

Scientific literacy and critical thinking missing from anti-GMO groups

The landscape of science communication resounds with a cacophony of credible and incredible voices. Such voices fill the demands of those who do not have direct access to the practice of science. Some of these voices come from the scientific community. However, as institutional scientific endeavours become increasingly specialised, expensive, and protective, the public becomes progressively dependent upon the honesty of researchers and peer review.

Regrettably, the public has reason to distrust the scientific community. Distrust comes from lingering fears of ominous sounding chemicals such as thalidomide, chlorofluorocarbon (CFC), dichlorodiphenyltrichloroethane (DDT), and Dihydrogen Monoxide (DHMO). With such fears lurking in public consciousness, each recent controversy stirs up a tornado of bad memories.

In attempt to allay such fears and distrust, consumers can read peer-reviewed journals to determine if there is discussion within the scientific community about a particular topic. Open access helps counter the problem of paywalls restricting research from the public; however, there are also predatory low quality publications that imitate more reputable journals. Since there are so many limits to scientific journals, information seekers can also use other media. Journalists, for instance, translate and interpret science, yet these communicators do not merely state the facts, but also frame scientific research in specific ways.

Being uncritical of misinformation, the anti-GMO movement parallels the anti-vaccination and climate-change denial movements. Dismissal of disconfirming evidence by claiming a conspiracy makes similarities more apparent. As with the anti-vaccination movement, instead of changing with the science, organisations behind the anti-GMO movement create a false dichotomy of good versus evil.

In the end, if the public is concerned about companies such as Monsanto, rejecting science and shunning scientific reasoning is counterproductive. Controversies within the scientific community are not justification to abandon science, but rather further reason to encourage scientific literacy and reasoning. Not only does the public need to be skeptical of scientific institutions, but also of those who manipulate the public by claiming scientific authority and credibility.

Read the full, original article: Analogical, Empathetical, and Analytical Reasoning in the Movement Against Genetically Modified Organisms