

The seven basic elements of the universe according to the scientific world. These are Time, Space, Matter, Energy, Power, Prestige, and Funding. He wrote a hilarious piece which I reproduce below:

<http://markshea.blogspot.com/2007/04/more-global-warming-hub-bub.html>

I am an “ex” scientist. I have over 100 publications in the field of materials science and physics. Many of these publications are in peer reviewed journals such as The Journal of the American Ceramic Society, Materials Research Society Journal and Journal of Applied Physics. I have sat on committees that review papers for these journals. I have worked at the following national laboratories: NIST, Oak Ridge (site X) and Brookhaven National Laboratory. I have spent 10 years living off of federally funded research. I have written winning proposals for government funding in the 10’s of millions of dollars. In short, I am very well aware of the process of getting and keeping funding and getting papers published in peer reviewed publications.

I have seen papers (perfectly good, well researched) papers rejected for publication for the following reasons:

1. The paper went against prevailing theory on a topic.
2. The paper was submitted by a company that was a competitor for government funding.
3. The paper was submitted by a government agency that was a competitor of the reviewer’s agency.
4. The author of the paper was disliked by one of the reviewers.

This is how the funding process works:

1. You determine what the latest ‘hot’ topic is (global warming, ceramic superconductivity, stealth technology).
2. You write your proposal to fund the work you’ve been doing for years in your area but you slant it towards the hot topic.
3. You almost “prove” that the above hot topic is effected in a way that is positive toward your research.
4. You write a follow-on proposal where you state that the really big break-through will occur in the next funding cycle.
5. Oh, and you try to partner with entities that always get government funding.

It works like this: You study frogs in the Black Hills of South Dakota. Nobody wants to fund the study of frogs. Why would they? So in the early 80’s you write your proposal to study the effect of the hole in the ozone layer on the frogs. The mid 80’s your try to figure out how to write a proposal on frogs and missile defense but give up. In the 90’s you write proposals on how frog pee can help certain forms of cancer. You partner with NIH on this because they are getting lots of funding, being the ‘hot’ agency. You both know that the results are useless from the get go but you do it anyway. In the late 90’s you write proposals on how frogs from South Dakota can be used to detect nerve gas as part of the Global War on Terrorism. You routinely reject papers to the Journal of Herpetology that claim that five lined skinks can detect nerve gas by their tails falling off. In the 2000’s you are awarded grants to study the decline of frog populations in the Black Hills due to global warming, despite the fact the frogs were there through the last dozen ice ages and that they’ve survived eight periods since the last ice age where the temperature was much warmer than now. You know that the frog population is declining because the government is leasing the land to cattle ranchers and the cows are crapping in the water but you don’t really care because you’re now just a few years away from retirement and you don’t want to work at Burger King.

So it is not a shock to me, now that the economy is the Hot Topic, to find [stories like this](#) bubbling up in the Pop Sci press. Gotta ride that bandwagon. It’s the next big thing.

In related news, [One in seven scientists say colleagues fake data.](#)
Posted by Mark P. Shea at [9:47 AM](#)

From *Times Online*
June 4, 2009

One in seven scientists say colleagues fake data Hannah Devlin
Faking scientific data and failing to report commercial conflicts of interest are far more prevalent than previously thought, a study suggests.

One in seven scientists says that they are aware of colleagues having seriously breached acceptable conduct by inventing results. And around 46 per cent say that they have observed fellow scientists engage in “questionable practices”, such as presenting data selectively or changing the conclusions of a study in response to pressure from a funding source.

However, when scientists were asked about their own behaviour only 2 per cent admitted to having faked results.

Daniele Fanelli, of the University of Edinburgh, who carried out the investigation, believes that high-profile cases such as that of Hwang Woo-Suk, the South Korean scientist disgraced for fabricating human stem cell data, are less unusual than is generally assumed. “Increasing evidence suggests that known frauds are just the tip of the iceberg and that many cases are never discovered,” he said.

The findings, published in the peer-reviewed journal PLoS One, are based on a review of 21 scientific misconduct surveys carried out between 1986 and 2005. The results paint a picture of a profession in which dishonesty and misrepresentation are widespread.

In all the surveys people were asked about both their own research practices and those of colleagues. Misconduct was divided into two categories: fabrication, the actual invention of data; and lesser breaches that went under the heading “questionable practices”. These included dropping data points based on a “gut feeling” and failing to publish data that contradict one’s previous research.

The discrepancy between the number of scientists owning up to misconduct and those having been observed by colleagues is likely to be in part due to fears over anonymity, Dr Fanelli suggests. “Anyone who has ever falsified research is probably unwilling to reveal it despite all guarantees of anonymity.”

The study predicts that the 2 per cent figure, although higher than most previous estimates, is still likely to be conservative.

Another explanation for the differences between the self-report results and colleague-report results could be that people consider themselves to be more moral than others. In a marginal case, people might characterise their colleagues’ behaviour as misconduct more readily than they would their own.

The study included scientists from a range of disciplines. Misconduct was far more frequently admitted by medical or pharmacological researchers than others, supporting fears that the field of medical research is being biased by commercial interests.