

# Opinion & Analysis

## When science is reduced to a game, anyone can play



**JOHN GIBBONS**

The mockery of evidence-based science is anything but marginal and can have serious consequences

**T**HIS WEEK marks the 40th anniversary of the historic first moon landing in July 1969. Or does it? Conspiracy theories have persisted over the decades, with books, websites and even organisations dedicated to “uncovering” Nasa’s gigantic hoax.

Laughable? Yes, but these theories are difficult to refute precisely because of the impossibility of proving a negative.

Buzz Aldrin, the second man to set foot on the moon, said last week he felt sorry for the “gullible people” being taken in by this nonsense. The fact that millions earnestly believe this stuff is neither trite nor trivial.

Of course, if someone writing in a major newspaper were to dignify this hokum by endorsing it, they should expect to be on the receiving end of some well-earned ridicule.

Yet the mockery of evidence-based science by quacks, egoists, curmudgeons and ideologues is anything but marginal.

Earlier this month, *Daily Mail* columnist Andrew Alexander wrote a piece about global warming, reheating a hotchpotch of Junior Cert level science errors in a rambling assault on “environmental fanaticism”. Yes, you’ve guessed it, the whole thing is a conspiracy theory, dreamed up by evil scientists involved in the largest conspiracy the world has ever witnessed. Their sinister

agenda? The crazed pursuit of research grants, possibly. The author casually dismisses perhaps the strongest scientific consensus ever to emerge on any major issue.

Sadly, this is anything but unusual. Kevin Myers in the *Irish Independent* wears his non-understanding of climate science as a badge of honour, cheerfully recycling, in May 2008, wild claims produced by others of a similar hue, such as the *Sunday Telegraph*’s Christopher Booker. Paddy O’Keeffe’s recent piece in the *Farmer’s Journal* is so so bizarre it’s completely off the wall.

So what exactly is going on here?

*Bad Science* by Ben Goldacre has some answers. It is a blistering exposé of the blight of science ignorance and the triumph of wilful stupidity. He lampoons all forms of quackery.

Among people working in the media, science literacy is the exception, not the norm. Some journalists, Goldacre reckons, feel intellectually offended by how hard they find science, and so “conclude that it all must simply be arbitrary, made-up nonsense”.

Commentators thus feel free to “pick a result from anywhere you like, and if it suits your agenda, then that’s that: nobody can take it away from you with their clever words because it’s all just game-playing, it just depends on who you ask”.

**“We seek out information and people to confirm our own biases**

This may be harmless fun when it comes to Elvis sightings, but in the teeth of humanity’s profoundest existential crisis in 100 centuries, misleading the public is reckless. The real purpose of the scientific method, according to author Robert Pirsig, “is to make sure nature hasn’t misled you into thinking you know something you actually don’t know”.

We humans reason anecdotally, depending heavily on hunches and intuition; it’s an effective way of dealing with the constant deluge of information we have to process.

The price for this convenience is that we are susceptible to what are known as cognitive illusions. We see patterns in the genuinely random; we see causal relationships where they don’t exist. We seek out information and people to confirm our own biases, and reject these if they don’t fit.

We can also be poor judges of our own aptitudes and limitations. Depending on intuition it may be appropriate when deciding what to watch on television, but it’s the precise opposite to how the scientific method works. And for good reason.

In 1946, paediatrician Dr Benjamin Spock published the bestselling *Baby and Child Care*. It included one utterly wrong recommendation: that babies should sleep on their tummies – advice that led to thousands of avoidable cot deaths. That’s why we do science: to weed out all those interesting hunches and replace them with rigorously tested scientific facts, however dull. Everyone now knows that cigarettes are dangerous; 50 years ago, everyone – including doctors – smoked.

The same goes for leaded petrol, ozone depletion, CO<sub>2</sub> and a host of other hazards that we have been alerted to over the decades by rigorous, scientific research. The media caricature of science as unfathomable, authoritarian and capricious is a dangerous fiction. It allows media-savvy showmen to set themselves up as “experts”.

Self-styled nutritionist Patrick Holford bashed conventional medicine on the *Late Late Show* some time back, in favour of his hip “alternative” methods. For instance, he

says the anti-Aids treatment, AZT, is “potentially harmful and proving less effective than vitamin C”. That’s one serious claim. Supporting evidence? Nil.

When science is reduced to a game, anyone can play. Scientists say the Arctic ice sheet is in danger of disappearing; I say they’re just stuffy old sausages and, besides, the world is actually getting colder. Maybe it’s all about sunspots, or whatever other discredited theory can be shoehorned to match my intellectual whims.

We trusted science to deliver dramatic improvements in health and life expectancy, as well as genuine technological advances.

Now, at the time of our greatest peril, we’ve turned to the quacks, blowhards and snake-oil salesmen. As Samuel Beckett observed: “We are all born mad; some remain so.”

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