

The Science of Science Communication: A Research Agenda

Committee

Alan I. Leshner

Chair

Alan Leshner (Chair) (NAM) is Chief Executive Officer, Emeritus, of the American Association for the Advancement of Science (AAAS) and former Executive Publisher of the journal *Science*. Before this position, Dr. Leshner was Director of the National Institute on Drug Abuse at the National Institutes of Health. He also served as Deputy Director and Acting Director of the National Institute of Mental Health, and in several roles at the National Science Foundation. Before joining the government, Dr. Leshner was Professor of Psychology at Bucknell University. Dr. Leshner is an elected fellow of AAAS, the American Academy of Arts and Sciences, the National Academy of Public Administration, and many other professional societies. He is a member and served on the governing Council of the National Academy of Medicine (previously the Institute of Medicine). He was appointed by President Bush to the National Science Board in 2004, and then reappointed by President Obama in 2011. Dr. Leshner received Ph.D. and M.S. degrees in physiological psychology from Rutgers University and an A.B. in psychology from Franklin and Marshall College. He has been awarded seven honorary Doctor of Science degrees.

Dietram A. Scheufele

Vice Chair

Dietram Scheufele is the John E. Ross Professor in Science Communication in the Department of Life Sciences Communication at the University of Wisconsin, Madison, and Vilas Distinguished Achievement Professor at the University of Wisconsin-Madison and in the Morgridge Institute for Research. During the fall 2015 semester, Dr. Scheufele was a Distinguished Visiting Fellow at the Annenberg Public Policy Center of the University of Pennsylvania. His research focuses on the public and political interfaces with science and technology, as well as the roles that social media and other emerging modes of communication play in shaping attitudes and democratic decision-making. Dr. Scheufele has published extensively in the areas of public opinion, political communication, and public attitudes towards emerging technologies, including nanotechnology, synthetic biology, stem cell research, nuclear energy, and genetically modified organisms. Dr. Scheufele has served on many committees and advisory panels, including the National Conference of Lawyers and Scientists, the Nanotechnology Technical Advisory Group to the U.S. President's Council of Advisors on Science and Technology, and the National Academy of Engineering Committee on Developing Effective Messages for Improving Public Understanding of Engineering. He serves as the co-chair for the Academies' Roundtable on the Public Interfaces of the Life Sciences. He received a MA in Journalism and Mass Communications and his PhD in Mass Communications from the University of Wisconsin-Madison.

Ann Bostrom

Member

Ann Bostrom is the Weyerhaeuser Endowed Professor of Environmental Policy at the Daniel J. Evans School of Public Affairs of the University of Washington. Dr. Bostrom previously served on the faculty at the Georgia Institute of Technology from 1992-2007, where she served as associate dean for research at the Ivan Allen College of Liberal Arts and professor in the School of Public Policy. She co-directed the Decision Risk and Management Science Program at the National Science Foundation from 1999-2001. Her research focuses on risk perception, communication, and management; and on environmental policy and decision-making under uncertainty. Dr. Bostrom serves as an associate editor for Journal of Risk Research and the Journal Human and Ecological Risk Assessment and is on the editorial board of Risk Analysis. She is an elected fellow of the American Association for the Advancement of Science and past president and an elected fellow of the Society for Risk Analysis. Dr. Bostrom received a Ph.D. in public-policy analysis from Carnegie Mellon University, an MBA from Western Washington University, and a B.A. from the University of Washington.

Karen S. Cook

Member

Karen Cook (NAS) is the Ray Lyman Wilbur Professor of Sociology; Director of the Institute for Research in the Social Sciences (IRiSS); and Vice-Provost for Faculty Development and Diversity at Stanford University. Dr. Cook conducts research on social exchange networks, power and influence dynamics, inter-group relations, negotiation strategies, social justice, and trust in social relations. Her research underscores the importance of trust in facilitating exchange relationships and of networks in creating social capital; for example, in physician-patient interactions and its effect on health outcomes. She has edited and co-edited a number of books in the Russell Sage Foundation Trust Series including *Trust in Society* (2001), *Trust and Distrust in Organizations: Emerging Perspectives* (2004), and *eTrust: Forming Relations in the Online World and Whom Can You Trust?* (2009). She is co-author of *Cooperation without Trust?* (2005) and she co-edited *Sociological Perspectives on Social Psychology* (1995). In 1996, she was elected to the American Academy of Arts and Sciences and in 2007 to the National Academy of Sciences. In 2004 she received the ASA Social Psychology Section Cooley Mead Award for Career Contributions to Social Psychology. Dr. Cook received her M.A. and Ph.D. in sociology from Stanford University.

Wandi Bruine de Bruin

Member

Wändi Bruine de Bruin is the university leadership chair in behavioral decision making at the Leeds University Business School, where she also serves as the co-director of the Centre for Decision Research. She also holds affiliations with Carnegie Mellon University, the University of Southern California, and the RAND Corporation and is a visiting research scholar at the Dutch Central Bank. Her research focuses behavioral decision making, individual differences in decision-making competence across the life span, risk perception and communication (with applications in health, finance, and environment). Dr. Bruine de Bruin is a member the editorial board of the *Journal of Risk Research*, *Journal of Experimental Psychology: Applied*, the *Journal of Behavioral Decision Making*, and *Psychology and Aging*. She is a member of the Scientific & Technical Committee of the International Risk Governance Council (IRGC), which provides evidence-based advice to international policy makers. She has contributed her expertise to a recent expert panel report on health product risk communication by the Council of Canadian Academies, as well as to expert workshops at the U.S. Environmental Protection Agency, the U.S. Federal Reserve, and the U.S. Food and Drug Administration. Dr. Bruine de Bruin received a B.Sc. and M.Sc. in psychology and cognitive psychology, respectively, from Free University Amsterdam and a M.Sc. and Ph.D. in behavioral decision theory and psychology from Carnegie Mellon University.

Thomas Dietz

Member

Thomas Dietz is professor of sociology and environmental science and policy and assistant vice president for environmental research at Michigan State University. He is also co-director of the Great Lakes Integrated Sciences and Assessment Center. At MSU he was founding director of the Environmental Science and Policy Program and associate dean in the Colleges of Social Science, Agriculture and Natural Resources and Natural Science. His current research examines the human driving forces of environmental change, environmental values and the interplay between science and democracy in environmental issues. Dr. Dietz is a fellow of the American Association for the Advancement of Science, and is the former president of the Society for Human Ecology. Dr. Dietz has been awarded the Sustainability Science Award of the Ecological Society of America, the Distinguished Contribution Award and the Outstanding Publication Award of the American Sociological Association Section on Environment, Technology and Society, and the Gerald R. Young Book Award from the Society for Human Ecology. He has chaired or served as a member on a number of Academies' committees related to public engagement and climate change. He holds a Ph.D. in ecology from the University of California, Davis, and a Bachelor of General Studies from Kent State University.

William K. Hallman

Member

William K. Hallman is a professor and Chair of the Department of Human Ecology and is a member of the graduate faculty of the Department of Nutritional Sciences, and of the Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey. Dr. Hallman recently served as the Chair of the Risk Communication Advisory Committee of the US Food and Drug Administration (FDA). His research examines public perceptions of controversial issues concerning food, health, and the environment. Recent research projects have looked at consumer perceptions and behaviors concerning genetically modified foods, animal cloning, avian influenza, accidental and intentional food contamination incidents, and food recalls. He has examined public perceptions and responses to food safety risks; the safety of fresh meat, poultry, game, and seafood products purchased on the Internet; the use of nanotechnology in food; and public understanding of health claims made for food products. Dr. Hallman consults for the Food Safety Risk Communication Handbook of the Food and Agriculture Organization of the United Nations in Rome, Italy, and is sought internationally to provide training as an expert in effective risk communication about food safety. Dr. Hallman formerly served as the Director of the Food Policy Institute (FPI) at Rutgers. Dr. Hallman serves on the Executive Committee of Rutgers Against Hunger (RAH), and helped to found the New Brunswick Community Farmers Market, which offers food insecure residents access to fresh, locally grown, affordable, nutritious, and culturally appropriate produce and other food products. He is a 1983 graduate of Juniata College in Huntingdon, Pennsylvania and received a PhD. in Experimental Psychology from the University of South Carolina in 1989.

Jeffrey R. Henig

Member

Jeffrey R. Henig is a professor of political science and education at Teachers College and professor of political science at Columbia University. He also serves as chair of the Teachers College Department of Education Policy & Social Analysis. He is a member of the National Academy of Education and a Fellow of the American Education Research Association. Dr. Henig focuses on the intersection of politics and social science research. He is the author, coauthor, or co-editor of eleven books. His 2008 book *Spin Cycle: How Research Gets Used in Policy Debates: The Case of Charter Schools* won the American Educational Research Association's Outstanding Book Award. His books *The Color of School Reform: Race, Politics and the Challenge of Urban Education* and *Building Civic Capacity: The Politics of Reforming Urban Schools* were both named in 1999 and 2001, respectively, as the best books written on urban politics by the Urban Politics Section of the American Political Science Association. His book, *The End of Exceptionalism In American Education: The Changing Politics of School Reform*, was published by Harvard Education Press in 2013. Most recently, he co-edited (with Rick Hess) *The New Education Philanthropy: Politics, Policy, and Reform*. In addition to scholarly publications, Dr. Henig's writing on contemporary policy issues aimed at general audiences has appeared in *Education Week*, *The Chronicle of Higher Education*, *Boston Globe*; *LA Times*, *Washington Post*, *The New York Times*, and as guest posts on prominent education policy blogs. Dr. Henig received a Ph.D. in political science from Northwestern University.

Robert C. Hornik

Member

Robert Hornik is the Wilbur Schramm Professor of Communication and Health Policy at the Annenberg School for Communication of the University of Pennsylvania. Since 2013 he has been the co-director of the Penn Tobacco Center of Regulatory Science (TCORS), a first-of-its-kind regulatory science research enterprise to inform the regulation of tobacco products to protect public health. Dr. Hornik led the Center of Excellence in Cancer Communication Research (CECCR) at the University of Pennsylvania from 2003-2014. Dr. Hornik's most recent research focuses on how Americans are affected by their exposure to information about cancer prevention, screening, and treatment; the effects of new and old media content on tobacco beliefs and behavior among youth and young adults; and the development and validation of methods to choose preferred message themes for communication campaigns. Dr. Hornik has served as a member on a number of Academies' committees focused on health promotion and communication. Dr. Hornik has particular expertise in measurement and research methodology in determining the effects of public health communications and media exposure. He received an A.B. in international relations from Dartmouth College, and a M.A. and Ph.D. in communication research from Stanford University.

Andrew Maynard

Member

Andrew Maynard is a professor in the School for the Future of Innovation in Society at Arizona State University and director of the Risk Innovation Lab focused on public thinking and action related to risk in the context of technology innovations. His research focuses on responsible development and use of emerging technologies, including nanotechnology and synthetic biology, and science communication and public engagement on these issues. He is widely published, and has testified before the U.S. Congress on several occasions regarding nanotechnology policy and research needs related to nanotechnology risk. Dr. Maynard is a regular contributor to a special column of the journal *Nature Nanotechnology* and is on the editorial board of the *Journal of Responsible Innovation*. Dr. Maynard works closely with and through conventional and new media to connect with audiences around the world on technology innovation and the science of risk. He received a B.Sc. in physics from the University of Birmingham (U.K.) and a Ph.D. in aerosol physics from the University of Cambridge (U.K.).

Matthew Nisbet

Member

Matthew Nisbet is Associate Professor of Communication Studies and Affiliate Associate Professor of Public Policy and Urban Affairs at Northeastern University. He is Editor-in-Chief of *The Oxford Encyclopedia of Climate Change Communication* and a consulting communication researcher to the American Association for the Advancement of Science. He studies the role of communication, media, and public opinion in debates over science, technology, and the environment. He is the author of more than 70 peer-reviewed studies, scholarly book chapters, and reports. Dr. Nisbet has been a Visiting Shorenstein Fellow at Harvard University's Kennedy School of Government, a Health Policy Investigator at the Robert Wood Johnson Foundation, a Google Science Communication Fellow, and a member of the Academies' Roundtable on Public Interfaces of the Life Sciences. In 2011, the editors at the journal *Nature* recommended Dr. Nisbet's research as "essential reading for anyone with a passing interest in the climate change debate," and the *New Republic* highlighted his work as a "fascinating dissection of the shortcomings of climate activism." Dr. Nisbet's research has been funded by the Robert Wood Johnson Foundation, MacArthur Foundation, and Nathan Cummings Foundation. His consulting experience includes analysis on behalf of the Academies, the Howard Hughes Medical Institute, the Corporation for Public Broadcasting, the Centers for Disease Control, and other public and private sector clients. Dr. Nisbet holds a PhD and MS in Communication from Cornell University.

Ellen Peters

Member

Ellen M. Peters is professor of psychology and director of the Decision Sciences Collaborative at Ohio State University. In her research, Dr. Peters focuses on understanding human judgment and decision making, and in particular how affective, intuitive, and deliberative processes help people to make decisions in an increasingly complex world. Dr. Peters has worked extensively with the U.S. National Cancer Institute and Food and Drug Administration (FDA) to advance the science of human decision making as it applies to health and health policy. She is current president of the Society for Judgment and Decision Making, former chair of the FDA's Risk Communication Advisory Committee, and a fellow of the Association for Psychological Science and the Society of Experimental Psychology. She has been awarded the Jane Beattie Scientific Recognition Award, an NIH Merit Award, and two Best Paper Awards from Risk Analysis. Her research has been funded extensively by the National Science Foundation and National Institutes of Health. Dr. Peters received a B.S. in economics and B.S.E. in systems engineering from the University of Pennsylvania and an M.S. and Ph.D. in psychology from the University of Oregon.

Sylvia B. Rowe

Member

Sylvia Rowe is president of SR Strategy which facilitates science communication and policy on a broad range of global health, nutrition, food safety and risk issues. Ms. Rowe is also an adjunct professor at the University of Massachusetts Amherst and Tufts Friedman School of Nutrition Science and Policy. Ms. Rowe is an experienced communication practitioner with particular expertise in bringing diverse groups together around policy issues related to food, nutrition and health. Previously, Ms. Rowe served as president and chief executive officer of the International Food Information Council (IFIC) and IFIC Foundation. During her eleven-year tenure, IFIC established itself as a leader in consumer research and consumer-based communications in nutrition, food safety, and health. Ms. Rowe has served on several Academies' Boards and Advisory Committees including being a member of the Institute of Medicine Roundtable on Obesity Solutions and serving as the current chair of the Institute of Medicine Food Forum of the Board on Food and Nutrition. Ms. Rowe is also a member of the International Women's Leadership Forum and the National Press Club among other professional groups. Ms. Rowe's background in media and expertise in issues management are reflected in her professional history as a producer and on-air host of several television and radio talk shows covering social, political, and economic and consumer issues. She also previously held positions in public relations, marketing, and membership development for several diverse associations. Ms. Rowe received a bachelor's degree from Wellesley College and a master's degree from Harvard University.