

Skeptic: Viewing the World with a Rational Eye
Michael Shermer

Love his lucid writing, admire his wide range of gifts and interests. If I agreed 100% I would not be a proper skeptic.

Shermer is an odd duck. Not Jewish, but so bright that he attracted Stephen Jay Gould and Carl Sagan as mentors. Dogged enough to complete the grueling bicycle Race Across America five times. A CalTech academic, but finding expression as a popular writer. This collection of columns he wrote over the years for Scientific American is well suited to people with that level of intellect.

The third, and one of the best pieces in the book, is entitled "I was wrong." Humility is a rare and admirable quality in human beings in general, and especially among scientists. I credit this book with changing my opinions on a couple of important subjects, covered later in this review.

Shermer is especially obsessed with fraud, quackery, junk science and religion. His articles on epistemology – how we know what we know – and scientific method are worth memorizing. We all come across people who simply do not believe in vaccines, or swear by their bottled water, or homeopathic medicines, or magnets and similar quackery. In the (unfortunately rare) case that you are dealing with somebody who will listen to reason, and might even be somewhat numerate, Shermer's succinct treatises are succinct and powerful.

Reflecting modern society itself, many of the themes he touches on are politically charged. A man who depends on academia cannot be uniformly brave, but Shermer does pretty well. Let's look at a few.

On global warming, Shermer switched from being a skeptic to something of a believer. He cites the rise in carbon dioxide in the atmosphere. Even climate-change skeptics agree that it has risen from 180 to 350 parts per billion, and is headed higher. The thesis of the 1990s was that these greenhouse gases would trap heat and suffocate us by today. It has not happened. I'll go with Shermer that, in my father's words, we "shouldn't muck with something we don't understand." A conservative should conserve the planet as it is, not knowingly make such dramatic changes and hope for the best. On the other hand, as a libertarian Shermer must also recognize that politicians are using global warming as a stalking horse to advance many other agendas. I read him with interest and an open mind.

Shermer strongly supports Napoleon Chagnon's anthropology among the Yanomamo against politically-charged attacks. His writing predates "Noble Savages: My Life Among Two Dangerous Tribes -- the Yanomamo and the Anthropologists," but I am sure that Shermer relishes Chagnon's setting the record straight. Primitive men were and are often violent. Civilization has improved us.

On the other hand, Shermer's mentor Stephen Jay Gould is bad odor among others whom he admires for his tenacious resistance to research on human evolution, evolutionary biology, evolutionary psychology and thus human biodiversity. Although he writes favorably of Richard Dawkins and E. O. Wilson, Shermer generally avoids these topics, dismissing them with a single-line throw-away. He simply does not write about the work of Arthur Jensen, Richard Lynn, Philippe Rushton, Kevin MacDonald, Barbara Oakley and many others in the sociobiology movement. Even a skeptic has to keep his horns pulled in upon occasion.

Shermer's brief comment on the controversy raised by the (unnamed) book "Inventing the AIDS Virus" led me to amend my review of that book. As with the climate change advocates, the AIDS lobby's being highly political does not mean that it is not right in many particulars. Much as I may sympathize for the abuse that the author of this book suffered, ad hominem attacks and slurs rather than refutations of his science, it appears that the refutations of the science do exist and are substantial. If I have a criticism to offer it might be that Shermer should be more candid about the politics of the issues. A model in my mind is Steven Pinker's dealing with them in "The Blank Slate."

Shermer goes at religion with the passion of the former evangelical that he is. He is especially tough on Intelligent Design. Yet, he has a compelling, moderately cast article entitled "Darwin on the Right – Why Christians and conservatives should accept evolution." His thesis is that evolution fits with theology and it explains human nature. Shermer's online biography shows him marrying late in life and does not credit him with any children. I would add that religion provides a rationale for having children. Bearing children does not offer much of a reward in the modern world. They are a great expense to raise, society is structured such that one's employer and the government are on the hook for our care in old age, and modern American society almost goes out of its way to teach children to be ungrateful. But for the religious injunction to "be fruitful and multiply" we would die out – even faster than we are doing!

"Dogged" is the theme of Shermer's piece on retracing Darwin's investigation of the Galapagos Islands and of Darwin's unrelenting quest to figure things out. It is the perfect word to describe Shermer himself. This is another excellent work. He strives to know, and relishes sharing what he has discovered.

Notes

9. If the claimant has proffered a new explanation, does it account for as many phenomena as the old explanation? The HIV-AIDS skeptics argue that lifestyle, not HIV, causes AIDS. Yet, to make this argument they must ignore the convergence of evidence in support of HIV as the causal vector in AIDS, and simultaneously ignore such blatant evidence as the significant correlation between the rise in AIDS among hemophiliacs shortly after HIV was inadvertently introduced into the blood supply. On top of this, their alternative theory does not explain nearly as much of the data as the HIV theory.

Shermer, Michael (2016-01-12). *Skeptic: Viewing the World with a Rational Eye* (Kindle Locations 669-671). Henry Holt and Co.. Kindle Edition.

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The view that all wrong theories are equal implies that no theory is better than any other. This itself is a theory known as the "strong social construction of science," which contends that science is inextricably bound to the social, political, economic, religious, and ideological predilections of a culture, particularly of those in power. Scientists are knowledge capitalists who produce scientific papers that report the results of experiments conducted to test (and usually support) the hegemonic theories that reinforce the status quo. In some extreme cases, particularly in the social sciences, this theory is right. In the early nineteenth century, physicians discovered that slaves suffered from drapetomania, or the uncontrollable urge to escape from slavery, and dysaesthesia aethiopsica, or the tendency to be disobedient to slave masters. In the late nineteenth and early twentieth centuries, scientific measurements of racial differences in cognitive abilities found that blacks were inferior to whites. In the mid-twentieth century

psychiatrists discovered evidence that led them to classify homosexuality as a disease. And until recently, women were considered inherently inferior in science classrooms and corporate boardrooms.

Shermer, Michael (2016-01-12). *Skeptic: Viewing the World with a Rational Eye* (Kindle Locations 552-554). Henry Holt and Co.. Kindle Edition.

After being poked, prodded, scanned, drugged, and radiated your doc tells you that there is nothing more that can be done to cure what ails you. Why not try an alternative healing modality? What's the harm? I started thinking about this question in 1991 when my normally intelligent mother presented to a psychiatrist symptoms of cognitive confusion, emotional instability, and memory loss. Within an hour it was determined that she was depressed. I didn't buy it. My mom was weird, not depressed. I requested a second opinion, from a neurologist. A minor deception got us in that afternoon (I'm a PhD, not an MD). A CT scan revealed an orange-size meningioma tumor. Meningioma tumors (originating on the meninges, the protective lining of the brain) are far more common in women than men— the ratio ranges from 1.4: 1 to 2.8: 1— and cluster, curiously, in Los Angeles County, where we live. They are usually successfully treated with surgical removal. Indeed, within days my mom was back to her bright and cheery self— what a remarkably recuperative and pliable organ is the brain. Unfortunately, within a year my mom had two new tumors in her brain. (My mom might be another data point in support of Harvard Medical School surgeon Judah Folkman's angiogenesis theory of cancer— that tumors secrete chemical stimulants that draw blood vessels to them for growth, as well as chemical inhibitors that prevent other tumors from implementing their own angiogenesis programs. Remove the dominant tumor, however, and you eliminate the angiogenesis inhibitors, thus allowing the dormant tumors to spring to life.) Three more rounds of this cycle of surgical removal and tumor return, plus two doses of gamma-knife radiation (a pinpoint-accurate beam that destroys cancer cells), finally led to the dreaded prognosis: there was nothing more to be done. What is a skeptic to do? An ideological commitment to science is one thing, but this was my mom! I turned to the literature, and with the help of our brilliant and humane oncologist, Dr. Avrum Bluming, determined that we would try an experimental treatment, mifepristone, a synthetic antiprogesterin better known as RU-486, which is also an induced abortion drug. A small-sample study suggested that it might retard the growth of tumors. It didn't. My mom was dying. There was nothing to lose in trying some alternative cancer treatments, right? Wrong. The choice is not between scientific medicine that doesn't work and alternative medicine that might work. Instead, there is only scientific medicine that has been tested and everything else ("alternative" and "complementary" medicine) that has not been tested. A few reliable authorities test and review the evidence for some of the claims— notably Dr. Stephen Barrett's Quackwatch (www.quackwatch.org), Dr. William Jarvis's National Council Against Health Fraud (www.ncahf.org), and Dr. Wallace Sampson's journal *The Scientific Review of Alternative Medicine*. However, most alternatives slip under the scientific peer review radar. This is why it is alarming that, according to the American Medical Association, the number of visits to alternative practitioners exceeds visits to traditional medical doctors; the amount of money spent on herbal medicines and nutrition therapy accounts for more than half of all out-of-pocket expenses to physicians; and most disturbingly, 60 percent of patients who underwent alternative treatments did not report that information to their physician— a serious, and even potentially fatal, problem if herbs and medicines are inappropriately mixed. For example, the September 17, 2003, issue of the *Journal of the American Medical Association* reported the results of a study that found St. John's wort, an herb derived from a blooming *Hypericum perforatum* plant and hugely popular as an alternative elixir (to the tune of \$ 86 million in 2002), can significantly impair the effectiveness of dozens of medications, including those used to treat high blood pressure, cardiac arrhythmias, high cholesterol, cancer, pain, and depression. The study's authors show that St. John's wort affects the liver enzyme cytochrome P450 3A4, essential to metabolizing at least half of all prescription drugs, speeding up the breakdown process, and thereby shortchanging patients of their lifesaving medications. But there is a deeper problem. All of us are limited to a few score years in which to enjoy meaningful life and love. Time is precious and fleeting. Given the choice of spending the next couple of months schlepping my dying mother around the country on a wild goose chase versus spending quality time together, my dad and I opted for the latter. She died a few months later, on September 2, 2000, three years from the day I penned the column on which this essay is based. Medicine is miraculous and science is scintillating, but in the end life ultimately turns on the love of the people who matter most. It is for those relationships, especially, that we should apply the ancient medical principle *primum non nocere*— first do no harm.

Please note that some of the links referenced in this work are no longer active. Those of us who practice skepticism for a living often find ourselves tiptoeing politely around the PC police who believe that truth is relative and all opinions are to be respected. Thus, when asked “Are you a debunker?” my initial instinct is to dissemble and mutter something about being an investigator, as if that will soften the blow. But what need, really, is there to assuage? According to the Oxford English Dictionary, to “debunk” is to “remove the nonsense from; to expose false claims or pretensions.” “Bunk” is slang for “humbug,” and “bunkum” is “empty claptrap oratory.” Here is some bunk that merits no brook. Aliens did not crash in Roswell, New Mexico, or anywhere else. If there are aliens in the cosmos they very likely are too far away to have made it to one of a hundred billion stars in one of a hundred billion galaxies. Alien abductees are not visiting the mother ship; they are having nightmares and wet dreams, or creating false memories through hypnosis conducted by abduction “therapists.” JFK was shot by Lee Harvey Oswald, not by a KGB, CIA, FBI cabal in cahoots with the military-industrial complex, Mafia, and Castro. Neither George Bush Sr. nor Jr. are puppets of the Freemasons, Illuminati, Rockefellers, Rothchilds, or any other New World Order secret society. There was, however, a conspiracy to land a man on the moon, and it succeeded. Feng shui— the ancient Chinese tradition (recently imported to the West) of arranging furniture, doors, windows, and various objects so as to adjust the yin-yang energy flow through a home or building to bring about health, harmony, and kismet— has nothing to do with mystical forces and everything to do with Chinese geography. Doors and windows do not control the movement of “ch’i energy” (or “life force”) because there is no such thing, but they do regulate the flow of cold wind blowing off a mountain, regardless of whether the mountain resembles a dragon, snake, or tiger. A bed placed in front of a door does not block ch’i, but it does interfere with the design aesthetics. Call an interior designer, not a feng shui practitioner. Ear coning cleans your ears and mind. Lie down on your side with your head on a pillow. Place a long, narrow, cylindrical cone of wax into your ear canal until there is a tight seal. Light the open end of the cone on fire. The negative pressure created will not only remove undesirable ear wax, according to Coning Works in Sedona, Arizona; additional benefits include “spiritual opening and emotional clearing, realignment and cleansing of subtle energy flows, sharpening of mental functioning, vision, hearing, smell, taste and color perception” and, most importantly, it “acts as a catalyst to clear out debris from nerve endings allowing for clear vibrational flow to corresponding areas of mind, body and spirit.” Why pay \$ 25 to \$ 75 to have your ears cleaned by your doctor, asks Wholistic Health Solutions, “when you can easily do it at home?” Well, for starters, according to a 1996 study conducted by physicians at the Spokane, WA, Ear, Nose, and Throat Clinic and published in the journal *Laryngoscope*, “Tymanometric measurements in an ear canal model demonstrated that ear candles do not produce negative pressure,” and thus there was no removal of wax in the eight ears tested. Worse, a survey of 122 otolaryngologists (ear, nose, and throat docs) identified twenty-one ear injuries from ear coning (“ which end am I supposed to light?”). If one is inclined toward such self-mutilation (or a good chortle), however, I recommend a quick stop at buttcandle.com, where you can find a “gentler alternative to laxatives, enemas and anti-flatulence pills” in the form of a carefully (and gently) placed hollow candle that when burning creates a vacuum that draws out impurities. Best of all, it’s “100% soluble and septic-safe.” Laundry balls clean clothes. Putting into a wash spherical, toroidal, or spiked balls that contain no chemicals and are indefinitely reusable to clean, deodorize, sterilize, bleach, and soften clothes, do not “ionize,” “structure,” “cluster,” or “magnetize” water, as various manufacturers claim. The EarthSmart Laundry CD, Unbelievable Laundry Disk 2000, WashaBall, EnviWash Laundry Ball, Bion Ceramic Laundry Disk, Scrub Balls, EuroWash Laundry Ball, Natural Wash Laundry Balls, LaundryMaster Ionic LaundryBall, Turbo Plus Laundry Disc, Stereo Laundry Disc, Little Helper Laundry Balls, Dynamic One Laundry Clean Ring, ABI Laundry Ball, CleanTec Washing Stones, CW-6 Laundry Ball, and EcoSave Magnetic Washball all work on the same principle: washing clothes in soapless warm water does have some cleansing effect, particularly for nongreasy clothes mainly soiled by dust, dirt, and sweat. But with laundry balls costing from \$ 25 to \$ 75, golf balls are just as effective and a lot cheaper. A counterfeit pen can detect counterfeit bills. Containing tincture of iodine that reacts with the starch in recycled paper to create a black streak, the pen only works to catch counterfeiters brainless enough to use cheap paper, thus creating a false sense of security. Meanwhile, clever counterfeiters with brains who use high-quality fiber or linen paper containing no starch or whitening continue to fleece their marks. Merchants beware: after warning law enforcement agencies— who ignored him— fellow skeptic James Randi periodically applies commercial spray starch

Shermer, Michael (2016-01-12). Skeptic: Viewing the World with a Rational Eye (Kindle Locations 1045-1083). Henry Holt and Co.. Kindle Edition.

Doggedness – Darwin. Today the HBD crowd.

Cyclist – tough body