“Think of the internet as a weapon on the table. Either you pick it up or your competitor does — but somebody is going to get killed.”

Presentation by Jay Byrne, Monsanto’s former director of corporate communications, quoting Michael S. Dell, founder and CEO of Dell Computer Corporation[^463]

When Edward Bernays designed PR campaigns for his clients in the 1920s and the decades that followed, he didn’t have the tools that help today’s corporate clients reach millions, even billions, with a stroke of a few keys: the internet and social media. Today, as more people get their news and information from social media, blogs, and seemingly independent online news and information sites like WebMD, companies like Monsanto, now Bayer, have developed many new stealth tactics to shape online public discourse.

Monsanto has been honing its skills in this arena for decades. In 2002, Jay Byrne, Monsanto’s then director of internet outreach, helped influence online debates about genetically engineered foods with the help of “fake citizens” — people who did not actually exist who were “bombarding internet listservs with messages denouncing the scientists and environmentalists who were critical of GM crops,” according to reporting by George Monbiot in the *Guardian*.[^464] In a *pitch to industry groups* in 2001[^465], the *Guardian* reported, Byrne described “how, before he got to work, the top GM sites listed by an internet search engine were all critical of the technology. Following his intervention, the top sites were all supportive ones” and several of those sites had been established by a Monsanto PR firm, Bivings[^466].

As we have shown throughout this report, Monsanto has worked with a wide range of third-party allies to spread its product-defense messaging, using stealth tactics that make it difficult, and at times impossible, to detect the company’s fingerprints. That is especially true online, where search engines serve up corporate messaging from independent-appearing sources, and messengers appear seemingly spontaneously across social media platforms to attack journalists, scientists, and others who pose a threat to the company or the pesticide industry more broadly. Internal Monsanto documents point to an inner circle of messengers — including Byrne, now president of a PR firm called v-Fluence Interactive — who coordinate an echo chamber of third-party allies to disseminate messaging laid out in Monsanto/Bayer PR plans. Here we take a closer look at how some of those groups wield influence online.

**Monsanto loving ‘science’ websites**

Anyone looking for articles on the topic of “IARC and glyphosate” might first try searching those terms in Google News. If they did so on October 14, 2021, they would have found that four of the top 10 “news” results came from one source: the American Council on Science and Health (ACSH), a well-known industry front group described in Tactic 3. Headlines for those ACSH articles included, “The Emperor —IARC — Has No Clothes,” and “Glyphosate Doesn’t Cause Cancer.”[^467][^468] The internal emails we reported on in Tactic 3 revealed that Monsanto had paid ACSH to help try to discredit IARC’s findings on the carcinogenicity of glyphosate.

Another “news” source turned up in the top spot of a Google News search in February
2020 for the terms “glyphosate and cancer”: Science 2.0. The website promotes itself with the tagline, “The world’s best scientists. The internet’s smartest readers.” Its owner, Hank Campbell, was president of the Monsanto-funded ACSH until December 2018. A few weeks prior to Campbell’s departure from ACSH, Charles Seife, a professor of journalism at New York University, posted documents that offer insights into the high visibility of websites connected to Campbell. In a Twitter thread he called “Mapping a Monsanto-Loving Octopus,” Seife explained that, in 2016, ACSH paid $60,000 to ION Publications, which owned science blogging websites including Science 2.0 and Science Codex. The payment was for promotional services to increase traffic to the ACSH.org website, according to tax records. The owner of ION Publications was ACSH’s Campbell. In 2018, Campbell expanded his ring of science-focused websites when he converted Science 2.0 into a non-profit and acquired another popular blogging website, ScienceBlogs.com.

All the “science” websites under this umbrella, including Science 2.0, Science Codex, and ScienceBlogs, cross-promoted the others and ACSH’s own website with content promoting and defending pesticides and other products made by companies that fund ACSH, among them Monsanto. Seife summed up his findings: “this is how a once-admired science blogging site, @scienceblogs, was acquired by a complex and [in my opinion] shady network of for-profits and non-profits helping Monsanto.”

Shortly after this post, Campbell left ACSH and delinked his science websites from ACSH.org. However, Campbell and others with connections to Monsanto continue to blog on his science websites, and Science 2.0 continues to enjoy high Google search rankings for search terms related to pesticides.

**Topping the Google’s News search**

Over a three-year period from 2019 to 2021, we conducted multiple keyword searches on topics related to glyphosate, other pesticides, and genetically engineered foods and found that a small group of Monsanto-connected “science communicators” has dominated the algorithm for Google News searches, leading to high-ranking results. Industry influence of search results warrants further study to better understand the extent of the reach, but the results we found from the keywords searched raises concerns about the integrity of Google News searches on these themes.

In a search for “glyphosate and cancer” across numerous dates, for example, we found links to the Genetic Literacy Project, a group funded by Bayer, ranked at or near the top every time.

In a Google News search for those keywords on February 14, 2020, for example, six of the top 10 returns were from Genetic Literacy Project and all with content that downplayed concerns about glyphosate. As we highlighted earlier, internal Monsanto documents and public record results showcase that the Genetic Literacy Project has been an important entity...
in Monsanto-coordinated PR and lobbying campaigns, particularly in pushing personal attacks on scientists who raised cancer concerns about glyphosate.

The Genetic Literacy Project links with high Google News ranking included headlines that align with talking points laid out in Monsanto’s PR glyphosate defense plan. For example, a top “news” return was a headline claiming “activists” were pushing a “conspiracy claim” about the toxicity of glyphosate surfactants.474 The article was written by Cameron English, former managing editor of Genetic Literacy Project who now works for ACSH.475 The timing of his article coincided with Bayer’s efforts to end the Roundup litigation and offer a $10 billion settlement with cancer victims who had sued Monsanto claiming exposure to glyphosate-based Roundup caused them to develop non-Hodgkin lymphoma.476

Additional searches found a range of industry-aligned and industry-funded messages and messengers rising to the top of Google News. For a February 25, 2020 search for “Chris Portier,” a scientist who served on the IARC glyphosate panel, five of the first six Google News returns were articles attacking his credibility. Two of these were from the Genetic Literacy Project, one was from ACSH, and another was from the ACSH-connected Science 2.0. Another top result was a link to a Forbes column by Geoffrey Kabat, the epidemiologist mentioned in Tactic 3 who has a history of defending tobacco industry interests, and who also serves on the board of Genetic Literacy Project’s parent group.

According to Google, its news search “helps you learn about what’s happening in the world through an organized experience of top stories, articles, videos and more” and the “Top stories feature aims to display relevant, high-quality results for a news topic.”477 But these findings raise questions about the credibility of the “high-quality results.” Our searches for keywords important to Monsanto and now Bayer, and the pesticide industry more broadly, indicate that industry front groups are elevating corporate messaging over legitimate news to the top of the search results.

This search domination is critically important for two key reasons: Many people may presume that Google results provide links to legitimate reporting (for news) and trustworthy resources (for general searches). Secondly, most people do not click lower ranking results, even on the first page of returns let alone past page one. So, ensuring articles and links appear high in search returns makes a huge impact on visibility. One recent study by Sistrix, a Search Engine Optimization software company, found that in a 2020 analysis of billions of search results, 28.5 percent of people click the very first result in a Google Search, with click-through rates falling considerably past that: Second and third place rankings had only a 15 and 11 percent click-through rate (CTR), respectively.478 By the tenth result, the CTR is just 2.5 percent, with virtually no one moving on to the second page.

Driving traffic to pro-industry messaging

One of the strategies Genetic Literacy Project uses to get these high-ranking results is to republish content of mainstream news articles. The website pulls articles from a range of outlets, ensuring a continual fresh stream of content. Importantly, GLP changes headlines, condenses content, adds graphics, and emphasizes specific keywords (such as glyphosate) in headlines. The website also sometimes adds promotional content to emphasize product-defense messaging, while linking back to the original news outlet. These practices elevate the site’s Search Engine Optimization (SEO),479 helping vault Genetic Literacy Project’s industry-friendly messages to the top of the Google News search. As an example: in Google News searches for “glyphosate and cancer” conducted 11 days apart (on February 14 and February 25, 2020) six of the top 10 returns on both dates were from Genetic Literacy Project or the ACSH-connected Science 2.0. Several of these were reposts of articles lifted from other news outlets and reprinted by Genetic Literacy
Project in condensed form. Reposts included articles from the Wall Street Journal, Reuters, Bloomberg Law, and USA Today, posted with new headlines and some text cut to emphasize or downplay particular themes. For instance, a 33-paragraph Bloomberg Law article by Stephen Gardner — titled “Four Pesticides Could Show U.K.s Post-Brexit Regulation Plans” — is condensed to five non-consecutive paragraphs in Genetic Literacy Project with a different headline (naming glyphosate and neonicotinoids) and missing context, yet still carrying the reporter’s byline. The reprint does not include, for example, a paragraph explaining the controversy in the EU over glyphosate safety and a pending ban in Luxembourg.

Genetic Literacy Projects explains these excerpted, retitled reprints with a disclaimer: “This article or excerpt is included in the GLP’s daily curated selection of ideologically diverse news, opinion and analysis of biotechnology innovation.” GLP explains that it “aggregates approximately 11 articles” each day from news sources following the fair use doctrine and Creative Commons guidelines. The page explains, “Excerpted articles list the original media outlet as the source.” The page further notes that GLP, “selects short segments from an article chosen to reflect the original piece,” changes titles “so as not to pose a conflict in searches,” and “often” also “adds pictures or illustrations to excerpted articles.” All of this provides opportunities to emphasize product-defense messaging, while keeping a stream of fresh content on the GLP website.

Genetic Literacy Project also makes frequent use of “Editor’s notes” to promote its own content. For example, a February 11, 2020 press release from the State of California Department of Justice describes an amicus brief filed by the state arguing that federal laws should not preempt California laws requiring warnings on cancer-causing chemicals. GLP reprinted the press release under the byline of then California Attorney General Xavier Becerra, but added an “Editor’s note” in bold near the top: “Most experts, including EPA regulators, don’t share California’s view that glyphosate causes cancer. The agency therefore told California in August 2019 that it would be “irresponsible” to put a warning label on the herbicide.” The note includes links to two Genetic Literacy Project articles.

To give another example of how the Genetic Literacy Project alters content to emphasize particular messaging, consider the excerpt from a January 28, 2020 BBC article by Emma Woollacot, titled “Zap! How microwaves and electricity are killing weeds.” The reprint is retitled: “Glyphosate herbicide cancer fears could turn electricity, microwaves into viable weed-killing tools,” and leads with a paragraph that appears later in the piece. The actual opening to Woollacot’s article was not as helpful to pesticide industry messaging: Woollacot began by explaining that the weed-zapping machines are part of an effort to clean up parks by “doing away with potentially dangerous weedkillers.” The repost also includes a GLP Editor’s note: “Most experts say glyphosate probably doesn’t cause cancer.”
Monsanto’s “Let Nothing Go” strategy

“Let Nothing Go” was Monsanto’s strategy to respond to any and all media coverage and social media posts involving the company or its products.487 As plaintiff’s lawyers in one case against the company described, Monsanto was determined “to leave nothing, not even Facebook comments, unanswered” — a sort of “broken windows” approach to shaping the public narrative on GMOs and pesticides.488 The lawyers further explained how Monsanto “employs individuals who appear to have no connection to the industry, who in turn post positive comments on news articles and Facebook posts, defending Monsanto, its chemicals, and GMOs.” The court brief calls out the Genetic Literacy Project and American Council on Science and Health specifically, describing them as “organizations intended to shame scientists and highlight information helpful to Monsanto and other chemical producers.”489

The “Let Nothing Go” strategy was to dominate social media and online fora to reframe the conversation about glyphosate, and GMOs generally, pushing back on all reporters, editors, influencers, and others who published unflattering material about these topics. A “Let Nothing Go report” compiled by the PR firm FleishmanHillard for Monsanto in 2017 describes how the firm was doing just this: tracking key influencers, volume and tone of conversation, and other social and media metrics in six European countries.490

PR firm “balances” online conversation

One of the strategies Monsanto/Bayer and other pesticide companies developed to influence online conversations is GMO Answers. Though the effort was clearly a marketing and PR campaign launched in 2013 by PR firm Ketchum,491 the GMO Answers website described itself as a “transparency” initiative.492 The initiative centers around a website that looks like a definitive source of information and features the voices of experts enlisted to build public trust in GMOs and the pesticides used to grow them. These experts, however, have been handpicked by Ketchum, the industry-funded PR firm running the site. Tax records show that the Council for Biotechnology Information, a trade group funded by Bayer, Syngenta, BASF, DowDupont, and formerly Monsanto, paid Ketchum over $14 million between 2014 and 2018 to conduct GMO Answers.493 (CropLife International, the pesticide industry trade association, has since taken over the funding.)494

Ketchum characterized GMO Answers as an effort to answer public concerns with “nothing filtered or censored, and no voice silenced.” As the St. Louis Post Dispatch reported at the...
time, the top pesticide companies launched the campaign to “help clear up confusion — and dispel mistrust — about their products.”

The website discloses that it is funded by the largest pesticide firms, but how “filtered” is the site’s content? Internal documents reveal what a heavy hand industry has had in shaping content. In one example, these documents reveal the specific ways that Monsanto used GMO Answers in its glyphosate defense. In its PR plan to protect the company from cancer concerns related to glyphosate-based Roundup herbicides, for example, Monsanto named GMO Answers as an “industry partner.” GMO Answers also appears as a key partner in Monsanto’s PR plan to discredit the U.S. Right to Know public records investigation into industry influence on academics. And emails obtained by U.S. Right to Know via the public records search found a number of the “independent” experts and groups listed on the GMO Answers website were receiving funds from Monsanto or were working with the company on PR projects, which were not disclosed on the site. These internal records also reveal at least three instances of Ketchum employees working with professors to ghostwrite content for GMO Answers.

Messaging on the site also mirrors industry talking points, often with industry sources. On the GMO Answers website, typing in the question, “Does glyphosate cause cancer?” yields an answer from Bayer scientist David Saltmiras: “No, glyphosate does not cause cancer. But don’t just take my word for it. Please also consider statements from multiple authorities who reviewed both robust glyphosate data sets and peer-reviewed literature.” Queries about the IARC cancer report on glyphosate elicit an infographic from Monsanto’s Cami Ryan (who now works for Bayer) comparing the toxicity of glyphosate to wine, and a quote from Kevin Folta, the University of Florida professor who worked with Monsanto on PR projects discussed in Tactic 2, claiming, “Glyphosate is amazingly non-toxic to humans or any other animals.” (Folta now also works for the Bayer-funded Genetic Literacy Project.)

Alongside the website, Ketchum developed a social media plan to engage people on platforms that were discussing GMOs and bring visitors to the site. Ketchum boasted this work had a measurable impact on the conversation about GMOs online. In a promotional video about GMO Answers, Ketchum noted: “On Twitter, where we closely monitor the

A “Let Nothing Go report” for Monsanto tracks public comments about glyphosate.
conversation, we’ve successfully balanced 80 percent of interactions with detractors.” As a result of this engagement, and the GMO Answers project more generally, Ketchum reported a doubling of “positive media coverage” about GMOs during its first year of operation. In the video, the firm also bragged about its success in GMO Answers’ position on Google search results: Before Ketchum got to work, “anyone searching for GMOs had to navigate more than 25 pages of hate before finding one factual scientific response. We’re now on the first page of search results.”

In 2014, these efforts on behalf of the pesticide industry earned Ketchum recognition for its success spinning the media and online coverage of the industry’s products: GMO Answers was shortlisted in the “Public Relations: Crisis and Issue Management” category for a CLIO Award, a prominent international advertising award.

Unleashing the trolls

Coordinated, aggressive pushback on social media is a common experience for people who disagree with pesticide industry narratives about pesticides and GMOs. In Tactic 4, we discussed how attacking critics — often with *ad hominem* personal attacks — is a common product-defense strategy, one that is increasingly playing out on social media and in other online spaces.

In one example from the summer of 2017, Marion Nestle, a professor of nutrition at New York University, became a target when she posted a blog critical of a documentary called *Food Evolution*. The pro-GMO film was funded by an industry trade group and heavily promoted by industry allies, including the professors, trade groups and front groups described in this report. On her blog, Nestle characterized the documentary as a “GMO propaganda film.” She explained to her readers on June 21, 2017, “I have asked repeatedly to have my short interview clip removed from this film. The director refuses. He believes his film is fair and balanced. I do not.” Cue a coordinated troll attack. “Would you believe 870 comments? These were filed in response to my post of last week about the GMO propaganda film,” Nestle reported on June 26.

“A Win for GMO Trolls,” Nestle announced she is no longer accepting comments on her website. “The GMO trolls — people who post deliberately hostile comments — have defeated me,” she wrote. “This is not about thoughtful discussion of the scientific, social, and political issues raised by GMOs. This is about personal attacks to discredit anyone who raises questions about those issues, as I did.”

Nassim Nicholas Taleb, author of *The Black Swan*, *Antifragile*, and other bestselling books on risk management became a target of GMO trolls after he *co-authored a paper* in 2014 calling for a precautionary approach to genetically engineered foods; and a year later, when he described the GMO endeavor in the *New York Times* as a “too big to fail” system “vastly riskier” than the 2008 financial sector meltdown. The attacks coming from product-defense groups were swift and familiar: “unintelligible gibberish,” declared the Competitive Enterprise Institute, while David Ropeik, a risk management consultant with pesticide industry clients, tried to discredit Taleb’s paper as “anti-GMO advocacy” via Twitter and a lengthy article on Medium. Genetic Literacy Project wondered whether Taleb is a “dangerous imbecile in the pay of the anti-GMO mafia.” A familiar ring of industry-friendly writers, including the freelance reporter Keith Kloor and Mark Lynas of Cornell Alliance for Science, jumped in on Twitter to promote these critiques. In a Facebook post he called “How to Argue with GMO Propagandists,” Taleb noted that these attacks echoed “the history of how the tobacco industry spread disinformation.” Taleb concluded, “unlike the mafia with tentacles, corporations are monstrously fragile. The fact that they need so much lobbying and spinning indicates how fragile they are.”

“Unlike the mafia with tentacles, corporations are monstrously fragile. The fact that they need so much lobbying and spinning indicates how fragile they are.”

Nassim Taleb
Author, *The Black Swan*
Coordinating the industry troops: Bonus Eventus

While Monsanto’s and now Bayer’s tactics for shaping public debates are adapted to the age of social media and online news, the core strategy — to track, attack, and try to discredit critics of chemical-intensive industrial agriculture — has been developed over decades. Consider Jay Byrne, Monsanto’s former director of communications who ensured back in 2001 that the top websites appearing in an internet search for GMO foods “were all supportive ones.”516 Today, as president of the public relations firm v-Fluence, Byrne plays an active role in pesticide industry defense efforts via his “Bonus Eventus.”517 The “private social networking portal” supplies academics and other industry allies with talking points and promotional opportunities.518 Members receive Byrne’s newsletter, access to his reference library of talking points on agribusiness topics, a “stakeholder database” of influential people in the GMO and pesticide debate, and training and support for social media engagement.

Examples of Byrne’s newsletter can be found in a cache of emails from Byrne to Peter Phillips, a University of Saskatchewan professor who has been criticized for his close ties to Monsanto.519 The emails were obtained by U.S. Right to Know via a public records request. In a newsletter from November 2016, Byrne urged Phillips and other recipients to share content on key topics important to the pesticide industry — and these influencers in turn share messages via Twitter and other social media channels on topics Byrne suggests. That week Byrne urged followers to discuss the “flaws and omissions” in a New York Times story that reported on the failure of GMO crops to increase yields and reduce pesticides,520 and the “mounting questions” facing the IARC scientists who reported glyphosate is probably a human carcinogen. Byrne prompted his audience to share content on these themes from industry-connected writers Julie Kelly,521 Dr. Henry I. Miller,522 Kavin Senapathy,523 and Hank Campbell524 formerly of the American Council on Science and Health (ACSH), one of the groups Monsanto was paying to help discredit the cancer scientists.525 All these writers, though they appear to be independent, are linked to Monsanto and participate in the echo chamber that shares pesticide industry messaging via blogs and social media activities.

Byrne’s client list has included a range of agribusiness and pharmaceutical companies and business groups, including the American Chemistry Council, Syngenta, AstraZeneca, Monsanto, Pfizer, the American Farm Bureau, National Corn Growers Association, Grocery Manufacturers Association, the pesticide industry trade group CropLife, and the International Rice Research Institute (IRRI), which promotes genetically engineered “Golden Rice.”526

His pitch to industry groups, urging them to spend more money for product defense and attack strategies, is laid out in a 2013 presentation to the African Agricultural Technology Foundation (AATF) — a group funded by the Gates Foundation to develop commercial seeds for the private sector.527, 528 Byrne described the threats posed by “eco-advocates,” ranked their influence online, and urged companies to pool their resources to confront such influencers to avoid “regulatory market constraints.”529

Email from USAID rep discussing partnership with Monsanto PR helpers Jay Byrne and Jon Entine to create a “journalism enclave” and do global media outreach with industry messaging.
The policy endgame

The documents described throughout this report point to a number of individuals and organizations — including Byrne, the Genetic Literacy Project, and the American Council on Science and Health — as key players in the effort to paint GMOs and glyphosate products as “science-based” solutions, while attacking industry critics using product-defense efforts paralleling those by the tobacco and fossil fuel industries. While many of these efforts play out on social media or other online spaces, they are ultimately about lobbying in the real world: they are part of a coordinated effort to keep toxic products unregulated, even as health, environmental, and safety concerns mount.

As Harvard professors Naomi Oreskes and Erik Conway recount in their seminal book *Merchants of Doubt*, the product-defense efforts of fossil fuel and tobacco corporations succeeded in shaping public opinion and policy for decades, efforts that can be traced back to “a handful of scientists” who “obscured the truth on issues from tobacco smoke to climate change.” As Oreskes said in the documentary *Merchants of Doubt*: “None of this is about the science. All of this is a political debate about the role of government.”

As we have shown throughout this report, policy debates over glyphosate, GMOs, and the broader topic of chemical-intensive industrial agriculture, have been heavily influenced by a small group of actors, too, led by academics and front groups with ties to industry. The U.S. government has also been an ally to these efforts, keeping products unregulated and helping to spread corporate messaging. As one example, a December 2013 email reveals communications between Genetic Literacy

Jay Byrne presentation describes “eco-activist” groups that he argues need to be confronted.
Project’s Jon Entine and Max T. Holtzman, then acting deputy undersecretary at USDA. Entine shared a pitch for a series of “US government – GLP – Byrne projects” to influence journalists, noting that he and Jay Byrne, Monsanto’s former communications director, had spoken to “two dozen people at State, with reps from USDA/FAS and USAID on how to effectively engage NGOs and journalists on agricultural biotech” and to preview Byrne’s stakeholder database tool.532

Entine proposed collaborating on a series of projects to increase global acceptance of GMOs and pesticides. The projects he described include many of the stealth tactics named in this report. He mentioned: a “boot camp and response swat team” to prepare third-party academics for “potential legislative engagement;” a “journalism enclave” to bolster media coverage about food security challenges; “coaching for younger journalists;” a global media outreach campaign; and “multi-media content and placements from credible sources” reinforcing key themes “with segments and footage made available on U.S. government websites, GLP and other platforms.”

Holtzman responded, “Thanks Jon. It was great meeting you as well. I think your outline below provides natural intersection points where usda/USG [U.S. government] messaging and your efforts intersect well. I’d like to engage further and loop other folks here at usda not only from the technical/trade areas but from our communications shop as well.”533

Further details of this partnership are not public, but the Monsanto investigations reveal numerous examples of the U.S. government aiding pesticide industry PR efforts. As one example, in 2012, U.S. taxpayers paid to produce a series of videos to promote genetically engineered foods with corporate messaging. Byrne’s PR firm v-Fluence helped create the videos that were “designed to appear a little low budget and amateurish,” according to an email from University of Illinois Professor Bruce Chassy obtained by U.S. Right to Know.534

Chassy wrote to Monsanto employees on April 27, 2012 to inform them he had a small grant from the U.S. State Department to produce 10 YouTube videos, noting that he thought it was important the videos came from the University of Illinois with credit to the State Department. He also noted he was seeking more government funding as well as outside sources to produce more videos, and he invited the Monsanto employees to provide suggestions. Monsanto’s Eric Sachs responded, “in a completely parallel effort, Monsanto is shooting videos to reinforce the safety of GM foods in support of food/retail industry requests for Monsanto to defend the onslaught of attacks on biotech crop safety and Bt/RR [Bt and Roundup Ready] sweet corn in particular. I alerted this team of your project and everyone was eager to see your work online. Obviously, independent content from the U of I and supported by US Govt agencies is the preferred approach.”535

The example is just one of many, as we have shown throughout this report, indicating that Monsanto’s public relations efforts to defend its flagship glyphosate-based Roundup herbicides and Roundup Ready seed products depend on subterfuge: on convincing the public that corporate product-defense messaging is coming from independent sources that are, in reality, anything but.