

PUBLIC UNDERSTANDING OF NANOSCIENCE: NEXT STEPS

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By and large the primary consumers of advanced technologies are governments, industries, and publics (this term is used to reflect that many different publics that make up the "rhetorical" public). The roles of publics in consuming advanced technologies involve but are not limited to electing and communicating with representatives in government who support budgets in turn funding research and development as well as purchasing, boycotting, and protesting the sale of products derived from advanced technologies. In addition, as members of the public sphere, publics are in a partnership with others, such as business and industry, to participate in a grand ecosystem commons that helps define what is and is not public property and is and is not public interest. Public participation in advanced technologies can be viewed as a public good. As advanced technologies become more integrated into society both as consumables and as platforms for other technologies, publics are left to defer to others especially experts, and policy makers who may be expert, but more than not they are no better informed than the publics in understanding advanced technologies. While some may argue that social science is underfunded in federal and private grant support, others have insisted it is waste of money. On balance, the expense of a social science research project is minute when compared to the investments made in science and technologies. However, without this research we guess what the public understands and wants and base our suggestions on "years of experience" when a more empirical approach might be both more amenable to our scientific colleagues in the natural sciences as well as subject to replication and verification. Before we invest fortunes into technologies the publics may not want or need, it is our duty as scholars to understand as well as we can their sensibilities.

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David M. Berube, Ph.D. (NYU, 1990) has degrees in psychology, biology, and communication and is a full professor in communication at North Carolina State University (NCSU). He coordinates the PCOST (Public Communication of Science and Technology) Project at NCSU. PCOST is an interdisciplinary team of researchers from NCSU and other USA universities interested in quantitative analyses and the social science of science. He teaches graduate courses in risk communication and argumentation in science and technology. In addition, he is or has been on multiple external advisory committees, grant review panels, journal editorial committees, institutional and center planning and steering committees, and national and international conference panels on science and communication. He is a member of MRS, ACS, AAAS, 4S, etc. In addition, he served briefly as the Communications Director of the International Council on Nanotechnology (ICON). He has been a PI or CoPI on four NSF societal and ethical grants totaling nearly \$5 million. He has published dozens of articles and chapters in argumentation and in nano-science and technology risk and policy studies and has written two books including NANOHYPER: BEYOND THE NANOTECHNOLOGY BUZZ 2006.