Science lost

Misconduct in conductors.

The atmosphere was tense and brows were furrowed.

"Professor: are you saying that you actually used taxpayers' money to perform an experiment?" Denial was futile given the evidence, but acquiescence would bring about the end of a glorious career. Hedging, and with a slight shuffling of feet, the professor decided to try to explain the historical precedent.

"Long, long ago, in a laboratory far away, rich men performed bottom-up science, driven by curiosity and wonder. As the technological needs of wars forced these gentlemen amateurs to make way for professionals, so the rules of the game were altered.

"Success became king, and this led to a top-down approach in which you assumed what you were actually trying to prove. Within the scientific community, it became acceptable practice to make the least number of errors required to tell a great story. Chutzpah, rather than science, became the order of the day. And retractions were the province of fools.

"However, the funding bodies eventually became wise to the deception, but only because of a traitorous article in a well known magazine. With the link between experiments and conclusions fatally weakened, there was no further justification for funding experimental research.

"It came to pass that science only remained distinct from science fiction because of computer simulations. Without irony, simulated results were labelled experimental. This led to some apparently sophisticated experiments. Good news for the software companies, but no use really, which is why I did it."

The professor stood impassively, arms folded, with a proud and distant expression. No regrets at all. Especially because the experiment had failed. Room-temperature superconductivity was now so well established, that the electricity companies had grown very rich off loss-free transmission. But the professor had shares in gas, and smelt foul play. Even so, attempting to falsify a 20-year-old Nobel-prizewinning study was bold. Especially given the financial shenanigans required to set up a covert laboratory.

Around the turn of the century, when misconduct really took off, the crooks would normally get caught. Failure to reproduce a spectacular conclusion was still respectable at that point. Indeed, a discovery team breathed easier once a reproduction had occurred. But slowly, the balance shifted.

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Nobody needed reminding that this shift had been the world's salvation. The ultimate in spectacular conclusions had been averted due to an unforeseen subtlety in nuclear physics. The plight of the imprisoned scientists who were responsible became the cause célèbre among peaceniks. Their vigil outside the federal penitentiary was dominated by philosophical debates concerning the wisdom of incarcerating the men whose fraud had saved Earth. And the underlying shift in the balance of scientific falsification became known as the 'sacred shift', even among the most die-hard atheists.

At around the time everyone started dressing smartly, it became unattractive to expose the fraud of one's peers, as to do so would have had severe implications for peer-review. And so instead of exposing fraud, people began to build on it: after all, who would approve your grants and papers if you hadn't cited them?

Once the charade had collapsed the system, the engineers were left with little prospect of progress. But their last big hurrah had been the exploitation of room-temperature superconductivity. Or so it had seemed to the outside world. For the professor, a scientific genius, made not a scientific leap, but rather one inspired by a passing, nay, vested interest in economics.

In its cynicism, the world had assumed that electricity remained costly because of a cartel. The electricity companies claimed they were still recouping their investment in the new technology. But the professor, and only the professor, had formulated the hypothesis that the announcement of room-temperature superconductivity had in effect been made post-, rather than pre-system collapse.

And then the progression is logical. How was the market to exploit a big new discovery? Hire the people who made the discovery. And with huge rewards on offer, they were hardly going to admit that their graduate studies were not whiter than white.

Faking whole companies was both sartorially and scientifically inevitable. And it became possible during system collapse because all original claims were necessarily supported by smartly dressed experimentalists and simulations.

"All I had to do was wait for a windless day, chop out part of a new power line, and test it with old equipment. It didn't even superconduct at low temperatures. Independently, I made the material from scratch myself, and again, no superconductivity.

"So anyway, I've decided to publish and perish. Maybe nobody will care. Maybe nobody will even notice that the results are based on actual experiments. But if they do, then so be it: I'll be out, and free to spend more time with you, and in the garden."

With that, the professor sat down, took a final sip of her cocoa, stretched out on the sofa in front of the roaring fire, and turned to her husband. "So tell me about your day…"

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