Mobilizing Public Support for S&T Investment

Mary Woolley, President, Research!America

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University of Michigan Jerome B. Wiesner Symposium
Ann Arbor, Mich.
“Everybody in the science and technology community who cares about the future of the world should be tithing 10% of his or her time to interacting with the public in the policy process.”

John P. Holdren, Ph.D.
President Obama’s Science Adviser
U.S. Politicians Rarely Talk about Science: Why?

- Many fear being asked science questions they can’t answer
- Many have little contact with scientists
- Their constituents, including individual scientists, aren’t pressing them for action
- They take progress in research for granted
- Some are opposed to government’s role in science

We can’t expect elected officials to champion science if their constituents don’t demand it
Public Support Matters

“...public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed.”

President Abraham Lincoln
Public Perceptions of Science and Scientists mostly Favorable

According to the latest National Science Board poll:

- Nearly 80% of Americans say leaders of science and medicine inspire confidence among the public. Only military leaders are ranked higher.
- Nearly 80% say they would be happy if their son or daughter chose science as a career.

National Science Board Science and Engineering Indicators, 2014
Americans Aspire to World Leadership

... If current trends continue, other nations will soon match U.S. investment in research and development. In your opinion, how important is it for the United States to maintain its world leadership role?

- Very important: 64%
- Somewhat important: 27%
- Somewhat unimportant: 4%
- Very unimportant: 2%
- Not sure: 3%

Source: A Research!America poll of likely voters conducted in partnership with JZ Analytics in March 2012.
Majority Agree that Basic Research is Necessary

Do you agree or disagree with the following statement? “Even if it brings no immediate benefits, basic scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government.”

- 24% Strongly agree
- 15% Somewhat agree
- 11% Somewhat disagree
- 4% Strongly disagree
- 46% Not sure

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2015.
Most Trusted Spokespersons for Science?

How trustworthy do you consider each of the following as spokespersons for science?

- Scientists: Very trustworthy (33), Somewhat trustworthy (48), Not very trustworthy (9), Not at all trustworthy (9), Not sure (9)
- Health care professionals: Very trustworthy (24), Somewhat trustworthy (52), Not very trustworthy (12), Not at all trustworthy (9), Not sure (15)
- Patient organizations: Very trustworthy (19), Somewhat trustworthy (47), Not very trustworthy (16), Not at all trustworthy (15), Not sure (11)
- Journalists: Very trustworthy (8), Somewhat trustworthy (34), Not very trustworthy (32), Not at all trustworthy (16), Not sure (11)
- Bloggers: Very trustworthy (7), Somewhat trustworthy (21), Not very trustworthy (37), Not at all trustworthy (20), Not sure (15)
- Business leaders: Very trustworthy (7), Somewhat trustworthy (31), Not very trustworthy (34), Not at all trustworthy (16), Not sure (13)
- Elected officials: Very trustworthy (5), Somewhat trustworthy (16), Not very trustworthy (34), Not at all trustworthy (33), Not sure (12)

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2014.
Despite these and reams of similar findings... Scientists are nearly invisible to the public.
Majority of Americans Can’t Name a Living Scientist

Please name a living scientist.

- I can
- I cannot

- Stephen Hawking: 43%
- Neil Degrasse Tyson: 6%
- Bill Nye: 5%
- Jane Goodall: 5%
- James Watson: 3%
- Richard Dawkins: 2%
- Michio Kaku: 2%
- Mehmet Oz: 1%
- Other: 33%

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
A very generous indication of public engagement...

41% of AAAS scientists often or occasionally engage with the public in at least two ways.

AAAS scientists survey Sept. 11–Oct. 13, 2014. Based on Q50a-f. More engaged refers to those who say they “often” or “occasionally” do at least two of the four activities measured.

- Talk with non-experts about science topics
- Talk with the media
- Use social media
- Blog

Majority of Americans Don’t Know Where Research is Conducted

Please name any institution, company or organization where medical or health research is conducted.

- I can
  - Mayo Clinic 14%
  - Johns Hopkins 14%
  - CDC 8%
  - NIH 6%
  - Pfizer 4%
  - Cleveland Clinic 3%
  - St. Jude’s 2%
  - American Cancer Soc. 2%
  - Harvard University 2%
  - Duke University 1%
  - Eli Lilly 1%
  - Other 43%

- I cannot

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
What is the name of the government agency that funds most of the medical research paid for by taxpayers in this country?

- 33% National Institutes of Health
- 16% Food and Drug Administration
- 16% Dept. of Health and Human Services
- 19% Centers for Disease Control and Prevention
- 15% Other
- 1% Don't know

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2014.
Only Half Agree Research has Benefited Family’s Health

Would you say your family’s health has been improved by medical research?

- 53% Yes
- 25% Not Sure
- 22% No

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2015.
Another problem: we are delivering double messages

• Fewer dollars reaching biomedical research centers, but philanthropy is bridging the gap
• 22 of 141 accredited U.S. medical schools named after donors, a significant increase since 2008
• New Weill Cornell institute’s goal is to “do what federal dollars no longer do enough of”, i.e. allow scientists to conduct groundbreaking research

-- So why is it again that we need more federal $$s for science?
Yet, Public Sentiment Won’t be Denied: HIV/AIDS

- Federally funded AIDS research:
  - 1990: $740.5 million
  - 2011: $3.06 billion
  - 2012: $3.07 billion
  - 2013: $2.89 billion
  - 2014: $2.97 billion
  - 2015 (est.): $3 billion
  - 2016 (est.): $3.1 billion

Sources: National Academies, NIH RePORT
Public Sentiment Won’t be Denied: Breast Cancer

Breast cancer funding at NCI

- FY90: $81M; FY00: $438.7M; FY10: $631.2M
- FY13: $559M

Since 1992, the Department of Defense has funded more than $3 billion in breast cancer research

Sources: Oncology Times; National Cancer Institute; DoD CDMRP; breastcancerdeadline2020.org
Spontaneous public support: ALS

Since July 29, 2014, The ALS Association has received $115 million in donations.

So what could all that ice bucket money do?

"It makes it possible for some young scientists to get a start to try out their new hypotheses before they are ready to submit a proposal to NIH," Woolley said. "It may also bridge some dry spells they're feeling right now because the NIH is really strapped."

(AP Photo/David J. Phillip)
An Opportunity Moment?

• Can universities and scientists align more successfully to drive public support?

• How?
  • Understand public view of scientists
  • Demonstrate accountability
  • Overcome invisibility
  • Connect as individuals as well as institutions
Getting in Touch with Public Perception of Scientists

- People make quick judgments about others’ intent and their degree of competency
  - Perception of competency + perception of good intent = trust
- Politicians almost never trusted, though are sometimes viewed as competent
- Scientists mostly considered competent, but also cold
  - This can throw doubt on their intentions
- Possible to change perceptions about scientists if they convey warmth and motivation to cooperate
  - Show ‘worthy intent’

Source: Fiske, Susan, and Dupree, Cydney. Gaining trust as well as respect in communicating to motivated audiences about science topics.
http://www.pnas.org/content/111/Supplement_4/13593.full
Say and Convey: “I work for you.”
How to Think About Communication to Non-Scientists

- Know your audience
- Use the Then-Now-Imagine message frame
- Be in the moment
- Understand and align with public sentiment
- Convey personal commitment/passion

Communicating well demonstrates accountability
Why is This So Hard to Say?

“I admire and love my brother [Paul Greengard], but he lives on a higher plane, and what he does is secret, unrevealable. To me, anyway ...

“Every time he took a new job — whether at Albert Einstein College of Medicine or Yale — I’d ask him about it. Then he’d get into electro-physiological properties, and it was all over ...

“Now, he has won the Nobel Prize in physiology or medicine, an honor he shares with two other scientists. In reporting it, the newspapers said their work on the way brain cells communicate might one day help cure diseases like Parkinson’s and Alzheimer’s.

“I’m thrilled he won. Now I know what he does.”

— Chris Chase in a New York Times opinion piece on October 15, 2000
Tell Your Story, Not Your Data!

“I’ll pause for a moment so you can let this information sink in.”
THEN... In 1981, the Centers for Disease Control and Prevention noted the first cases of what would become the AIDS epidemic.  *AIDS IS A DEATH SENTENCE.*

NOW... NIH-funded research supported the development of a microfluid-based “lab-on-a-chip” to rapidly detect HIV.  *HIV/AIDS IS A MANAGEABLE CHRONIC DISEASE.*

IMAGINE... A vaccine.  *HIV/AIDS IS RELEGATED TO THE HISTORY BOOKS.*

Research is the future!
Research!America Works With and for Our Members

- Advocacy workshops
- Commission national, state and special topic polls, both to use in advocacy, and to keep a finger on the public pulse
- Advocacy internships and fellowships
- Advocacy Alerts
- Weekly Letter
Young scientists surveyed gave the following reasons for not engaging in public communication of science and technology (PCST):

- Don’t know how: 73
- Unaware of opportunities for public engagement: 63
- Don’t have necessary training: 50
- Lack of time: 38
- Absence of credit toward professional development: 8
- Other: 2

Source: Young Scientist Survey, Winter 2012—Research!America
Advocacy Workshops

• Connecting the Dots - Effectively Communicating Science to Non-Scientists - George Washington University
  April. 2015

• Advocacy Academy - Sept. 2013
  • 2-day introduction to science policy and effective communications for young scientists, Washington
Local Programs with Universities -- examples


- Research: The Risks, the Rewards and the Returns - A Florida Perspective - Nov. 2006 - University of South Florida
Local Programs with Universities - more examples

- Global Health Research and Development and the Hidden Burden of Neglected Tropical Diseases in Texas - June 2012 - Baylor College of Medicine

- Research Partners Forum: Building Ohio’s Economy and Health Through Medical Research - May 2011 - Northeast Ohio Medical University (NEOMED)
What Can Universities Do?

• Stop waiting for the public to demand more science, per se, and instead align with public thirst for solutions
• Don’t discourage public outreach and advocacy for science by faculty and students; instead, support and reward it
• Add an introduction to the public and political context of science to the graduate science curriculum
• Encourage investigators to engage with patient groups beyond being their grantees
• Work with J-School to offer courses or workshops on issues in science
“... If I had to do it all over again, I would spend more time talking to general audiences and public officials, penning op-eds.”

J. Michael Bishop, M.D., Nobel laureate
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