Who Do You Trust?
Science Museums as Forums for Conversations between Scientists and the Public

Larry Bell
Sr. V. P. for Exhibits and Programs, Museum of Science
PI, Nanoscale Informal Science Education Network

RESEARCH INTEGRITY: FOSTERING RESPONSIBLE RESEARCH
16-19 September 2007  Lisbon, Portugal
Track IIC: Institutional and Societal Issues - Public Perceptions & Responsibilities

Museum of Science
Boston
Science museums serve as links between science and the public

Live presentations by MOS staff

Guest Presenters
82% of Americans polled said that they do not personally know any scientists.

Science museums create fun learning experiences for the public
Science museums build trusting relationships with the public.
How does the public feel about science?
Three sources of data:

**Science and the Public: A Review of Science Communication and Public Attitudes to Science in Britain**  
Office of Science and Technology and the Wellcome Trust, October 2000

**Science and Engineering Indicators 2006**  
National Science Board, U.S.

**Center for Nanotechnology in Society Survey**  
Preliminary data not yet published, Arizona State University, 2007
Public Attitudes to Science in Britain are very positive

- 68% agree that science and technology are making our lives healthier, easier, and more comfortable
- 72% agree research that advances knowledge should be supported by the government even if it brings no immediate benefits
- 75% are “amazed” by the achievements of science
- 84% think scientists and engineers make a valuable contribution to society

http://www.wellcome.ac.uk/doc_WTD003420.html
Public Attitudes to Science in Britain also show reservations

- Only 43% agreed that the benefits of scientific research outweigh any harmful results.
- 70% agree that rules will not stop researchers from doing what they want behind closed doors.
- 56% think scientists seem to be trying new things without stopping to think about risks.
- 69% think scientists should listen more to what ordinary people think

http://www.wellcome.ac.uk/doc_WTD003420.html
U.S. Science and Technology Indicators 2006 are very positive

- 91% agreed that science and technology are making our lives healthier, easier, and more comfortable
- 83% agree research that advances knowledge should be supported by the government even if it brings no immediate benefits
- 86% agreed that because of science and technology, there will be more opportunities for the next generation
- 84% agreed that the benefits of scientific research outweigh harmful results.

http://www.nsf.gov/statistics/seind06/
A sizeable segment of the U.S. population has some reservations about S&T

• 56% agreed that "we depend too much on science and not enough on faith,"
• 61% agreed that "scientific research these days doesn't pay enough attention to the moral values of society,"
• 51% felt that "scientific research has created as many problems for society as it has solutions."
• However, this 2004 data shows that agreement with the last two statements declined from 2001.

http://www.nsf.gov/statistics/seind06/
In this spot there will be a slide showing CNS-ASU preliminary data on public trust of various sources on benefits and risks of new technologies.
Residency
Eric Heller, Don Eigler & Stephanie Maxwell

Working with scientists to create experiences for the public
Giving visitors access to tools of science
Using new technologies to create engaging learning experiences about science
Research to learn how well various science thinking tools work with youth - molecular modeling
Visitors working with staff at the Exploratorium to create giant nano landscape model
Creating a giant nanotube model
Forums:

Nanotechnology
Risks, Benefits, and Who Decides

Given the potential benefits as well as the unknown risks associated with nanotechnology, who should play the major role in shaping its future development and the government policies concerning its use?
Bringing people together for dialogue and deliberation
Speaker presentations
Facilitators help conversation
Quizzing experts
Deliberation
Participants are 20% scientists
Reporting out

SOME EXPERTS UNDERSTAND TECH BUT ALSO WANT WATCHDOGS INVOLVED AND ALSO PUBLIC INVOLVED. WATCHDOGS GET POWER FROM PUBLIC. EXPERTS FUNDING INFLUENCED BY WATCHDOGS. FEEDBACK SYSTEM IN WHICH ALL THREE ARE INVOLVED.
Professional Development: Nano Education and Outreach for Researchers

To build capacity and sustainability for collaborations between research centers and informal science education institutions.
20 Participants in Year 1

- Arizona State University
- Harvard University
- Northwestern University
- Portland State University
- Stanford University
- University of Alabama
- University of Chicago
- University of Colorado
- University of Delaware
- University of Florida
- University of Minnesota
- Virginia Tech University
- Museum of Science/Northeastern University

NEO is offered to Education Outreach Directors, Researchers, and Graduate Students.
Bringing Nano to the Public: A Collaboration Opportunity for Researchers and Museums

By Wendy C. Crone
Edited by Susan E. Koch
Websites

• www.mos.org
• www.nisenet.org
• www.nctl.org

Who Do You Trust?
Science Museums as Forums for Conversations between Scientists and the Public

Larry Bell, Museum of Science, Boston;
Nanoscale Informal Science Education Network

The Nanoscale Informal Science Education Network is funded by the National Science Foundation ESI-0532536 and is led through a collaboration of the Museum of Science, the Exploratorium, and the Science Museum of Minnesota