

Politics, the Public, and Science: Navigating the New Reality

2019 ASN Vice Presidential Symposium

Organizer: Douglas Emlen, The University of Montana

Critical decisions concerning climate, public health, and national security are being made without the benefit of data - not because such data are lacking, but because the decision-makers elect to ignore it. In the United States, cabinet level positions are now filled by anti-scientists, academic staffs at federal agencies such as the EPA and NOAA are being let go, and academic reports from these agencies are being censored and amended. Powerful corporations and political and religious interest groups are flooding both mainstream and social media outlets with rhetoric designed to create pseudo-controversies where in fact none exist, and paint scientists as politically-motivated, agenda-driven extremists.

Navigating this new reality is going to require reaching audiences many of us are unaccustomed to: politicians and citizens distrustful of and hostile to science. In 2017 the National Academy of Sciences¹ detailed the many challenges to effective science communication, highlighting in particular the fact that many people regularly dismiss scientific evidence when they make decisions because it conflicts with other values or beliefs important to them. Engaging meaningfully is not simply a matter of filling in "knowledge gaps." It will require fundamentally different approaches.

This symposium brings together a panel of experts to help us succeed in this task. Collectively, they have tackled policy at both global and national scales; they have engaged with audiences across the political spectrum, working with legislators and corporations and local communities; they have mobilized and motivated scientists to engage more effectively; and they have mastered the art of meaningfully communicating the excitement and relevance of science.

It is my hope that we can learn from their experiences.

Douglas Emlen,
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¹ [Communicating Science Effectively: A Research Agenda](#) (2017) The National Academies Press



Meghan Duffy is a professor of ecology and evolutionary biology at the University of Michigan. She is a recipient of a Presidential Early Career Award for Scientists and Engineers (PECASE), the Yentsch-Schindler Early Career Award from the Association for the Sciences of Limnology and Oceanography, and the George Mercer Award from the Ecological Society of America. Meghan co-created EEB Mentor Match, which helps young scientists from traditionally underrepresented groups apply to graduate schools, and Diversity EEB, which highlights ecologists and

evolutionary biologists who are women and/or underrepresented minorities. In 2017/2018 Meghan was an American Association for the Advancement of Science (AAAS) Leshner Leadership Institute Public Engagement Fellow. Meghan was awarded the University of Michigan President's Award for Impact for her efforts nationally on behalf of science, and she is the vice-president elect for the American Society of Naturalists.



Ayana Elizabeth Johnson is a marine biologist and founder and CEO of [Ocean Collectiv](#), a strategy consulting firm for conservation solutions. She holds appointments as an adjunct professor at New York University and a science scholar at Pioneer Works. As executive director of the [Waitt Institute](#), Ayana co-founded the [Blue Halo Initiative](#) and led the Caribbean's first successful island-wide ocean zoning effort. Previously, she worked on ocean policy at the EPA and NOAA, and was a leader of the March for Science. Ayana earned a BA from Harvard University in environmental

science and public policy, and a Ph.D. from Scripps Institution of Oceanography in marine biology. She [writes](#) and tweets ([@ayanaeliza](#)) about how we can use the ocean without using it up, and is a passionate advocate for coastal communities and solutions to the climate crisis.



Jane Lubchenco is a marine biologist at Oregon State University. She served as Under Secretary of Commerce for Oceans and Atmosphere and Administrator of the National Oceanographic and Atmospheric Administration (NOAA), where she helped craft the U.S.'s National Ocean Policy, a science-based blueprint for managing the U.S.'s oceans, coasts, and Great Lakes. She was appointed to President Barak Obama's Science Team, and later became the first U.S. State Department Science Envoy for the Ocean, serving as a science diplomat to China, Indonesia, South Africa, Mauritius and the Seychelles. She is a past-president of the Ecological Society of America and the American Association for the Advancement of Science, a fellow of the American Academy of Arts and Sciences, and a

member of the National Academy of Sciences, the American Philosophical Society, the Royal Society, and The World Academy of Science. Jane has been awarded the National Academy's Public Welfare Medal and the National Science Foundation's Vannevar Bush Award for her exceptional service on behalf of science and society. She co-founded three organizations devoted to helping scientists communicate and engage effectively: COMPASS, the Leopold Leadership Program, and Climate Central.



Liz Neeley is the Executive Director of The Story Collider. In live shows across the country, a weekly podcast, and intensive workshops, The Story Collider is dedicated to producing true, personal stories about science. She comes to the field of storytelling after a decade of work in ocean conservation and science communication. From 2008 to 2015, she worked as the Assistant Director of Science Outreach for COMPASS, and was affiliate staff at The University of Washington. Before that, she worked on locally-managed marine conservation in Fiji and Papua New

Guinea, and on international trade policies for deep-sea corals for SeaWeb. Her approach to communication is influenced by her graduate research at Boston University on the evolution of visual communication systems in tropical reef fishes. She was on the advisory board of the CommLab at MIT 2015-2017, and on the advisory council of *Ensia* magazine from 2016-2018.

She currently holds a Lecturer appointment at Yale University through the National Neuroscience Curriculum Initiative. She is on the organizing committee of the 2019 National Academies of Science's Sackler Colloquium on the science of science communication. In 2018, she commissioned and edited the peer-reviewed "Stories from the Frontlines of Conservation" series at PLOS Biology. She was a contributing author to *Science Blogging: The Essential Guide* (2016), *Effective Risk Communication* (2015), and *Escape From the Ivory Tower* (2010). Find her on twitter at @LizNeeley.



Carl Zimmer is one of the country's leading science writers. A columnist for the New York Times, he is the author of 13 books, including *She Has Her Mother's Laugh: The Powers, Perversions, and Potentials of Heredity*, which The Guardian named the best science book of 2018. Zimmer is an adjunct professor at Yale University, where he teaches science writing. Carl has been awarded the Stephen Jay Gould Prize by the Society for the Study of Evolution, the National Academies Science Communication Award, and the National Association of Biology Teachers Distinguished Service Award.