

Ongoing Projects in the McCright Lab

(Potential Opportunities for Ambitious Graduate Students)

The “McCright Lab” sociologically investigates how interrelationships among scientific developments, political processes, and social dynamics affect society’s capacity for recognizing and dealing with environmental degradation and technological risks. The main lab projects engage with environmental sociology, political sociology, social movements, sociology of science and technology, and sociology of risk. Often, projects are located at the intersection of two or more of these areas.

Below are descriptions of ongoing projects for which Dr. McCright is seeking graduate student collaborators. Each project requires a strong commitment from the interested graduate student, who will be expected to work hard, learn quickly, and continually strengthen each student’s theoretical, methodological, and analytical competencies over the duration of the project.

Some projects are more completely developed than others. The more developed projects are less risky for students looking for experience with projects that will likely present fewer challenges, produce expected results, and lead to quicker publications than the less developed projects. The latter are more risky for students, mostly because of steeper theoretical, substantive, and methodological learning curves and greater uncertainties regarding future outcomes. However, graduate students may more completely take ownership of less developed projects, asserting more intellectual independence and developing more of a voice/identity with the project—perhaps making it their core early career project from dissertation through promotion and tenure.

The ongoing projects of the lab are grouped into thematic areas. Each thematic area contains some background readings to improve understanding of earlier work on the projects in that area. The brief project descriptions also contain keyword tags in brackets. Theoretical/conceptual keywords are in purple, substantive keywords are in green, and methodological/analytical keywords are in red.

Climate Change Denial and Politics

Background Readings

- McCright, Aaron M., and Riley E. Dunlap. 2000. “Challenging Global Warming as a Social Problem: An Analysis of the Conservative Movement’s Counter Claims.” *Social Problems* 47(4):499-522.
- McCright, Aaron M., and Riley E. Dunlap. 2003. “Defeating Kyoto: The Conservative Movement’s Impact on U.S. Climate Change Policy.” *Social Problems* 50(3):348-373.
- McCright, Aaron M. 2007. “Dealing With Climate Change Contrarians.” Pp. 200-212 in *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*, edited by Susanne C. Moser and Lisa Dilling. New York: Cambridge University Press.
- Dunlap, Riley E., and Aaron M. McCright. 2010. “Climate Change Denial: Sources, Actors, and Strategies.” Pp. 240-259 in *Routledge Handbook of Climate Change and Society*, edited by Constance Lever-Tracy. New York: Routledge Press.
- McCright, Aaron M., and Riley E. Dunlap. 2010. “Anti-Reflexivity: The American Conservative Movement’s Success in Undermining Climate Science and Policy.” *Theory, Culture, and Society* 27(2-3):100-133.
- Dunlap, Riley E., and Aaron M. McCright. 2011. “Organized Climate Change Denial.” Pp. 144-160 in *Oxford Handbook of Climate Change and Society*, edited by John Dryzek, Richard Norgaard, and David Schlosberg. Cambridge: Oxford University Press.
- McCright, Aaron M., and Riley E. Dunlap. 2012. “Organized Denial and Political Polarization on Climate Change in the United States.” Pp. 173-194 in *Controverses Climatiques, Sciences et Politiques*, edited by Edwin Zaccai, François Gemenne and Jean-Michel Decroly. Paris: Sciences Po Press.

Project: Content Analysis of Energy and Environment

Many years ago, this journal was taken over by climate change contrarian and IPCC critic Sonja Boehmer-Christiansen (<http://www.multi-science.co.uk/ee.htm>). Since then it has become a friendly outlet for deniers and contrarians to get their work published in a peer-reviewed journal. Indeed, *E&E* articles are central to the ongoing climate change denial movement.

MSU is one of a handful of universities around the world that still subscribes to this journal, so we have full access to every issue of this journal since 1999. This project would entail conducting a content analysis of every published unit in this journal since 1999 to examine authorship, citation, content, etc. patterns over time.

[anti-reflexivity] [non-problematicity] [science] [climate change] [available data research] [qualitative data analysis]

Project: Empirical Extensions of Anti-Reflexivity (and Manufacturing Uncertainty)

McCright and Dunlap (2010) document the “anti-reflexivity playbook” the conservative movement (and some in the fossil fuels industry) uses to “manufacture uncertainty” regarding climate science in the minds of policy-makers and the general public. This work builds upon concepts of “nondecision-making” and “impact science” that emerged in earlier years in political sociology and environmental sociology, respectively. This project would entail theoretically and empirically extending the concept of anti-reflexivity and the process of manufacturing uncertainty beyond the case of climate change. Potential cases include those where some impact science produces evidence that is used by others to argue for economic/industrial regulation or monitoring: fracking; CAFOs (especially with the recent ag-gag laws); traumatic brain injuries in the NFL; among others.

[anti-reflexivity] [nondecision-making] [power] [impact science] [manufacturing uncertainty] [case study research]

Climate Change Public Opinion

Background Readings

- Dunlap, Riley E., and Aaron M. McCright. 2008. "A Widening Gap: Republican and Democratic Views on Climate Change." *Environment* 50(5):26-35.
- McCright, Aaron M. 2009. "The Social Bases of Climate Change Knowledge, Concern, and Policy Support in the US General Public." *Hofstra Law Review* 37(4):1017-1047.
- McCright, Aaron M. 2009. "The Politics of Climate Change." Pp. 107-112 in *Workshop on Sociological Perspectives on Global Climate Change*, edited by Joane Nagel, Thomas Dietz, and Jeffrey Broadbent. Washington, D.C.: National Science Foundation.
- McCright, Aaron M. 2010. "The Effects of Gender on Climate Change Knowledge and Concern in the American Public." *Population and Environment* 32:66-87.
- McCright, Aaron M. 2011. "Political Orientation Moderates Americans' Beliefs and Concern about Climate Change." *Climatic Change* 104(2):243-253.
- McCright, Aaron M., and Riley E. Dunlap. 2011. "The Politicization of Climate Change and Polarization in the American Public's Views of Global Warming, 2001-2010." *The Sociological Quarterly* 52:155-194.
- Marquart-Pyatt, Sandra, Rachael L. Shwom, Thomas Dietz, Riley E. Dunlap, Stan A. Kaplowitz, Aaron M. McCright, and Sammy Zahran. 2011. "Understanding Public Opinion on Climate Change: A Call for Research." *Environment* 53(4):38-42.
- McCright, Aaron M., and Riley E. Dunlap. 2011. "Cool Dudes: The Denial of Climate Change among Conservative White Males in the United States." *Global Environmental Change* 21:1163-1172.
- McCright, Aaron M., and Riley E. Dunlap. 2012. "Organized Denial and Political Polarization on Climate Change in the United States." Pp. 173-194 in *Controverses Climatiques, Sciences et Politiques*, edited by Edwin Zaccai, François Gemenne and Jean-Michel Decroly. Paris: Sciences Po Press.
- McCright, Aaron M., Riley E. Dunlap, and Chenyang Xiao. 2013. "Perceived Scientific Agreement and Support for Government Action on Climate Change in the USA." *Climatic Change* 119:511-518.
- Dietz, Thomas, Christina Leshko, and Aaron M. McCright. 2013. Politics Shapes Individual Choices about Energy Efficiency." *Proceedings of the National Academy of Sciences* doi:10.1073/pnas.1307484110.

Project: Climate Change Messaging Experiments

Much scholarship has focused on the disconnect between climate science and the general public. Climate scientists and science/environmental journalists are attempting to improve their efforts at communicating climate change to the general public and policy-makers. Also, social scientists are investigating how different aspects of climate change messages may influence audience members' knowledge and concern about climate change and willingness to change their behaviors and/or support policy proposals to deal with climate change.

A range of different factors may be manipulated experimentally to examine their communicative effectiveness. Some of these are: information about threat severity (e.g., how far in the future the harm will occur, how many people are affected, how culturally similar the victims are to the respondent); the presentation of scientific consensus (qualitatively described versus quantitatively described); the presentation of scientific uncertainty (described qualitatively ["very likely"] or quantitatively ["85% likely"]; described precisely ["75% likely"] versus less precisely ["between 65% and 85% likely"]); the organizational affiliation of the scientist communicating the message (government agency, university, corporation, conservative think tank); the political orientation or religious affiliation of the scientist communicating the message (liberal, conservative, independent; Christian, non-Christian, non-religious); the media outlet conveying a news story about climate change (Fox News, MSNBC, NPR); the presence of the "dueling scientists scenario" in a message on climate change; etc.

This project would use Mechanical Turk to solicit subjects and Survey Monkey to administer the embedded experiment surveys.

[[risk perception theory](#)] [[other social psychological theories](#)] [[climate change](#)] [[experimental research](#)] [[survey research](#)] [[quantitative data analysis](#)]

Environmental Concern

Background Readings

- Dunlap, Riley E., Chenyang Xiao, and Aaron M. McCright. 2001. "Politics and Environment in America: Partisan and Ideological Cleavages in Public Support for Environmentalism." *Environmental Politics* 10(4):23-48.
- Xiao, Chenyang, and Aaron M. McCright. 2007. "Environmental Concern and Socio-Demographic Variables: A Study of Statistical Models." *Journal of Environmental Education* 38(2):3-13.
- McCright, Aaron M. 2010. "The Effects of Gender on Climate Change Knowledge and Concern in the American Public." *Population and Environment* 32:66-87.
- McCright, Aaron M., and Riley E. Dunlap. 2011. "Cool Dudes: The Denial of Climate Change among Conservative White Males in the United States." *Global Environmental Change* 21:1163-1172.
- Xiao, Chenyang, and Aaron M. McCright. 2012. "Explaining Gender Differences in Concern about Environmental Problems in the United States." *Society and Natural Resources* 25:1067-1084.
- Xiao, Chenyang, and Aaron M. McCright. 2012. "A Test of the Biographical Availability Argument for Gender Differences in Environmental Behaviors." *Environment and Behavior* DOI: 10.1177/0013916512453991.

- Xiao, Chenyang, and Aaron M. McCright. 2013. "Gender Differences in Environmental Concern: Revisiting the Institutional Trust Hypothesis in the USA." *Environment and Behavior* doi: 10.1177/0013916513491571.
- McCright, Aaron M., and Riley E. Dunlap. 2013. "Bringing Ideology In: The Conservative White Male Effect on Worry about Environmental Problems in the United States." *Journal of Risk Research* 16:211-226.
- Clements, John M., Aaron M. McCright, and Chenyang Xiao. 2013. "Green Christians?: An Empirical Examination of Environmental Concern within the U.S. General Public." *Organization and Environment* doi: 10.1177/1086026613495475.
- Kojola, Erik, Chenyang Xiao, and Aaron M. McCright. 2014. "Environmental Concern of Labor Union Members in the United States." *The Sociological Quarterly* Accepted for Publication.
- McCright, Aaron M., and Aksel Sundström. 2014. "Examining Gender Differences in Environmental Concern in the Swedish General Public, 1990-2011." *International Journal of Sociology* Accepted for Publication.

Project: Gender and Environmental Concern in the US

This project entails simultaneously testing prevailing theories explaining gender differences in environmental concern with nationally representative survey data from the US general public. It directly builds upon recent work by McCright and Xiao listed above. This project is ready-made to become a dissertation. The next step is securing an NSF grant to conduct the survey research after some preliminary work to pilot study some new, refined measures of gender and key predictor/mediator variables.

[gender socialization theory] [values orientation hypothesis] [risk perception hypothesis] [safety concerns hypothesis] [gender] [environmental concern] [survey research] [quantitative data analysis]

Social Movements and Public Opinion

Background Readings

- Dunlap, Riley E., and Aaron M. McCright. 2008. "Social Movement Identity: Validating a Measure of Identification with the Environmental Movement." *Social Science Quarterly* 89(5):1045-1065.
- McCright, Aaron M., and Riley E. Dunlap. 2008. "Belief Systems and Social Movement Identity: An Examination of the Consistency of Beliefs about Environmental Problems within the American Public." *Public Opinion Quarterly* 72(4):651-676.
- McCright, Aaron M., and Riley E. Dunlap. 2008. "The Nature and Social Bases of Progressive Social Movement Ideology: Examining Public Opinion toward Social Movements." *The Sociological Quarterly* 49(4):825-848.

Project: Social Movement Identity in the US General Public

This project entails empirically examining public opinion about a wide range of social movements across the political spectrum in the US general public via a nationally representative survey. Such a survey will measure support for and opposition to the goals of a wide range of social movements, individuals' level of identification with these movements, and self-reported behaviors related to these social movements. It would be the first national survey about social movements in the US. This project is ready-made to become a dissertation. The next step is securing an NSF grant to conduct the survey research.

Over the long term, this project will help us more effectively examine currently understudied rank-and-file movement members, sympathetic adherents, and unsympathetic opponents in the general public. It will help us better understand predictors of, and barriers to, activism and also the dynamics of public support as a movement resource. This project will examine patterns of overlapping participation in and support for multiple movements within the general public, and thus expand upon recent work on activists' involvement with multiple movements.

Future extension of this project will involve designing and implementing a panel study to track changes in individuals' participation in, support for, or opposition to movements over time, potentially linking observed patterns to such phenomena as changes in media coverage and political opportunity structure. This will allow us to examine the socio-political bases of support for, or opposition to, social movements among the general public, including analyzing how support and opposition broadens or narrows over time.

[social movements theories] [identity theory] [micromobilization theory] [social movements] [public opinion] [social movement identity] [survey research] [qualitative data analysis] [quantitative data analysis]

Sociology of Science

Background Reading

- McCright, Aaron M. 2008. *An Analysis of Scientific Practices at Tropical Field Stations*. 2008. Research Grant Proposal. National Science Foundation. Division of Social and Economic Sciences. Science and Society Program. \$357,444 requested. Not funded.

Project: Gender Performance at a Tropical Field Station

Extending earlier "laboratory studies" in which social scientists analyzed the dynamics of scientific practices and knowledge production of bench science laboratories, work already done in this project has done the same field science settings. Two summers of fieldwork at two biological field stations in Panama have already been conducted—with most fieldwork done at one of them. This fieldwork has produced extensive field notes, transcripts of a few dozen interviews, and a collection of hundreds of archival/legacy photos of one field station from 1978 to the late 2000s. Perhaps the easiest publication with this data would focus

on the gender performance of scientists and staff members and/or focus on the organizational culture of the one field station for which there are much more data—including the hundreds of archival photos.

[gender socialization theory] [laboratory studies concepts] [science] [gender] [culture] [visual sociology] [ethnographic research] [available data research] [qualitative data analysis]

Project: Examination of Scientific Practices at Tropical Field Stations

This project would entail a substantial revision of the earlier grant proposal noted above. This project is designed to become a dissertation for someone who really wants to do sociology of science and ethnographic research outside of the US. This would be the first major ethnography of a field science setting in sociology.

[various sociology of science theories] [science] [various substantive topics of interest] [ethnographic research] [case study research] [qualitative data analysis]

Sociology of Risk

Background Readings

Rosa, Eugene A., Aaron M. McCright, and Ortwin Renn. 2010. "Jürgen Habermas and Risk Society Theory: The Meeting of Passing Ships." *Quaderni di Teoria Sociale* 10:55-82.

Rosa, Eugene A., Ortwin Renn, and Aaron M. McCright. 2013. *The Risk Society Revisited: Social Theory and Governance*. Philadelphia, PA: Temple University Press.

Project: Sociological Insights on Societal Risk

This project entails extending the ideas promoted in the 2013 book by Rosa, Renn, and McCright listed above. Read it, and develop some arguments/avenues you want to pursue.

[conception and operational definitions of risk] [reflexive modernization theory] [systems theory] [critical theory] [risk] [governance] [survey research] [case study research] [qualitative data analysis] [quantitative data analysis]

Sociology of STEM Education

Background Readings

McCright, Aaron M. 2012. "Enhancing Students' Scientific and Quantitative Literacies through a Sociological Inquiry-Based Learning Project on Climate Change." *Journal of the Scholarship of Teaching and Learning* 12(4):86-102.

Sweeder, Ryan D., Kathleen A. Jeffery, and Aaron M. McCright. 2012. "Lyman Briggs College: An Innovative Living-Learning Community for STEM Education." *Quality Approaches in Higher Education* 3(2):7-14.

McCright, Aaron M., Brian O'Shea, Ryan Sweeder, Gerald Urquhart, and Aklilu Zeleke. 2013. "Promoting Interdisciplinarity through Climate Change Education." *Nature Climate Change* doi: 10.1038/nclimate1844.

Project: Students' Evaluations of Instructors and Courses in STEM Disciplines

This project is relatively well-developed. A collaborative team has been assembled, ready to analyze almost a decade's worth of course evaluation data from Lyman Briggs College STEM courses. A Professorial Assistant conducted an extensive search for all existing publications on predictors of course evaluations, putting information about these existing studies into an Excel spreadsheet. The literature review needs to be written from this work. After that, the team will run analytical models based upon insights derived from this literature review.

[insights from existing literature on predictors of course evaluations] [STEM education] [survey research] [quantitative data analysis]

Project: Survey of HPS Knowledge, Skills, and Attitudes

The project entails the development and testing of a standardized instrument to measure STEM students' knowledge, skills, and attitudes regarding the interdisciplinary field of history, philosophy, and sociology of science (HPS). Pre-test and post-test versions of such a survey would then be used to measure the effectiveness of LB 133: Introduction to History, Philosophy, and Sociology of Science in the Lyman Briggs College curriculum. Along the way, such a survey would allow for answering important sociological questions about STEM education.

[core HPS concepts] [science] [STEM education] [survey research] [quantitative data analysis]

Project: Climate Change Science Education in LBC

This project would specifically follow through with the recommendations in McCright et al. (2013) listed above. Briefly, that article argues that the topic of climate change and local/regional data on climate change may effectively be used to significantly improve the scientific, quantitative, and climate literacies of STEM students. The next step in this project is to secure an NSF grant to support this research. The grant proposal could be written so as to fully support a graduate student to take this project on for his/her dissertation.

[education theory] [scientific literacy] [quantitative literacy] [climate literacy] [climate change] [STEM education] [survey research] [qualitative data analysis] [quantitative data analysis]