

We need to talk about Ethics: Challenges in Engaging Scientists in Research Ethics Discussions

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and Oslo University



Research Ethics Courses: Oslo and UMB

- Philosophy of Science
 - What is science?
- Research Ethics
 - What responsibilities do scientists have?
- Science and Society
 - Education, funding, dissemination, patents,...



Testing whether or not animals "kiss"

Challenges

- Breadth of students' research topics
- Variability in students' previous training in ethics and philosophy
- Number of students (UiO has 200-250 registered students per year)
- (Obligatory)

Highlights – student feedback

- Opportunity to meet and discuss with students
- Chance to think about subjects that issues that are not usually part of the day to day research
- Important and relevant issues

Discussion Cases

- Relevant
- Topical
- Challenging



*Italian
Earthquake
Court Case*

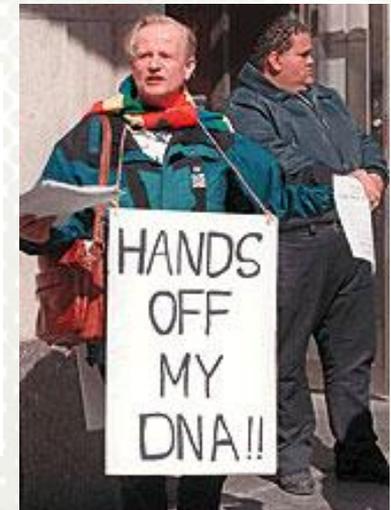


*Myriad Genetics
US Supreme Court Case*



Research Ethics: Three areas of responsibility

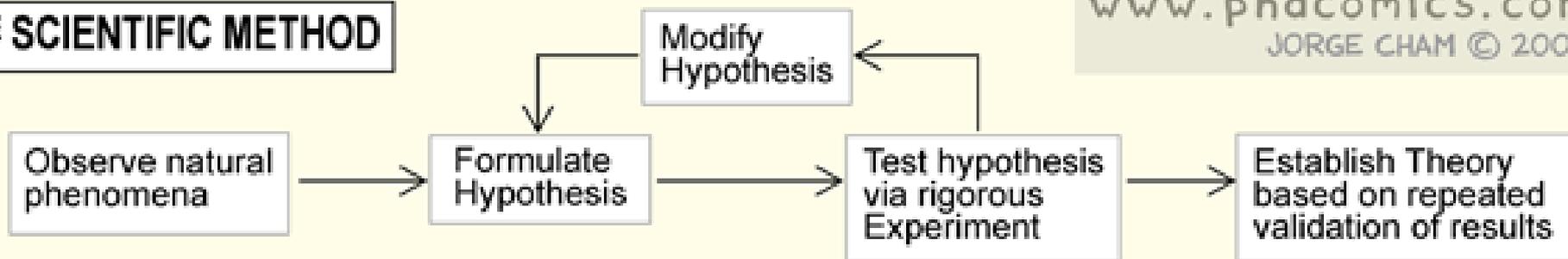
- Scientific community: research norms, misconduct, publication
- Research subjects: humans, animals
- Society: the public, environment, risk, dissemination



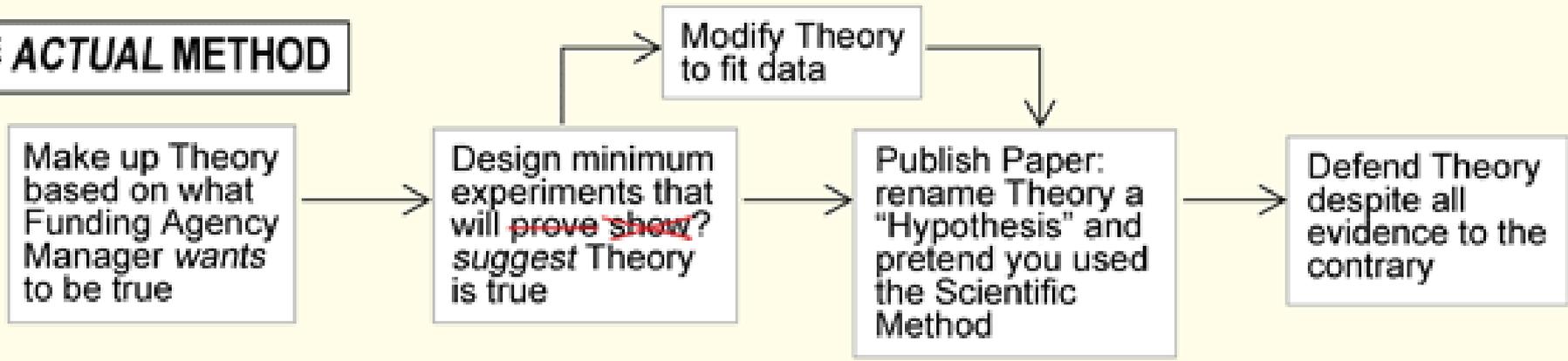
Good Research Practice

www.phdcomics.com
 JORGE CHAM © 2006

THE SCIENTIFIC METHOD



THE ACTUAL METHOD



#overlyhonestmethods



- [Morgan Edwards@mangoedwards](mailto:Morgan.Edwards@mangoedwards)

I can't send you the original data because I don't remember what my excel file names mean anymore [#overlyhonestmethods](#)

- [Mags Lum@ScientistMags](mailto:Mags.Lum@ScientistMags)

There should have been more experiments but our funding ran out so we published it anyway. [#overlyhonestmethods](#)

- [Dean Burnett @garwboy](#)

What the... We didn't do any of this! Has my supervisor edited it without telling me? Oh, great. Now I'll look stupid
[#overlyhonestmethods](#)

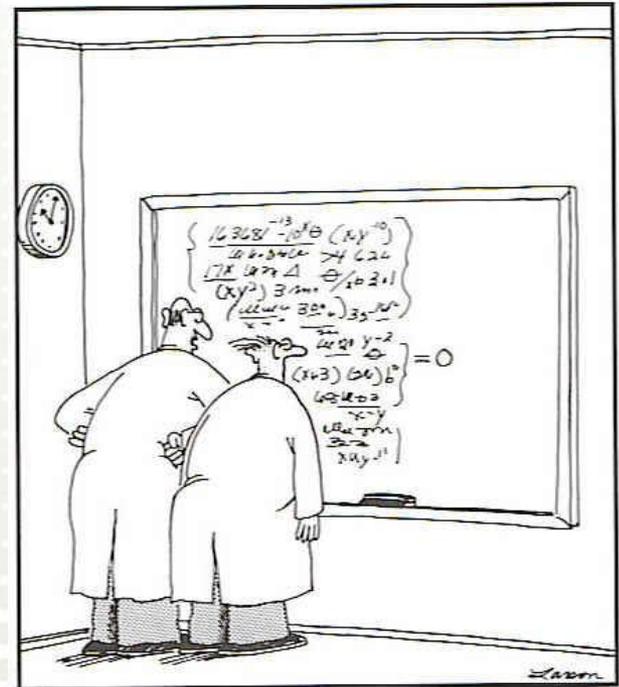
- [Adriana Heguy@AdrianaHeguy](#)

A Northern blot was run instead of realtime QPCR because the PI is old and does not trust results unless he sees a band
[#overlyhonestmethods](#)

- [David C Logan@angerstusson](mailto:David.C.Logan@angerstusson)

"Experiment was repeated until we had three statistically significant similar results and could discard the outliers"

[#overlyhonestmethods](#)



"No doubt about it, Ellington—we've mathematically expressed the purpose of the universe. God, how I love the thrill of scientific discovery!"

Publication and Authorship

- Guidelines for publication and review – The International Committee of Medical Journal Editors (ICMJE) – “Uniform Requirements for Manuscripts Submitted to Biomedical Journals” (the Vancouver Convention) www.icmje.org

THE AUTHOR LIST: GIVING CREDIT WHERE CREDIT IS DUE

The first author
Senior grad student on the project. Made the figures.

The third author
First year student who actually did the experiments, performed the analysis and wrote the whole paper. Thinks being third author is “fair”.

The second-to-last author
Ambitious assistant professor or post-doc who instigated the paper.

Michaels, C., Lee, E. F., Sap, P. S., Nichols, S. T., Oliveira, L., Smith, B. S.

The second author
Grad student in the lab that has nothing to do with this project, but was included because he/she hung around the group meetings (usually for the food).

The middle authors
Author names nobody really reads. Reserved for undergrads and technical staff.

The last author
The head honcho. Hasn't even read the paper but, hey, he got the funding, and his famous name will get the paper accepted.



Figure 1 The bizarre climax of the sensational Scopes trial occurred on the afternoon of 20 July 1925 when Clarence Darrow (right) questioned William Jennings Bryan (left) about the literal truth of the Bible. The Scopes trial remains the most famous event in the evolution-creationism controversy. Photograph courtesy of Bryan College.



Lysenko and Khrushchev Wikipedia

SATURDAY

THE DENVER POST

Voice of the Rocky Mountain Region

DAILY WEB
The Denver Post Online

March 11, 2000

AA 250 -- Thursday, March 11, 2000

79% back creationism in schools

by Carrie Cole

As creationists' efforts to overturn state creationism should be sought, the state's school board is a more significant barrier to the evolutionists' efforts.

State officials are reviewing the proposal to include creationism in the state's public schools, according to a report by the state's school board.

The board is expected to vote on the proposal in the next few weeks. The board's decision will be a significant step in the evolution-creationism debate.

The board's decision will be a significant step in the evolution-creationism debate.

Figure 2 This front-page headline on the 11 March 2000 issue of The Denver Post announced Americans' continuing and overwhelming desire to have creationism taught in public schools.

Decades after monkey trial, debate hasn't evolved much

Theory's detractors say 'popular revolt' under way

By TODD ACKERMAN
Houston Chronicle

Even before he became a Christian, Jeff Farmer was an opponent of evolution.

His interest in such matters was twofold: As a wildlife artist, Farmer studied animal anatomy, and as a lifelong dinosaur buff, he read voraciously about prehistory. The more research he did, says Farmer, the less concrete evidence he found for evolution.

"I grew up, like most people, as summing evolution was true," says Farmer, a 1987 University of Texas graduate who writes an opinion column for the Chronicle, earlier this month calling evolution a "great illusion."

"But ultimately, textbooks are evolution's enemy, and most have done a poor job of explaining the fossil record."

Three-quarters of a century after the Scopes monkey trial, Americans' resistance to evolution remains about the same. Since the Kansas Board of Education in August the emboldened teaching that man descended from a common ancestor, newspapers around the country have been inundated with supporters' letters to the editor, presidential candidates have taken stances, and polls show as many people reject evolution as accept it.

"It's gotten to the point that leading evolution opponents are raising that 'popular revolt' is under way."

The state of affairs is leading to scientists, who believe that evolution is as well documented as Earth's revolution around the sun. To deny evolution means behaving like Earth is less than 10,000 years old, that carbon dating is false, that life on Earth exists precisely as it did at the beginning of time. No wonder.

See EVOLUTION on Page 16A.

Figure 3 Decades after the Scopes trial, the evolution-creationism debate rages on in the United States. This article appeared on the front page of the Houston Chronicle on 18 September 1999.



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News

Creationism stir fries Reiss

Royal Society's director of education stands down.

Daniel Cressey

The director of education at one of the world's premier scientific bodies has been forced from his job in a row over approaches to creationism in the classroom.

Michael Reiss, a professor at London's Institute of Education and an ordained minister in the Church of England, yesterday stepped down from his post as director of education at Britain's Royal Society. The move, which appears to have been forced, follows a letter to the president of the Society, Martin Rees, from three Nobel-prize winning fellows "greatly concerned" by remarks Reiss was reported to have made at the British Association for the Advancement of Science's annual 'Festival of Science' on 11 September.

Reiss's remarks on the need to engage in dialogue with the creationist views some children express in science classes resurrected claims that, as a priest, Reiss should not have been appointed in the first place. "When he was appointed there were concerns that he would push a religious agenda," says Richard Roberts, chief scientific officer of New England Biolabs in Massachusetts, a fellow of the society who in 1993 won the Nobel Prize in Physiology or Medicine. The fact that "Professor Reiss is a derygman ... in itself is very worrisome," said the letter that Roberts sent on behalf of himself, Harold Kroto, of Florida State University in Tallahassee, and John Sulston, of the University of Manchester, UK.



Professor Michael Reiss
Institute of Education



Example Group Discussion

- A Norwegian group of global warming sceptics, “Cool It”, has taken the Department of Education to court, challenging the showing of “An Inconvenient Truth” in school science classes.
- You are expert witnesses to a firm of solicitors who have been assigned the task of creating the strongest possible case for: a) the opponents of the film; b) supporters of showing the film
- Try to find the best arguments for both sides.
- Allocate a spokesperson for each side.

October 11, 2007

Al Gore's inconvenient judgment

Lewis Smith, Environment Reporter

The nine inconveniences

Al Gore's award-winning climate change documentary was littered with nine inconvenient untruths, a judge ruled yesterday.

An Inconvenient Truth won plaudits from the environmental lobby and an Oscar from the film industry but was found wanting when it was scrutinised in the High Court in London.

Mr Justice Burton identified nine significant errors within the former presidential candidate's documentary as he assessed whether it should be shown to school children. He agreed that Mr Gore's film was “broadly accurate” in its presentation of the causes and likely effects of climate change but said that some of the claims were wrong and had arisen in “the context of alarmism and exaggeration”.



The Times

Environmental and Animal Ethics



Dolly, library.thinkquest.org



Glofish©



Mother and Child, Divided (Damien Hirst), Astrup Fearnley Museum



Conclusions

- Make time for small group discussions
- Case, cases, cases...
- Will not please all the people all the time,...
- Mixture of classic cases and topical cases
- Lectures from scientists and philosophers
- Exam in the form of essays give opportunity for deeper analysis (and is an excellent source of teaching cases ...)

Thank You

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