In August 2009, the TIME Magazine article “Why Exercise Won’t Make You Thin” soared high in popularity for weeks on end. It attracted the attention of thousands of skeptical readers and incensed the fitness community with quotes like "In general, for weight loss, exercise is pretty useless" (which the reporter quoted from Eric Ravussin, a “prominent exercise researcher”). To summarize new research, it was written that “Exercise, in other words, isn't necessarily helping us lose weight. It may even be making it harder [because it makes us hungrier]” (Cloud 1). Coming from a usually reputable news source like TIME, some consternation is understandable: how do we react to news that would seem to clash with what we already know from trusted sources?

The problem is that while there may be general agreement on a given issue among scientists, the American news media loves controversy, and so its portrayal of certain issues can be misleading. For example, in the TIME article above, a scientific study was cited in which 464 overweight women were divided into four groups that did varying amounts of exercise with a personal trainer. Importantly, all of the women were told to maintain their normal dietary habits, and in the end the researchers found that the women who exercised “did not lose significantly more weight than the control subjects did” (Cloud 2). The article’s conclusion was that exercise made the women so much hungrier for junk food that their exercise indirectly caused them to gain up to ten pounds in some cases. But instead of running a headline like “Why exercise might not lead to weight loss if you eat more junk food than you did before,” the article’s main (misleading) assertion was that exercise is often actually harmful to our weight loss efforts. In
other words, TIME misrepresented a scientific study in a way designed not primarily to inform or educate, but to sell magazines by sparking a debate.

The worst predictable outcome from the article above is that some people might skim it and use it as an excuse to keep on living a sedentary lifestyle. But in other cases of misleading reporting on popular and “controversial” scientific issues, the consequences are more dangerous, particularly when those issues concern human health.

Consider hormone replacement therapy, made famous this past year by Suzanne Somers, 62-year-old actress and author of *Ageless: the Naked Truth About Bioidentical Hormones*, a book full of all her menopause-alleviating strategies. It was marketed as “an inspiring, medically validated approach to reversing the aging process and maintaining a healthy, vibrant, mentally sharp, sexually active life” (Amazon). Somers and her hormones gained a staggering amount of publicity when she appeared on the Oprah Winfrey Show and “invited cameras into her home to learn about her daily routine of hormone injections and supplement popping,” which involved taking 60 pills a day, rubbing syringes of estrogen and progesterone into her arms, and injecting estriol directly into her vagina (FOXNews). Oprah Winfrey praised Somers’s use of bio-identical hormone therapy as a great way for women to take charge of their own health, but publications like *Newsweek* soon reported how medical experts slammed the show as full of misinformation: “I found the program to be quite shocking, and full of audacious claims, not substantiated by evidence,” said Dr. Wulf Utian, gynecologist and consultant at the Cleveland Clinic (Wingert and Katrowitz 1), and according to the American Congress of Obstetricians and Gynecologists (or ACOG), prolonged use of hormones like estrogen should be strongly discouraged because it “could increase the risk of heart attacks, strokes, blood clots, and breast cancer for some
women.” The ACOG also recommended that “A woman should take the smallest dose of hormone therapy that works for her, for the shortest possible time” (ACOG).

The trouble here is that while Oprah may be at fault for allowing a layperson like Somers to dole out medical advice on her show as though she were a medical professional, there is a bigger concern when the same blur between reliable and unreliable sources is illustrated in the mainstream news media. On December 29, 2009, Fox News aired a one-on-one interview of Sean Hannity and Somers. In the interview, when Hannity mentions that Somers has come under attack for some of her ideas (as in the above-cited Newsweek article which discounted many of her claims about non-FDA-approved supplements and how to fight cancer), Somers dismisses all of the criticism and counterevidence by saying simply, “I counted how many pharmaceutical ads are in that magazine. Fifteen full pages,” a significant accusation of conflict-of-interest or even conspiracy that Hannity simply takes in stride and moves away from. Indeed, in the interview Hannity seems to be charmed by Somers:

HANNITY: […] it's fascinating that there are alternatives. And I like the fact that you're thinking out of the box. I like the fact that there are doctors thinking out of the box. […] And having success. And I do not care, and you don't care what people are saying about you, which I like a lot, because that's bold. I like that (FOXNews).

In short, Sean Hannity’s compliments might seem friendly, but when he tells his audience that he does not care “what people are saying” about his interviewee, it signifies that he (and by association, Fox News) does not really know or care if the extreme therapy he nearly endorses is one that will kill women with heart disease or breast cancer (as warned by the previously cited ACOG). In a similar way to the TIME article about exercise, Hannity’s interview shows how the media can easily downplay or misrepresent scientific findings in order to give credence to something of an alternative to what is best supported by scientific evidence. In this way, news
organizations can use the “alternative” side to better cater to an audience’s interests and desires for weight loss and anti-aging tips and tricks.

Aside from appealing to our desires, however, the media can also be very adept at playing to our fears. We can see examples of this in the media coverage of the controversy stemming from the new mammogram guidelines released by the U.S. Preventive Services Task Force, whose report stated that the benefits of routine “early detection” mammograms for women in their 40s are statistically very small (helping only one in 1,904 women) and do not outweigh the harms of overscreening, such as “extreme stress, unnecessary further tests, and overtreatment” (Conniff 1). On Fox on November 19, 2009, the “Fox News Medical + A Team” stepped up to the fear-mongering occasion when in an interview-style segment, journalist Gretchen Carlson questioned three guests, beginning with “Is preventative care being replaced by rationed care?” “In their 40s one in sixty-nine women will develop breast cancer, which is a huge number of women, and women die from breast cancer,” says a female guest earnestly. “We can only hope that private insurance companies do not follow these federal guidelines.” “I don’t want to be cynical as to the reason behind the guidelines,” says a guest gynecologist, “but one has to wonder if this is leading to the rationing of health care in some way” (FOXNews).

With a generous use of the phrase “rationed health care,” a phrase for articulating fear and anger at big government, Carlson and her guests have immediately turned a scientific finding into a political issue. But the Fox guests continue to cast doubt on the Task Force’s credibility in more ways than just pointing out that it was funded by the U.S. government. As the charismatic gynecologist continues,

[…] most of those people [on the panel] have been in place for a long time, but none of them were gynecologists, none of them were oncologists, none of them were radiologists, I’m sure they have good scientific minds and I give them credit, but you know, why come up with this so fast, and there’s a political mandate out there to de-escalate the use of tests
that are really necessary like this, and it’s no accident that it’s happening now (FOXNews).

In this situation, Fox has illustrated clearly illustrated how the controversy over mammography guidelines effectively has two sides: one supported by scientific evidence, and one supported by an innuendo of fear and suspicion. According to a statement by Joseph W. Stubbs, MD and president of the American College of Physicians, the “attacks on the expertise, motivations, and independence of the scientists and clinician experts” on the committee have been “unfair and unsubstantiated” (Stubbs 1). Politicians’ efforts to reject the committee’s scientific findings, as by adding to pending legislation the Vitter amendment that would instruct insurers to disregard their recommendation, is an example of how in the media and correspondingly in real life, scientific research (and possibly our health) often loses to politics.

From the mammography story we can see how unhelpful it is when the media presents thorough scientific research as less reliable than the feelings of people who are less well-informed. But one of the best examples of the media’s mistreatment of scientific issues is not unhelpful, but tragic: its coverage of the proposed link between childhood vaccinations and autism. In June of 2008, ABC News aired an interview of Jenny McCarthy and her partner Jim Carrey, who both hoped to “use their star power to raise awareness about the dangers of childhood vaccinations” (Brady and Dahle 1). The actors were to lead the “Green Our Vaccines” march and rally in Washington, D.C. to press for “toxins” to be eliminated from children’s vaccines and for children to be vaccinated less often. ABC’s story included only minimal reference to the mainstream medical community’s skepticism of vaccination-autism links, but according to USA Today, the best scientific evidence (as reviewed by the CDC and the World Health Organization) shows that people like Jenny McCarthy are not just mistaken about a link between vaccinations and autism. They also recklessly put children in danger: unvaccinated
children are much more likely to contract and even die from diseases like measles, mumps, chicken pox, whooping cough, invasive pneumococcal disease, and meningitis (Szabo 1). Additionally, communities with low vaccination rates often suffer outbreaks of these diseases, and for children who cannot be vaccinated for medical reasons (such as those with rare immunodeficiency diseases), a weakened “herd immunity” is especially deadly (Szabo 1).

Haddayr Copley-Woods, essayist and mother of an autistic child, is exasperated with the media when she writes:

I understand the panic parents feel when a child reacts to the world in frightening and unpredictable ways. I understand the instinct to go with emotional reactions rather than scientific evidence. But let me tell you something: I do not appreciate these parents risking my children's lives so that they can indulge their superstitions. […] A parent's decision to take healthy skepticism and twist it into some bizarre inability to comprehend basic scientific principles […] could very well kill the neighbors' baby (Copley-Woods 1).

With so much misdirection a conclusion is clear: that with regards to contentious issues that hinge on science, not all sources have equal validity, and they should not be treated by the news media as such. Too often the news media has distorted scientific findings to tempt us with things that we cannot have, like a tip for effortless weight loss, injections of immortality, or even a tangible enemy-- like Obamacare or childhood vaccinations-- when there is sadly no enemy to fight but disease. These false targets are ghostly but their consequences are real and tangible in that many people have been led to make bad medical decisions ranging from undergoing harmful or unnecessary medical treatment to causing horrible illnesses or deaths of children from preventable disease. As writer Isaac Asimov once said, democracy should never mean that “my ignorance is as worthy as your knowledge” (NewScientist), and the significance of the media’s unethical psychological game is that it is unfortunately our responsibility to distinguish between reliable and unreliable science news.
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