

A National Campaign to Improve the Public Understanding of Science

Judith Scotchmoor & Lee Allison



Science under attack:

"Evolution is not good science, and, as such, we don't believe it should be presented."

Steve Abrams, Chair,
Kansas State Board of
Education
Sept 16, 1999



OPUS

"85% of measured growth in US income per capita is due to technological change."

NRC: Rising Above the Gathering Storm, 2005

OPUS

The Scientific Enterprise in Colorado is a \$24 Billion industry on a par with Tourism and Agriculture and a leading enterprise in the State

Colorado Science Forum, 2005

colorado science forum

OPUS

OECD 2003 assessment 49 industrialized countries

US 15-year-olds

- 16th in reading
- 19th in science literacy
- 24th in mathematics

Engineering undergraduates

- US – 6% (2nd lowest among developed countries)
- Europe - 12%
- Singapore – 20%
- China - >40%

OPUS

"Regardless of whether you categorize our current situation as a stall or decline, there is general agreement that America's dominance in science and innovation is slipping."

"Many Americans are unaware of this trend. They also have no idea what this could mean to our economy and our national security."

Rep. Frank Wolf (R-VA), May 12, 2005

OPUS

Science – a growing national concern

TAPPING AMERICA'S POTENTIAL
The Blueprint for Economic Recovery

RISING ABOVE THE GATHERING STORM
Energy and Technology in a New Age

TIM
IS AMERICA FLUNKING SCIENCE?

COPUS

“...public appreciation of science, the scientific process, and the impacts of scientific advancements on our quality of life is necessary for continued support of the national scientific enterprise.”

Coalition on the Public Understanding of Science workshop, 2006

COPUS

Goals are to empower Americans to:

- Appreciate the pragmatic outcomes of science
- Distinguish science from non-science
- Participate in discourse that depends on science

COPUS workshop, 2006

COPUS

COPUS vision

- Network scientists and science educators – “you are not alone”
- Engage business and industry
- Learn to communicate and frame the message
- Multi-disciplinary “think tank”
- Provide science proponents with tools to speak up
- Empower one million scientists

COPUS

COPUS Network

American Institute of Biological Sciences

THE GEOLOGICAL SOCIETY OF AMERICA

DENVER MUSEUM OF NATURE & SCIENCE

UCMP

ARIZONA GEOLOGICAL SURVEY

Berkeley Natural History Museums

colorado science forum

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WHERE DISCOVERY BEGINS

COPUS

Model 1: Science Literacy and Popular Science

- **Assumption:** If the public knew more about the technical side of science, then the public would view issues as scientists do, and there would be fewer controversies
- Emphasis is on science education and mass mediated popular science.

But increasingly reaching only those who are already interested in science

Matthew Nisbett scienceblogs.com/framing-science

Model 2: What about Public Engagement?



- Two-way interaction between scientists and citizens.
- Take advantage of localized understanding and knowledge.
- Increase citizen efficacy, sense of involvement, and fairness.
- But also tends to attract only the small number of people who already have strong opinions about science



scienceblogs.com/framing-science

CONCLUSION: Towards a Scientific Understanding of the Public



- Science literacy and public engagement models are limited, esp. when thinking about the "mass public."
- For strategic communication, there is nothing essentially unique or different about science from other political issues.
- Battle for public opinion is about activating favorable predispositions and these predispositions are then used as powerful filtering devices by public.
- Frames are the primary tools of activation. Miserly citizens use frames in combination with their value predispositions to cut down on information costs.

scienceblogs.com/framing-science



<http://blogs.aibs.org/copus/>

www.copusproject.org