

The Four Horsemen - James Heathers

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The Four Horsemen



There are four archetypal figures you can meet studying scientific fraud. I've met them. Now you can, too.

Old Nick has a snarky response he delivers almost by reflex whenever researchers (and psychologists in particular) suddenly discover that their lives and careers are directly affected by the things they ostensibly study scientifically.

I've always found this funny, the blindspot of understanding poor human behaviour in science on scientific terms.

And it was on my mind recently, thinking about biases and associated scientific naughtiness. Scientists, and people who like talking about science, frequently bark assertions of both biases and formal /informal fallacies at each other.

Post hoc ergo propter hoc, you hack. Illusory causality, you pudding. Argument from authority, you infection in short pants. On and on it goes.

These happen when people talk, of course. But when it comes to understanding scientific malfeasance, I think one bias that's in the driving seat, tooting the horn and driving through the main thoroughfare of a local mall, is the the false consensus effect.

For those of you too lazy to click the link, here's a poorly formatted grab.

False consensus effect

From Wikipedia, the free encyclopedia

In psychology, the **false-consensus effect** or **false-consensus bias** is an **attributional** type of **cognitive bias** whereby people tend to overestimate the extent to which their own opinions, beliefs, preferences, values, and habits are normal and typical of those of others (i.e., that others also think the same way that they do).^[1] This cognitive bias tends to lead to the perception of a consensus that does not exist, a "false consensus".

This false consensus is significant because it increases or decreases **self-esteem**, the **overconfidence effect** or a belief that everyone knows one's own knowledge. It can be derived from a desire to conform and be liked by others in a social environment. This bias is especially prevalent in group settings where one thinks the collective opinion of their own group matches that of the larger population. Since the members of a group reach a consensus and rarely encounter those who dispute it, they tend to believe that everybody thinks the same way. The false-consensus effect is not restricted to cases where people believe that their values are shared by the majority, but it still manifests as an overestimate of the extent of their belief.

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One interesting thing I suspect about this bias is that it affects *more intelligent and scientifically progressive people more strongly*. I have had so many conversations about fabrication and falsification in particular which go like this:

“XYZ did ABC, turns out they were doing HIJ the whole time.”

“What? James, are you sure? But why?”

“Because ”

“I don’t understand. Why would you do that? Why wouldn’t you just ***sensible and/or honest alternative***?”

“... I just told you.”

“Sorry, RUN THAT BY ME AGAIN? Why would you do that?”

When you present evidence that other people do not think as they do, a very clever, honest, motivated person will often hit a mental wall like a flung pie. Their thought process is presumably akin to *I have an opinion about a situation, having considered as much information as possible, so surely other people have as well. The logic of this choice is obvious, given the competing alternatives, and my clever friends all agree with me, so do people more broadly within my parasocial network. Surely everyone else has at least a somewhat similar view.*

This it at something of a zenith when scientists (structure! information! data! insight! overthinking! consultation! consensus!) think about scientific misconduct (very socially proscribed, completely antithetical to the scientific ethos).

This is because scientists — ethical, honest, consequence-fearing people driven by an intrinsic interest in delineating the structure of the natural world — assume that almost all other scientists think the same way they do.

They do not.

So, let’s get into the guts of some titular alternatives.

The Horsemen

I realised recently, in an uncharacteristic flash of insight, that I subconsciously sort naughty scientists into archetypes. So the following is my own hack attempt to write about what might be considered their... collective clinical features.

As I am normally about as likely to write the above as “fleek” or “anthracite”, you’ll have to bear with me through any mischaracterizations.

My incipient silliness aside, I should probably mention now that there’s a horribly serious side to all this, because the below might help you identify or understand a person in your past. Or, god forbid, present.

I hope it doesn’t. But it might.

A quick note first, though: the following is both not data-driven, and deliberately unreferenced. This is primarily so I don't go to prison, but it's also because the following characters **aren't real people**.

I'm going to repeat that, because it bears repeating.

The following characters **aren't real people, they're portmanteaus**.

They are quasi-mythical figures, cobbled together from personal experience, and newspaper reports, and textbooks, and university misconduct report proceedings (usually unwillingly released), and a great deal of reading between the lines, and smidge of idle speculation.

With that said, let's meet the Horsemen.

The PsychopathThe GrifterThe SmilerThe Zealot

I doubt any of these will describe anyone you've met perfectly. But you may be struck by how some of the central features in any one of these archetypes describe someone you know.

I'm leaving out a fifth category here, I suppose, maybe even the largest one, of people who are engage in serious misconduct but are substantially harder to summarise, and are probably a lot more... well, a lot more like you and me.

However, that's not the goal here — if we are to kick the false consensus effect around, we must preferentially outline the species and genus of these rare carnivorous birds.

THE PSYCHOPATH

Research as a vehicle for personal gratification and dominance over others.

: a board game

: as an assemblage of words and numbers designed to achieve an publication outcome, which is an initial step before an eventual reward. How any given piece of work maps to reality is only relevant inasmuch as (1) more real/reliable work probably brings with it less external risks of discovery / awkward questions (2) repeatable results may have increased future utility for rewards.

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- may be when challenged — not because they are threatened or even emotionally involved in conflict, but because they have made the sober judgement that ignoring the problem will make it go away. Unfortunately for the rest of us, they are often right.

- while not guaranteed to retaliate (as above: may not see the point, may not serve interests at the time) may also luxuriate in revenge. Regardless of outcome, they will never forget you, nor forgive you, in the long term. If they ever review one of your papers and/or grants, it's curtains. Astonishingly good at grudges.
- staff treatment / laboratory behaviour alternates between positivity, especially when externally visible, to brutal informational and emotional control. Usually employment starts well and gets much worse. Even people they support and agree with see their relationship, as best, as fraught... eventually.
- maintains good public relations because they are more personally useful than conflict, and are very good at them cf. The Zealot
- big fan of hierarchy when they are in charge, big fan of unofficial channels, favours, and 'networking' into positions when not in charge.
- type of misconduct may vary enormously, from minor phacking/HARKing through to wholesale fabrication. Strategies are deployed as necessary. They treat misconduct the way fighter pilots treat amphetamines — take enough to complete the mission and minimise side-effects.
- very, very difficult to detect: abusive or manipulative to whistleblowers, charming and/or diffident with investigators/administrators, likely to maintain internally coherent work, may even embrace practices of 'reform' as window-dressing to avoid scrutiny.
- extremely dangerous
- most unlike the other types

THE GRIFTER

Research as a vehicle for external gain — public status, profile, money.

: empirical window dressing, a plank within a strategic plan for marketplace or intellectual dominance of an idea in the public sphere.

: the genesis of a idea which might have future commercial or external applications, the advance copy of a future popular platform presentation, book, or media campaign.

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- More likely to be junior or mid career, more likely to be 'science-adjacent' but still claim to be a working scientist, more likely to be from a venerable institution which encourages their self-perception as a 'thought leader' or 'leading light'.
- Often very bad at the internal mechanics of science, but a competent writer and excellent narrator.
- Bipolar treatment of colleagues: often incredibly supportive and nurturing of people within their network, can be harsh and unforgiving when narratives are contradicted. Dissenters within the work process are frozen out or socially shunned, generally not attacked, abused, etc.

- Acts of misconduct usually confined to extreme HARKing or various forms of falsification (deleting variables, retiring data points, etc.) Usually, fabrication isn't something they even consider, because analytical flexibility can handle necessary when it comes to engineering outcomes.
- Most antithetical or apathetic to Open Science principles, as these challenge their work processes head-on.
- Mistakes are not carefully hidden, often are quite obvious or trivial. Accuracy is an afterthought. Problem is, as always, no-one thinks to look.
- Dangerous to challenge in public. Manipulating discourse is their game, not yours, and their platform is bigger. Will move to publicly devalue criticism by criticizing tone rather than content of criticism within the popular tropes of unwarranted attacks on young/old/male/female/etc. researchers. Sometimes comes with the insinuation of "if you knew anything, you'd be famous too". The Grifter is very good at reading zeitgeists, and knows precisely what bucket to throw you in to make you look like the worst crab in it.
- Least affected by the devaluation of their body of work. Once their stories are sold and then bought, there are very few people in the public domain who will pay attention to failed replications, corrections, retractions et al. such that the Narrative Train could ever be derailed.
- Additional: perfectly willing to abandon a scientific idea that is no longer 'commercially viable', and immediately take up a congruent or even completely different one. Far more mercurial in that respect than other types.

THE SMILER

Research as a source of personal attention and admiration as an expert, or as the owner of a sophisticated idea / topic / domain.

: a vehicle to make positive change in the world ... according to their own personal definition, of course.

: as a reflection on their seriousness, commitment, human decency, et al. — as a statement of personal value.

- Usually has a reputation as
- Very likely to work on a 'nice' idea — something everyone agrees on in principle cf. the Zealot.
- Problems may span a continuum between inattention, insufficient curiosity or care, and outright fab / falsification / extreme manipulation. The process involved is glossed over in favour of producing more publications at any cost.
- Highest volume of publication. It is their life. Comes with a component lack of attention on published materials. Consequently...
- Detection is usually quite easy, when someone thinks to look.

- Capable of being mean when threatened by awkward questions, but more likely to bluster, act hurt / confused, or withdraw due to the challenge of their high superficial opinion of themselves.
- At a deeper level, beset with brutal feelings of inadequacy. May be in research to prove a deeper point about their self-worth, hence the strategy of creating a bubble within a research tradition — it's rewarding.
- Would never dream of deploying the dismissive and nuanced PR strategy of the Grifter, the amoral viciousness of the Psychopath, or the public cant and bombast of the Zealot (see below).
- Work conflicts / likelihood of whistleblower involvement low — staff are treated well, unless they object to terrible work processes, at which point they are more likely to be 'managed out' than attacked. This is the primary reason that they avoid detection — in the absence of the broader analysis of their work (which is uncommon everywhere) or the research presenting a threat to public safety (which tends to garner much more critical attention than is normative) and The Smiler retains phenomenally good and often very genuine interpersonal relations than the other types here.
- May be much, much cattier or defensive in private than they are in public.
- Deeply people-pleasing. Strong need to be respected. Adores attention but is far more interested in the respect of experts than a large public profile cf. The Grifter

THE ZEALOT

Research as the Eastern Front of an ongoing war

an ongoing conflict between the righteous and the wretched, where the ends always justify the means.

as a weapon, stocked in an arsenal to be deployed against wrongdoing perpetuated by the unrighteous, dishonest, or dangerous.

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- The most archetype. Comes with a strong social constructionist model of an empirical body of knowledge as being determined by whoever is left standing. Thus, scientific progress is understood as a series of competing public assertions.
- Completely dissimilar to The Grifter & Smiler with regards to narratives, who want to own 'their own' intellectual area. The Zealot wants to triumph in the conflict between identified and opposing ideas.
- More likely to be aware of the weakness of their own work and arguments against it than other types — a deep strategic understanding of how work can be deployed to make an argument often means they have to be. Often more experience and gravitas than other types. Under expert scrutiny, usually more convincing. However, these sophisticated assertions often fall apart under further scrutiny.

- They are under no obligation to be committed to a bad idea, in fact, . In this case, people judging them to be mendacious or overbearing may forgive their methods because 'their heart is in the right place', see The Smiler.
- Medium detectability, much easier when you're a domain expert — you need to know where to look.
- Not a fabricator. Dissimilar to Psychopath and Smiler in that respect, more similar to Grifter. Far more likely to torture data until it confesses. Due to their legendary commitment to an idea or premise, Can be a lightning rod for the misconduct of others, as will accept bad arguments, bad papers, bad colleagues, et al. because they are 'useful to the cause'.
- Related: believes that quality of evidence is important... but deploys commitment to it strategically. Poor quality evidence is acceptable, but is known to be poor. Good quality evidence is scrutinized intensely, which is necessary because it was produced by The Enemy.
- Attack-oriented and relentless to a degree that often becomes to others in the field. The consistency and volume of their advocacy (and an inability to admit mistakes, or even opposing ideas), if you are not directly affected by it, becomes tiresome.
- Usually bombastic, frequently mean, enjoys the display of dominance and eminence much more than The Psychopath.
- Much more likely than other types to come with a component reputation as being 'a bit dodgy' within the field. However, their public and published reputation is rigidly maintained. Cracks do not appear because people who go against them in the right context will find conflict straightforward and immediate. More likely to be quietly sidelined or ignored by others than fought.
- Related: 100% guaranteed to retaliate in some form to any perceived challenge to authority, often publicly. This may involve communications with the media, with colleagues, with an institution, with a scientific society, or with the legal system.
- Dangerous to work for. May be mercurial, but also may be a martinet and a table-thumper. More likely to personally transgress than other types, because they understand personal, face-to-face or workplace power dynamics through the same lens as the more general kind that governs their work.
- Does not mind any of the above in the slightest, may even be quite proud of the fact they 'ruffle feathers'. Probably more self-awareness than the other kinds.
- Tendency to deploy metaphors about martyrdom, persecution, and eventual triumph in the face of adversity. Fond of misquoting and/or misunderstanding Galileo.

DISCUSSION:

Having completed the above, I think the most valuable source was insights cribbed from misconduct proceedings, investigatory outcomes, and private communications, read with an extensive knowledge of the misconduct being discussed.

In other words, good information but overwhelmingly (a) private, and (b) potentially

defamatory in context. And while I have the confidence to write all of this in a single night+morning, I still feel oddly compelled to continue to justify it, to include some kind of jeremiad about 'please believe me', because of that lack of direct and citeable evidence. Another opinion on the internet. Another open mouth bellowing TRUST ME between each sentence.

All I can offer is the following:

- I'll stack my record of trying to understand scientific misconduct on a broad level against anyone's.
- I've heard so many whistleblower stories and been on the inside of so many 'unofficial investigations' at this point that I've started to forget some of them.
- The figures above are made from a of three people each. If you're thinking "he's talking about ABC in particular!", you're wrong.
- Those of you who were involved with people like this, feel free to identify bits and pieces of the behaviours you've experienced previously. Tell me what rings true or feels eerily familiar.
- Also, feel free to point out at maximum volume, anything you think is a poor characterisation, unfair, problematic, or unusual. I'm very, very far from being an authority on clinical matters, and having written this, it feels like... a diagnosis.

People who've had a sudden flash of insight, or the instant feeling of recognition at this point: you need to realise that others are reading this for the first time, and it's really quite foreign to them.

People who are reading about this for the first time and thinking "good god man is all this even real": you need to realise that these people are not only real, but somewhat commonplace.



Two final things:

(1) Please refrain from speculating on the people involved. Be smart. Protect yourself.

(2) Please refrain from being shitty to people who have stories or reflections they might want to contribute in light of the above. For instance, here's a conversation I don't want to see:

Person A (sadly): oh wow, I had an experience like XYZ

Person B (Kool Aid-ing through the wall): YOU HANDLED THAT ALL WRONG,
YOU SHOULDA OUGHTA DONE THIS OTHER THING, YOU SAP

Just be nice, or at least, as nice as some of you can manage.