

Trisha R. Shrum

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ASSISTANT PROFESSOR AT THE UNIVERSITY OF VERMONT

Department of Community Development & Applied Economics Faculty
Masters of Public Administration Program Faculty
Sustainable Development, Policy, Economics, & Governance Doctoral Program Faculty
Social Ecological Gaming and Simulation (SEGS) Lab Research Fellow
Gund Institute for the Environment Faculty Affiliate

Areas of specialization

Climate Change, Behavioral Science, Environmental Economics, Behavioral Economics, Experimental Economics, Environmental Policy, Risk & Uncertainty

Appointments held

2018-2021 Assistant Professor, Community Development & Applied Economics, University of Vermont
2016-2018 Post-Doctoral Research Associate, Earth Lab, University of Colorado, Boulder

Education

2016 PhD in Public Policy, Harvard University
2009 MESC, Yale School of the Environment
2006 BA, in Environmental Science, University of Kansas
2006 BS, in Ecology and Evolutionary Biology, University of Kansas

Publications & talks

JOURNAL ARTICLES

- 2021 Merrill, S., Trinity, L., Clark, E.M., **Shrum, T.**, Koliba, C.J., Zia, A., Bucini, G., Sellnow, T.L., Sellnow, D.D., Smith, J.M. Message delivery strategy influences willingness to comply with biosecurity. Forthcoming at *Frontiers in Veterinary Science, section Veterinary Humanities and Social Sciences*.
- 2021 **Shrum, T.R.** (2021). The salience of future impacts and the willingness to pay for climate change mitigation: an experiment in intergenerational framing." *Climatic Change* 165(1): 1-20. <https://doi.org/10.1007/s10584-021-03002-6>.
- 2021 Clark, E.M., Merrill, S.C., Trinity, L., Bucini, G., Cheney, N., Langle-Chimal, O., **Shrum, T.R.**, Koliba, C., Zia, A., Smith, J. (2021). Emulating Agricultural Disease Management: Comparing Risk Preferences Between Industry Professionals and Online Participants Using Experimental Gaming Simulations and Paired Lottery Choice Surveys. *Frontiers in Veterinary Science*, 7: 1-12. <https://doi.org/10.3389/fvets.2020.556668>.
- 2020 Balch, J., Iglesias, V., Braswell, A., Rossi, M., Joseph, M.B., Mahood, A.L., Travis, W., **Shrum, T.R.**, White, C.T., Scholl, V. and McGuire, B. (2020). Social-environmental extremes: Rethinking extraordinary events as outcomes of interacting biophysical and social systems. *Earth's Future*, 8, e2019EF001319. <https://doi.org/10.1029/2019EF001319>
- 2020 **Shrum, T.R.**, Markowitz, E., Buck, H., Gregory, R., van der Linden, S., Attari, S. Z., Van Boven, L. (2020). Behavioural frameworks to understand public perceptions of and risk response to carbon dioxide removal. *The Royal Society: Interface Focus*, 10(5), 20200002. <https://doi.org/10.1098/rsfs.2020.0002>.
- 2020 Clark, E.M., Merrill, S.C., Trinity, L., Bucini, G., Cheney, N., Langle-Chimal, O., **Shrum, T.R.**, Koliba, C., Zia, A. and Smith, J.M. (2020). Using Digital Field Experiments To Elicit Risk Mitigation Behavioral Strategies For Disease Management Across Agricultural Production Systems. *PLoS ONE*, 15(3): 1-18. <https://doi.org/10.1371/journal.pone.0228983>.
- 2018 **Shrum, T.R.**, Travis, W.R., Williams, R, Lih, E. (2018). Managing Climate Risks on the Ranch with Limited Drought Forecasts. *Climate Risk Management*, 20: 11-26. <https://doi.org/10.1016/j.crm.2018.01.002>

WORKING PAPERS & MANUSCRIPTS UNDER REVIEW

Shrum, T.R., Nowak, S.A., Merrill, S.C., Hanley, J.P., Liu, T., Clark, E.M., Zia, A., Koliba, C. Pro-Environmental Attitudes, Altruism, and COVID-19 Risk Management Behavior. Under review at *Environmental Health Perspectives*. Preprint: <https://doi.org/10.31235/osf.io/fm29j>

Shrum, T.R., Molokandov, R. (2021). Endogenous Preferences, Intrinsic Motivation, and the Evolution of Pro-Environmental Behavior. SSRN Working Paper. <http://ssrn.com/abstract=3837023>.

Molokandov, R., Zia, A., **Shrum, T.** Quantifying the Structural Effects of Identity, Attitude, Concern, and Warm-Glow on Weak versus Strong Pro-Environmental Behaviors. Under review at *Environment and Behavior*.

Koliba, C., Merrill, S., Zia, A., Wiltshire, S., Bucini, G., Clark, E., Trinity, L., **Shrum, T.**, Smith, J. Synthesizing Micro-Macro Scales in Public Administration Through Experimental Simulation Platforms: Assessing Strategic, Tactical and Operational Risk in a Livestock Production Chain. Under review at the *Journal of Behavioral Public Administration*.

POLICY PAPERS

- 2009 **Shrum, T.** (2009) The Carbon Tax. in H. Girardet M. Mendoca (Eds.), *A Renewable World: Energy, Ecology, Equality*, Green Books.
- 2008 **Shrum, T.** (2008) Additional Costs of the Proposed Holcomb Coal Plant Expansion under the Lieberman-Warner Bill (S.2191), policy analysis prepared for the Kansas State Legislature.
- 2008 **Shrum, T.** “Greenhouse Gas Emissions: Policy and Economics,” white paper prepared for the Kansas Energy Council and published by CarbonTax.org.

REFEREED PRESENTATIONS & PROCEEDINGS

- 2021 Shrum, T. “Endogenous Preferences in Pro-Environmental Behavior.” Western Economic Association International. Virtual International Conference. March 18, 2021.
- 2021 Merrill, S.C., Bucini, G., Clark, E.M., Koliba, C.J., Trinity, L., Zia, A., Langle-Chimal, O., Cheney, N., Shrum, T.R., Sellnow, T., Sellnow, D.D., and Smith, J.M. (2021). Why we need to account for human behavior and decision-making to effectively model the non-linear dynamics of livestock disease. Proceedings of the International Crisis and Risk Communication Conference, Volume 4 (pp. X-X). Orlando FL: Nicholson School of Communication and Media. <https://www.doi.org/10.30658/icrcc.2021.XX>
- 2020 Shrum, T. “Experiments in Ranching: Rain-Index Insurance and Investment in Production and Drought Risk Management.” Northeastern Agricultural and Resource Economics Association Annual Conference. June 17, 2020.
- 2020 Merrill, S.C., Koliba, C., Bucini, G., Clark, E., Trinity, L., Zia, A., Cheney, Z., Langle, L., Shrum, T.R., Sellnow, T., Sellnow, D., Smith, J.M. (2020). A systems approach to understanding biosecurity decision-making. American Society of Animal Science Annual Meeting. November 4, 2020.
- 2018 Front Range Energy Camp. “Behavioral Motivations for Energy Efficiency Investments: Episodic Prospection and Intertemporal Decision-making.” Presentation. University of Colorado Boulder. May 17, 2018.
- 2016 “Dear Tomorrow, a promise to the future about climate change.” Presented at MIT’s Crowds and Climate conference with Jill Kubit. Massachusetts Institute of Technology. September 29, 2016.
- 2013 Trisha Shrum. “Mind the Gap: Expectation Biased Perception and the Energy Paradox.” Research Sketch at the Camp Resources Workshop. August 5, 2013.
- 2012 Todd Rogers and Trisha Shrum. “Mind the Gap: Self-Perpetuating Perceptions and the Energy Efficiency Gap.” Research presentation and conference paper at the Conference on Behavioral and Environmental Economics at the University of Toulouse. October 12, 2012.
- 2009 Weslyne Ashton, Ariana Bain, and Trisha Shrum. “Life-cycle based comparison of the reuse of

agricultural residues as fuel and feedstocks in South India.” Poster presentation at the International Society for Industrial Ecology Conference, Lisbon, Portugal, June 21-24, 2009.

INVITED TALKS

- 2021 Shrum, T., “Experiments in Ranching: Rain-Index Insurance and Investment in Production and Drought Risk Management.” AAEA-WAEA Conference. Austin, Texas. August 2-3.
- 2021 Shrum, T. “Endogenous Preferences, Intrinsic Motivation, and the Evolution of Pro-Environmental Behavior.” Seminar. University of Maine, Department of Economics. February 26, 2021.
- 2020 Merrill, S. C., Clark, E., Bucini, G., Koliba, C., Trinity, L., Cheney, N., Langle-Chimal, O. D., Sellnow, T., Sellnow, D., Zia, A., Shrum, T., Beattie, R., Urbani, J., Wiltshire, S., and Smith J. M. “Systems Approach to Understanding Biosecurity Decision-Making.” ASAS-CSAS-WSASAS Virtual Annual Meeting Trade Show, July 2020.
- 2020 “Behavioral Frameworks for Risk Responses and Value Assessments of Carbon Dioxide Removal.” Presentation. Jumpstarting the New Carbon Economy. Columbia University. January 27, 2020.
- 2019 Harvard Environmental Economics Program Workshop. Panelist. September 20, 2019.
- 2019 “Exploring how future prospecting affects the willingness to pay for carbon mitigation and time preferences.” Lightning Talk. Human/Societal Dimensions of a New Carbon Economy Workshop. Cornell in Washington. February 13, 2019.
- 2018 “Experiments in Ranching: Rain-Index Insurance and Investment in Production and Drought Risk Management.” Presentation. Boulder Economics Departmental Seminar. March 2, 2018.
- 2017 “Drought Risk Insurance and Ranching R (DRIR-R) Experimental Model.” Led Workshop and Presentation at the Western Water Assessment, North Central Climate Science, and Northern Plains Climate Hub Retreat. Central Plains Experimental Range, Colorado. June 22, 2017.
- 2017 “Earth Lab’s Drought and PRF Model.” Modeling Rangeland Livestock, Drought, and PRF Insurance Workshop. University of Wyoming. February 3, 2017.
- 2014 “Building Public Support for Arctic Renewable Energy: Lessons from Behavioral Science.” Invited speaker at Arctic Circle Conference Plenary Session in Reykjavik, Iceland. November 2, 2014.

Grants, honors & awards

GRANTS

- 2021 Gund Institute Catalyst Award, co-Investigator. Proposal title: Hemp as a contributor to Rural Resilience and Sustainability.
- 2020 Gund Institute COVID-19 Rapid Research Fund, Co-PI. Proposal title: COVID-19 Outbreak Behavior Experimental Simulation Game and Survey: Accounting for the Heterogeneity of Human Behavior to Prevent Infection Spread Due to Pro-Environmental Attitudes and Behaviors.
- 2018 UVM OVPR EXPRESS Award
- 2018 HATCH grant, PI. Proposal title: Future Prospecting, Time Preference, and Demand for Climate Change Mitigation.

- 2018 University of Colorado Boulder Research and Innovation Office Seed Grant, Collaborator with Sherri Cook, Amanda Carrico, and Max Boykoff. Proposal title: Resilient and Sustainable Sanitation Systems.
- 2016 KR Foundation Grant
- 2015 Harvard GSAS Dissertation Completion Fellowship
- 2015 Foundations of Human Behavior Research Grant
- 2015 Harvard Office of Sustainability Grant
- 2015 Harvard Environmental Economics Program Research Grant
- 2011 Harvard Real Estate Academic Initiative Fellowship
- 2008 Yale University Tropical Resources Institute Fellowship

HONORS & AWARDS

- 2019 UVM Sustainability Fellow
- 2017 Grist 50: Top Innovative Environmental Leaders
- 2016 MIT Climate CoLab “Shifting Behavior for a Changing Climate” Winner
- 2015 Top Creative in the Climate Issue of Origin Magazine, December 2015
- 2014 Rising Star in Renewable Energy Climate Change, Arctic Circle
- 2006 Phi Beta Kappa Society
- 2004-2005 Morris K. Udall Scholar

Teaching

GRADUATE COURSES

- 2021 The Political Economy of Sustainable Development, University of Vermont
- 2014 Energy Policy Analysis, Harvard University, Teaching Assistant to Dr. Henry Lee
- 2013 Economic Analysis of Public Policy, Harvard University, Teaching Assistant to Professor Joe Aldy
- 2009 Economics of Sustainable Development, Yale University, Teaching Assistant to Professor Gary Yohe
- 2008 Economics of Pollution, Yale University, Teaching Assistant to Professor Robert Mendelsohn

UNDERGRADUATE COURSES

- 2018-2021 Introduction to Community Entrepreneurship, University of Vermont
- 2019-2021 Strategic Planning for Community Entrepreneurs, University of Vermont
- 2015 Fundamentals of Environmental Economics and Policy, Harvard University, Teaching Assistant to Professor Robert Stavins
- 2011-2013 Principles of Economics, Harvard University, Section Leader for Professor Greg Mankiw
- 2011 Economics of the Environment, Natural Resources, and Climate Change, Harvard University, Teaching Assistant to Professor Martin Weitzman

Professional Service

2017-2021	Reviewer for <i>Behavioral Science & Policy</i> , <i>The Energy Journal</i> , <i>the Journal of Environmental Economics and Management</i>
2019-2021	UVM Pitch Competition Planning Committee
2021-2022	SDPEG PhD Program Student Progress Committee
2020-2021	SDPEG PhD Program Recruitment & Admissions Committee
2020-2021	Faculty Senator for the UVM Faculty Senate
2018	USGS Drought Social Science Synthesis Working Group
2018	Founder and Co-Chair of the Earth Lab Research Incubator Seminar Series
2017	Interview Committee for the Associate Director for Science of CIRES
2016-2017	Research Intern Mentor for CU Earth Lab Project Risk Undergraduates
2016	Volunteer for the Behavioral Exchange conference at Harvard
2015	Harvard President Faust's Complementary Mechanisms Advisory Committee

Public Service & Outreach

2014-2021	Co-Founder, founding director, and current advisor of DearTomorrow a climate communications project with a global reach and media coverage by the New York Times, Vox, NPR, and others
2020	Podcast guest for the NORI Carbon Removal Newsroom
2019	Speaker at the Pecha Kucha Burlington
2017	Contributor to <i>Our Arctic Nation</i> , a book published by the U.S. State Department
2018	Featured in Sierra Magazine
2016	Public Radio International – Living on Earth Radio Interview
2016	Invited speaker at Switch in Boulder, CO, 2016
2011	Editorial in <i>Lawrence Journal World</i> on the Efficiency Kansas Program
2008	Interview on the Canadian Broadcasting Company's As it Happens – “Carbon Taxes Around the World,” 2008