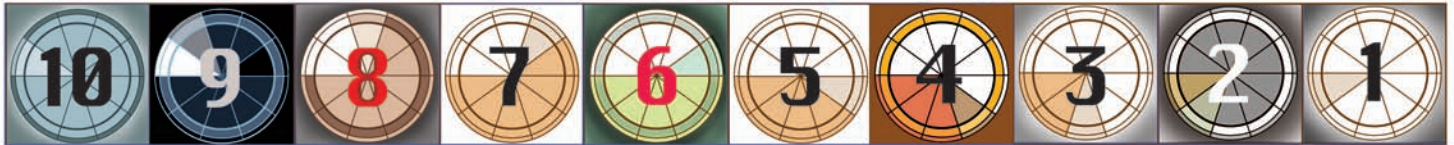


THE TOP TEN WEIRDEST THINGS COUNTDOWN

Ever since I wrote *Why People Believe Weird Things* I have been asked to list the strangest beliefs I've come across in my quarter century as a professional skeptic. Naturally the criteria of what constitutes "weird" is necessarily subjective, so I considered not just the error of the belief but the wider impact the belief has on society.

—Michael Shermer



The belief that aliens have been visiting Earth for millennia gained a mass following in 1968 with the publication of Erich von Däniken's *Chariots of the Gods?*, which became an international bestseller. Tens of millions of dollars in sales generated numerous sequels, including *Gods from Outer Space*, *The Gods Were Astronauts* and, just in time for the December 21, 2012 doomsday palooza, *Twilight of the Gods: The Mayan Calendar and the Return of the Extraterrestrials*. Earthlings still await their arrival.

10 ANCIENT ALIENS

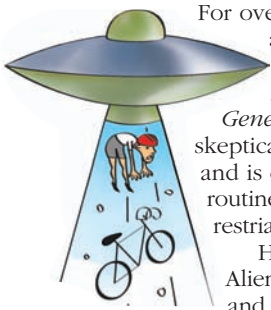
The latest channel for the belief that ancient peoples were incapable of accomplishing such an inconceivable feat as piling cut stones into a pyramid shape is the History Channel, or more precisely H2, which lacks the oxygen of the original. Its *Ancient Aliens* series stars the bouffant crowned Giorgio Tsoukalos, whose goofy expression and catch phrase ("I'm not saying it's aliens...but it's aliens.") are featured on every episode.

This one makes the top ten list is because of its ubiquity (77% of Americans believe there are signs that aliens have visited the earth at some time in the past abcn.ws/1KuGHbq) and because it's an excellent example of the logical fallacy called *argumentum ad ignorantiam*, or *appeal to ignorance*. The illogical reasoning goes like this: if there is no satisfactory terrestrial explanation for the Egyptian pyramids and many other features of ancient landscapes—such as the Nazca lines of Peru and the statues of Easter Island—then the extraterrestrial theory that they were built by aliens must be true.

In point of fact archaeologists, anthropologists, and historians have perfectly terrestrial explanations for all the so-called unsolved mysteries of the past, making extra-terrestrial explanations unnecessary. Before we say something is otherworldly we should first consider its worldly explanations.

Researching this subject for my July 2013 column in *Scientific American*, I discovered that in subsequent printings of *Chariots of the Gods?* the question mark was dropped and this disqualifier was added on the copyright page: "This is a work of fiction. Names, characters, places, and incidents are either the product of the author's imagination or are used fictitiously." QED.

9 UFOS VISIT EARTH



For over half a century reports have been coming in about Unidentified Flying Objects (UFOs) darting about our skies and landing in our grain fields, mutilating cows, probing humans, and even impregnating women to form alien-human hybrids. Since "UFO" has become something of a joke, a new phrase was recently introduced: Unidentified Aerial Phenomena (UAP), proffered by the investigative journalist Leslie Kean in a 2010 book entitled *UFOS: Generals, Pilots, and Government Officials Go on the Record*. Kean asks readers to consider "with an open and truly skeptical mind" that such sightings represent "a solid, physical phenomenon that appears to be under intelligent control and is capable of speeds, maneuverability, and luminosity beyond current known technology," that the "U.S. government routinely ignores UFOs and, when pressed, issues false explanations," and that the "hypothesis that UFOs are of extraterrestrial or interdimensional origin is a rational one and must be taken into account, given the data we have."

How much data do we have and can it help us distinguish between UAPs and what I call Completely Ridiculous Alien Piffle (CRAP) such as crop circles and cattle mutilations, alien abductions and anal probes, and genetic experiments and human-alien hybrids? According to Kean, "roughly 90 to 95% of UFO sightings *can* be explained" as "weather balloons, flares, sky lanterns, planes flying in formation, secret military aircraft, birds reflecting the sun, planes reflecting the sun, blimps, helicopters, planes in formation, the planets Venus or Mars, meteors or meteorites, space junk, satellites, swamp gas, spinning eddies, sundogs, ball lightning, ice crystals, reflected light off clouds, lights on the ground or lights reflected on a cockpit window" and more. So the entire extraterrestrial hypothesis is based on the residue of data left over after the above list has been exhausted. What's left? Not much.

In all fields of science there is a residue of anomalies unexplained by the dominant theory. That does not mean that the prevailing theory is wrong or that alternative theories are right. It just means that more work needs to be done to bring those anomalies into the accepted paradigm. In the meantime, it is okay to live with the uncertainty that not everything has an explanation. And once again, before we say something is extra-terrestrial let's first make sure that it is not terrestrial.

8 CREATIONISM



The *argumentum ad ignorantiam* employed by alien and UFO proponents is actually an old one used by evolution deniers—better known as creationists, or Intelligent Design theorists—who make what are called “God of the gaps” arguments: wherever there is a gap in scientific knowledge, that is evidence of divine design. The problem with all such arguments from ignorance—or gaps—is what happens to your theory when the gaps are filled? In science, for a new theory to be accepted, it is not enough to only identify the gaps in the prevailing theory (negative evidence). Proponents must provide positive evidence in favor of their new theory.

This is what creationists have failed to do ever since Darwin published his theory in 1859. Denying that evolution happened, denying that natural selection suffices as a mechanism of evolutionary change, denying macro-evolution (while accepting micro-evolution), denying transitional fossils, denying embryology, comparative anatomy, and comparative physiology, denying biogeography, and denying the genetic similarity of all living beings adds up to a lot of denial in order to rescue religious beliefs from the onslaught of convergent evidence from so many lines of inquiry.

This one also makes the list because of its popularity (polls consistently show that 40–45% of Americans believe in young earth creationism, another 40–45% believe that God guides evolution, while the rest take a strictly materialist/non-supernatural view of evolution <http://bit.ly/1o59RAX>) and its influence on science education as religious groups continue to lobby school boards, curriculum boards, textbook publishers, politicians, and teachers to “teach the controversy” and to give “equal time” to creationism in its many forms. Yet their curriculum programs fail to offer anything more than gussied up versions of “God did it” explanations, without even bothering to explain how God did it. Maybe he didn’t. Maybe no one did it.

7 HOLOCAUST DENIAL

The doppelganger of evolution denial, Holocaust revisionists (as they call themselves) deny the Shoah with very similar tactics as creationists (I explore this in depth in my book *Why People Believe Weird Things* (amzn.to/1MDR5J1)):

A. Holocaust deniers find errors in the scholarship of historians and then imply that therefore their conclusions are wrong, as if historians never make mistakes. Evolution deniers (creationists) find errors in science and imply that all of science is wrong, as if scientists never make mistakes.

B. Holocaust deniers are fond of quoting, usually out of context, leading Jews and Holocaust scholars to make it sound like they support Holocaust deniers’ claims. Evolution deniers are fond of quoting leading scientists like Stephen Jay Gould and Ernst Mayr out of context to imply that they are capably denying the reality of evolution.

C. Holocaust deniers contend that genuine and honest debate between Holocaust scholars means they themselves doubt the Holocaust or cannot get their stories straight. Evolution deniers argue that genuine and honest debate between scientists means even they doubt evolution or cannot get their science straight. The irony of this analogy is that the Holocaust deniers can at least be partially right (the best estimate of the number of Jews killed at Auschwitz, for example, has changed), whereas the evolution deniers cannot even be partially right—once you allow divine intervention into the scientific process, all assumptions about natural law go out the window, and with them science.

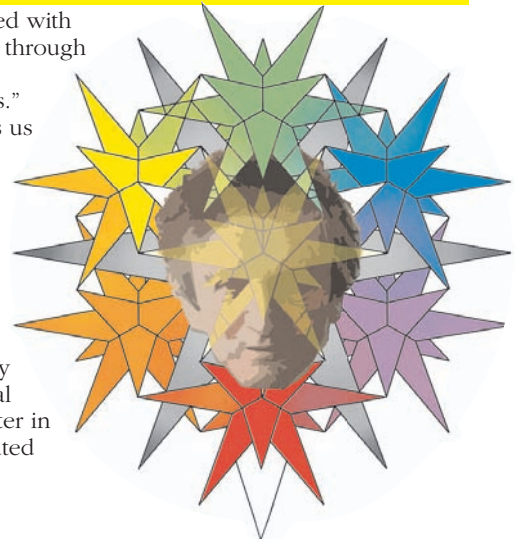
More arguments and my many refutations here can be found in my book *Denying History* (amzn.to/1MDRdbw). Holocaust denial makes the list because of its profound political ramifications, particularly in the Middle East where there are still people who while denying that Hitler attempted to eradicate European Jewry nevertheless wish he would have, and that they would still like to. Thus is it, pace George Santayana, if we do not remember this past properly we may be condemned to repeat it.



6 MORPHIC RESONANCE

According to Rupert Sheldrake, a Cambridge University trained scientist, the universe is infused with what he calls morphic resonance: similar forms (morphs) resonate and exchange information through a universal life force. This, he says, is “the basis of memory in nature...the idea of mysterious telepathy-type interconnections between organisms and of collective memories within species.” This is a type of ESP or Psi phenomena, in which, says Sheldrake, “Morphic resonance shows us that our very souls are connected with those of others and bound up with the world around us.”

As well, Sheldrake writes in his 1981 book *A New Science of Life* that “As time goes on, each type of organism forms a special kind of cumulative collective memory. The regularities of nature are therefore habitual. Things are as they are because they were as they were.” Morphic resonance, Sheldrake continues, is “the idea of mysterious telepathy-type interconnections between organisms and of collective memories within species,” and it explains phantom limbs, homing pigeons, how dogs know when their owners are coming home, and such psychic phenomena as how people know when someone is staring at them. “Vision may involve a two-way process, an inward movement of light and an outward projection of mental images.” This is also why it is so much easier to do the New York Times crossword puzzle later in the day—because people earlier in the day have already solved it and that knowledge resonated into the cosmos. You’ve noticed that right? No? Me neither.



5 JFK CONSPIRACY

This one makes the list because for the past half century it has emerged as the mother of all conspiracy theories and has considerable public support. A 2009 CBS News poll, for example, found that 60-80% of Americans believe that President Kennedy was the victim of an assassination conspiracy.

The conspiracy's popularity notwithstanding, they are all wrong. Oswald acted alone. If Gerald Posner's devastating take-down book *Case Closed* doesn't do it for you, Vincent Bugliosi's broodingnagian *Reclaiming History* at 1,648 pages demolishes every single claim for conspiracy ever made. Consider just a few of the many facts in support of the lone assassin theory:

- Conspiracy theorists make a big deal about the fact that Oswald had a job at a building that was on JFK's parade route, claiming that he was planted there by assassination plotters. But Gerald Posner tracked down the timeline for when the White House decided Kennedy was going to Dallas. Oswald had been hired long before it was made. It was pure coincidence.
- Oswald's Carcano bolt-action rifle—with his fingerprints on it—was found on the sixth floor of the Texas School Book Depository building, where he was employed. His sniper's nest—built out of boxes—also had his fingerprints on it.
- Three bullet casings found there matched what 81% of eyewitnesses in Dealey Plaza reported hearing—three shots.
- Tests with Oswald's rifle found that three shots are possible in the amount of time Oswald had to shoot.
- The Carcano was the same rifle Oswald purchased by mailorder in March 1963.
- Co-workers saw Oswald on the sixth floor of the Book Depository shortly before JFK's motorcade arrived, and saw him exit soon after the assassination.
- Oswald went home, picked up his pistol, and left. A short time later he was stopped by Dallas Patrolman J.D. Tippet, whom Oswald shot dead with four bullets—all witnessed by numerous observers. He then fled the scene and ducked into a nearby theater without paying. The police were summoned and Oswald was confronted. He pulled out his revolver and attempted to shoot the first officer but the gun failed and he was arrested, saying, "Well, it is all over now."

4 9/11 CONSPIRACY

Was 9/11 an "inside job"? That is, did the Bush administration orchestrate the attacks on the World Trade Center and the Pentagon on September 11, 2001? No.

But a lot of people think it is possible, or at the

very least that President Bush and his operatives knew about the pending attacks and allowed them to happen in order to galvanize the American public into going to war against Iraq to finish the job his father failed to complete, as well as to protect our oil interests and other Middle East relations. I never imagined that 9/11 denial would get media legs. But it did, so at SKEPTIC magazine we published a full rebuttal of all the 9/11 truthers' claims (bit.ly/1I7yVyx).

The belief that a handful of unexplained anomalies can undermine a well-established theory lies at the heart of all conspiratorial thinking, and is easily refuted by noting that beliefs and theories are not built on single facts alone, but on a convergence of evidence from multiple lines of inquiry. All of the "evidence" for a 9/11 conspiracy falls under the rubric of this fallacy. By contrast, the evidence of the real conspiracy by Osama bin Laden and Al-Qaeda is overwhelming. For example:

- The 1983 attack on the Marine barracks in Lebanon by a Hezbollah faction.
- The 1993 truck bomb attack on the World Trade Center.
- The 1995 attempt to blow up 12 planes flying from the Philippines to the U.S.
- The 1995 bombings of U.S. Embassy buildings in East Africa that killed 212.
- The 1996 Khobar Tower attack in Saudi Arabia that killed 19 U.S. servicemen.
- The 1999 attempt to attack Los Angeles International airport by Ahmed Ressam.
- The 2000 suicide boat attack on the U.S.S. Cole that killed 17 and injured 39.
- The well-documented evidence that Osama Bin Laden was a major financier for and the leader of Al-Qaeda.
- The 1996 fatwa by Bin Laden that officially declared a jihad against the U.S.
- The 1998 fatwa calling on his followers "to kill the Americans and their allies—civilian and military...in any country in which it is possible to do it."

Given this evidence, and the fact that Osama bin Laden and Al-Qaeda officially claimed responsibility for the attacks of 9/11, we should take them at their word that they did it.

3 END OF THE WORLD

You would think by now that people would have glommed on to the fact that every single prediction about the end of the world has failed, and that would discourage any future attempts to predict the world's demise. But no.

The years A.D. 1000 and 2000, of course, were too round and zeroey to pass up for doomsday, yet both came and went without incident. There was a European famine in 1005-1006 that was believed to be a sign of the end. Since Jesus was born in the year 0 by some calendrical calculations and died at age 33, a millennia later in 1033 there was a mass pilgrimage to Jerusalem in preparation for the final judgment. But the centuries rolled on.

In 1843 a New York farmer named William Miller recalculated Bishop Ussher's famous computations for the beginning and end of the world (using the begats in the Old Testament), concluding that it would happen sometime between March 21, 1843 and March 21, 1844. When the latter date came and went without incident a "great disappointment" set in among his followers, but instead of abandoning their deranged prophet the sect recalculated the end for October 22, 1844, finding themselves twice disappointed. But instead of disbanding the group doubled down on their belief (the very definition of cognitive dissonance) and employed several rationalizations that prophets use when their prophecies fail: (1) miscalculation of the date; (2) the date was a loose prediction, not a specific prophecy; (3) the date was a warning, not a prophecy; (4) God changed his mind; (5) predictions were just a test of members' faith; (6) the prophecy was fulfilled physically, but not as expected; and (7) the prophecy was fulfilled—spiritually.

That group went on to become the Seventh-Day Adventist Church. But they're lightweights compared to the Jehovah's Witnesses, whose failed dates of doom include 1874, 1878, 1881, 1910, 1914, 1918, 1920, 1925, 1975, 1984, and finally 1996.

Not just religious people are smitten with end times. Secular versions have been proffered by hardline Marxists (the end of capitalism), extreme environmentalists (the end of resources), libertarians (Ayn Rand's *Atlas Shrugged* is an apocalyptic doomsday work), radical feminists (the end of patriarchy), and most recently the singularity (the end of biological intelligence and the beginning of artificial intelligence and human immortality), which is predicted to arrive sometime between 2030 and 2040. Don't bet on it.

2 AFTERLIFE & SOUL

According to a 2009 Harris poll the following percentages of Americans believe in some form of the afterlife and the soul (amzn.to/1MDRkDY):

Soul survival.....	71%
Heaven.....	75%
Hell.....	61%
Reincarnation.....	20%

This one makes the list because of its popularity and importance for most people's purpose in life. Even the atheist Woody Allen said "I don't want to achieve immortality through my work; I want to achieve immortality through not dying. I don't want to live on in the hearts of my countrymen; I want to live on in my apartment." I am often asked about the afterlife. My response: *I'm for it!* But the fact that I wish it were so does not make it so. And there is no scientific evidence that anything like a soul transcends the death of our physical bodies, or that there is life after life. As I wrote in my book *The Believing Brain* (amzn.to/1MDRkDY):



Either the soul survives death or it does not, and there is no scientific evidence that it does or ever will. Does science and skepticism extirpate all meaning in life? I think not; quite the opposite, in fact. If this is all there is, then how meaningful become our lives, our families, our friends, our communities—and how we treat others—when every day, every moment, every relationship, and every person counts; not as props in a temporary staging before an eternal tomorrow where ultimate purpose will be revealed to us, but as valued essences in the here-and-now where provisional purpose is created by us. Awareness of this reality elevates us all to a higher plane of humanity and humility, as we course through life together in this limited time and space—a momentary proscenium in the drama of the cosmos.



1 GOD

According to Oxford University Press's *World Christian Encyclopedia*, 84% of the world's population belongs to some form of organized religion, and a 2007 Pew Forum survey found that Americans believed in the following:

God or a universal spirit.....	92%
Heaven.....	74%
Hell.....	59%
Miracles.....	79%

I realize that calling belief in God a "weird thing" will be offensive to some, but to be intellectually honest and consistent it should be correctly classified as a supernatural belief because by most traditional believers' accounts God is conceived as *all powerful (omnipotent), all knowing (omniscient), and all good (omnibenevolent); who created out of nothing the universe and everything in it; who is uncreated and eternal, a noncorporeal spirit who created, loves, and can grant eternal life to humans.*

I do not believe in any such god. Further, I believe that there is substantive evidence to show that God and religion are human and social constructions based on research from psychology, anthropology, history, comparative mythology, and sociology. But the burden of proof is on believers to prove God, not on nonbelievers to disprove it—and to date theists have failed to prove God's existence, at least by the high evidentiary standards of science and reason.

I also note a problem we face with the God question: certainty is not possible when we bump up against such ultimate questions as "What was there before time began?" or "If the Big

Bang marked the beginning of all time, space, and matter, what triggered this first act of creation?" The fact that science has yet to answer these questions with certainty doesn't faze scientists because theologians hit the same epistemological wall. You just have to push them one more step. For example, in my debates and dialogues with theologians the exchange usually goes something like this for the question of what triggered the Big Bang:

God did it.

Who created God?

God is He who needs not be created.

Why can't the universe be "that which needs not be created?"

The universe is a thing or an event, whereas God is an agent or being, and things and events have to be created by something, but an agent or being does not.

Isn't God a thing if He is part of the universe?

God is not a thing. God is an agent or being.

Don't agents and beings have to be created as well? We're an agent, a being—a human being. We agree that human beings need an explanation for our origin. So why does this causal reasoning not apply to God as agent and being?

God is outside of time, space, and matter, and thus needs no explanation.

If that is the case, then it is not possible for any of us to know if there is a God or not because, by definition, as finite beings operating exclusively within the natural world we can only know other natural beings and objects. It is not possible for a natural finite being to know a supernatural infinite being.

Thus it is that skepticism in this realm, as in so many others, is altogether appropriate. As the bumper sticker says:

MILITANT AGNOSTIC: I DON'T KNOW AND YOU DON'T EITHER.