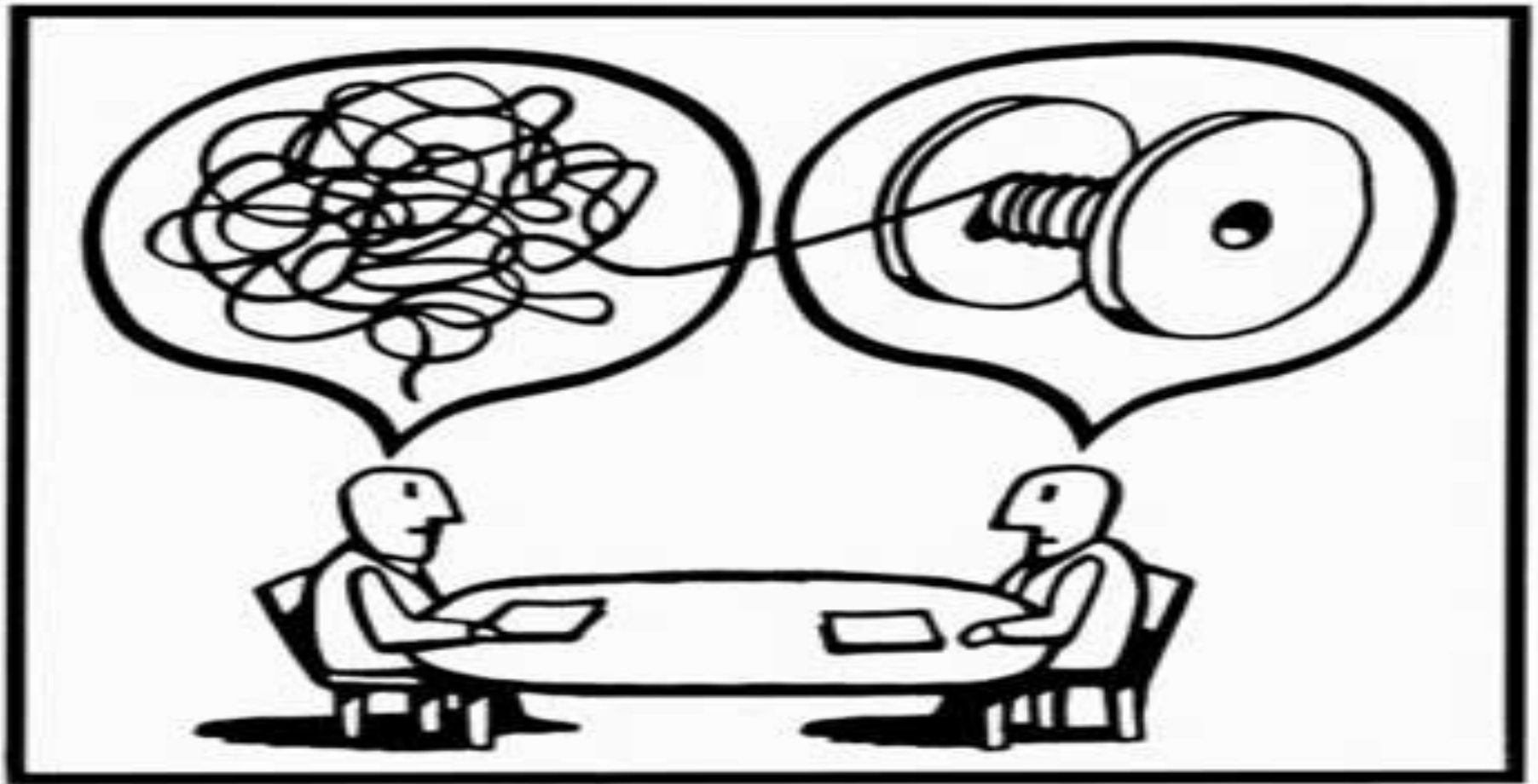


Communication:

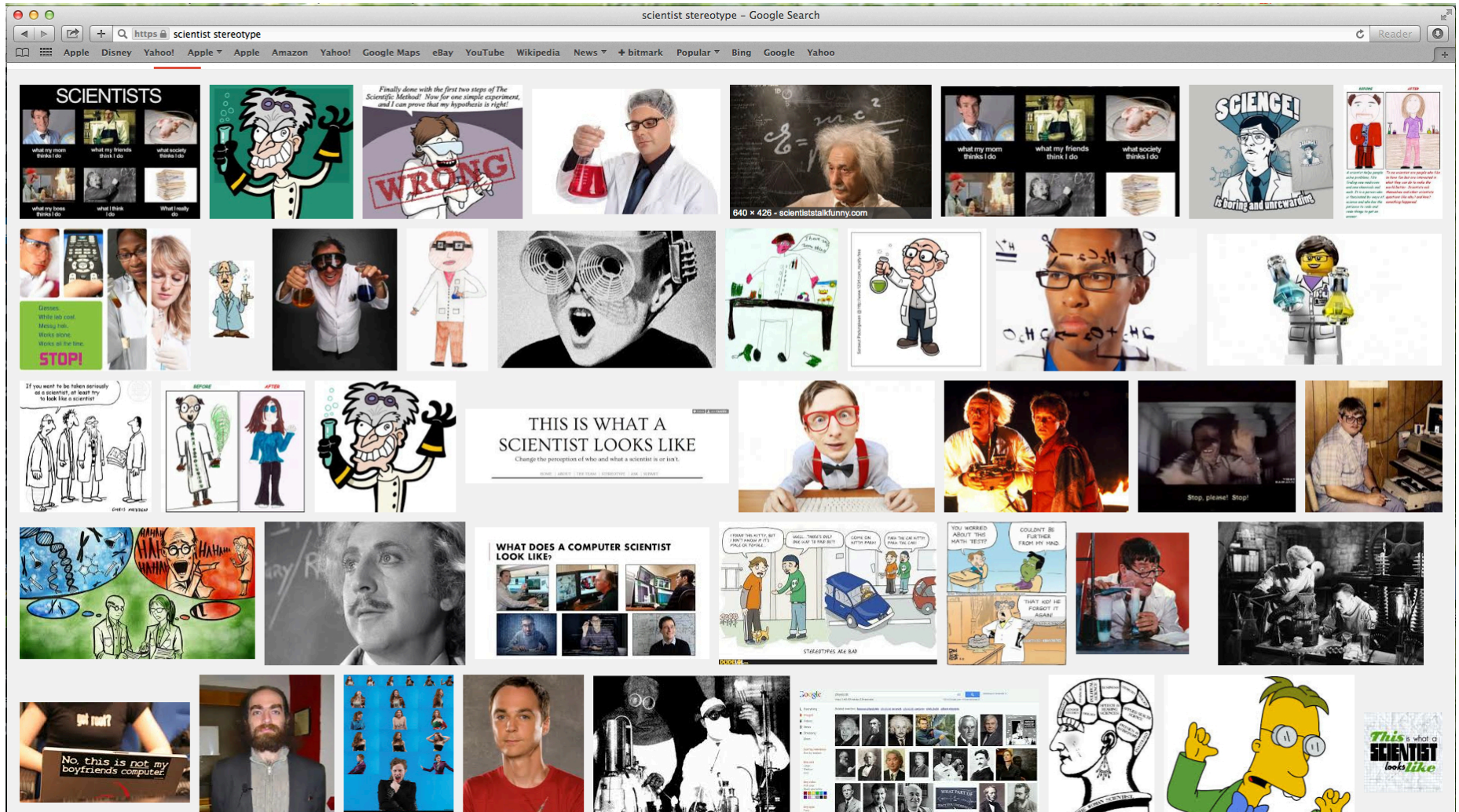
an Integral Component of the Undergraduate Experience



Dr. Adam Oliver Brown



Google Images: Scientist Stereotype



Scientists' Public Communications



Science and Society

- **Science is important**
 - Learning and discovery
- **For the general public**
 - Environment
 - Health
 - Technology
 - Cut down on the pseudoscientific bullshit on the Internet



Climate Change Denial



Belief as False Knowledge

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Science Journal

Explore Group

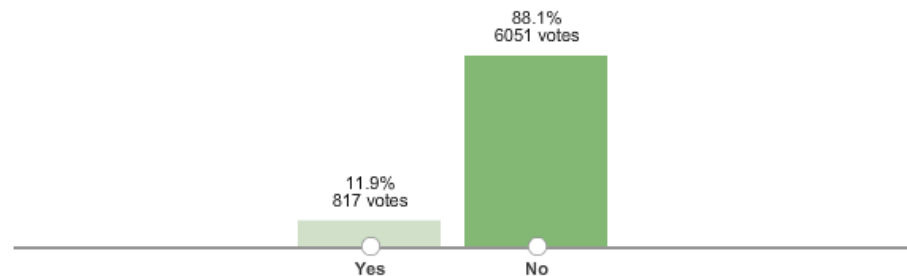
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EVERY
TRADING
DAY



Biotechnology and GMOs



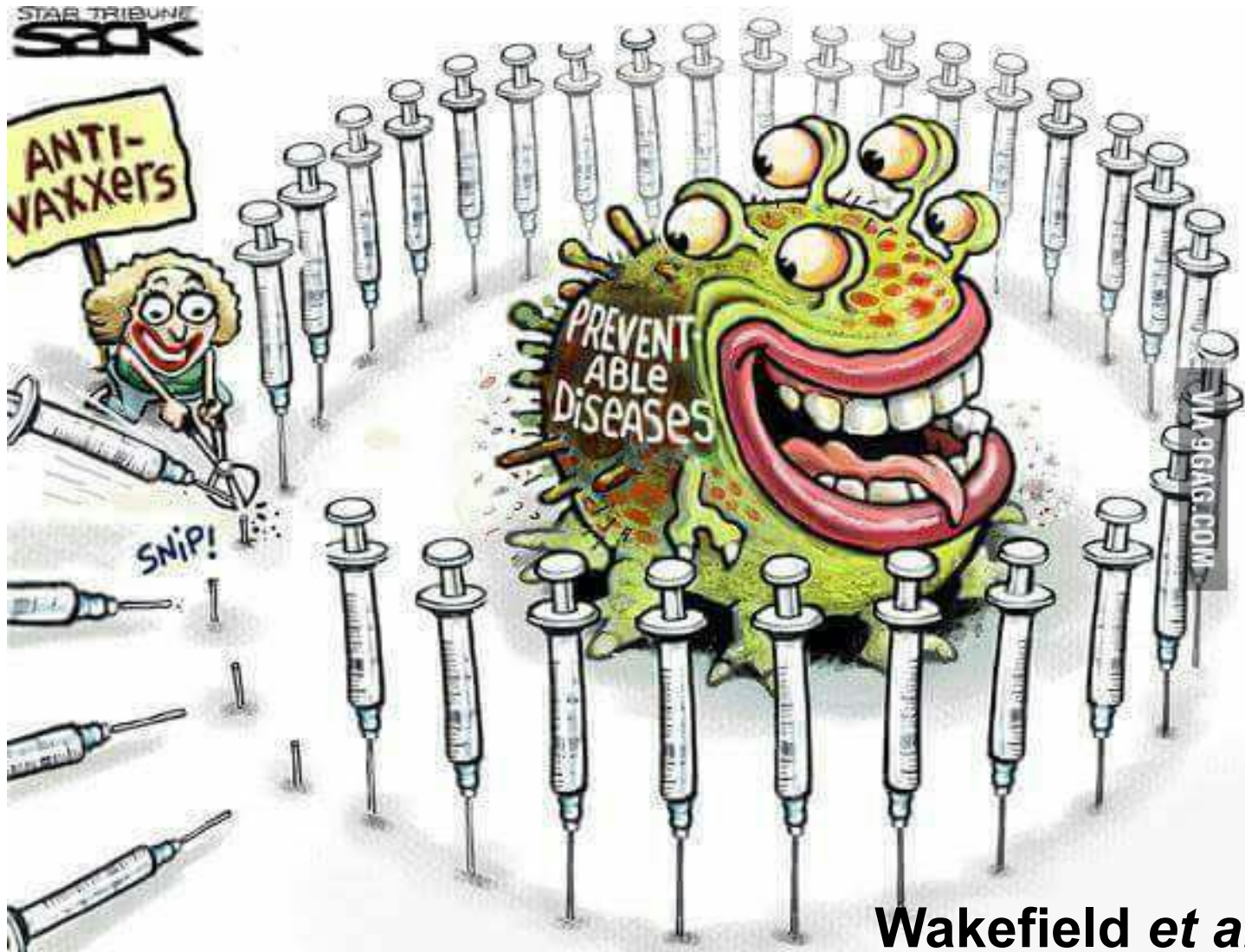
Séralini *et al.*, 2012



Golden Rice and Vit A Deficiency



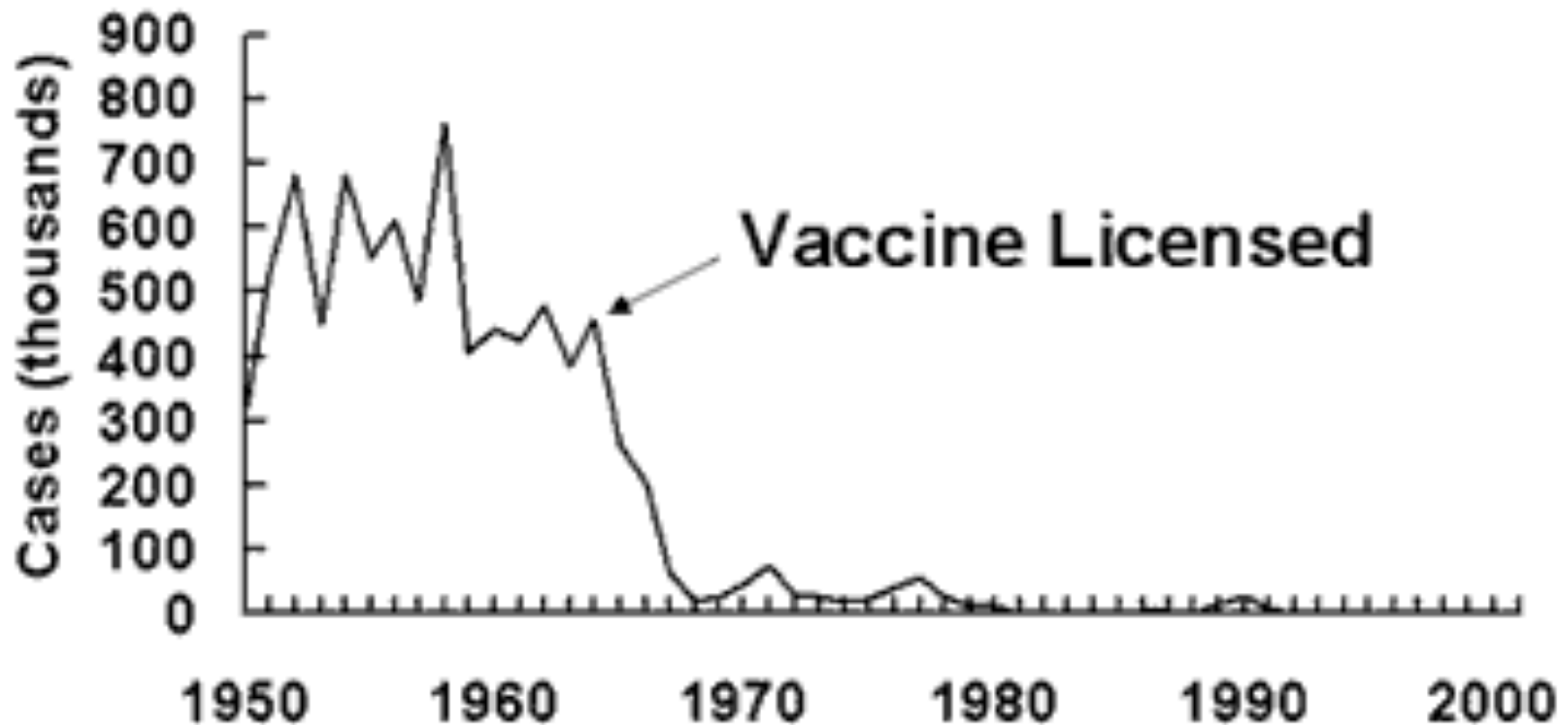
Vaccines and Public Health



Wakefield *et al.*, 1998



Measles–United States, 1950-2001



Centre for Disease Control



Homeopathy and Magical Potions



HOMEOPATHY

It may seem prettier, but it's still just water.



Responsible Citizenry and Informed Decision-making

- Important to know about
 - Effect of GH gases on climate (Environmental Impact)
 - Technology on Fuel and Energy efficiency (Economic Impact)
 - Which politicians support evidence-based policies and not ideology (Political Impact)
 - Being supportive of research and exploration (Academic Impact)



Communication and Academia

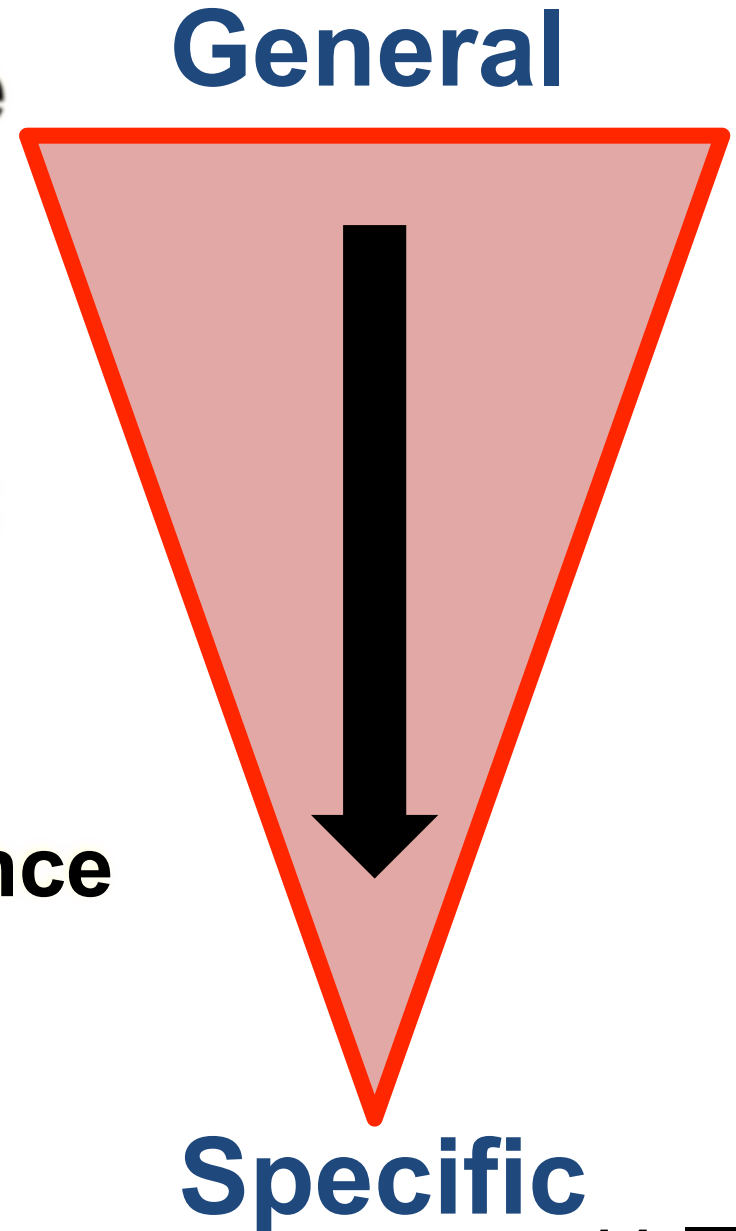
- **Intra-disciplinary communication**
- **Inter-disciplinary communication**
- **Pedagogy**
- **Communication to the Public**



Communicating Science

a) among specialists

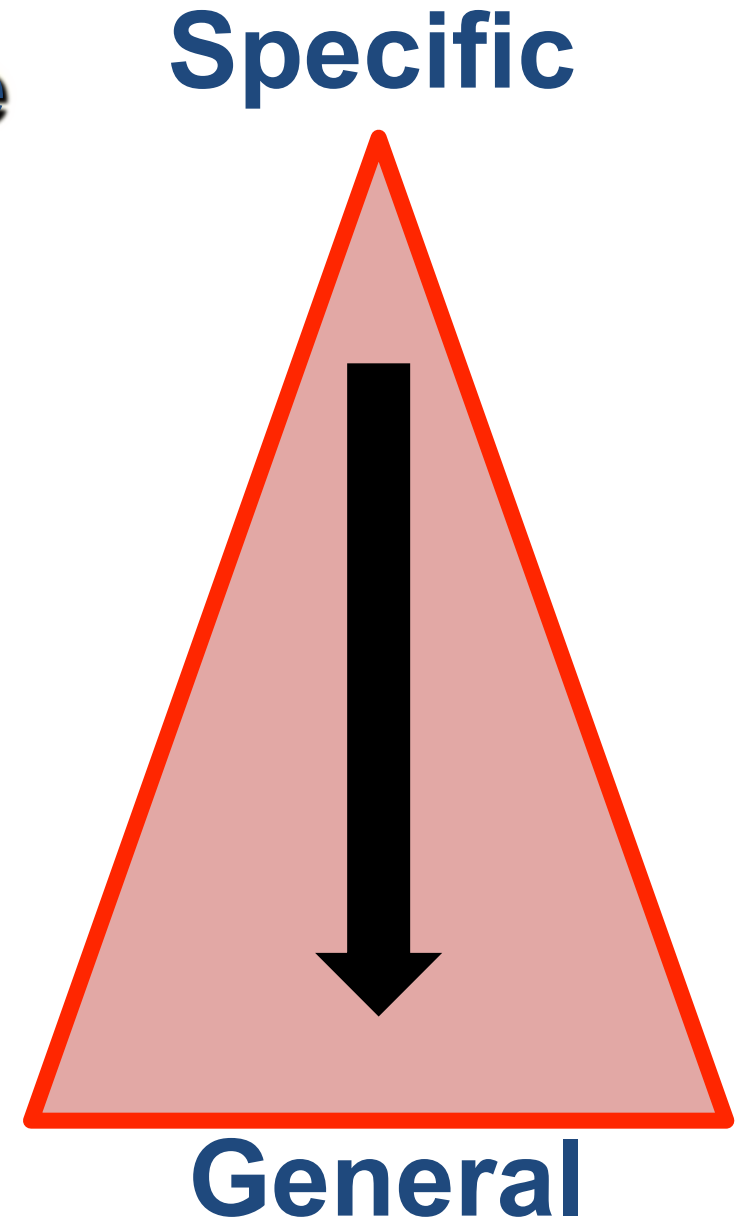
- Introduction and context
- Materials and methods
- Results
- Discussion and importance



Communicating Science

b) to non-specialists

- **Bottom line take-home message, why am I here?**
- **So what?**
- **Background information and context**



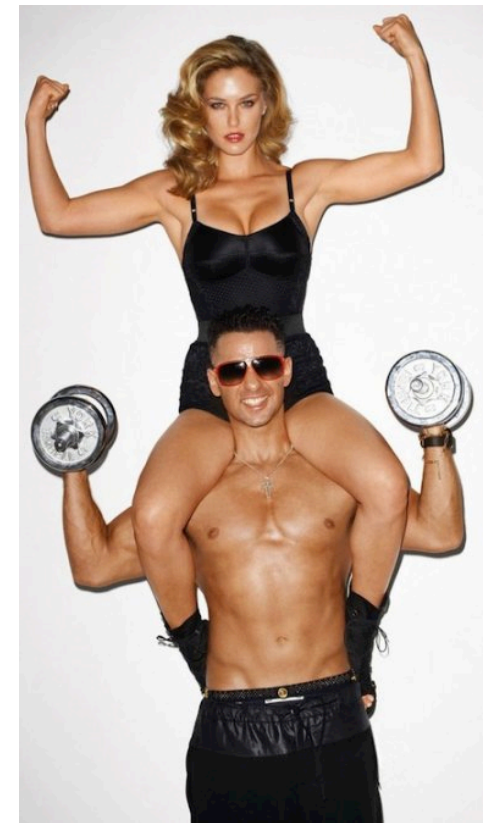
Communication 101

- Know your audience
- Speak to your audience



Who are 'The Public'?

- Made up of many different special interest groups, demographics, societal sectors



Framing for a Diversity of Audiences



Framing for a Diversity of Audiences



Framing for a Diversity of Audiences



Framing for a Diversity of Audiences



Lose the Jargon



Scientific Term	What the public hears	Better Choice
Theory	Hunch, speculation	Scientific understanding
Positive trend	Good trend	Upward trend
Values	Ethics, monetary value	Numbers, quantity
Manipulation	Illicit tampering, cheating	Data processing
Positive feedback	Good response, praise	Self-reinforcing cycle



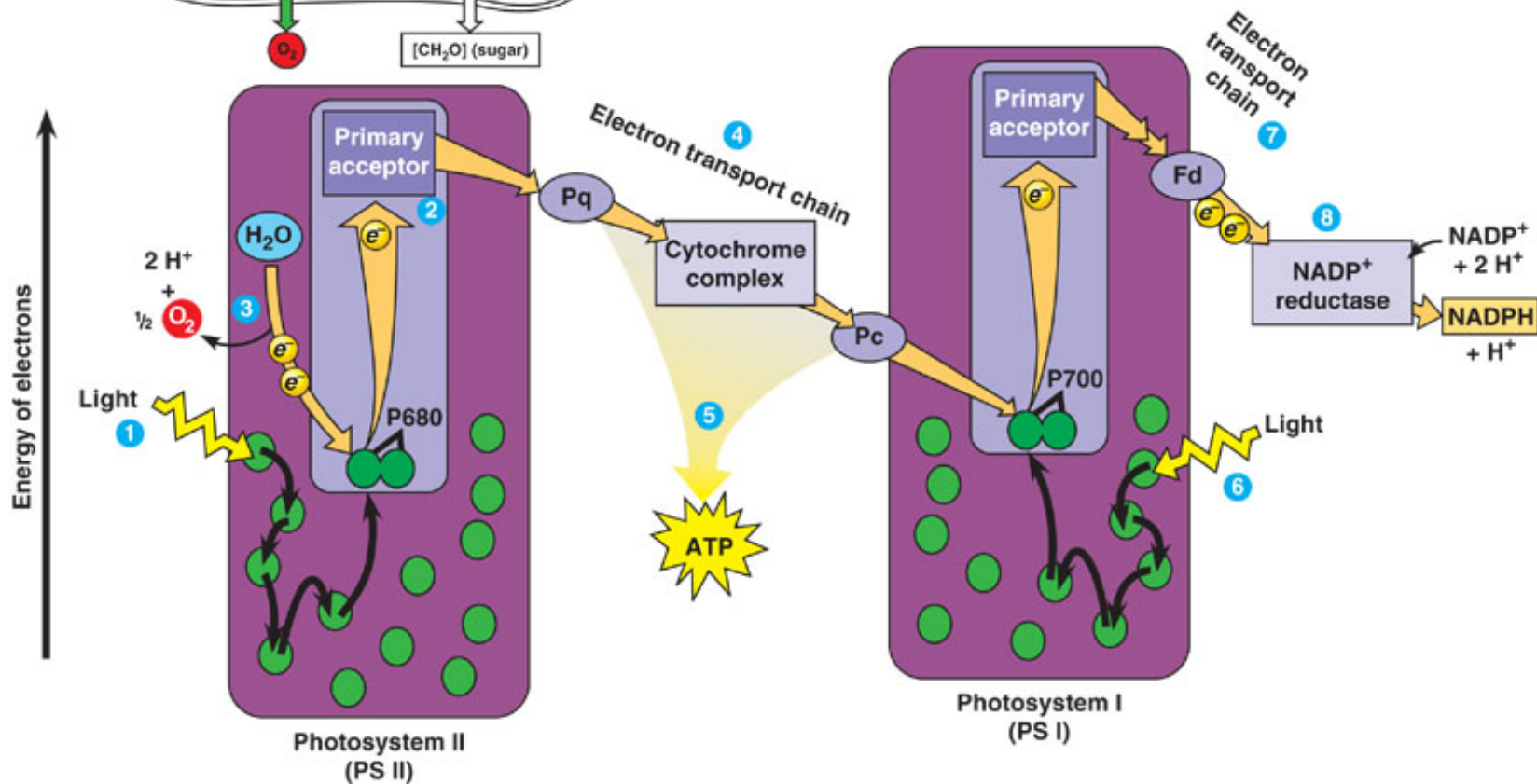
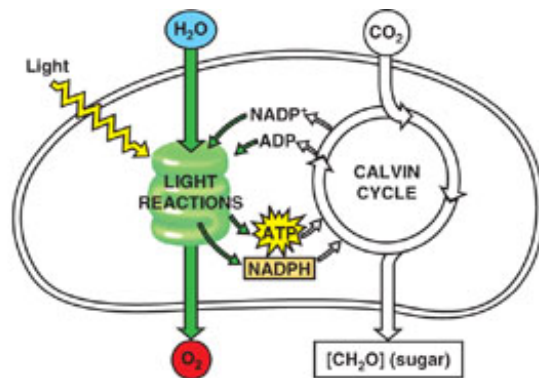
The Power of the Metaphor



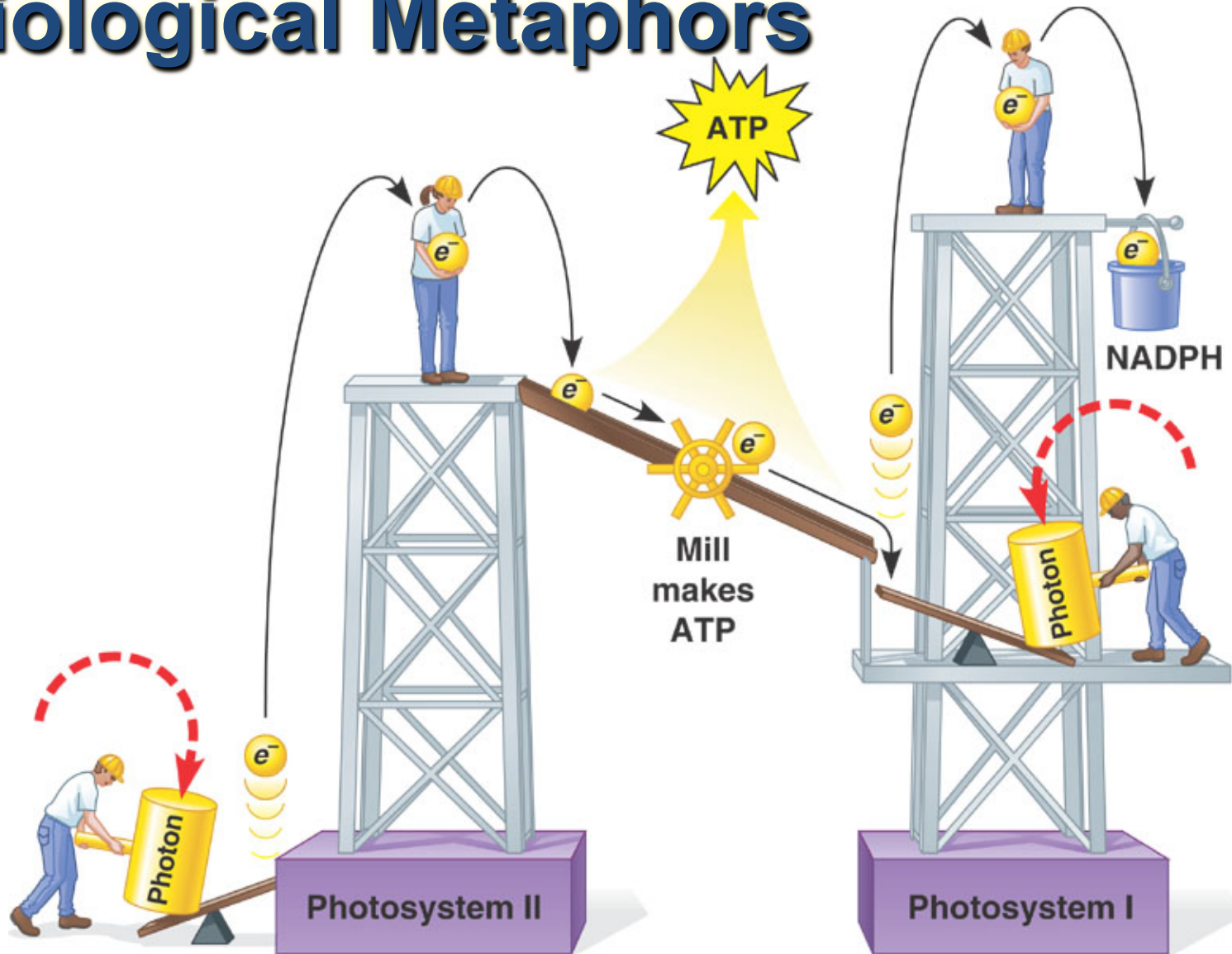
The Power of the Metaphor



Biological Metaphors

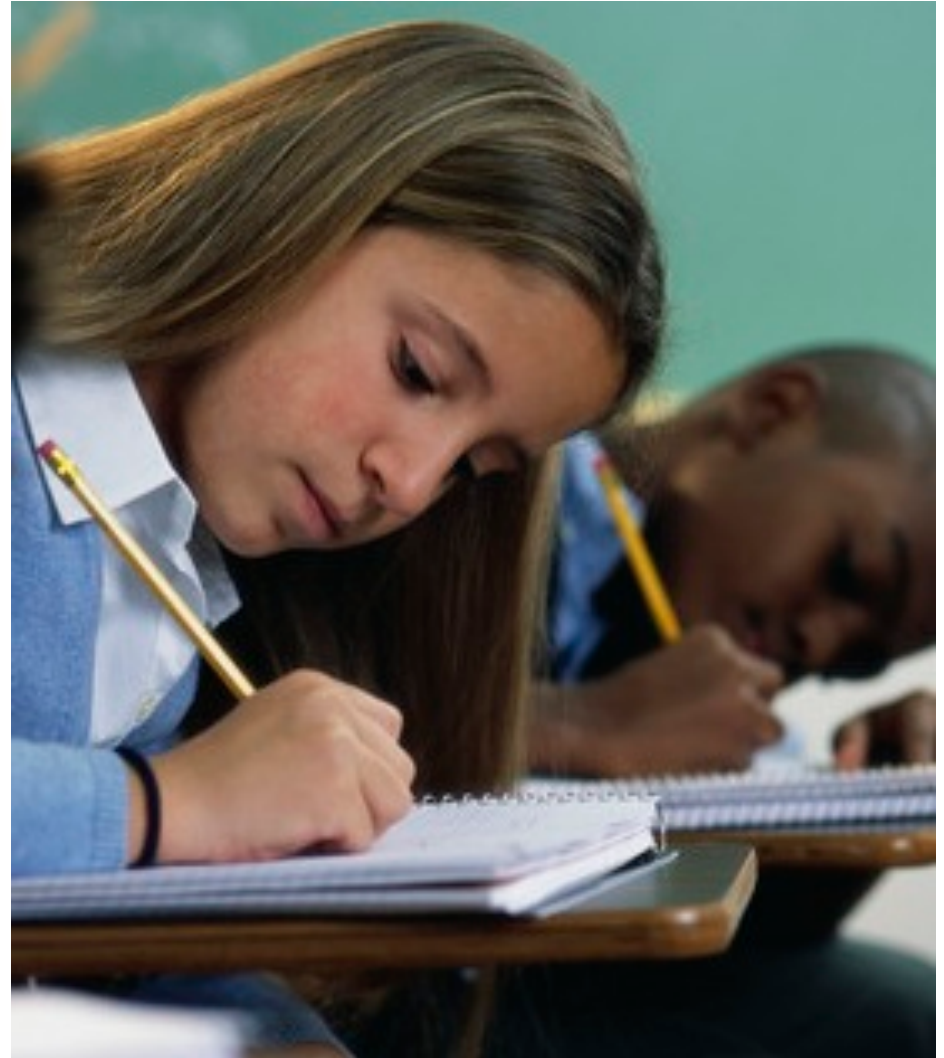


Biological Metaphors



Exams as Communication

- **Students view them as ‘Point Scoring’**
- **We evaluate their ability to convey material**
- **Must be able to explain content to uninitiated**



BIO4101/4501: Pesticides and the Environment

- Presentations as ‘Scientists’ to different audiences
 - Town Hall Meeting
 - Business Group
 - Government Agency
 - High School Auditorium



Public Communication of Science

SCI3101

The Public Communication of Science

(3,1.5,0) 3 cr.

A multi-disciplinary approach to communicating Science towards non-specialist audiences by exploring the principles and practices of communication, public speaking and media relations. Theoretical topics include framing issues for various audience-types, use of metaphor and appropriate terminology in story-telling.

Prerequisites: 21 course credits offered by the Faculty of Science at the 2000, 3000 or 4000 level. This course cannot count as a Science optional course, but may be used as an elective. Limited enrolment.

[Top](#)

SCI3501

La communication scientifique au grand public

(3,1.5,0) 3 cr.

Une approche multidisciplinaire de la communication scientifique pour des auditoires non spécialisés afin d'explorer les principes et pratiques de la communication, les discours publics et les relations avec les médias. Les sujets théoriques abordés incluent l'encadrement des enjeux scientifiques pour divers auditoires, les métaphores et la terminologie appropriée.

Préalables: 21 crédits de cours offerts par la Faculté des sciences au niveau 2000, 3000 ou 4000. Ce cours ne peut pas être utilisé comme cours optionnel en sciences, mais il peut être utilisé comme cours au choix. Cours contingenté.

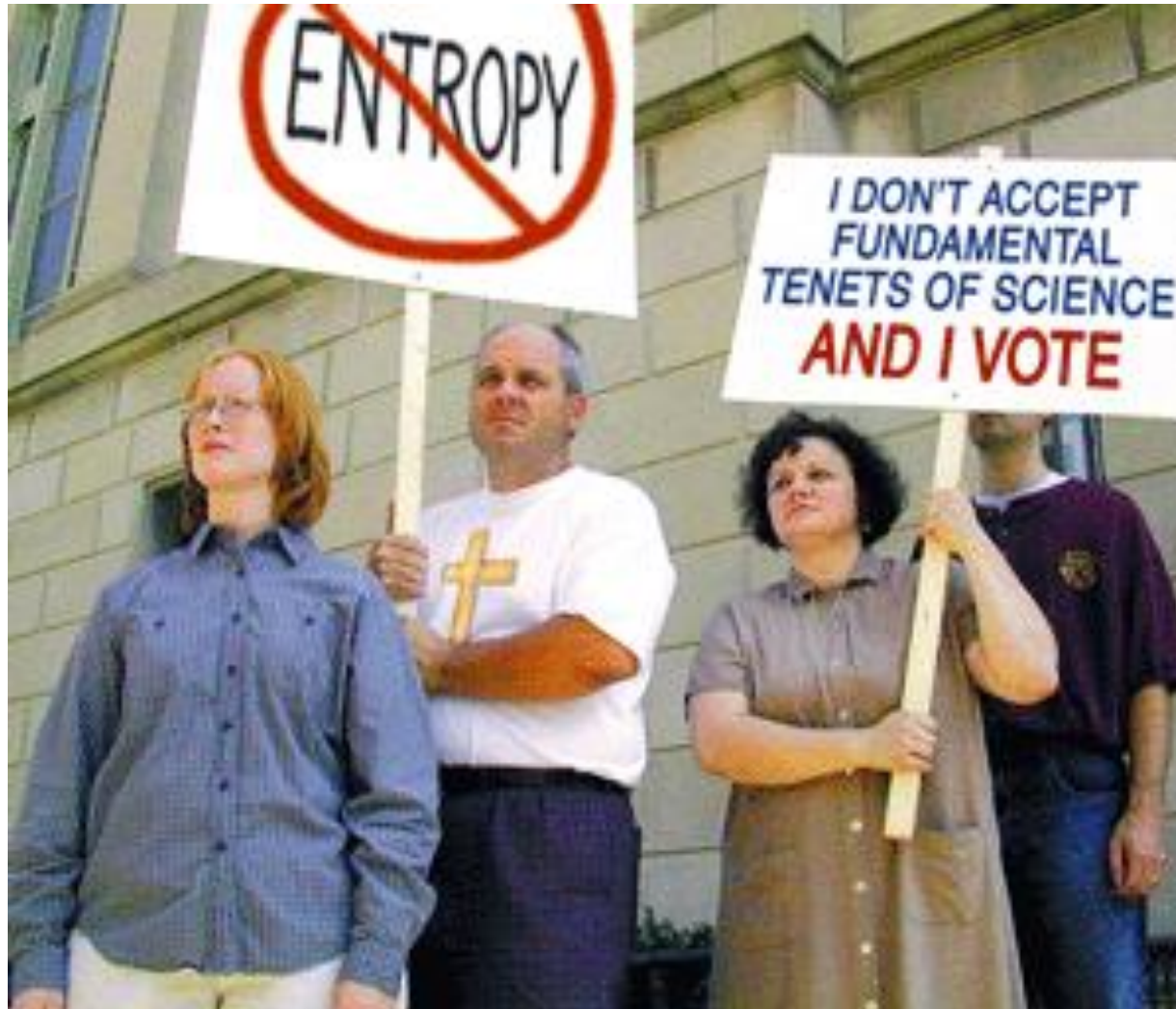
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Public Communication of Science



We've Got Our Work Cut Out



Activities

- **Think-pair-share brief communication on your work**
 - Involve flipping structure, framing for audience type, lose the jargon
- **The Um game**
- **Improv while staying on message**
 - Using random slides

