



Public Understanding of Emerging Science and Technology: Four Observations

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THE WHITE PAPER

- NSF NIRT #0809470 – Applied Nanoscience: Public Perception of Risk 2007-2011 (<http://communication.chass.ncsu.edu/nirt/Home.html>).
- Workshop (August 28-29, 2008) <http://communication.chass.ncsu.edu/nirt/Deliverables.html>.
 - Power Points.
 - Streams and Downloads.

THE NIRT

■ Research

- Delphi questionnaire (Jan-Mar 2009).
- Public Service and Policy Research (IPSPR) w USouth Carolina (mirror surveys).
- Data analysis w UWisc.
- Civic Engagement exercises (assessment) w USC.
- Focus Group. (nanofood) w UMinn.

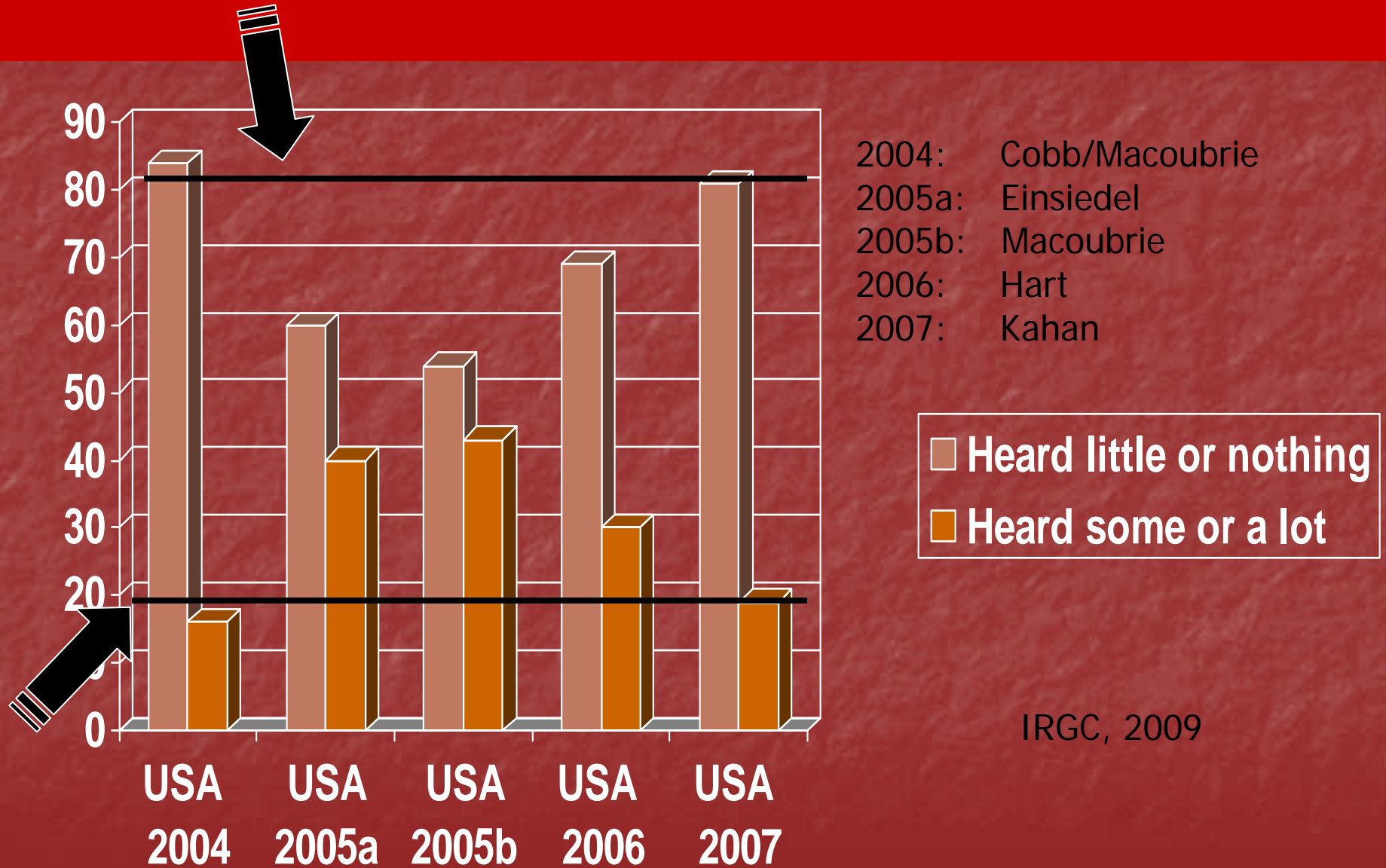
■ Supplement

- History with NSF.
- Summer 2008 (144 pp.)
- Train-the-Trainer (12/08; Scheufele, Wisc.)

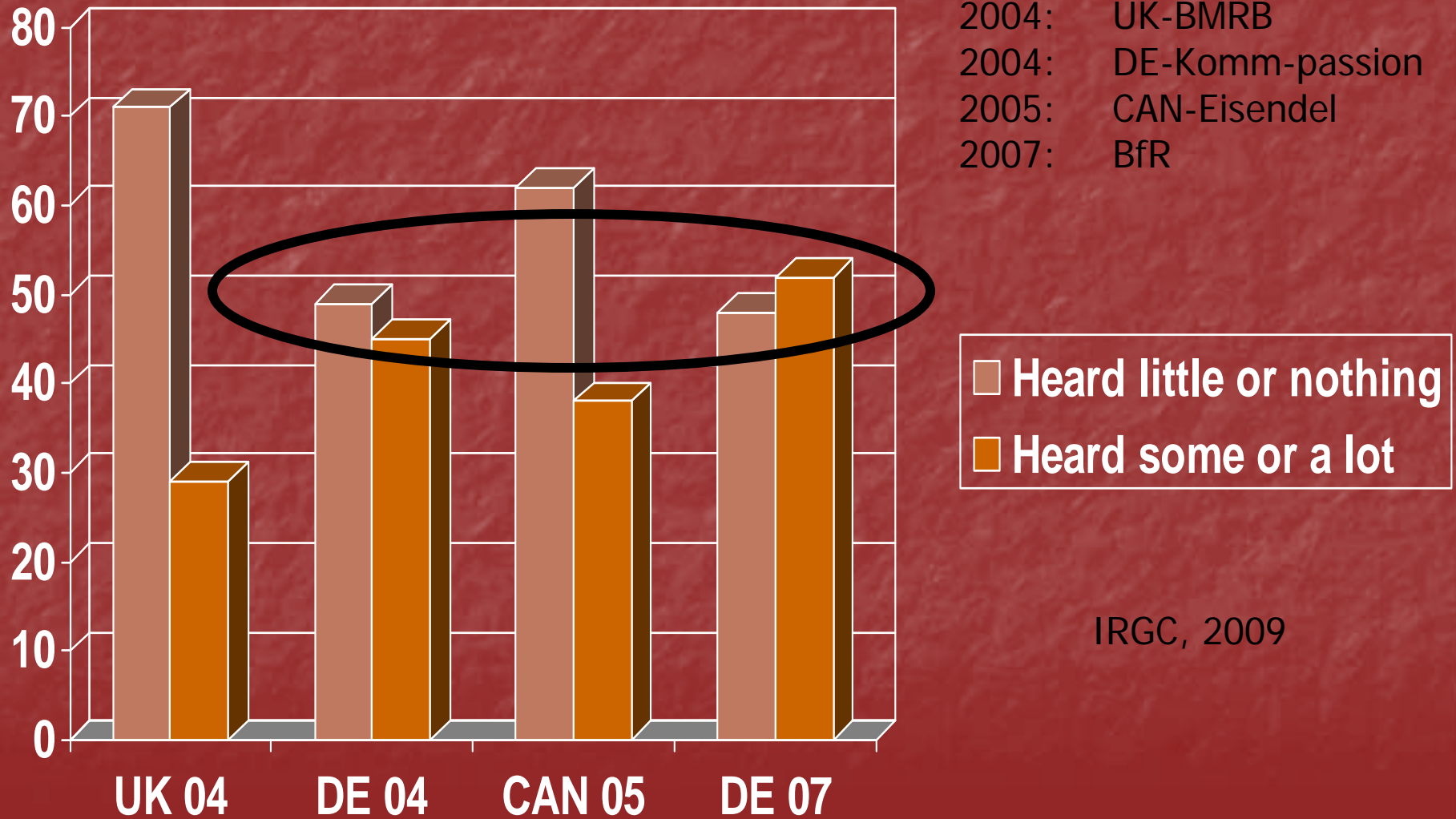
OBSERATION 1 – PUBLIC INTEREST = KNOWLEDGE

- 1. Public is generally disinterested in nanoscience (<70%).**
- 2. Public is overwhelmingly disinterested in science and technology policy (<90%).**
- 3. Deficit theory of science literacy. Self-selected exclusion.**

PUBLIC KNOWLEDGE ON NANOTECHNOLOGIES USA



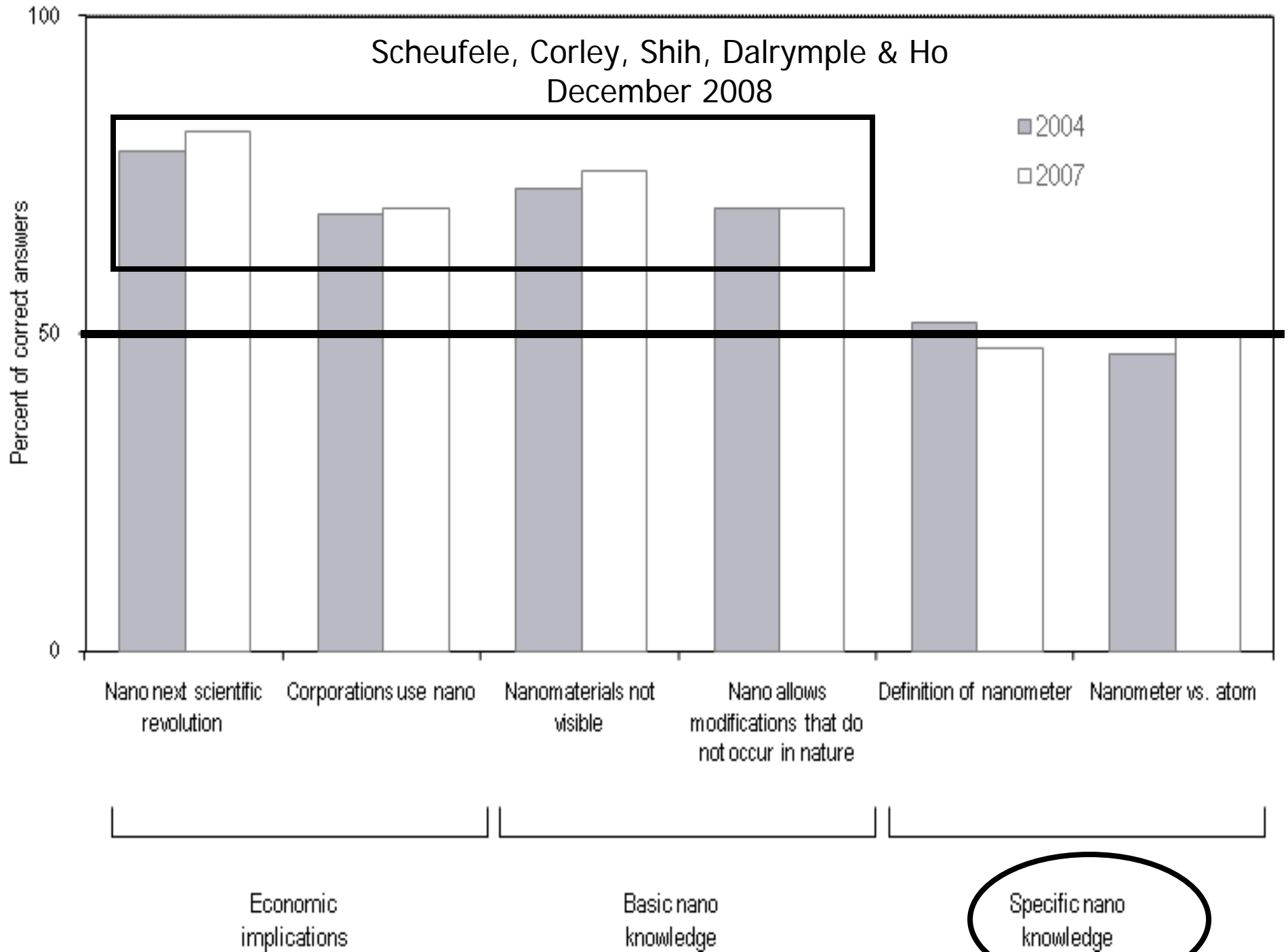
PUBLIC KNOWLEDGE ON NANOTECHNOLOGIES CANADA AND EUROPE



PUBLIC KNOWLEDGE = INTEREST

- 1. From 2004 to 2007 public who heard little or nothing decreased from 84 to 81 percent, people who heard some or a lot increased from 16 to 19 percent.**
- 2. Over 3 years, no significant impact from media exposure. 3% within error percentage.**

Scheufele, Corley, Shih, Dalrymple & Ho
December 2008



PUBLIC KNOWLEDGE = UNDERSTANDING

- From 2004 to 2007, no changes in levels of public knowledge about nanotechnology, levels of technical understanding of nanotechnology (definitions of nanometer, and size relative to an atom) are close to 50 percent.
- The distribution of correct and incorrect responses that could be expected based on pure chance.

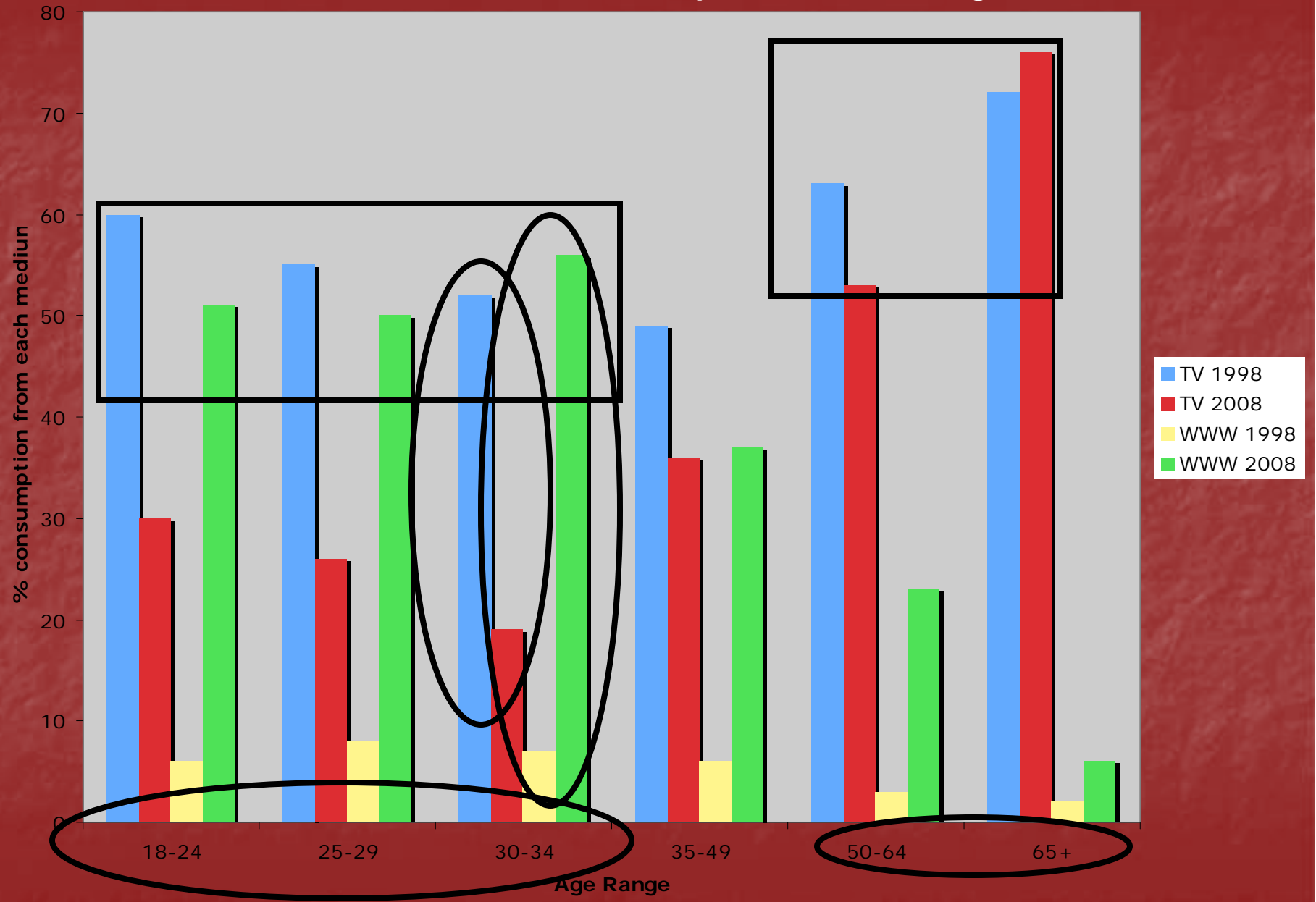
PUBLIC KNOWLEDGE/INTEREST DATA

1. Data is poorly collected and inaccurate.
 1. Incorrect sample.
 2. Incorrect methodology.
2. Plateaued – the public with interest and attention are meeting their information needs.
3. Disinterest – the public simply does not care until a crisis event ensues.

OBSERVATION 2 – PUBLIC ATTENTION AND DIGITAL MEDIA

1. Net resources amplify risk messages though they could also attenuate them.
2. Design web resources as digital media NOT as text. Web2 are interactive.
3. Staying on course with the evolving media: Social networking services (SNS), Twitter (micro-blogging), sliver TV, Second Life....
4. Data indicates demographics favor net-newsers in the USA (Pew 2008 data).

TV and Internet News Consumption
Pew Research Center for the People and the Press, August 2008



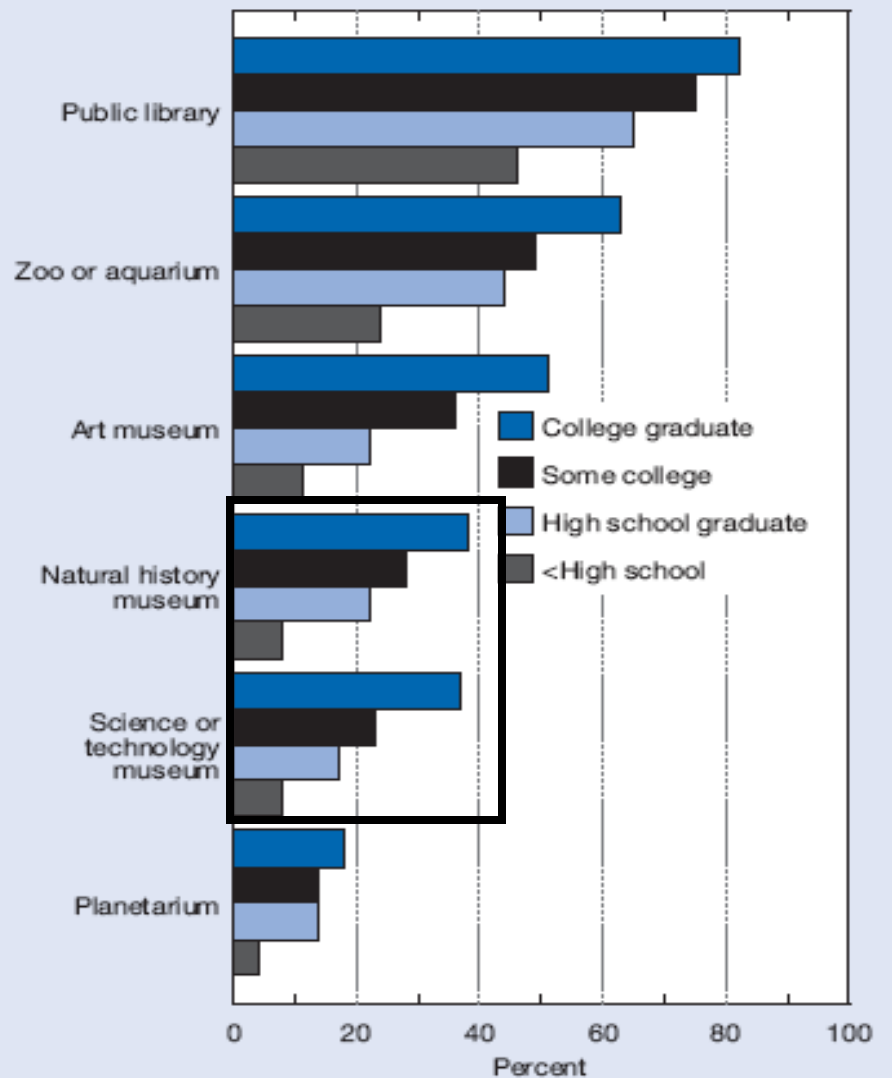
OBSERVATION 3 – PUBLIC ENGAGEMENT

- 1. Determine your audience (the 7-10 percent solution).**
- 2. Engagement is not for everyone. Engagement exercises may not produce usable data. Sample size and methodology.**
- 3. Prepare the public for a trigger event (contagion). Inoculate the public. Anchor a positive.**

NISE AUDIENCES

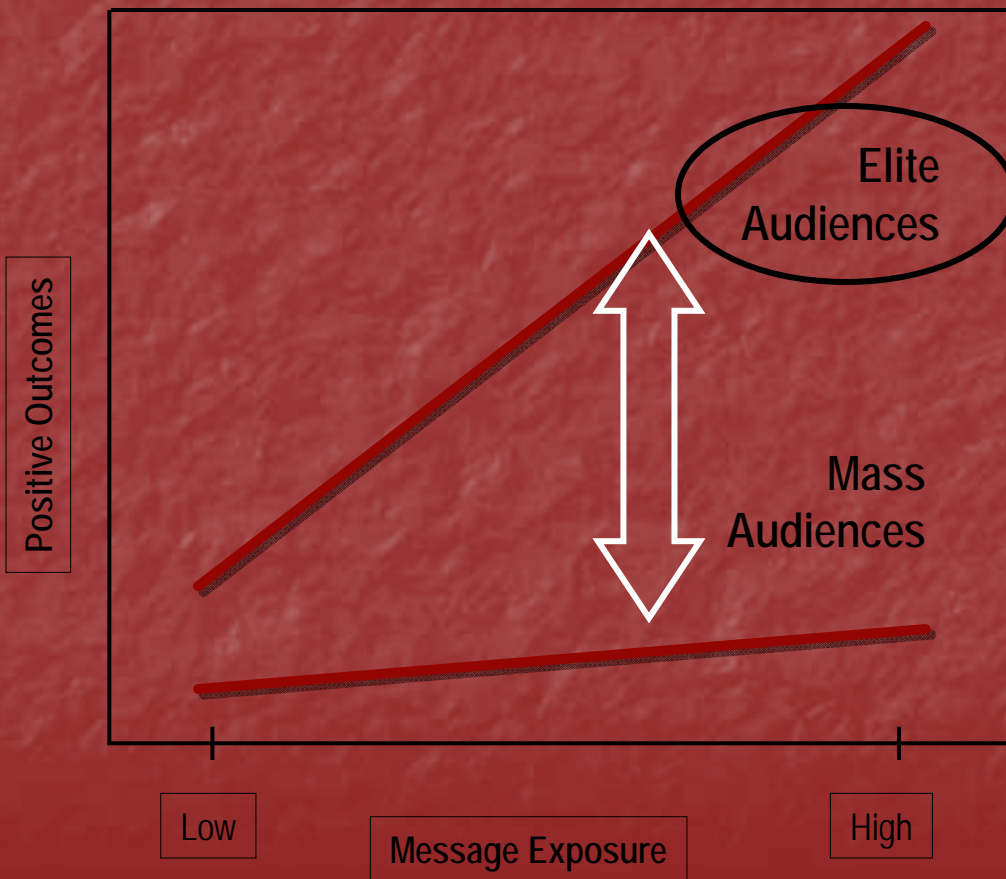


Figure 7-5
Attendance at informal science institutions, by institution type and education level: 2006



SOURCE: Horrigan J, The Internet as a Resource for News and Information about Science, *Pew/Internet* (November 2006); and Pew Internet & American Life Project Survey (January 2006), <http://www.pewinternet.org>.

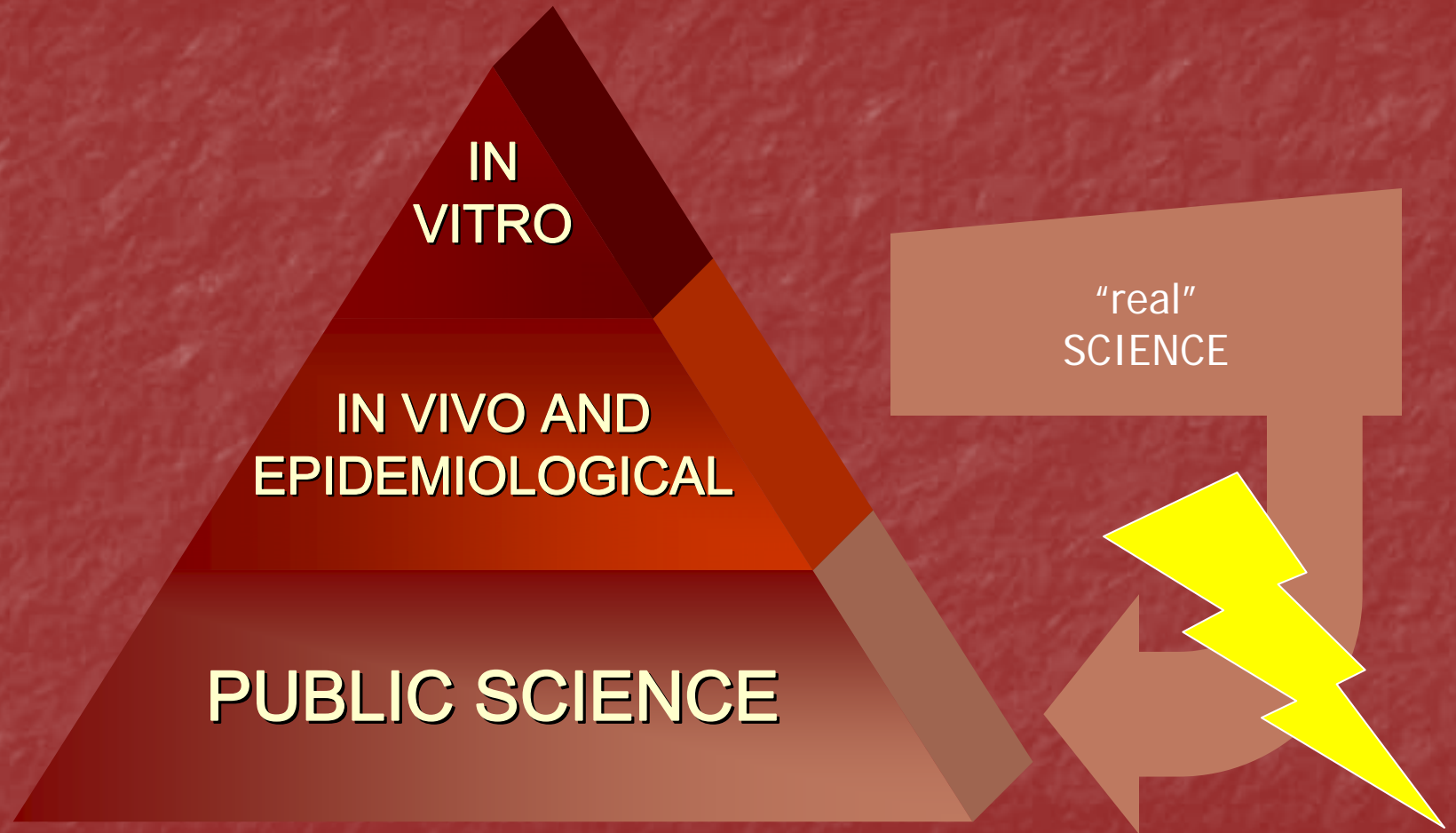
SCIENCE TELEVISION



PERCEPTION



OBSERVATION 4 – PUBLIC SCIENCE



OBSERVATION 4 – PUBLIC SCIENCE

- 1. Prepare the public for a trigger event (contagion). Inoculate the public. Anchor a positive.**
- 2. Public science is technology: it deals with applications not with discoveries.**
- 3. Risk has a negative valence. Discussing risk increases its negative valence regardless of the subject.**

New risk
strategies for
communicating
to publics

PUBLIC SPHERE

OUTREACH

CONSUMERS

ENGAGEMENT

PARTICIPATION

FREE ADVICE - WHAT TO DO WHEN COMMUNICATING TO THE PUBLIC

- 1. Stop using intuition when designing a communication campaigns. Failures are expensive AND risk fatigue is real.**
- 2. Use data; NO place for pop-communication and crisis PR.**
- 3. Don't over-extend your expertise. Risk on a dime is not wise. Use communication professionals.**



RISK COMMUNICATION AND PUBLICS

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Salute to Dietram Scheufele, U Wisc.

THANKS
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