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Connecting the Dots: What Statins, Transfats, and GMOs Reveal About Scientific Controversies

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It's the role of science to provide the criteria for determining how our society regulates, monitors, and controls both health promoting substances, as well as contributors to health and environmental harm. Each such decision can have far-reaching consequences— and long-term costs. And that's why when controversies erupt, all debate participants lay claim to the scientific truth. When in a *Scientific American* blog ("GMO Labeling, I-522, and Why This Debate Sucks for Progressive Scientists Like Me," November 8, 2013), Kevin Bonham (a sixth year Harvard graduate student) writes that he takes, "the position that the National Academies, the American Association for the Advancement of Science the American Medical Association, and the Royal Society take, "namely that GMOs are safe for consumption." Merely citing these august organizations sounds convincing to the average person.

Yet despite claims of consensus, scientific findings are rarely absolute because it's the nature of science to evolve. Research occurs within a human, social, and economic context. Given the business drivers influencing both medical and other forms of scientific research, most science is nowhere near as definitive as climatology. As a result, the certainty we seek from science will sometimes—if we are honest— evade us. And even major scientific organizations (like those Bonham cites) get it wrong for reasons I'll highlight in this article. Five recent happenings in ongoing scientific debate reveal that informed people cannot afford merely to take all scientific "evidence" at face value.

Statins Redux

In a recent Op-Ed piece in the *New York Times* ("Don't Give More Patients Statins," November 13, 2013), Harvard's John D. Abramson, MD, author of *Overdosed: The Broken Promise of American Medicine* (and his Op-Ed co-author, cardiologist Rita F. Redberg, MD) critique newly released medical guidelines that advise statin prescriptions for an additional and sizeable new segment of the population— increasing the pool of recommended users by as much as 70%. According to Abramson, the guideline change, issued by two respected medical authorities, the American Heart Association and the American College of Cardiology:

may sound like good news for patients, and it would be — if statins actually offered meaningful protection from our No. 1 killer, heart disease; if they helped people live longer or better; and if they had minimal adverse side effects. However, none of these are the case.

Abramson goes on to enumerate the numerous problems with these most widely prescribed and profitable pharmaceuticals. He covers the precise concerns I detailed in a September 2013 article, "Three Scary Misconceptions About One of the Most Widely Prescribed Drugs for Heart Attack Prevention" published on *AlterNet*.

So why did major medical organizations expand the guidelines to encompass millions more Americans? John Abramson comments:

The process by which these latest [statin] guidelines were developed gives rise to further skepticism. The group that wrote the recommendations was not sufficiently free of conflicts of interest; several of the experts on the panel have recent or current financial ties to drug makers. In addition, both the American Heart Association and the American College of Cardiology, while nonprofit entities, are heavily supported by drug companies.

Nor is this a rare instance of business goals impinging on science. When the American Academy of Pediatrics endorsed guidelines for acne treatment via prescription acne drugs (a billion dollar industry) a reporter at the *Milwaukee Journal Sentinel* ("Guideline: Following the Money in Acne Treatment," September 15, 2013) noted that:

13 of the 15 experts who drafted the guidelines were paid consultants or speakers for companies that market the drugs recommended in the guidelines...

The organization that developed the guidelines -- paid the academy to publish them -- received 98% of its 2011 revenue from companies that make acne drugs.

Yet when scientific claims are made, rational people want to trust them. We forget that the pharmaceutical and other industries have the resources not merely to influence elections, but also to garner boards of scientists, generate organizationally endorsed studies, assemble think tanks with slick websites, publish journal articles, and buy ads and PR strategies. By contrast,

those presenting evidence through independent research may be too readily dismissed for smaller cohorts, or criticized in ways that breed confusion about the validity of their results.

Transfats

In 1978, lipid researcher Mary Enig, PhD, was the first to publish data connecting transfats consumption to health concerns including cardiovascular illness and cancer. Her findings contradicted the medical consensus of the 1960's, 1970's, 1980's and beyond, which advised people to eat transfats to prevent heart disease. Ironically, it was the American Heart Association, (the same organization that recently expanded statin guidelines) that asserted this now debunked science. Publications, appointments, and research grants, followed the scientific consensus of the day, as they do today. Representatives from Krafts Foods and Lever Brothers (and their advisors) visited Enig, as she recounts in a long essay (www.drcranton.com/nutrition/oiling.htm). They made attempts to get her published research retracted. A 1987 Nurse's Health study ("Now What? U.S. Study Says Margarine May Be Harmful," *New York Times*, October 7, 1992) conducted by Harvard Scientist, Dr. Walter Willett confirmed Enig's findings. In tracking the nutrition of 85,000 nurses for eight years, the study found that those with high intake of transfats had *increased* (not lessened) risk of heart disease.

Over twenty-five years later, this past month, the FDA has belatedly acted on the scientific evidence by moving to recategorize and ban transfats. From the time that the first researcher (in this case, Enig) sounds the alarm, there may be decades of controversy before regulatory agencies read the memo that yesterday's scientific certainty unraveled. The present day snap shot offered by many scientific findings is like a single frame of an epic movie, which continues to play, it's hard to determine at the outset the long-range health risks of novel synthesized ingredients or processes. Unlike natural foods or substances, consumed for centuries, the side effects or downsides of synthesized products (or processes) may only emerge with time and study. But as with statins, acne medication, transfats, and high fructose corn syrup, business imperatives drive the introduction of novel substances (and activities) *before* they have been fully vetted.

Settling controversies requires research, conducted outside the web of entangled authorities and organizations. And when that research is undertaken by scientific whistleblowers, like Enig, we can expect the chorus of establishment scientists to defend the status quo.

GMOs

For example, the Elsevier publication, *Food and Chemical Toxicology* (FCT) retracted its 2012 publication of Dr. Gilles Seralini's animal research. Rats fed GMO foods developed long term toxicity, as well as tumors, in contrast to rats in the control group. Since it's publication, the study has been attacked by an assembly of august medical organizations, yet most of its findings still stand. The Elsevier editor, Dr. Wallace Hayes makes clear that the decision to reconsider and ultimately to retract the article came about due to pressure from unnamed scientists and scientific organizations, who ultimately conducted a behind-the-scenes review ("Paper Tying Rat Cancer to Herbicide Is Retracted," *New York Times*, November 28, 2013). Since the reviewers were not disclosed, it is impossible to ascertain any potential conflicts of interest. Hayes' rationale for the retraction that Seralini's "results (while not incorrect) are inconclusive, and therefore do not reach the threshold [for] publication."

According to a response from the European Network of Scientists for Social and Environmental Responsibility (ENSSER) ("ENSSER Comments on the Retraction of the Seralini et al. 2012 Study," November 29, 2013, www.ensser.org) scientific publications abide by certain agreed-to guidelines for retractions, and "inconclusiveness" is not among them. ENSSER points out that

'Conclusive' results are rare in science, and certainly not to be decided by one editor and a secret team of persons using undisclosed criteria and methods. Independent science would cease to exist if this were to be an accepted mode of procedure.

The Seralini research

did not draw any definitive conclusions in the paper in the first place; they simply reported their observations and phrased their conclusions carefully, cognizant of their uncertainties. This is because the paper is a chronic toxicity study and not a full-scale carcinogenicity study...The authors did not intend to look specifically for tumours, but still found increased tumour rates.

ENSSER stated that all of the rationales for retracting the study were considered at the outset "by the peer reviewers of the journal, who decided they formed no objection to publication" rendering the retraction a "travesty of science..[that] looks like a bow to industry."

Claire Robinson of GM Watch points out that the retraction "follows FCT's appointment of Richard E. Goodman, a former Monsanto scientist and an affiliate of the GMO industry-funded group, the International Life Sciences Institute, to the specially created post of associate editor for biotechnology at the journal." ("Journal retraction of Seralini study is illicit, unscientific, and unethical," www.gmwatch.org, November 27, 2013,).

Despite the assertions of scientific consensus on GMOs in *Scientific American*, *Forbes*, and elsewhere, in 2013, a group of over two hundred international scientists signed a statement "No scientific consensus on GMO safety." ("Scientists who say GMOs not proven safe climbs to 231," FarmWars.info, October 30, 2013).

Industry's Hand on Science

Rather than instilling trust that any given set of scientific findings are definitive, the debacle over statin guidelines, the banning of trans fats, the GMO animal study retraction, and a range of other controversies unmask this dilemma: People must respect science, while also maintaining a healthy skepticism.

In fact, the spirit of scientific inquiry requires us to distinguish between valid scientific consensus (which exists for climate change, and the health dangers of

trans-fats or high fructose corn syrup) and arenas where scientific questions continue to emerge— despite attempts of vested science to close the door on legitimate concerns.

John Abramson adds:

The American people deserve to have important medical guidelines developed by doctors and scientists on whom they can confidently rely to make judgments free from influence, conscious or unconscious, by the industries that stand to gain or lose.

And the same holds true for other areas of scientific controversy. When medical journal publishers, such as Elsevier, attempt to suppress or discredit legitimate

research (like Seralini's), "it will decrease public trust in science," predict the ENSSER scientists. "And it will not succeed in eliminating critical independent science from public view and scrutiny. Such days and times are definitively over."

Alison Rose Levy is a journalist who has been in the major media for over twenty years, covers the wide range of areas that affect health, such as food, the environment, health care, health science and research, activism, media and marketing of health, treatments, public policy, regulation, and legislation, and the health, drug, food, agricultural, and energy industries. Alison hosts the radio program "Connect the Dots" on the Progressive Radio Network, and reports for AlterNet, Eco-Watch and the Huffington Post, as well as regularly contributing articles to Citizens for Health.

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