Was GMO critic Sheldon Krimsky ‘rigorous’ and ‘courageous’ as Ralph Nader and the NY Times claim? Or was the recently-deceased Tufts professor an anti-science crank?

as Sheldon Krimsky a seer who appropriately warned about a lack of oversight of the biotechnology revolution, including the inherent dangers of genetically modified food, that the media and government were ignoring? Or was he an ideologically-motivated science rejectionist, who himself undermined science and the public trust in our food system with conspiratorial claims?

Depends on who you ask.

The New York Times ran a glowing testimonial to Sheldon Krimsky, a science ethicist who died on April 23. Earlier in his career, he emerged as a strident critic of the ‘commercialization of science.’

“He was the Ralph Nader of bioethics,” Jonathan Garlick, a stem-cell researcher at Tufts and a friend of Dr. Krimsky, told the Times, referring to the longtime consumer advocate.“He was saying, if we didn’t slow down and pay attention to important check points, once you let the genie out of the bottle there might be irreversible harm that could persist across many generations. He wanted to protect us from irreversible harm.”

But Krimsky was a controversial figure, which the Times piece ignores, often outside the mainstream debate over the growing impact of the biotechnology revolution, particularly in agriculture. Curiously, the Times did not review any of his legion of critics, which outnumber his admirers. In his later years, say many scientists, he devolved into a combination of technophobe and conspiracist, with biotechnology is target.
Krimsky is most criticized for The GMO Deception, which he edited in 2014 with Jeremy Gruber, in which he endorsed claims by environmental activists that genetically modified foods, including transgenic and gene edited crops that increase yields, reduce chemical usage, bolster nutrition and are climate adaptive are unsafe and unnecessary. Unable to find a mainstream publisher for the book, he turned to Skyhorse, notorious for its publication of fringe and often discredited authors, including the two most discredited anti-vaccine conspiracists Robert F. Kennedy, Jr. and Andrew Wakefield, who launched the modern anti-vaxx movement decades ago.

Here, the Genetic Literacy Project reproduces two articles from our archives to balance the coverage and stimulate constructive debate:

- A 2014 review of The GMO Deception, by cell biologist Mary Mangan, which appeared in digest form on the GLP site. Under the title “The GMO Deception’ is in fact deceptive,” Dr. Mangan casts a different light on the critical analysis of the subject of the Times’ glowing obituary.
- A 2020 review by Judith M. Heimann of GMOs Decoded, Krimsky’s polemic which includes an attack on Vitamin-A fortified Golden Rice, which after 20+ years in development and aggressive, sometimes violent opposition by Greenpeace and other ‘progressive’ critics, is now being planted in the Philippines for distribution later this year.
Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other ‘disruptive’ innovations. Subscribe to our newsletter.

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“The GMO Deception” is in fact deceptive

— Mary Mangan

Recycling can be a very good practice. Re-using components of electronics, waste paper, and food scraps that would otherwise head to the waste stream can be a great idea. However, sometimes re-use doesn’t bring any value. Recycling bad claims and ideas about GMOs helps no one. Unfortunately, The GMO Deception is a prime example of worthless recycling.

I found out about this text from Marion Nestle’s blog. She promoted this book in a post and by blurbing for it: This week’s reading: The GMO Deception. It didn’t take me long to find more details about it at the publisher’s site, because I had already been over there that same week. Skyhorse Publishing had just published RFK Jr’s new book on thimerosal and vaccines. And I learned that they had also published Andrew Wakefield’s “Callous Disregard”. This did not bode well for my confidence in scientific rigor, of course.
Unwilling to pay for the book ([$24.95 at the publisher’s site](#)), I put my name into my local library queue and waited. My chance arrived a couple weeks ago, and I began to look over the contents. This is when I realized it was almost nothing but regurgitation.

Except for an occasional new piece, or a pre-section wrapper, the material in this tome is mostly cut-and-paste from the GeneWatch archives. That’s right—it’s largely the same material that has been widely ignored for years. It’s possible to use prior material in a thoughtful or introspective way—especially if it offers updated information, or if new and current context is added to further understand the issues and outcomes. But that’s not what has happened in this case.

Ralph Nader knows the answer to every question.

And sadly, even the new pieces—which could have contained current information—are rife with errors and misinformation. For example, Ralph Nader’s foreword is essentially an anti-corporation screed. When attempting science, there was this laughable result:

More than a decade ago, an Iowa corn farmer told me he liked Bt corn primarily because it allowed him to spend more time with his wife—meaning less time needed for weeding.

We are perplexed about how Bt corn reduces weeding time. But similarly, Nader re-hashes incorrect or misunderstood claims of many types, none of which would be new to anyone following this topic.

Similarly, the [introduction by Krimsky and Gruber](#) offers this odd conflation and incomplete information:

In fact, there have been only two commonly applied major innovations in GMO agriculture: 1) crops resistant to herbicide, and 2) crops that contain their own insecticide. Both methods were designed to find synergies with their corporate sponsor’s existing pesticide, herbicide, and
fertilizer businesses in order to maximize profits. For example, a farmer who buys Monsanto’s Roundup Ready soybeans would also need to buy Monsanto’s Roundup Ready herbicide.

Ok, we’ll note that they were unable to include the hugely successful publicly-funded papaya project that had nothing to do with these “synergies”. And in addition they are just making up the relationship to fertilizer—the 2 innovations they cite have zero to do with fertilizer. Bt crops do not sell more pesticide—that’s just completely absurd. Dog-piling on the #fail, they neglect to include the fact that Monsanto Roundup has long been off patent and is not needed for Monsanto seeds—farmers can buy this from other sources. They also wildly mis-characterize farmer’s realities about the tech agreements and seed choices. They also leave out the fact that these issues are not unique to GMOs—because that doesn’t suit the case they are making.

In the Biofortified forum I’ll provide a complete list of the chapters that I was able to locate in the GeneWatch archives, which are unevenly available. When there is no link to a site, the volume and issue details will have to suffice. You can likely get back issues from your library if you could be bothered to do so. Some of them are from as far back as the 1980s.

Image not found or type unknown.

The 2012 Proposition 37 voting map. Blue voted Yes, while orange voted No.

More recent pieces included a 2012 piece by “Pamm Larry and the CRG Staff”; Larry led the California Prop37 efforts. In this short piece, Labeling Genetically Engineered Foods in California, she enthused
about their efforts to get the legislation on the ballot. The chapter’s short blurb failed to note that when voters did see this ballot initiative, they rejected it. That’s really just blatant ignorance of reality.

Curiously, the new segment introducing the “Labeling and Consumer Activism” section in which Larry’s piece appears offers this gem from Jeremy Gruber: “The US already allows “process” labels on other products. Kosher foods, for example, are equivalent in nutritional value and taste to non-Kosher foods.”

Why, Jeremy—are you suggesting GMOs are like this, and labels should be handled by a 3rd-party system as Kosher is? Perhaps we actually agree on something. Labeling GMOs is a philosophical issue best handled like voluntary Kosher labeling: Labeling. What is Kosher for a food community?

One new section, the “Conclusion: The Future of GM Food” by Sheldon Krimsky, suffered from all the same problems of outdated information, cherry-picked details, clinging to fringy scientists, and a failure to understand the scientific literature. I howled with laughter at this part:

In 2009 de Vendomois et al. fed rats three commercialized GM maize varieties and found newly observed side effects with the kidney and liver and other effects observed in the heart, adrenal glands, spleen, and blood (hematopoietic) system.6

Reference 6 in the Conclusion Endnotes: “A
Comparison of the Effects of Three GM Corn Varieties on Mammalian Health” found here: http://www.ijbs.com/v05p0706.htm The de Vendomois team did not feed rats in this study—it was a statistical fishing expedition of previous data, which was summarily denounced by food safety experts around the world. But to see that Krimsky has no understanding of what this study comprised should certainly give a reader pause.

This text offers no new insights, it merely re-hashes decades of wild claims and misinformation, and sometimes dishes just flat-out fiction. Most of it is available in the GeneWatch archives, and the new bits are not any different than the same stuff you can find from these authors on other sites.

If you want to read a book of essays that has scientific credibility and insights from current practitioners in the fields of science and agriculture, and which was written entirely in this century, try this e-book for free instead: The Lowdown on GMOs: According to Science. That’s worth your time—and it’s free.

The GMO Deception is full of miscellaneous reused pieces that are deceptive and misleading. It is also completely stale. It’s only real value would be the cost of some recycled paper: about 2 pounds of it. Don’t waste money or time on this book.

Sheldon Krimsky’s ‘GMOs Decoded’ cherry-picks data to spur fear of biotech crops

Reviewed by Judith M. Heimann, May 5, 2020

Sheldon Krimsky’s latest book, GMOs Decoded, has a foreword by Marion Nestle, an emeritus professor at New York University and prolific author on the politics of food safety. Discussing the controversy over genetically modified organisms (GMOs), Nestle notes that “scientists argue that if GMOs are safe, they are fully acceptable and no further criticism is justified. But to nonscientists, safety is only one of many concerns about GMOs and not necessarily the most important…. Even if GMOs are safe, they still may not be acceptable for reasons of ethics, social desirability, unfair distribution, nontransparent marketing, or inequitable and undemocratic control of the food supply.”

But what if, as I believe, many of these doubts in the public mind were put there or encouraged via decades of concerted maligning of the general class of genetically modified (GM) products by groups specifically organized to oppose them? What if much of the public concerns over GMOs are the result of billions of dollars spent by “organic” lobbies in the United States, and huge agricultural subsidies for non-GM agriculture in the European Union (reported by the New York Times as amounting to $65 billion annually)?
Studies have consistently demonstrated that GM seeds and related products are as nutritious, cheaper, safer, and more environmentally friendly than traditional agriculture. I strongly suspect that doubts among the general public about GMOs have less to do with safety concerns and more do with protecting non-GM producers and defending the questionable claims of “organic” marketers against competition.

I come to this position, and an interest in GMOs more generally, from an unusual angle. I spent four years researching my most recent book, *Using Nature’s Shuttle*, a history of the first genetically modified plants. (Except for participation in a seminar organized by the Flemish Institute of Biotechnology, I received no outside support for my research.) But my professional background is in diplomacy: I spent decades as a US diplomat posted in Western Europe, where I specialized in the politics underpinning the European Union and its Common Market.

The subsidies that currently prop up the EU’s otherwise economically nonviable traditional agriculture are deeply embedded in the history of the Common Market. By now, virtually all EU countries get these subsidies, and they are prepared to do whatever it takes to maintain them and keep GM rivals out, as well as out of the developing countries these EU countries trade with.
these issues and provides what a blurb on the back of *GMOs Decoded* calls “an authoritative and balanced examination of the scientific and policy debates about GMOs.” But after I’d finished the book I recalled Jake, the hero of Ernest Hemingway’s *The Sun Also Rises*, lamenting a doomed relationship with the weary skepticism I was starting to feel: “Isn’t it pretty to think so?”

Authoritative? Krimsky, a professor at Tufts University, has written 16 books on biotechnology and related subjects. Unquestionably, Krimsky writes well and clearly for the nonscientist about biotech matters. His goal in *GMOs Decoded*, as he writes in the introduction, “is not about taking sides.” Rather, he says, the book “will succeed if it lays out the claims and counterclaims and points to supporting arguments in a manner that demystifies the science, and shows where there is consensus, honest disagreement, or unresolved uncertainties.” To that end, he covers a variety of key topics in the debate, including how genetically modified crops differ from those produced via traditional breeding methods; how the risks, if any, posed by GM crops are evaluated; and whether GM foods are healthy and safe.

This all sounds promising. But I found his authority on the subject eroding as he repeatedly made what I consider unorthodox judgments that tend to favor anti-GMO positions that are unsupported by the available science. Krimsky’s typical method in the book is to present the standard scientific approach to a subject such as “Herbicide Tolerant Transgenic Crops”—that is, crops that are genetically modified to withstand herbicide so that the herbicide kills only weeds. In this instance, in describing glyphosate, the herbicidal ingredient in Monsanto’s Roundup, he writes that “herbicide treatments … provide cost-effective increases in agricultural productivity.” He goes on to note that as judged by its degree of toxicity (as measured by how much of it laboratory mice can ingest without dying), glyphosate is one of the least toxic herbicides on the market.

But then Krimsky cites scientists connected to the International Agency for Research on Cancer (IARC). As Geoffrey Kabat documented in the Fall 2019 *Issues*, the Lyon, France-based IARC is controversial in the scientific world as an outlier from the World Health Organization, to which the IARC is technically an appendage.
The IARC’s publicly stated—and highly unusual—criteria for making its classifications as to whether something is carcinogenic do not include either length of exposure to the substance or the size of the dose. Given this approach to conducting its research, I find it unsurprising that of the hundreds of substances the IARC has examined, there is only one (caprolactum, a chemical used in the manufacture of synthetic fibers) that it has placed in the “probably not carcinogenic to humans” category.

In the case of glyphosate, Krimsky writes that “Although glyphosate—compared in all categories to [other herbicides]—has, traditionally, come out as safer, that conclusion was brought into question when the International Agency for Research on Cancer reclassified glyphosate as a probable human carcinogen.” Ignoring robust research that finds no link between glyphosate and cancer, Krimsky points to “new evidence” that chronic low-level exposure to glyphosate can “potentially result in risks to human health.” The reason that Krimsky hedges with “potentially” and doesn’t state definitively that glyphosate causes cancer is because, despite jury verdicts and the seeming willingness of Bayer (Monsanto’s corporate owner) to settle out of court, there is no reputable scientific evidence to back that IARC claim.

Krimsky’s final word in this chapter is that “though this has no direct bearing on the safety of glyphosate-resistant seed,” referring to crop seeds that are genetically modified to resist the herbicide, “that popular seed is inextricably tied to a particular herbicide formulation that has become increasingly suspect and the target of scores of lawsuits.” I’m firmly of the conviction that the suspicion and lawsuits are largely the result of scare campaigns by anti-GMO activists, and there is evidence that significant amounts of the money funding these campaigns come from rival sources of seed and agricultural products and their political backers.

Thus, “balanced” is not a word I would honestly apply to this book. It seems as if Krimsky’s self-professed “skepticism” is primarily focused against GMOs and their producers and defenders. He does not, for
example, cite the Agricultural Health Study, a huge, ongoing study that examines connections between pesticide exposure and negative health outcomes—and which has demonstrated no link between glyphosate and cancer. (As to its credentials, the Agricultural Health Study is a collaborative effort involving investigators from National Cancer Institute, the National Institute of Environmental Health Sciences, the Environmental Protection Agency, and the National Institute for Occupational Safety and Health.)

When Krimsky does not ignore such mainstream studies, he tends to treat them as having only equal or lesser value than his chosen “contested” views, which are often from labs, scientists, or activists whose methods and conclusions have been rejected by the majority of mainstream scientists.
Calling the safety of GM foods into question has significant and detrimental effects, not only for the bottom line of a company such as Monsanto but also for people around the world. Matt Winkler, a noted American molecular biologist, pointed out to me that the hypocrisy and lack of scientific basis of anti-GMO views and the damage they cause lock developing-world farmers into subsistence farming and help prevent them from joining the lower middle class.

Also, as the British biochemist and Nobel laureate Richard J. Roberts reminds me, there is the sad story of how anti-GM attacks kept Golden Rice—a rice variety genetically modified to include beta-carotene, the source of vitamin A—from getting to the half-million children in the developing world who go blind and the two million who die every year for the lack of sufficient vitamin A in their diet.

The Golden Rice story illustrates an important point: anti-GMO activists often cite health concerns as a rationale for their views. For instance, the French molecular biologist and activist Gilles-Éric Séralini made sensational claims in a since-retracted article that he found cancers in rats due to their consumption of GM Roundup-tolerant corn (or maize). This is nonsense: a recent multimillion-dollar, two-year set of three studies carried out by European Union authorities and the prestigious French Association of Biotechnology refutes, the groups declared, “the main conclusions drawn from the Séralini studies on the toxicity of the analyzed GMO maize, as no potential risk has been identified.”

Yet the health concerns may run in the opposite direction: GM foods can help provide food security and vital nutrients to populations that lack both, and they do so with no demonstrated health risks. Depriving people of these benefits and harming their health and economic prospects because of ill-founded concerns—largely expressed by people in wealthy, food-secure countries—is, in my view, reprehensible. Krimsky, as a “skeptic,” could have and should have done a much better job of balancing activists’ claims against the available scientific evidence.

Séralini and his colleagues are frequently cited in the notes for Krimsky’s arguments in this book. I wonder if Krimsky will continue to cite these sources in the future.

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