

SCIENTIFIC AMERICAN

Strange

Metals

Parenting

LGBTQ

Kids

The Fight for an
Ancient Forest

What We're Learning from

AI

How to decode ancient scrolls, prove theorems
and study intelligence itself

APRIL 2024
SCIENTIFICAMERICAN.COM

© 2024 Scientific American

a 2009 paper by criminology researchers at the University of Dallas, outlines experimental and statistical flaws in econometrics-based death penalty studies that claim to find a correlated reduction in violent crime. The death penalty does not stop people from killing. Executions don't make us safer.

The methods used to kill prisoners are inhumane. Electrocutation fails, causing significant pain and suffering. Joel Zivot, an anesthesiologist who criticizes the use of medicines in carrying out the death penalty, has found (at the request of lawyers of death row inmates) that the lungs of prisoners who were killed by lethal injection were often heavy with fluid and froth that suggested they were struggling to breathe and felt like they were drowning. Nitrogen gas is used in some veterinary euthanasia, but based in part on the behavior of rats in its presence, it is "unacceptable" for mammals, according to the American Veterinary Medical Association. This means that Smith, as his lawyers claimed in efforts to stop his execution, became a human subject in an immoral experiment.

Courts have often decided, against the abundant evidence, that these killings are constitutional and do not fall under the "cruel and unusual punishment" clause of the 8th Amendment or, in Smith's appeal, both the 8th Amendment and the due process protection clause of the 14th amendment.

A small number of prosecutors and judges in a few states, mostly in the South, are responsible for most of the death sentences being handed down in the U.S. today. It's a power they should not be able to wield. Smith was sentenced to life in prison by a jury before the judge in his case overruled the jury and gave him the death sentence.

A furious urge for vengeance against those who have done wrong—or those we think have done wrong—is the biggest motivation for the death penalty. But this desire for violent retribution is the very impulse that our criminal justice system is made to check, not abet. Elected officials need to reform this aspect of our justice system at both the state and federal levels. Capital punishment does not stop crime and mocks both justice and humanity. The death penalty in the U.S. must come to an end. ●

Observations from a Government UFO Hunter

A Pentagon investigation has found no evidence of aliens, but unsupported claims persist BY SEAN M. KIRKPATRICK

CARL SAGAN popularized the maxim that "extraordinary claims require extraordinary evidence." This advice should not be optional for policymakers. In today's world of misinformation, conspiracy-driven decision-making and sensationalist-dominated governance, our capacity for rational, evidence-based critical thinking is eroding, with deleterious consequences for our ability to deal with multiplying challenges of ever increasing complexity.

As director of the U.S. Department of Defense's All-Domain Anomaly Resolution Office (AARO), charged by Congress in 2022 with helping to bring science-based clarity and resolution to the long-standing mystery surrounding credible observations of unidentified anomalous phenomena (UAPs), also known as UFOs, I experienced this erosion up close and personal. And it was one factor in my decision to step down from my position last December. After painstakingly assembling a team of highly talented and motivated personnel and working with them to develop a rational, systematic and science-based strategy to investigate these phenomena, I saw our efforts ultimately overwhelmed by sensational but unsupported claims that ignored contradictory evidence yet captured the attention of policymakers, driving legislative battles and dominating the public narrative.

The results of this whirlwind of tall tales, fabrications, and secondhand or thirdhand retellings of the same were a social media frenzy and a significant amount of congressional and executive time and energy spent on investigating such claims—as if we had nothing better to do.

The conspiracists' story goes something like this: The U.S. has been hiding and attempting to reverse engineer as many as

12 UAPs/UFOs from as early as the 1960s and perhaps earlier. This cover-up and conspiracy failed to produce any salient results; consequently, the effort was handed off to some private-sector defense contractors to continue the work. Sometime later those contractors wanted to bring the whole program back under U.S. government (USG) auspices. Apparently the CIA stopped this supposed transfer back to the USG. All of this is without substantiating evidence, but, alas, belief in a statement is directly proportional to the volume at which it is transmitted and the number of times it is repeated, not the actual facts.

During a year-long investigation of this story (which has been told and retold by a small group of interconnected believers and others with possibly less than honest intentions—none of whom have firsthand accounts of any of it), the AARO discovered a few things, and none were about aliens.

First, no record exists of any president or living DOD or intelligence community leader knowing about this alleged program or of any congressional committee having such knowledge. This fact should speak volumes if this case were following typical procedure because it is inconceivable that a program of such import would not ever have been briefed to the 50 to 100 people at the top of the USG over the decades of its existence.

Second, this narrative has been simmering for years and is an outgrowth of a former program at the DOD's Defense Intelligence Agency called the Advanced Aerospace

Threat Identification Program (AATIP), which was heavily influenced by a group associated with longtime UFOlogist Robert Bigelow, founder of Bigelow Aerospace. In 2009 then Senator Harry Reid of Nevada asked the secretary of defense (SEC-DEF) to set up a special access

Sean M. Kirkpatrick recently retired from federal service as the first director of the All-Domain Anomaly Resolution Office at the U.S. Department of Defense. He holds a Ph.D. in physics from the University of Georgia.



program (SAP) to protect the alleged UAP/UFO material AATIP proponents believed the USG was hiding. The secretary declined to do so after a review by the Office of the Undersecretary of Defense for Intelligence, and the Defense Intelligence Agency concluded not only did no such material exist, but taxpayer money was being inappropriately spent on paranormal research at Skinwalker Ranch in Utah.

This is well documented in open sources, particularly in records available on the Defense Intelligence Agency's electronic Freedom of Information Act Reading Room. After the negative response by SECDEF, Senator Reid enlisted the help of then Senator Joseph Lieberman of Connecticut to request that the Department of Homeland Security set up an SAP for the same purpose. The administrative SAP proposal package was informed by the same people who had been associated with the AATIP. The AARO's archival research has located the administrative proposal for the Homeland Security SAP, complete with the participants, which has been declassified and is being reviewed for public release.

Finally, the key purveyors of this narrative have known one another for decades. In the early 2000s several members of this small group also participated in a study, erroneously characterized (by the same people) as having been sponsored by the White

House, on the possible societal impact of disclosing the existence of extraterrestrials to the public, with the authenticity of the abovementioned concealed government program taken as its baseline assumption. The think tank in question was a "futures" enterprise that often worked on fringe studies. Many who were involved with the study also worked for Bigelow Aerospace.

The AARO investigated these claims as part of its congressionally mandated mission to not only technically evaluate contemporary UAP observations but also review historical accounts going back to the 1940s. One of my last acts before retiring was to sign the AARO's *Historical Record Report*, Volume 1, which is now being prepared for delivery to Congress and the public. The report demonstrates that many of the circulating allegations described derive from inadvertent or unauthorized disclosures of legitimate U.S. programs or related R&D that has nothing to do with extraterrestrial issues or technology. Some are misrepresentations; some derive from pure, unsupported beliefs. In many ways, the narrative is a textbook example of circular reporting, with each person relaying what they heard but the information often ultimately being sourced to the same small group.

The operational mission Congress has assigned to the AARO is important. Accumulating observations by highly trained

U.S. military and other credible personnel of UAPs at or near sensitive national security areas and activities calls for a serious effort to understand what's going on. Simply put, "unidentified" is unacceptable, particularly in these times of heightened geopolitical tension. Part of the problem we face today, however, is that the modern media cycle drives stories faster than sound research, science and peer review time lines can validate them. More worrisome is the willingness of some to make judgments and take actions on these stories without having seen or even requested supporting evidence, an omission that is all the more problematic when the claims are so extraordinary. Some members of Congress prefer to opine about aliens to the press rather than get an evidence-based briefing on the matter. Members have a responsibility to exhibit critical thinking skills instead of seeking the spotlight.

At the time of my departure, none of the conspiracy-minded "whistleblowers" in the public eye had elected to come to the AARO to provide their "evidence" and statements for the record, despite numerous invitations. Anyone who would rather be publicly sensationalist than bring their evidence to the one organization established in law with all the legal processes and the security framework to protect them, their privacy and the information and to investigate and report findings is suspect.

I can assure you as its former director that the AARO is unwaveringly committed to harnessing science and technology to bring unprecedented clarity to these fascinating, important and stubborn mysteries and to do so with maximum transparency. Its talented staff and team of supporting scientists are at this very moment striving in collaboration with the armed forces, the intelligence community, government agencies, national laboratories, the scientific community and the academic community—and soon the general public per Congress—to collect and analyze hard, measurable data in this heretofore eyewitness-rich but data-poor field. The AARO team will go wherever the data take it, without fail, and will not be swayed by any attempts to influence its findings.

Science cannot be left on the side of the road in the mad dash to uncover some great conspiracy. Carl Sagan would expect no less, and neither should the American people. ●