

Skepticism Checks Its Coat at the Door of Science

How the new secularists and skeptics do Monsanto's dirty work

by Lorna Salzman (March 2015)

Skepticism is in short supply these days even, paradoxically, as paranoia and conspiracy theories spread. The eclipse of the trust in science and modern medicine is in full swing. Irrationality, paranormal beliefs and the ingestion of unproven folk medicine have found audiences and consumers around the world, as have all manner of spiritual and quasi-religious movements.

Much of this stems not only from inadequate education and exposure to scientific thought or from religious fundamentalism but from a violent reaction to the growing dominance of technology, in particular that which is incomprehensible or presents tangible hazards to human health and personal freedom. In this category one would also include technologies whose effects are as yet unknown, which lack a credible scientific consensus of safety, are known to pollute or contaminate human food supplies and which put nonhuman species and ecosystems under stress or threat.

By any measure one would include nuclear power, synthetic chemicals, overuse of antibiotics, genetically modified food crops, and fossil fuel burning that is palpably and irreversibly changing the earth's climate. Also irreversible is genetic engineering, modifying the universal genetic code as a substitute for natural selection and evolution.

Of all of these, the most definitive scientific consensus is on the causes and impact of climate change. This consensus* is effectively 100%, if one excludes creationist contrarianism, nervous economists and scientists affiliated with or dependent on the fossil fuel and energy industries, as well as free marketeers who fear, quite rightly, for the future of the capitalist economic growth model. There are legitimate differences between scientists about the impact and timing of climate change but not on the decades-old data and research that fully support the theory of radical anthropogenic climate change from the use of fossil fuels. The debate would have long been over were it not for reactionary forces who have managed to deceive the sorely uninformed mass media while indulging in dirty tricks to discredit the evidence and the reputation of those who have taken strong public positions on the fact of climate change.

(* consensus meaning not the result of a vote but of a preponderance of opinion based on extensive long-term scientific evidence supporting a particular conclusion).

In the face of these anti-science forces, it seemed fortuitous for the pro-reason, pro-science community to come together and confront the challenge to the validity of science and the elevation of personal spiritual and religious belief systems in a reversion to pre-Enlightenment superstitions of the Dark Ages, before science had advanced sufficiently to provide naturalistic explanations for life and the cosmos. Pagan gods governing human existence gave way to powerful and munificent Christian saints, legitimized by authoritarian patriarchal hierarchies that threatened incineration, in this lifetime or after, to doubters. Except for Islam today, hellfire has been shelved in favor of appeals to love, compassion, tolerance and peace, all of which resonate among today's liberals. One still finds books asking the question: why is there evil? Marxists have their answer: society. The religious have theirs: lack of piety.

Among the voices for reason, science and skepticism are individuals like Richard Dawkins and Sam Harris, who take the flak for millions of people in their unapologetic atheism. And there are organizations and publications that have found wide public favor, such as the Center for Inquiry (CFI), whose journal is named Free Inquiry, and its affiliate, Committee for Skeptical Inquiry (CSI, formerly dedicated to debunking paranormal claims).

The CSI and CFI mission statements are quite clear:

"The Committee for Skeptical Inquiry (CSI) promotes science and scientific inquiry, critical thinking, science education, and the use of reason in examining important issues. It encourages the critical investigation of controversial or extraordinary claims from a responsible, scientific point of view and disseminates factual information about the results of such inquiries to the scientific community, the media, and the public."

The Center for Inquiry mission statement:

"To oppose and supplant the mythological narratives of the past, and the dogmas of the present, the world needs an institution devoted to promoting science, reason, freedom of inquiry, and humanist values."

CSI insists on the reliance on "science-based evidence" Fine, well and good. But when it comes to skepticism, apparently science and technology are exempt. And there is this: the biggest skeptics are the scientists themselves. Their career is one of respectful professional

hostility to unproven hypotheses of other scientists and a demand for valid replication and evidence. This is what is known as Freedom of Inquiry. This seems to have escaped CSI and CFI.

The latest confrontation stems from the uninformed opposition to the use of vaccines. This movement and others like it have been a boon to any number of charlatans, pseudo-doctors and snake oil salesmen, who play on ignorance and fears that usually arise from some personal tragedy such as the death of a child who has received a vaccine. Most of the objections are to the use of the measles vaccine though there is a growing resistance to even the influenza vaccine by many parents.

As expected, new measles outbreaks are occurring in this country, the most recent one starting in Disneyland, California, where workers were responsible for 49 of the 52 cases discovered so far in California, and have spread to Utah, Washington, Oregon, Colorado, New York and Mexico. Since 2000 there have been 644 cases from 27 states. Orange County, California, is presently the center of the new outbreak; a local childhood disease physician said that this is "100% connected" to the anti-immunization campaign. The local school district is now barring non-immunized children from attending school. The rate of application for religious exemptions has risen dramatically, and most crucially there is almost no immunization among recent immigrants, which has boosted the number of the unimmunized students into the double digits – a 95% immunization rate is what is medically recommended to curb new outbreaks.

While it is well known that any vaccine can have dangerous side effects, these are extremely rare compared to the number of lives that are saved. The biggest recent campaign was one charging that a measles vaccine, thimerosal, causes autism, Confusing coincidence and causation, many people with autistic children leaped on this purported linkage, thus giving support and ammunition to other fraudulent anti-science campaigners. The British scientist Andrew Wakefield is the most notorious; he was barred from medical practice when it was found that the pill he was selling to the Japanese to "protect" them from radioactivity exposure gave him all the profits as well as being useless. Other gurus with large followings include Dr. Mehmet Oz, Michel Chossudovsky (Global Research), Gary Null of Pacifica Radio in New York and the perpetually smiling New Age guru Deepak Chopra.

These movements never disappear because medicine never disappears. There is a bottomless pool of uninformed people looking for others to boost their suspicions and hatred of modern medicine. Of course these are the same ones who will accept at face value, without scrutiny or clinical evidence, the claims of the new gurus, while categorically rejecting proven medical solutions.

But a closer look shows that all is not well within the skeptics' house. As they preach skepticism about specious and unproven medical theories, and try to debunk dangerous anti-science attitudes, they have also taken the position that technology should not be questioned, even when, as with GMOs, an independent consensus based on extensive independent long-term research does not exist. Skepticism for them stops short of technology itself, if not science. To question science or technology, they suggest, is a sign of ignorance like that of the anti-vaccine movement.

Skepticism for them has thus stopped short of genetic modification, which they support and promote, indirectly or directly. Their reasoning is based on the heavy and often knee-jerk public opposition to genetically modified crops and foods....knee-jerk only because many opponents have not troubled themselves to scrutinize the arguments on each side and because independent evidence of safety IS lacking. Real skeptics long ago learned not to trust industry-funded studies, which constitute the vast majority of studies used to support the purported "consensus" of safety.

But there are quite valid scientific justifications for skepticism about GMOs, not least the fact that hundreds of credible prominent scientists all over the world have spoken out in opposition to the technology.....just as an equal number of scientists have spoken out and offered science-based evidence of anthropogenic climate change, a consensus fully accepted by CSI and CFI. The Precautionary Principle has been thrown out the window when it comes to GMOs which by any measure rely on "controversial claims" as articulated by CSI itself.

The effect of this is to (wittingly or unwittingly) do the dirty work of Monsanto, which can quietly sit back and not engage in public debate. NECSS (Northeast Conference on Science and Skepticism) last year gave a platform to Kevin Folta, one of the leading pro-GMO mouthpieces. This year, CSI and CFI have invited New Yorker staff writer Michael Specter to speak in favor of GMOS at their June conference. But CSI has chosen to ignore scientific critics of GMOS, aligning itself with pro-GMO scientists and attacking skeptics of GMOS as uninformed and ignorant, conflating them with the anti-vaccine movement.

Specter is not a scientist and his major accomplishment was publishing a [2009 review of Specter's book](#), "Denialism," referenced an article by Andrew Pollack which referred to a letter sent to the U.S. Environmental Protection Agency by a group of scientists who would not allow their names to be made public for fear of losing industry funding. Here is what Philpott wrote:

In an [article](#) published in February of this year—maybe too late for consideration by

Specter—*The New York Times* reported that 26 corn-insect specialists signed a letter to the EPA complaining that “no truly independent research [on GMOS] can be legally conducted on many critical questions” because the patent-holding companies have so much power over research. From the *Times*:

The problem, the scientists say, is that farmers and other buyers of genetically engineered seeds have to sign an agreement meant to ensure that growers honor company patent rights and environmental regulations. But the agreements also prohibit growing the crops for research purposes.

Shockingly, “The researchers ... withheld their names [from the EPA letter] because they feared being cut off from research by the companies.” Now there’s an example of scientists who are free to pursue the path of truth!

I’d also urge Specter to read a [paper](#) by Don Lotter, published early this year in the *International Journal of the Sociology of Food and Agriculture*. Lotter’s paper, provocatively titled “The Genetic Engineering of Food and The Failure of Science,” shows how the collapse of biology’s “central dogma”—the one-gene, one-trait thesis that fell apart with the mapping of the human genome—exposed GM plant breeding as a rather crude tool. He traces the rise of GMOs, convincingly arguing that political and economic power, not scientific rigor, have driven the technology’s ascent.

But the most telling revelation by Philpott is of Specter’s failure to indict climate change deniers for their vehement denial of the consensus, based on overwhelming evidence, that climate change induced by humans is a reality:

But there’s another, even more glaring oversight at work here. In a book devoted to ‘denialism’ and ‘how irrational thinking hinders scientific progress, harms the planet, and threatens our lives,’ there is almost no discussion of the most powerful and successful of all the denier cliques: those who insist human-induced climate change is a hoax.

So what do we find in these pages? We get a chapter defending the pharmaceutical industry against critics who question its wares—an industry with nearly \$ 300 billion in sales in the U.S. alone, and fast-growing markets overseas. Specter’s defense aside, Big Pharma typically vies with ‘oil and mining’ and ‘commercial banks’ for the title of most profitable industry in the United States.

That the *New Yorker* allowed Specter’s attack on Shiva was deplorable, though it wasn’t the

first time they had, by inference, effectively denigrated progressive scientists. They did that last year as well by devoting considerable space to the Nature Conservancy, arguably the biggest compromiser and deceiver among the Big Enviros; it buys and preserves land and then turns around and leases the land to oil companies for oil drilling, among other egregious acts.

This article cast a rapt loving gaze on the TNC, in particular on staff scientist Peter Kareiva, who has announced that wilderness no longer exists, and president Mark Tercek, a former corporate executive. Both of them celebrate the “anthropocene” era and insist that the natural world must be managed by humans primarily for their needs and concerns which, one presumes, are profits and power although they call it “ending hunger and poverty.” This of course pleases corporations because it confirms what they have said all along: that Nature must serve Man...though in as “green” a manner as possible. Thus continued corporate funding is assured, and corporations can point to the TNC to justify their ways to man.

Now let’s turn the tables and ask CSI and CFI to present the evidence on which they base their support for GMOs. Apparently they choose to ignore the word/consensus of the hundreds of scientists who signed onto the following statement... at least the same number who have signed similar petitions stressing the urgency of climate change:

Open Letter from World Scientists to All Governments Concerning Genetically Modified Organisms (GMOs)

The World Scientists Statement dates from 1999. It was superseded by the [Independent Science Panel Report](#) in 2003, and by the most recent report [Ban GMOs Now](#) in 2013.

- The scientists are extremely concerned about the hazards of GMOs to biodiversity, food safety, human and animal health, and demand a moratorium on environmental releases in accordance with the precautionary principle.
- They are opposed to GM crops that will intensify corporate monopoly, exacerbate inequality and prevent the essential shift to sustainable agriculture that can provide food security and health around the world.
- They call for a ban on patents of life-forms and living processes which threaten food security, sanction biopiracy of indigenous knowledge and genetic resources and violate basic human rights and dignity.
- They want more support on research and development of non-corporate, sustainable agriculture that can benefit family farmers all over the world.

Previous versions of this letter were submitted to many governments and international forums including:

- World Trade Organization Conference in Seattle (November 30 – Dec. 2, 1999)
- UN Biosafety Protocol Meeting in Montreal (24 – 28, Jan. 2000)
- UN Commission on Sustainable Development Conference on Sustainable Agriculture in New York (April 24-May 5, 2000)
- UN Convention on Biological Diversity Conference in Nairobi (May 16-24, 2000)
- United States Congress (29 June, 2000)

Signed by 815 scientists from 82 different countries, including:

George Woodwell, David Suzuki, Liebe Cavalieri, David Ehrenfeld, Tewolde Egziabher, David Bellamy, Erwin Laszlo and Samuel Epstein, all doctorates and some of them also MDs. Of special note on the roster of other GMO critics is the late Erwin Chargaff, one of the world's most respected evolutionary geneticists.

What evidence, besides New Yorker writer Michael Specter, has convinced CSI and CFI that GMOS are safe?

EarthSourceWatch reported that Folta had received an inquiry from a scientist about funding for independent GMO researchers to whom he pertly said that this would be readily available at any university. But it turned out, not surprisingly, that the scientist was turned down repeatedly, being told that ..."it would be very unhealthy for the career of any researcher to get involved with any research that may shed negative light on a GM crop or glyphosate" (H. Vlieger, unpublished letter to the editor of Grist).

Getting funding for any GMO study has stymied many European scientists, in some cases leading to lawsuits and loss of their academic jobs. The experience of Prof. Gilles-Eric Seralini echoes that of many others. Seralini wanted to do research on long-term feeding of GMOs to rats, involving the testing of Monsanto's Roundup Ready pesticide but could not find the financial resources. So he decided to study a variety of maize (corn) engineered to tolerate Roundup Ready. Getting the pesticide was the easy part. He had to access the GM maize and a nonGM related maize. At the time the GM maize was banned in Europe and farmers would not give it to him since they had been forced to sign an agreement with Monsanto, even though

technically the GM maize could be legally researched. Seralini approached farmers in Spain, Romania and the US unsuccessfully. He finally got a source in Canada which would not allow him reveal its name because it feared loss of funding.

An editorial in [EarthOpenSource](#) and is available from them along with details on the iron-fisted control of data, material and research findings of independent scientists by Monsanto and the GM industry. The EarthOpenSource report, as well as its numerous sources in the scientific community, is there for CSI and CFI to see. So are there other forces and motives at work that have turned these organizations into what may justly be termed shells for Monsanto *et al*? At the very least they should be required to show evidence or a credible pro-GMO consensus as with climate change. But no such consensus exists. If CSI believes that they have independent "evidence," in the form of a consensus on GMO safety, they should note what [denounced](#) it..... Only 3 of the 57 governments that participated refused to sign the IAASTD: the Bush II-led United States, Canada, and Australia.

The scientists who signed that anti-GMO petition are, needless to say, not screaming anti-vaccine paranoiacs. And the evidence to support the claims of GMO safety is not there. One would expect those dedicated to free inquiry and skepticism would apply these same principles to their own policies and practices. In an exchange with Barry Karr, the director of CSI, I outlined all these issues and insisted that CSI recognize that it was in effect doing Monsanto's dirty work as well as violating CSI's own mission statement to utilize skepticism.

Karr, along with neuroscientist Steven Novella and evolutionary biologist Massimo Pigliucci, rejected my concerns; he noted with satisfaction that they had awarded Specter their Robert Balles award for his book and that they looked forward to his talk at their June conference. He did not seem to even consider what CSI's unwitting (one hopes) surrogacy for Monsanto would mean to their reputation.

The secular/atheist community has come under fire from some feminists for supposed sexism though it is not clear to an outsider whether there is any justification. But the GMO issue stands to damage CSI and CFI in significant ways that will reverberate more widely and, worst of all, give new ammunition to the anti-science gang. We need all the friends we can get to beat back fundamentalist religion, irrationality, conspiracy theorists and the medical charlatans to whom uninformed people entrust their health and sometimes their lives. CSI and CFI need to examine the inconsistency between their actions and their principles, and soon.

Lorna Salzman's career as an environmental activist and writer began when the late David Brower hired her to be the regional representative of Friends of the Earth in NYC. Later she worked as an editor on *National Audubon's American Birds* magazine and as director of Food & Water, an early opponent of food irradiation, and then spent three years as a natural resource specialist in the NYC Dept. of Environmental Protection. She co-founded the New York Green Party in 1984 and in 2004 she sought the U.S. Green Party's presidential nomination. She is the author of "