



Fear and blame: A table of T-shirts with antimask slogans accompanied a protest outside the Jet Blue headquarters in Queens, N.Y., on October 27, 2021. Protesters were pushing back against the airline's COVID vaccine mandate and mask policies. The instability created by the pandemic is fertile ground for conspiracy theories. Credit: Mark Peterson/Redux Pictures

Self-Sealing: Cognitive Deception in Conspiracy Theories

I was reading an article published in the March 2022 issue of *Scientific American* (SA), called “The Lab-Leak Hypothesis Made It Harder for Scientists to Seek the Truth,”¹ and came across a term called “self-sealing,” which, as explained by authors Stephan Lewandowsky, Peter Jacobs, and Start Neil, is the cognitive perpetuation of conspiracy theorists:

“One of their hallmarks is that [conspiracy theories] are self-sealing: as more evidence against the conspiracy emerges, adherents keep the theory alive by dismissing contrary evidence as further proof of the conspiracy, creating an ever more elaborate and complicated theory.”

This is a typical conspiracy theorist’s response to scientists who engage in what is natural to the scientific process itself. Specifically, when science revises or rejects failed hypotheses, a regular feature of experimentation and accumulating additional evidence to refine a scientific theory emerges to refine that science. Change apparently frightens conspiracy theorists, as they seem to want black and white revelations, literally and figuratively.

The article goes onto explain this “self-sealing cognition” through a famous denial conspiracy theory from 2009 allegedly brought about by climate change scientists, called “Climategate”:

¹<https://www.scientificamerican.com/article/the-lab-leak-hypothesis-made-it-harder-for-scientists-to-seek-the-truth/>

“At that time thousands of documents and e-mails were stolen from the Climatic Research Unit of the University of East Anglia in England and made public right before the United Nations climate conference in Copenhagen. The e-mails were cherry-picked by deniers for sound bites that, when taken out of context, seemed to point to malfeasance by scientists. Ultimately nine independent inquiries around the world cleared the scientists of misconduct², and nine of the warmest years ever measured have occurred in the eleven years since Climategate”

However, after the conspiracy was thoroughly refuted, there remained resulting damage, according to UK climate scientist, Professor Phil Jones: Science was lost, as the media and climate change-deniers became obsessed with “a few words in a few emails.” He continued to receive hate mail and believes that action on climate as a result of these hacked emails was stalled by a decade.

The nature of self-sealing conspiratorial thinking is based on selective research, mostly quoting scientifically substantiated research with out-of-context information that “seals in predetermined conclusions.” These conclusions satisfy the conspiracy theory and not the truth, which, for many, achieves a false cognition of righteousness that often spills over into bitter acrimony, as evidence by the above graphic.

The reason I bring this up is to address the persistent reaction to Covid, its variants, vaccinations, masks, and regulations as ongoing hoaxes. The hysteria is characterized by claims that the science is clumsy, that the CDC can’t make up its mind regarding policy and advice, resulting in conspiracy theorists subjecting some officials to unfounded political harangues because they still advocate caution. These claims persist regardless of the evidence of Covid’s catastrophic impact on individuals, on minorities, hospitals and staff, on children, teachers, and public sector employees, and institutions and events that are built around gatherings.

SA’s article was motivated by the conspiracy theory that Covid originated in a Chinese lab, located near the market in Wuhan, China, to where the virus was first traced. The conspiracy theory of having it originate in a lab of a nation we have an adversarial relation with is a convenient explanation and excuse to invoke blame, to engage a xenophobic reaction, often taking the form of violence. The article thoroughly refutes that theory, and in great detail explains the scientific findings that the virus originated from a “zoonotic chain”—that it originated with microbes passed through animals and ultimately to human beings. The one concession (so far) to the lab thesis was the proximity of the lab to the market where exotic (to us) meats are sold. This proximity could account for its spread by a person, but not by an intentional harvesting of the virus in a lab nearby, as conspiracy theorists would have you believe. That concession supports the scientific process, largely misunderstood by those with a belligerent, contrary agenda:

²Independent inquiries regarding Climategate:
<https://iopscience.iop.org/article/10.1088/1748-9326/9/11/111004>

“In normal scientific inquiry, as evidence emerges, the remaining space for plausible hypotheses narrows. Some facets continue to be supported, and others are contradicted and eventually precluded altogether.” [...] “Plausible routes for a lab origin *do* exist—but they differ from the engineering-based hypotheses that most lab-leak rhetoric relies on. The lab in Wuhan could be a relay point in a zoonotic chain in which a worker became infected while sampling in the field or being accidentally contaminated during an attempt to isolate the virus from a sample. Evidence for these possibilities may yet emerge and represents a legitimate line of inquiry that proponents of a natural origin and lab-leak theorists should be able to agree on. But support for those claims will not be found in self-sealing reasoning, quote-mining of e-mails, or baseless suggestions.”

Scientific inquiry builds upon itself, should remain fluid so that a door is always open to new evidence, to new discoveries, and to better science. Unlike the self-sealing theology of conspiracy theorists, their acquaintance with facts seeks information to counter the inconvenient truths that frighten the mind that prefers myth over matter.

The consequences of conspiracy thinking, whether it's climate change, Covid, or anything that suppresses the scientific process are dire:

“Ironically the xenophobic instrumentalization of the lab-leak hypothesis may have made it harder for reasonable scientific voices to suggest and explore theories because so much time and effort has gone into containing the fallout from conspiratorial rhetoric. Lessons from climate science show that failure to demarcate conspiratorial reasoning from scientific investigation results in public confusion, insufficient action from leadership, and the harassment of scientists. It even has the potential to impact research itself, as scientists are diverted into knocking back incorrect claims and, in the process, ceding potentially them more legitimacy than warranted.”

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