



COMMUNICATING RISK



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SOURCES

“The Rhetoric of Stakeholding,” Nanoethics: The Ethical and Social Implications of Nanotechnology, Lin, A., ed., Hoboken, NJ: Wiley and Sons, 2007, 225-240.

“Public Acceptance of Nanomedicine: A Personal Perspective”, Nanomedicine, J. Baker, ed., NY: Wiley Interdisciplinary Reviews, 2008, x-x.

“Stakeholder Participation in Nanotechnology Policy Debates” Nanotechnology: Ethics and Society, Bennett, D. ed. London: CRC Press (Taylor & Francis), 2008, x-x.

“Intuitive Toxicology: The Public Perception of Nanoscience,” Nanoethics: Emerging Debates, Allhoff, F. & Lin, P., eds., London: Springer, 2008, x-x.



PCOST is

- NCSU, Wisconsin, American, South Carolina (17).
- Communication, Journalism, Management, Political Science & Technical Writing.
- Its mission will be to provide **opportunities for scholars in public communication to conduct research and experiments to improve how stakeholders in science and technology, including policy makers, scientists, and businesspersons communicate information to the general public through oral and written means in education, media, and other contexts.**



CHALLENGES

1. Assessing public sentiment –
 - False readings given the level of understanding. Rounds.
 - Push polling phenomenon in consensus conferences.
 - Avoiding trigger terms – risk (negative valence); cultural.



CHALLENGES

2. Producing value –

- Determining demographics – decide who is most relevant.
- Establishing risk maps – stimuli/response patterns, such as oases and ghettos; perceptually-specific communities of environmental risk.
- Avoiding heuristics and biases, such as affect and alarmist heuristics (EX: maximin).



DEBUNKING ASSUMPTIONS

1. Experts know more about risks.
Hazard vs. risk dialogues. Meta-judgment of risk & social construction of risk.



ASSUMPTIONS

2. Accuracy as a variable.

- Does misreporting impact perception? (MagicNano, Samsung, WWC-P index)? Kapferer – Villejuif.
- Does more information improve perception? Hart Assoc. unsure. Access vs. inclination. Links between information and perception of risk are variable.



ASSUMPTIONS

3. Proximity denotes risk valence. Are the maps concentric? If not, then why not? Might explain discounting exposure and dosage.



DEBUNKING PUBLIC SPHERE ISSUES

1. Stakeholding has unusual dynamics: some stakeholders are more important than others. EX: The insurance industry and regulators.



PUBLIC SPHERE ISSUES

2. Public role in science. What role can/should they play? Are there legitimate surrogates?



PUBLIC SPHERE ISSUES

3. Public as consuming public.
Voting with their wallets. Hart Assoc. focus groups on food discovered disconnect between opinions and consuming behavior.



OPINION GENERATION

1. Experts and the general public disagree on risk rankings. Some but not all risks. Experts rationalize hazards against dosage and exposure. The public does not. Non-rational variables, such as availability heuristic.



OPINION GENERATION

2. Experts are more concerned about the EHS variables of nanotechnology than the public. Why is this true?
Toxicology push.



OPINION GENERATION

3. Hart Assoc. discovered more information might be counterproductive. Information variable meaning some information increases apprehension.



OPINION GENERATION

4. Merely mentioning a risk increases its negative valence.
EVID: High power tension lines and cell phones.



MEDIA

The media accentuates and attenuates hazard and risk estimations.

- How are they affecting the EHS debate over nanotechnology?
- If there is an effect, is it significant?
- If it is significant, which media sources matter more than others? And why? New media.
- What role does media hyper-globalization play in risk construction?



CAGs (civic advocacy groups)

1. Are CAGs legitimate stakeholders.
A CAG can be run out of a spare room or office in a garage. Only takes a domain and web site. Same conflicts of interest as business and industry.



CAGs

2. Some CAGs act differently than others. Some are more responsible than others. EX: Risk profile shifts.



CAGs

3. Providing CAGs with a free pass is unjustified. Third party vetting of government, industry, CAGs, and media.



NON-RATIONAL VARIABLES

1. Affect bias – probability as a function of emotion.
2. Affiliation bias (trust) – probability favor associations: industry, government, academic.
3. Alarmist bias – probability favors high alarm.
4. Availability bias – probability as a function of recall.
5. Informational bias – probability favors social information generated often by highly visible or mediated anecdote.
6. Proportionality bias – probability favors reduced proportion rather than number of people assisted (child in the well); LESS BAD > MORE GOOD.



TEACHING RISK ASSESSMENT

- Hazard (H) x (Exposure ? Dosage) = Risk
- The calculation has high levels of uncertainty.
 - Hazard is derived from studies (in vitro, in vivo, epidemiological).
 - Hazard is derived from extrapolation – chemical similarity, esp. features such as charge or surface area.



HEURISTICS –

Where do they come from?

- Nature.
- Nurture.
 - Parenting.
 - Peer association.
 - **Education.**
 - Media.



RECOMMENDATIONS

- Get data – less scholasticism and more empiricism. EX: Fallacy of contagion.
- Start early – teach risk and certainty (modules fit everywhere).
- Leave science to the scientists and communication to the communication specialists. **A good consensus communicator is much less expensive than a crisis communicator.**



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