

# GPC

## Science Communication workshop

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Science communication:

It kills...

It saves lives...

# Nano-terrorism



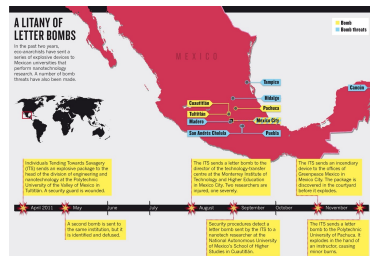
Ernesto Méndez Salinas,  
biologist, Unam, Mexico  
Killed 8/11/2011



José Jaime Barrera Moreno,  
chemist, Unam, Mexico  
Killed 27/06/2016



Individuals Tending towards the  
Wild (ITS)  
Claim the action 22/02/2012



## Transhumanism

On Newsstands Now  
Issue 8.04 | Apr 2000

### Why the future doesn't need us.

Our most powerful 21st-century technologies - robotics, genetic engineering, and nanotech - are threatening to make humans an endangered species.

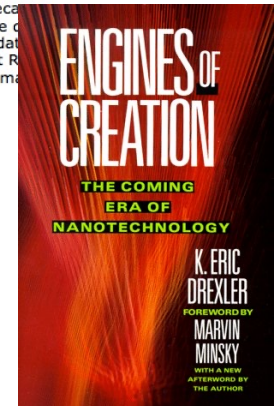
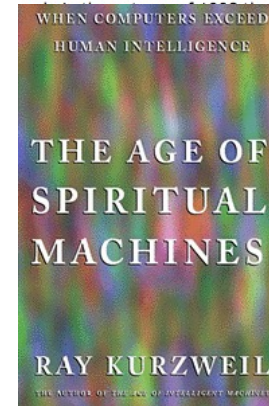
By Bill Joy

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Print, email, or fax  
this article for free.

PLUS  
A Tale of Two Botanies

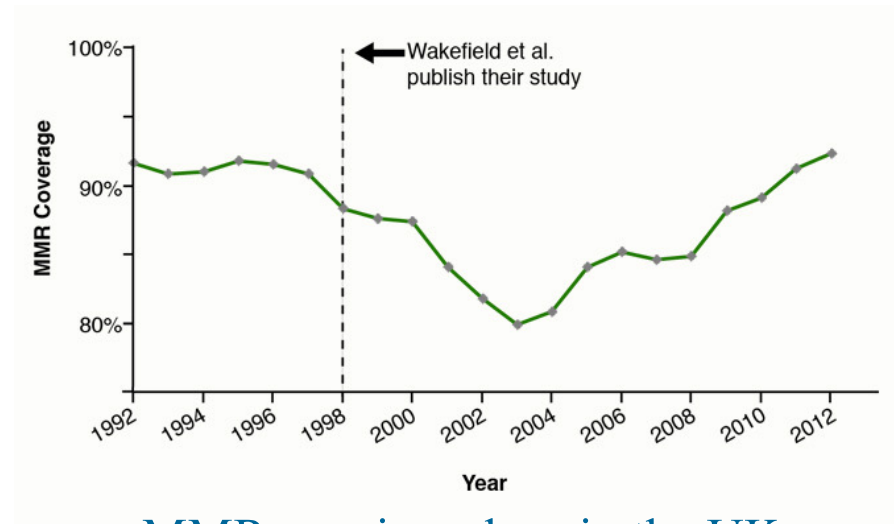
From the moment I became involved in the creation of new technologies, their ethical dimensions have concerned me, but it was



# Debunking the MMR-Autism link



1998: MMR-Autism-Bowel disease link in A. Wakefield's Lancet paper



MMR vaccines drop in the UK

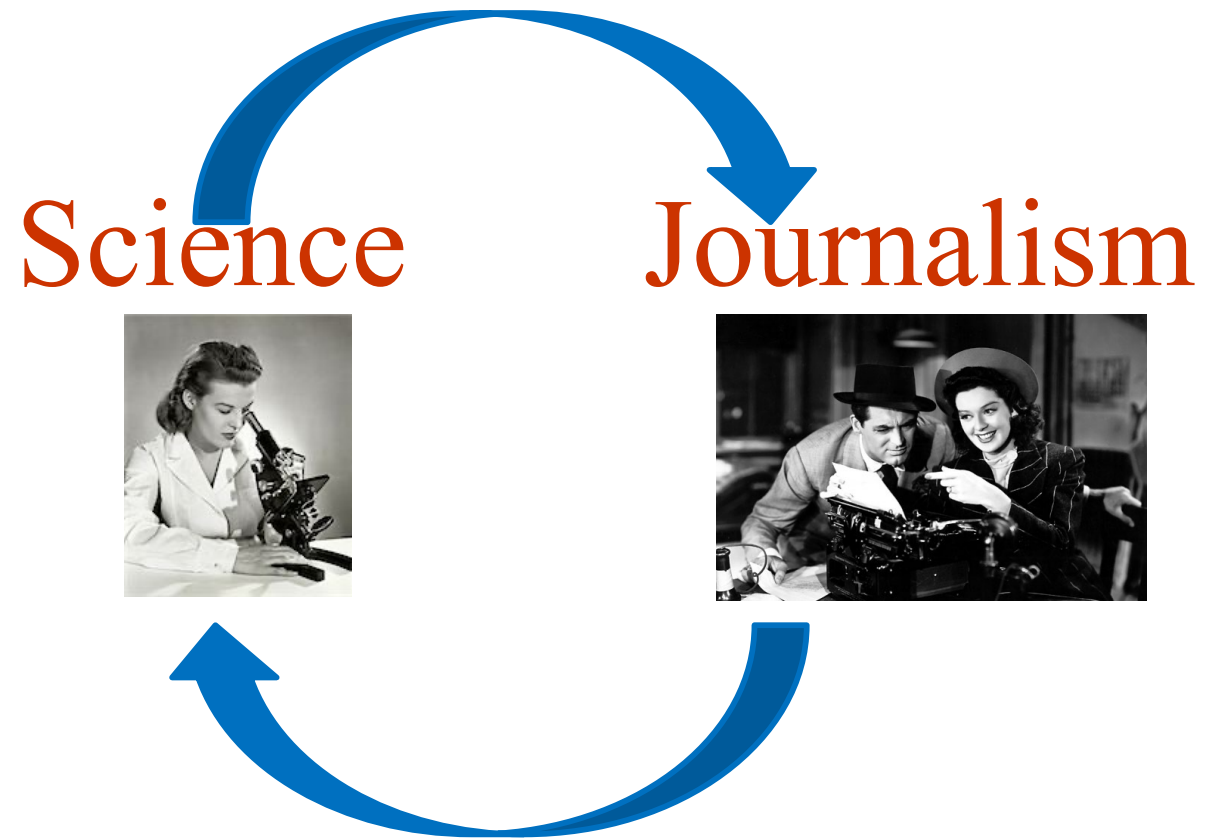


2004-2011: Brian Deer (The Sunday Times, UK) finds evidence of cherrypicking and conflict of interest



2010: retraction

# Beyond the naive view



# Newspaper articles increase paper's citations

**Journal:** New England Journal of Medicine

**Newspaper:** NYTimes (normal ed. & “strike” ed)

**Time follow-up for each article:** 10 years

**Lay press impact:**

- Journal articles publicized by the NYTimes received **72.8%** more scientific citations than control articles (1<sup>st</sup> year after publication).
- This effect was not present for articles published during the strike

What makes for a news?



# Some questions to assess newsworthiness

- **Is it new?** (Why are you writing it now?)
  - Is it a novel fact?
- **Is it important?** (For my readership, not for me!)
  - Target: Is my reader a layperson or an expert?
  - Space: Is it close to my reader?
  - Time: Is the subject currently in the public sphere?
- **So what?**
  - Impact or applications: in health, environment, technology, industry, economy, governance, culture, ethics...
  - Past: How does it change things? What problem does it solve or pose?
  - Future: What future events can be expected?
  - Actions: What actions should be done?
- **How solid is it?**
  - What is the reputation of the authors? Are they expert in the field?
  - At what stage is it? (preprint, peer-reviewed, etc.)
  - How strong is the evidence? Is the statistics good? Could it be reproduced?
  - Is it correlation or causation?
  - What does it explain? What not?

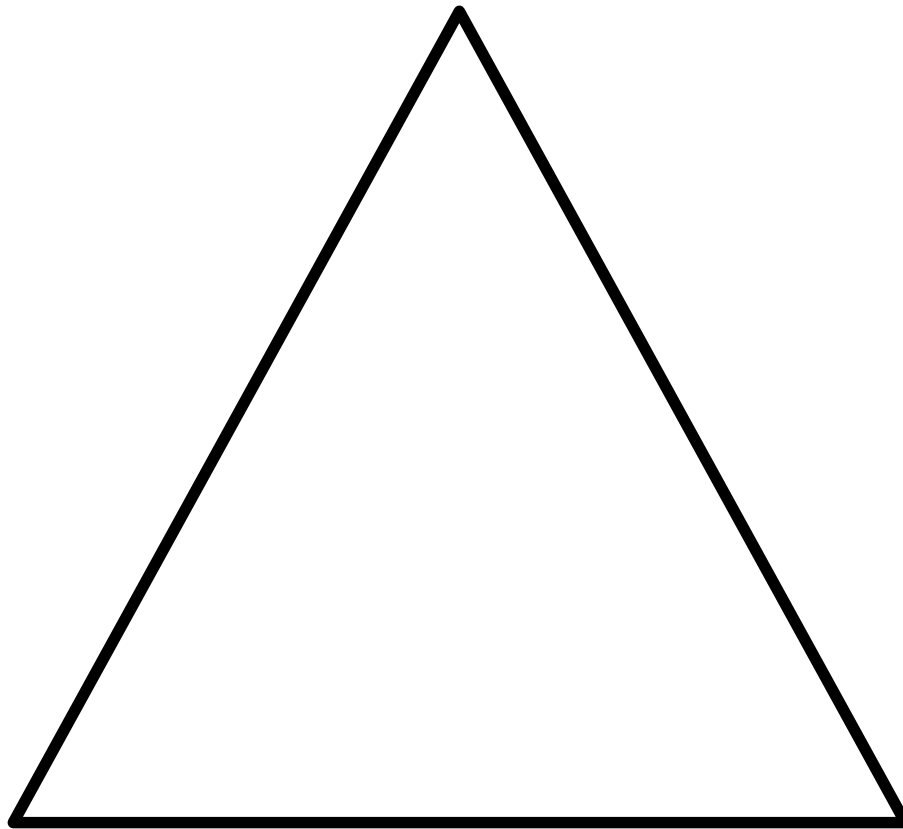


# Some features of effective writing

# Inverted pyramid

Academic publication

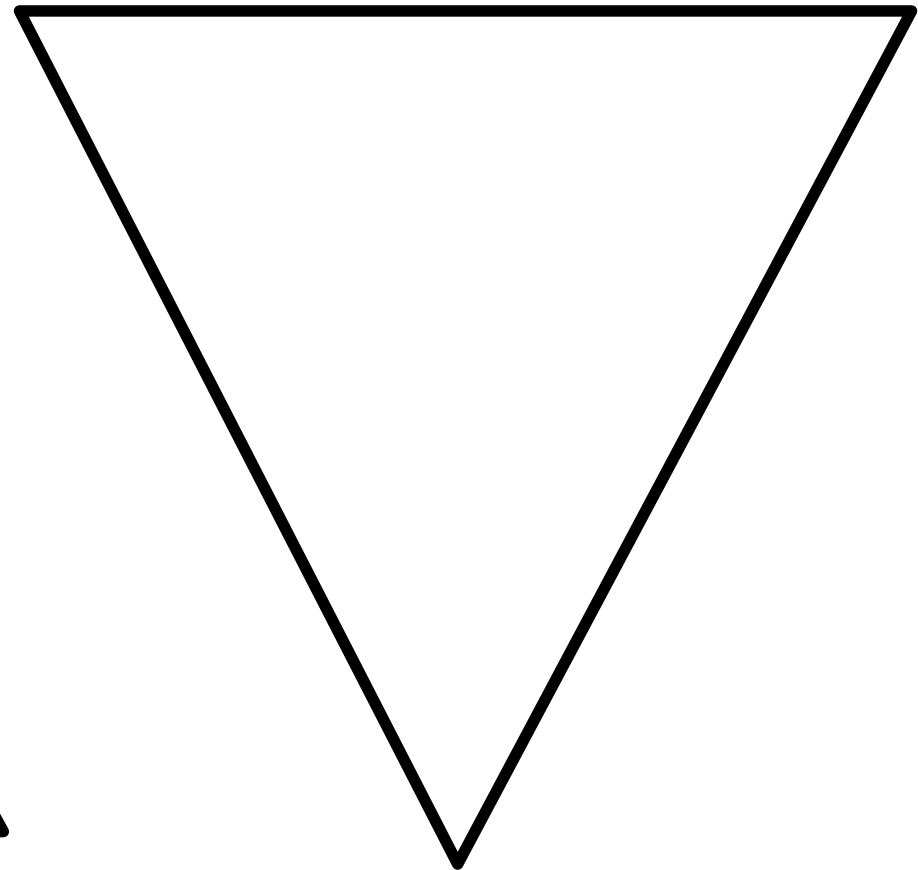
Background



Results

Publication for the press

Results



Background

From more to less interesting, new, attractive...

# Headline, subheads, and lead

## *Headline*

- *Subhead 1*
- *Subhead 2*

**Lead:** text text text text text text text text  
text text text text text text text text text text  
text text text text text text text text

**Second paragraph:** text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**More paragraphs:** text text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**More paragraphs:** text text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**Conclusion:** text text text text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

- What matters more!
- Choose one subject at a time
- Include all essential information

*Story of the friend on a hill (Peter Corrigan) or Trailer metaphor*

• 5 W + 1 H

What? Who? When? Where? Why?

How?

- Avoid things that make reading difficult (eg. starting with the name of an institution)
- Note: the lead can extend along more than one paragraph

## Second paragraph

### *Headline*

- *Subhead 1*
- *Subhead 2*


**Lead:** text text text text text text text text  
text text text text text text text text text text  
text text text text text text text

**Second paragraph:** text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**More paragraphs:** text text text text text text  
text text text text text text text text text text  
text text text text text text text text text

**More paragraphs:** text text text text text text  
text text text text text text text text text text  
text text text text text text text text text

**Conclusion:** text text text text text text text  
text text text text text text text text text text  
text text text text text text text text

- 
- Please, don't disappoint me!
  - Good place to put relevant quotes

## Following blocks

### *Headline*

- *Subhead 1*
- *Subhead 2*

**Lead:** text text text text text text text text  
text text text text text text text text text text  
text text text text text text text text

**Second paragraph:** text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**Subhead. More paragraphs:** text text text  
text text text text text text text text text text  
text text text text text text text text text text  
text text

**More paragraphs:** text text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

**Conclusion:** text text text text text text text text  
text text text text text text text text text text  
text text text text text text text text text text

- Treat each issue separately (one per paragraph)
- Clear sequence of paragraphs (eg. chronologic, list, etc.)
- “Dead ends” (eg. paragraph with details): at the end or before subheads embedded in the text.
- Third paragraph: good place for background, context...
- Put contrasting points of view together (eg. in two successive paragraphs)
- Avoid an abrupt conclusion

## General ideas

- Be clear, easy, to the spot: readers have little time
- The reader: infinitely intelligent, but infinitely ignorant
- Accuracy: give facts, data and state their source
- For each complex concept, give a metaphor/anecdote/example  
(eg: *“Liechtenstein, an alpine principedom with 15.000 citizens and 5.000 cows, is so tiny that its telephone book has just 3 pages” Guy Talese, NYTimes, 1961*)  
Opportunity to convey opinion: but avoid being ridiculous or conveying misunderstanding.
- Use comparisons  
(eg.: *A 15.000 m<sup>2</sup> building, equivalent to 5 tennis pitches; A 13.000 km trip, the distance between London and Tokyo*)

## Words and sentences that work

- Short sentences, with few subordinate clauses (split a long sentence in shorter ones; make all logical connections clear)
- Never use the first person (I, We)
- Adjectives: only if strictly necessary (Avoid *a lot*, *a few*, *big*, *small*, use numbers + comparisons)
- Whenever possible, use present tense and avoid passive
- Avoid impersonal (“*it is thought*”, “*has been announced*”, “*people say*”)



## Quotes

- Another opportunity to convey opinion.
- Use them only if they state things in an original, non-trivial way
- In press releases, use only the essential ones.
- They can help to improve the flow of a long or complicated paragraph.
- “Says” has plenty of synonyms: claims, declares, maintains, replies, states, suggest ...

## Words and sentences that don't work

- Technical jargon: rephrase in plain language, use it only if strictly necessary (and if you do, always explain the meaning).

- Generic expression

(Eg: “*Experts agree that...*” = “*In 2011, the European Environmental Agency showed in a report that...*”)

- Rethoric sentences

(Eg: “*It is well known that...*” “*One can easily see that...*”)

- Usless connections between paragraphs

(Eg: “*Naturally, not all experts agree on this point...*”)

- Euphemisms

(Eg: “*The company is experiencing challenges in its positioning and will carry on a rationalization...*” → “*The company is loosing money because people don't buy its products, and will fire 50 employees*”)

- Clichés (accident=“*battle field*”), automatic couplings (*alarming report, brutal murder*), useless adjectives (*serious danger...*), trendy words...

THANKS!

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NOTES

# Opportunities & Challenges in plant health comm

## Opportunities

- Food
- Climate change
- Fighting plagues
- Innovation in agriculture
- Plants in culture&society
- ...

## Challenges

- Pesticides
- Environmental impact
- Injustice
- GMOs
- Naive image of agriculture
- ...