

How Should Science Journalists Cover Disputes?

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The Problem

- How to handle the huge diversity of ideas and views in science, many of which conflict
- Spectrum of disagreements, from respectful disagreements at KITP workshops to interminable debates over quantum foundations to political minefields such as climate policy



http://upload.wikimedia.org/wikipedia/commons/f/f4/Niels_Bohr_Albert_Einstein2_by_Ehrenfest.jpg

Challenges for a Science Magazine

1. Track research ... but need to be selective
2. Inform citizens ... but what is the best available knowledge?
3. Explain the process of research ... disagreement is part of it



What Makes It Hard

- Science is messy
- Understanding disputes requires higher-order knowledge
- Readers come with their own preconceptions, e.g. a soft spot for heroic outsiders



<http://en.wikipedia.org/wiki/File:GodfreyKneller-IsaacNewton-1689.jpg>, <http://en.wikipedia.org/wiki/>

Messiness of Science

1. Gap between textbook “scientific method” and reality

“Scientists must be dispassionate observers, unbiased by emotion, intellectually cold.”

Each Generation Complains, But...

“Fifty years passed before the scientific world was converted by the experiments of Davy and Rumford ... a remarkable instance of the tremendous inefficiency of bad logic.”

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“When Röntgen’s discovery of the X-rays was announced at the end of 1895, Lord Kelvin was entirely sceptical, and regarded the announcement as a hoax.”

—*The Life of William Thomson*, 1910

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“Helmholtz probably did not even read my paper at all.”

—Planck, 1949

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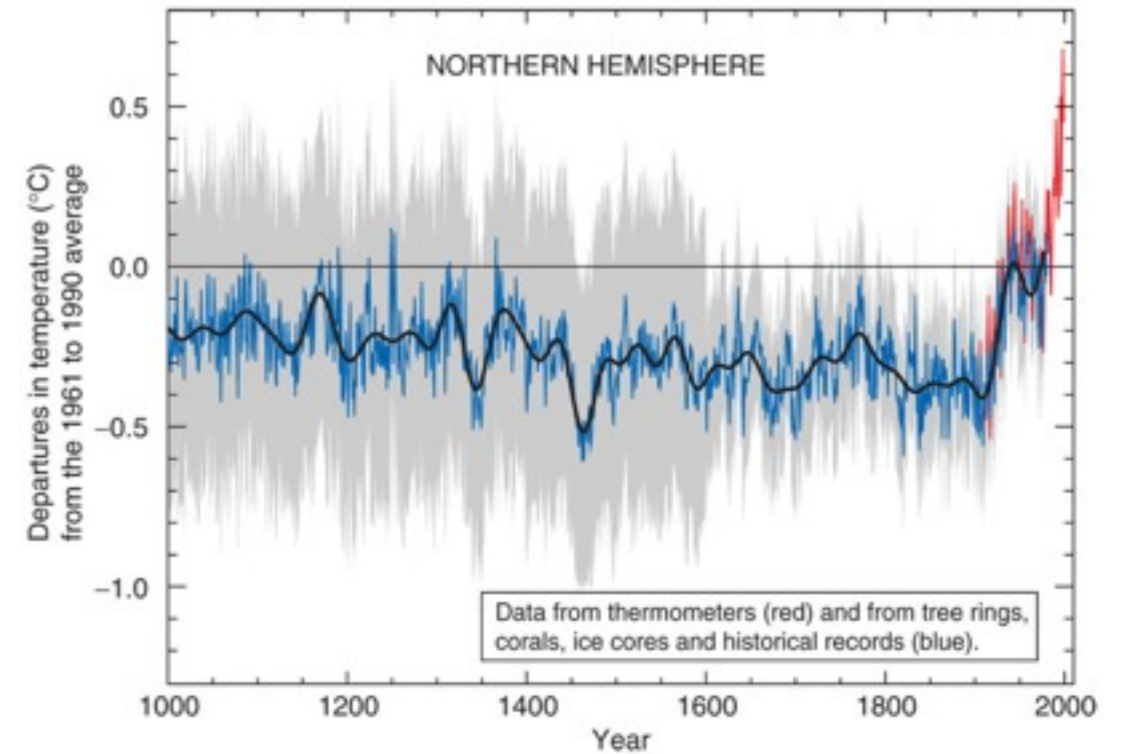
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Messiness of Science

1. Gap between textbook “scientific method” and reality
2. Ways of talking, euphemisms
3. Direct engagement is rare
4. Importance of tacit knowledge
5. *Who* can matter more than *what*
6. Paradox of skepticism

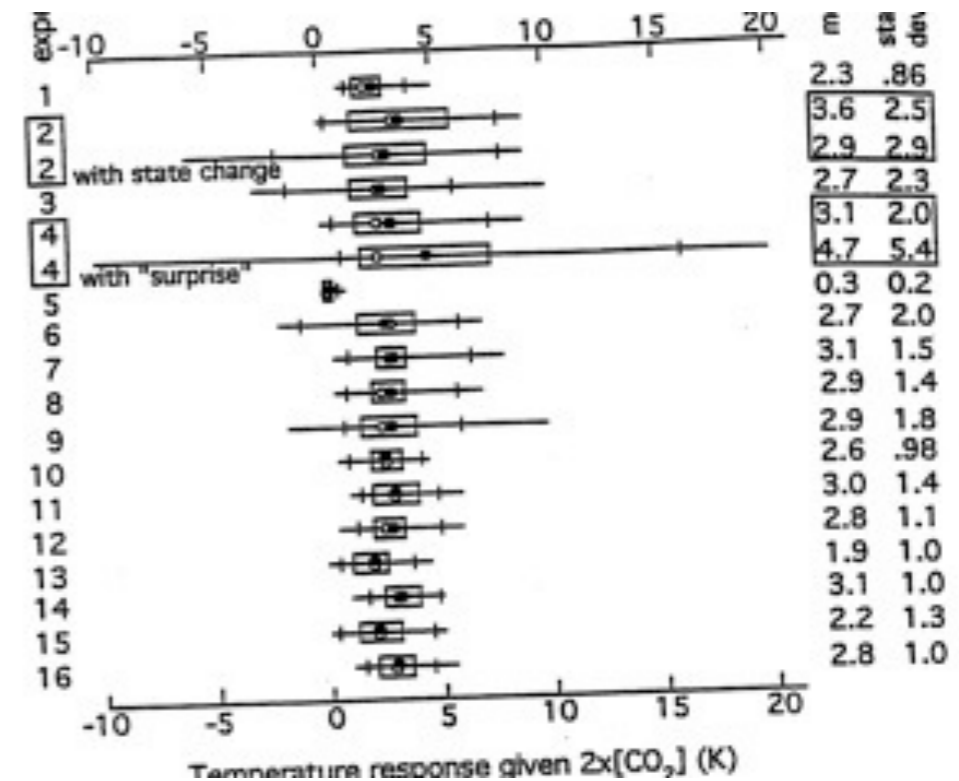
Do Disputes Hurt Science?

- Well, maybe, but science is human
- To deny it may keep the peace in the short run, but makes the eventual comedown more acute



Heuristics

1. King Solomon test: those who admit they might be wrong are more likely to be right
2. Will an article have taught something useful even if its conclusion is proved wrong?
3. Does an idea fit into a context?
4. Red flag: appeal to persecuted Galileo or paradigm shifts



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