

45 min from 6:15pm - 7pm Friday January 27, 2017
Cornell University, Klarman Hall, TA Office 1

Title: Can Science Speak Truth to Power?

Short description: **This workshop will examine some of the domains where the scientific establishment fails to speak truth to power—or to us. We examine reasons for this failure and responses.**

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<https://bioscienceresource.org/>
<https://www.independentsciencenews.org/>



What does the Public Want?

- Healthy food
- Clean air, soil, water
- Connection with family, friends, nature
- Meaningful work
- A say in their lives – choice

What Does Speaking Truth to Power Look Like?

- Speaking out against corporations or industries polluting poor communities
- Publishing research that suggests a powerful industry needs more regulation or that their products are unsafe (e.g. Oil and Gas industries, GMOs, Chemicals, meat and dairy industries)
- Government whistleblowers whose research suggests industry regulation is needed (e.g. toxicity of sewage sludge)



Speaking Truth to Power

Carrying out independent research on important but contentious subjects and publishing results that do not favor industry or government positions.

Speaking out in the public's interest in opposition to powerful Government or Corporate entities.

What Are Some Scientific Questions Where Answers Impact the Public and Industry?

- **Environmental** – Is this chemical toxic? What is the best way to mitigate climate change? Can climate change be reversed? How can we grow food without degrading soil, air, water quality? Do Bt crops harm monarchs? What are the implications of Climate change?
- **Health related** – What is healthiest diet? Does how food is grown impact nutrition? Do herbicide-resistant crops lead to higher residues in food? Is eating meat good for you? Can a plant-based diet give you enough protein? Does the flu vaccine decrease the number of flu cases? Do deadly bird flu strains arise in CAFOs or in wild bird populations? Is drug X or medical procedure Y safe or effective?

What Happens When Your Research Threatens a Corporate Interest?

- Personal Attacks – e.g. called unethical
- Science attacked or unduly scrutinized – biased assessment of methods or data
- Research from industry associated scientists produced that “debunks” your study
- You may lose funding or career opportunities or even your job

Eg: Suppression of dissent in science by Brian Martin: <https://www.uow.edu.au/~bmartin/pubs/99rsppp.html>

What Is Industry Playbook for Controlling Scientific Message?

- Fund Academics to do research or consult or promote their products or act as expert witnesses
- Enlist Academics to attack dissenting scientists in scientific journals, in the media, within the University
- Replace concept of cost/benefit analysis with risk assessment
- Change COI into 'perceived' COI
- Enlist science mainstream media to run stories that push their message: "Food crisis – world needs GMOs and industrial agriculture to grow enough food"; "Genes are responsible for disease not food, toxins or environment"
- Label those who oppose their product "anti-science".

Examples:

- a. [Trust Us We're Experts: How Industry Manipulates Science and Gambles with Your Future](#) (2002) Book by Sheldon Rampton and John Stauber
- b. "The Neoliberal University" by Wilhelm Peekhaus (2010) at https://works.bepress.com/wilhelm_peekhaus/5/
- c. "Monsanto Discovers New Social Media" by W. Peekhaus (2010) at <http://ijoc.org/index.php/ijoc/article/download/901/468>
- d. "Monsanto's Mind-Meld; Spin Machine in High Gear." (2017) Carey Gillam at http://www.huffingtonpost.com/carey-gillam/monsantos-mind-meld-spin_b_14528692.html

What is the Corporate Playbook for Big Food?

- Focus on personal responsibility as the cause of the nation's un- healthy diet.
- Raise fears that government action usurps personal freedom.
- Vilify critics with totalitarian language, characterizing them as the food police, leaders of a nanny state, and even "food fascists," and accuse them of desiring to strip people of their civil liberties.
- Criticize studies that hurt industry as "junk science."
- Emphasize physical activity over diet.
- State there are no good or bad foods; hence no food or food type (animal products, soft drinks, fast foods, etc.) should be targeted for change.
- Plant doubt when concerns are raised about the industry.

From:

Brownell, Kelly D., and Kenneth E. Warner. "**The perils of ignoring history: Big Tobacco played dirty and millions died. How similar is Big Food?**" *Milbank Quarterly* 87.1 (2009): 259-294.

Results of Scientific Suppression

- **Only one voice is heard** (the pro-technology voice -- vaccines are safe, GMOs are safe, chemicals are safe)
- **Many academics self-censor** (don't do certain types of research, don't critique certain scientifically unfounded claims)
- **Public interest research is underfunded**
- **Legitimate scientific questions go untested**
- **Difficult to publish dissenting papers**
- **Public is misled**
- **Negative health and environmental consequences**

How Does Science Policy Work?

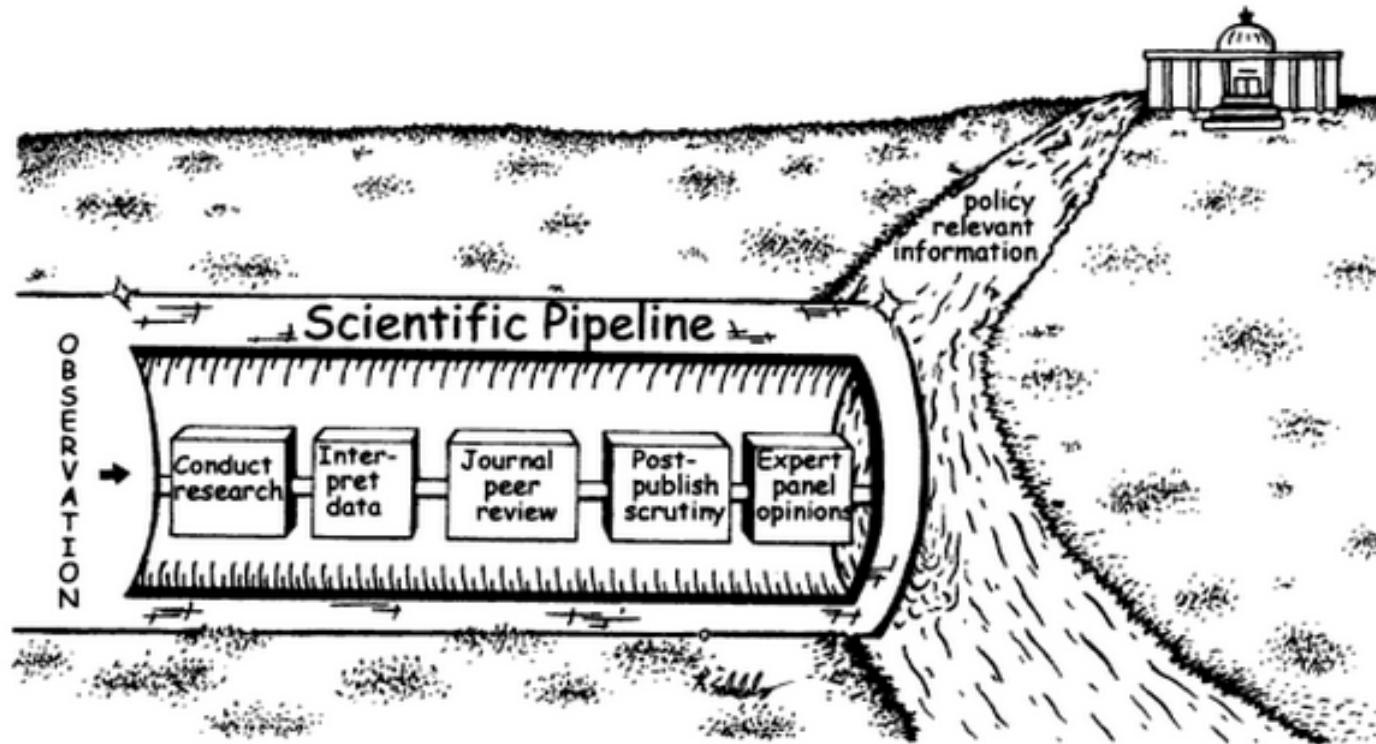


Figure 1: The separatist view of science and policy

From: McGarity, Thomas O., and Wendy Elizabeth Wagner. Bending science: How special interests corrupt public health research. Harvard University Press, 2008.

What Promotes Corporate Bias and Scientific Suppression?

- Universities soliciting and accepting money from industry or private foundations (Cornell examples: Gates Building 25 M + 5.6 M Alliance for Science to promote GMOs, Pepsico auditorium in Food Science, 1.5 M from Chobani Yogurt).
- University Trustees with ties to Financial and other Industries.
- Revolving door between Industry and Universities.
- Faculty Promotion based on Patents, Industry funding and connections.
- Scientists with COI on research panels, granting bodies, Editorial board of Journals, choosing conference speakers.
- Corporate advertising in scientific journals (for jobs or products or services or “special sections”).
- Scientists with COI in prestigious scientific organizations with advisory roles (eg. National Academy of Sciences)
- Corporate influence over mainstream media including science media

Eg: <http://www.foodandwaterwatch.org/news/under-influence-national-research-council-and-gmos> and https://www.nytimes.com/2016/12/27/business/national-academies-biotechnology-conflicts.html?_r=0

Is Industry Funded Research Really Research?

- Research shows that industry ties and funding correlate with findings that are positive for industry
- Research shows that ties with one industry bias researchers in favor of other industries
- Research shows that disclosure of a COI does not necessarily result in readers giving experiments extra scrutiny or showing extra caution in accepting results

How Does Industry Bias Scientific Results?

Examples:

- Use a small sample size so that differences will never be statistically significant
- Do tests on 20 rats but only report the results of the 10 most favorable rats
- Test GMO crops in 20 locations and only publish the results from the experiments that gave the “right” result
- Use the wrong controls or no controls, so that results are inconclusive



How Can Scientists Respond to Scientific Suppression?

- **Amass the Data and Go public** [Write a book, make a documentary, speak out. (e.g. *Silent Spring*; *Living Downstream*; *The China Study*; *The Real Costs of Fracking*; *Altered Genes, Twisted Truth*; *The CAFO Reader*)]
- **Create Data Bases of Relevant Scientific Literature** (e.g. Concerned Health Professionals of New York: *4th edition of the Compendium of scientific, medical and media findings demonstrating risks and harms of fracking (unconventional gas and oil extraction)*; Plant Based Research database: <http://www.plantbasedresearch.org/>)
- **Create a Database of Examples or Case Studies** (e.g. Unintended Effects of Genetic Manipulation - A Project of The Nature Institute; There used to be a database of sewage sludge health incidents compiled on Cornell Waste Management Website)
- **Carry out Community Science to Collect Data** (e.g. Community Science Institute Ithaca tests water for fracking compounds; Bucket Brigades test air quality)
- **Unite** with Scientists in other fields, Doctors or other Professionals, Businesses and the Public who share similar concerns to do research or put pressure on politicians (e.g. Preventing herbicide-resistant wheat approval in Canada see Andree, Peter. "Civil society and the political economy of GMO failures in Canada: a neo-Gramscian analysis." *Environmental Politics* 20.2 (2011): 173-191. ; Fracking NY State)
- **Start or Write for Independent Science Journals or Independent Science Media** (eg: www.independentsciencenews.org/)

How Can Non-Scientists Counter Scientific Suppression?

- Start local organizations to fight for public or environmental health
- Work with public interest scientists
- Hold conferences, public forums
- Become an expert yourself by reading scientific studies, talking to scientists
- Gather your own data – alone or working with scientists, doctors and other professionals
- Start independent media (eg. No Frack Almanac, listservs, discussion groups)
- Political action to change policy (e.g. organize and run for office)