 2 no. 3 (July 2014).

American National Biography, s.v. “L. Gordon Cooper.” New York: Oxford University Press, 2014.

“Daryl Xavier: On Thick Ice,” *Scholar and Feminist*, Women on Ice, Issue 7.1, Fall 2008.

Book Reviews

Review of *The Unreliable Nation: Hostile Nature and Technological Failure in the Cold War*, Edward Jones-Imhotep. *Isis* (in preparation).

Review of *Earth, Life, and System. Evolution and Ecology on a Gaian Planet*, Bruce Clarke ed. *Isis* 107 no. 4. (December 2016).

Review of *Rise of the Rocket Girls: The Women Who Propelled Us, From Missiles to the Moon to Mars*, Nathalia Holt. *Physics World* (July 2016).

Review of *The Surveillance Imperative: Geosciences During the Cold War and Beyond*, Simone Turchetti and Peder Roberts, eds. *Quest: The History of Spaceflight Quarterly* 23 no. 1 (2016).

General Interest

“Seen from Space.” *Popular Mechanics*, January 26 2018.

“How Apollo Astronauts Took Out the Trash.” *Popular Mechanics*, July 21 2015.

“*Gravity, the Sequel: Why the Real Story Would Be on the Ground.*” *The Atlantic*, February 28 2014.

TEACHING EXPERIENCE

University of Wisconsin-Madison

HIST 600, Senior Capstone: *Environment and Technology in America*, Spring 2018.

ENVST 404 | HIST 221: *Trashed: History of Waste in America*, Fall 2017.

ENVST 404 | HIST 229: *Global Environmental History*, Spring 2017.

University of Pennsylvania

STSC 003: *Technology and Society*, teaching assistant. Spring 2012, Spring 2013.

STSC 001: *The Emergence of Modern Science*, teaching assistant. Fall 2011.

HSOC 102 | SOCI 101: *Bioethics*, teaching assistant. Spring 2011.

STSC 160: *The Information Age*, teaching assistant. Fall 2010.

RESEARCH AND TEACHING INTERESTS

Environmental history, history of technology, history of science, science and technology studies, Cold War, aerospace, critical discard studies, gender & sexuality, science fiction, futurism, utopianism, history of astronomy, science & technology policy, public history

FELLOWSHIPS, AWARDS, AND GRANTS

2018	Fellowship in Space History American Historical Association/NASA
2018	Residential Research Fellowship (declined) The Linda Hall Library
2017	Research Travel Grant Holtz Center for Science and Technology Studies
2016-2018	A. W. Mellon Postdoctoral Fellowship University of Wisconsin-Madison
2016-2018	Mellon Postdoctoral Fellowship in Environmental Studies (declined) Williams College

- 2016-2017 Postdoctoral Fellowship in the Social Sciences and Humanities (declined)
University of South Florida
- 2015-2016 NASA Fellowship in the History of Space Technology
Society for the History of Technology
- 2015-2016 Dissertation Writing Fellowship
Consortium for History of Science, Technology and Medicine
- 2011-2016 National Science Foundation Travel Grant
SHOT (2011, 2012, 2015), HSS (2012 and 2013), ASEH (2013 and 2016)
- 2014 Envirotech Travel Grant Award
American Society for Environmental History
- 2013-2014 Daniel and Florence Guggenheim Fellowship
National Air and Space Museum, Smithsonian Institution
- 2013-2014 NASA Fellowship in the History of Space Technology (declined)
Society for the History of Technology
- 2013-2014 Teece Fellowship
School of Arts and Sciences, University of Pennsylvania
- 2012-2013 Andrew W. Mellon Graduate Research Fellowship
Penn Humanities Forum, University of Pennsylvania
- 2012 Dissertation Proposal Development Fellowship, Alternate
Social Science Research Council
- 2010-2014 SASGov Travel Grant (2010, 2012, 2014)
University of Pennsylvania
- 2009-2015 Benjamin Franklin Fellowship
University of Pennsylvania
- 2001-2005 Centennial Scholar
Barnard College

INVITED ACADEMIC PRESENTATIONS

“Remote Sensing the Space Environment.” Space Science and Engineering Center,
University of Wisconsin-Madison, June 18 2018.

“Envirotechnical Disasters.” University of Wisconsin-Madison, Disasters in the History
of Science, April 4 2018.

“It Came from Outer Space: Solar Weather, Space Junk, and Envirotechnical Disaster during the Cold War,” Colby College, February 12 2018.

“Cosmic Nature: The Environmental Politics of Earth Orbit.” Humanities Friday Lunches lecture series, Center for the Humanities, University of Wisconsin-Madison, October 20 2017.

“Limited Space: Resistance to the Enclosure of Geostationary Orbit.” Holtz Center for Science & Technology Studies, University of Wisconsin-Madison, October 12 2017.

“Nuclear Satellites, Space Weather, and International Environmental Liability.” Institute for Research in the Humanities, University of Wisconsin-Madison, May 4 2017.

“Seeing and Knowing Earth From Space.” University of Wisconsin-Madison, Geographies of the Global Environment, February 23 2017.

“Orbital Watchdogs: Astronomers Against the Pollution of Outer Space during the Cold War.” University of Madison-Wisconsin Department of Astronomy, March 13 2017.

“Space Junk: An Environmental History.” History of Science Department Brown Bag Series, University of Wisconsin-Madison, September 30 2016.

“Terror in the Skies”: Falling Space Junk, Space Weather, and International Environmental Liability During the Long 1970s.” Bristol University Environmental Reading Group, March 16 2016.

“Rubbish Round the Earth”: Needles, Nukes, and the Roots of Outer Space Environmentalism, 1958-1964.” Reed College, February 17 2016.

“Out of This World: Environmental History of Near-Earth Space.” Featured guest on *Exploring Environmental History* Podcast #67, August 10 2015.

“The Case for Female Astronauts: Reproducing Americans in the Final Frontier.” Gender, Sexuality, and Women’s Studies Graduate Colloquium, University of Pennsylvania, February 3 2015.

“Behind the ‘Copper Curtain’: Project West Ford and the Roots of Outer Space Environmentalism, 1958-1964,” New York Metro Seminar on Environmental History, October 20 2014.

“Good Seeing: Best Practices for Sustainable Operations at the Maui Space Surveillance Complex,” RAND Corporation, 2013.

“Propelling Woman, Grounding Women: Conflicting Advocacy in the Aviation Career of Jacqueline Cochran,” Gender, Sexuality, and Women’s Studies Graduate Colloquium, University of Pennsylvania, November 11 2010.

CONFERENCES ORGANIZED

Organizing committee, “Global Science, Global Technology, Global Impacts: The Second Early-Career Conference for Historians of the Physical Sciences.” American Institute of Physics, College Park, MD. March 30-April 1 2014.

“Workshop on the History of the Environment, Agriculture, Technology, and Science (WHEATS).” University of Pennsylvania, Philadelphia, PA. Sponsored by the University of Pennsylvania, the Chemical Heritage Foundation, and the Consortium for the History of Science, Technology, and Medicine. March 15-17 2013.

CONFERENCE PANELS ORGANIZED

“Technologies of Self-Determination and Collective Action in African American Expert Communities,” Society for the History of Technology Annual Meeting, 2018.

“The Sky’s the Limit: Alternative and Ephemeral Effluence in Transboundary Technological Systems,” Society for the History of Technology Annual Meeting, 2017.

“Ethereal Wastescapes: Rethinking the Meaning, Place, and Materiality of Pollution,” American Society for Environmental History Annual Meeting, 2016.

“From Deep Sea to Near Space: Cultural Encounters with Extreme Nature,” American Society for Environmental History Annual Meeting, 2013.

CONFERENCE PRESENTATIONS

“Decay and Disruption: The Globalizing By/Products of the Cold War Space Industry,” Society for the History of Technology Annual Meeting, 2018.

“Markers of the Anthropocene: Bringing History to the Fore,” roundtable commentator, American Society for Environmental History Annual Meeting, 2018.

“Assignment Charrette: Creative Environmental History Assignments,” roundtable, American Society for Environmental History Annual Meeting, 2018.

“‘Allow Equitable Access to This Orbit’: Resistance to the Technological Colonization of Geosynchronous Space, 1972-1980,” Society for the History of Technology Annual Meeting, 2017.

“‘What Would an Old Woman Like Me Do on Altair?’: Reproductive Decay and Republican Motherhood Beyond Earth,” Association for the Study of Literature and Environment, 2017.

“Fallen Skies: Near-Earth Space as Global Environment During the Long 1970s,” American Society for Environmental History Annual Meeting, 2017.

“Critical Discard Studies and Environmental History: Revisited,” roundtable, American Society for Environmental History Annual Meeting, 2017.

“Un/making the Boundaries of the Global: Negotiating Environmental Governance of Near-Earth Space, 1958-1972,” Environment, Society, and the Making of the Modern World Workshop, 2016.

“Wasted Space: Production and Protest of Orbital Pollution, 1958-1988,” American Society for Environmental History Annual Meeting, 2016.

“Up to Earth: Falling Space Junk and the Spatial Expansion of Environmental Politics During the Long 1970s,” Society for the History of Technology Annual Meeting, 2015.

“Environmental History of Outer Space: An Overview,” Introductory Symposium, Consortium for the History of Science, Technology, and Medicine, 2015.

“The Sky Is Falling: Nuclear Space Junk and Problems of Global Environmental Governance, 1964-1983,” European Society for Environmental History Meeting, 2015.

“‘Our Only Chance is to Fight’: Optical and Radio Astronomers and the Environmental Protection of Outer Space, 1957–1963,” Biennial History of Astronomy Workshop, 2015.

“Landscapes in Orbit: The Material and Political Topography of Near-Earth Space,” American Historical Association Annual Meeting, 2015.

“Orbital Decay: Space Junk and the Environmental Politics of the Final Frontier,” Works-in-Progress series, Smithsonian National Air and Space Museum, 2014.

“What Is a Disaster? A Roundtable on Risk and Disaster Research in Environmental History,” American Society for Environmental History Annual Meeting, 2014.

“Earth Under Glass: The Search for Cultural Credibility through Analogy at the Biosphere 2,” History of Science Society Annual Meeting, 2013.

“Expanding the Exosphere: Space Debris and The Environmental Politics of Astronomy, 1958-1964,” Joint Atlantic Seminar for the History of the Physical Sciences, 2013.

“Orbital Extreme: Earthbound American Encounters with the Planetary Borderlands,” American Society for Environmental History Annual Meeting, 2013.

“A Dangerous Precedent”: Astronomers, Environmental Politics, and Protest against Project West Ford, 1958-1963,” History of Science Society Annual Meeting, 2012.

“A Dangerous Precedent”: Project West Ford and the Roots of Space Environmentalism, 1958-1963,” Society for the History of Technology Annual Meeting, 2012.

“The Sky is Failing: Space Junk, Satellites, and the American Encounter with a Hazardous Orbital Landscape,” Society for the History of Technology Annual Meeting, 2011.

“The Sky is Crowding: Perceptions of Environmental Threat from Earth Orbit,” Workshop on the History of the Environment, Agriculture, Technology, and Science, Massachusetts Institute of Technology, 2011.

“No 'Damned Housewife': Gendered Advocacy and Self-Fashioning in the Aviation Career of Jacqueline Cochran,” Thinking Gender Conference, University of California, Los Angeles, 2011.

INVITED PUBLIC PRESENTATIONS

Discussion with astrobotanist Simon Gilroy. Edge Effects Podcast, July 24 2018.

“Space Roomba.” Flash Forward podcast, June 19 2018.

“AirSpace Ep.6: Space Junk.” Smithsonian National Air and Space Museum Podcast, June 14 2018.

“Space Junk from the Moon to the Midwest.” University of Wisconsin-Madison Space Place, June 12 2018.

“Ep 42: Space Junk, Trash on the Moon, and the Earth’s Copper Ring.” Featured guest on *SparkDialog* Podcast, April 17 2018.

“When What Goes Up Doesn't Come Down: Space Junk.” On-air guest on *Where We Live*, WNPR Connecticut Public Radio, February 20 2018.

On-air guest discussing environmental history of extreme environments on *Earthspeak Radio*, WSUM Madison Student Radio, October 17 2017.

“Galactic Garbage And Sustainable Space.” On-air guest on *The Morning Show*, WPR Wisconsin Public Radio, October 10 2017.

Discussion with Neil Maher on *Apollo in the Age of Aquarius*. Edge Effects Podcast, June 2017.

“Women in Space: Fact and Fiction,” Madison Women in Technology, May 25 2017.

“Space Junk: Earth’s Mechanical Graveyard.” Madison Women in Technology, December 1 2016.

“Cleaning Up Outer Space.” What’s New in Aerospace Public Lecture, Smithsonian National Air and Space Museum, May 17 2016.

Televised discussion with Nathalia Holt on *Rise of the Rocket Girls: The Women Who Propelled Us, From Missiles to the Moon to Mars. After Words*, CSPAN. April 20 2016.

“Rubble Trouble: How Space Junk Impacts Astronomy.” Smithsonian’s Stars Lecture, Smithsonian National Air and Space Museum, December 6 2014.

“Space Junk: The Problem of Orbiting Trash.” On-air guest on *Radio Times*, WHYY Philadelphia Public Radio, May 28 2014.

“Project West Ford: Needles in Space,” Ask an Expert Program, Smithsonian National Air and Space Museum Udvar-Hazy Center, May 22 2014.

PROFESSIONAL SERVICE

Peer Review

Oxford University Press

Nature and Technology in History, SHOT/AHA booklet

History & Technology

Environment and Society: Advances in Research History and Technology

Awards Committees

Travel Grant Award Committee, Exploring Diversity in Technology’s History Special Interest Group, Society for the History of Technology, 2017-2021.

Program Committees

(un)SAFE: A Gender, Sexuality, and Women's Studies Graduate Student Conference. University of Pennsylvania, 2012

Future No Future: An Interdisciplinary Graduate Student Conference on the Future of Gender and Sexuality Studies University of Pennsylvania, 2010.

Departmental

Graduate assistant, Workshop Series in History and Sociology of Science, Medicine, and Technology. University of Pennsylvania, 2011-2012.

Faculty search committee graduate student liaison, Department of History & Sociology of Science, University of Pennsylvania, 2011-2012.

MEDIA INTEREST

Colleen Leahy, “Space Trash: What Is It And Why Is It A Problem?,” *Wisconsin Public Radio*, October 10 2017, <https://www.wpr.org/space-trash-what-it-and-why-it-problem>

Becky Little, “How Our Galactic Garbage May Come Back to Haunt Us.” *History Stories*, September 2017: <http://www.history.com/news/how-our-galactic-garbage-may-come-back-to-haunt-us>

Sarah Fecht, “Wanted: Uteruses to Populate Space Colony.” *Popular Science*, July 2014: <http://www.popsci.com/article/science/wanted-uteruses-populate-space-colony>

Blake Cole, “Space Junk: Lisa Ruth Rand Explores the Ecosystem of Deep Space.” *SAS Frontiers*, June 2013: <https://www.sas.upenn.edu/series/frontiers/space-junk>

OTHER EXPERIENCE

- 2017-present Coach and manager
Girls Rock Camp Madison
- 2016-present Volunteer
LGBT Books to Prisoners
- 2015-present Volunteer Astronomy Educator
#Popscope
- 2015-present Barnard Alumnae Admissions Representative (BAAR)
Barnard College
- 2014 Research assistant to Etienne Benson
University of Pennsylvania
- 2014 Volunteer Astronomy Educator
Phoebe Waterman Haas Public Observatory
Smithsonian National Air and Space Museum
- 2013 Graduate Summer Research Associate
RAND Corporation
- 2011-2013 Research assistant to Ruth Schwartz Cowan
University of Pennsylvania
- 2008-2009 Science Editor
Chelsea House, Infobase Publishing
- 2005-2008 Science Ancillaries Editor
Editorial Assistant, Physical Sciences
W. W. Norton and Company
- 2001-present Playwright
3-time Heideman Award finalist, Actors Theatre of Louisville
Plays published by Playscripts, Inc.

LANGUAGES

English (Native speaker), French (Intermediate), Hebrew (Reading), Spanish (Reading)

PROFESSIONAL MEMBERSHIPS

Society for the History of Technology (SHOT)
Exploring Diversity in Technology's History (EDITH) Special Interest Group
Women in Technological History (WITH) Special Interest Group
Envirotech Special Interest Group

History of Science Society (HSS)
American Historical Association (AHA)
American Society for Environmental History (ASEH)
Association for the Study of Literature and Environment (ASLE)
Consortium for the History of Science, Technology, and Medicine (CHSTM) Working
Groups in Earth & Environmental Sciences, Technology, and Physical Sciences