DAVID S. CAUDILL*

Climatologist Mann's Defamation Suit Victory: Can It Help Resolve the Crisis of Expertise?

* Professor and Goldberg Family Chair in Law, Villanova University Charles Widger School of Law. The author is grateful to the participants of SEESHOP 2024, an international workshop sponsored by the Centre for the Study of Knowledge, Expertise and Science and held at Cardiff University on June 27–28, 2024, for their helpful comments and criticism on an earlier version of this Article.

ABSTRACT

When a jury awarded one million dollars in punitive damages to climatologist Michael Mann, in his defamation suit against writer Mark Steyn (who accused Mann of scientific fraud), it was newsworthy, even surprising, because opinions regarding scientific matters are rarely actionable. And yet it was not seen as a groundbreaking event in terms of legal doctrine, since the outcome was easily justifiable—Steyn's accusation was provably false. However, even if the Constitutional contours of defamation law did not change, the Mann verdict has far-reaching implications for a major contemporary social phenomenon, namely the so-called crisis of expertise, a term identifying a distrust of consensus science by a large segment of our society. That phenomenon is but a part of the current polarization between left and right in the United States, and the Mann verdict sends a message to those who would casually encourage distrust of a credible scientist. Any such constructive move toward resolving the crisis of expertise could help reduce the dangerous effects of ignoring scientific expertise, whether with respect to healthcare or protection of the environment. Mann's victory is, therefore, exemplary of a legal decision with benefits, albeit indirect (the benefits have little to do with free speech doctrine), for social progress. Courts do not purport to evaluate scientific truth, but when a court decides that a scientist was unfairly attacked for manipulating data, there is at least a suggestion that the work was sound, even though a scientific position can always be questioned on scientific grounds.

The crisis of expertise was caused, in part, by disinformation on the internet that raised doubts about credible science and scientists. When, in our polarized society, people seem to live in two different worlds, restoring trust in scientific institutions can seem almost impossible. And when judges appear to be politically polarized, law seems an unlikely ally to restore that trust. Mann's victory, however, demonstrates that courts can help remove artificial controversies from the field of genuine scientific disagreements, and thereby begin to resolve the crisis of expertise. We should therefore recognize its

benefits for science, scientists, and the citizenry in an age of disinformation.

INTRODUCTION

On June 23, 2024, the *Mail on Sunday* published a warning by Amanda Spielman, the former chief of England's office for standards in education, that "climate change activists" are "causing shock and spreading anxiety" by providing free teaching resources that "contain overwhelmingly negative messages."[1]

> Her comments came after she told an audience of head teachers that discussion of contentious subjects had become "dominated by campaigners whose intention is to de-legitimise the expression of any view but their own. . . . Anything said in a school comes with tremendous authority, so if children get a very strong message from their school or teacher about a contentious issue it can feel as though that is the only permitted view."[2]

The responses to Spielman's warning (in letters to the editor) were predictably divided between those who thought climate change teaching materials are beneficial ("What should we do—lie to them?"),[3] and those who found such materials out of place ("Activists . . . should be nowhere near our children").[4] We all recognize in those

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1 *See* Elizabeth Ivens, *Pupils Are Being Terrified by Shock Climate Lessons, Warns Ex-Schools Chief*, THE MAIL ON SUNDAY (June 23, 2024), https://www.pressreader.com/uk/the-mail-on-sunday/20240623/281878713553097 [https://perma.cc/E9LW-A2KP]. The full name of Spielman's former office, which she headed for 7 years, is the Office for Standards in Education, Children's Services and Skills ("Ofsted"), which inspects and reports on all providers of education for children in England. An example of the alleged anxiety-producing materials is WWF's "Climate Crisis!" poster, which "paints a grim picture of a world where huge numbers of species are at risk of extinction if the Earth heats up, and [states] that 'every part of our world' is being affected by the rise in carbon dioxide." *Id.*

2 *Id.*

3 Josephine Drury, Letter to the Editor, THE MAIL ON SUNDAY (June 30, 2024), https://www.pressreader.com/uk/the-mail-on-sunday/20240630/282973930228831?srsltid=AfmBOooCDrNd6jBRcOd5Nh8KmiCc34RVK9UZ54Q4N739mjT9XT6ru-aR [https://perma.cc/EB6S-QYB4]. Another letter from H. White was similar: "Children need to be scared. If we have any hope of turning climate change around, they need to know how not to behave like their parents and grandparents." *Id.*

4 Dennis Richardson, Letter to the Editor, THE MAIL ON SUNDAY (June 30, 2024), https://www.pressreader.com/uk/the-mail-on-sunday/20240630/282973930228831?srsltid=AfmBOooCDrNd6jBRcOd5Nh8KmiCc34RVK9UZ54Q4N739mjT9XT6ru-aR [https://perma.cc/EB6S-QYB4]. Another letter from Janet Scott was similar: "They are being indoctrinated." *Id.*

responses the cultural polarization over whether to trust scientific consensus in matters like vaccination and climate change.

The public controversy over climate change is central to the defamation suit brought by climatologist Michael Mann against Mark Steyn.

> A jury awarded Mann . . . more than US$1 million in a landmark case that legal observers see as a warning to those who attack scientists working in controversial fields, including climate science and public health. . . . Mann tells *Nature* that he hopes the win "signals the beginning of the end of the open season on scientists by ideologically motivated bad actors. And maybe, just maybe, that facts and reason still matter . . . " [in our] time of increasing political polarization . . . .[5]

Mann was accused by Steyn, in a *National Review* blog, of manipulating the data supporting the "hockey stick" graph indicating recent global warming, and there was no basis—no "truth," a defense to any defamation claim—to that accusation.

That interesting and perhaps surprising outcome may not seem particularly worthy of prolonged attention, since it did not alter defamation doctrine. In my view, however, the case could have enormous consequences for the so-called crisis of expertise, a social phenomenon identifiable as a loss of confidence—of trust—in consensus science on the part of a large segment of the U.S. population. While that crisis preexisted the COVID-19 pandemic, it was exacerbated during the pandemic by a combination of (i) disinformation and/or misinformation on the internet, and (ii) a misunderstanding of science insofar as retractions of statements by medical experts, as new data was collected, was interpreted by some as signaling the unreliability of consensus science.[6]

The purpose of this Article is to highlight the potential beneficial effect of the Mann jury's verdict for a resolution, at least partial, of the crisis of expertise. Part I summarizes Michael Mann's fifteen-year odyssey from "Climategate"—the brief scandal following the release

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5 Jeff Tollefson, *Climatologist Michael Mann Wins Defamation Case: What It Means for Scientists*, NATURE (Feb. 12, 2024), https://www.nature.com/articles/d41586-024-00396-y [https://perma.cc/H9Y9-YXZV].

6 Recording of the Mellon-Sawyer Seminar on Trust and Mistrust of Science and Experts (comments by Rogers Brubaker), *Experts, Publics and Trust During the Pandemic: Sociological Perspectives*, THE AM. ASSEMBLY COLUM. UNIV., at 07:05–10:34, 11:49–12:45, 15:11–19:07, 24:39–25:45 (Oct. 30, 2020), https://american-assembly.org/news/video-trust-models-modeling-trust-55dtr-yj2ff-fh3dh [https://perma.cc/BT9D-5VVY] [hereinafter Recording of the Mellon Seminar (comments by Brubaker)].

of emails that suggested some scientists' improprieties—and the lawsuit brought by Mann to clear his name from publications accusing him of fraud. The contours of defamation law were explored during the various stages of the lawsuit, but the conventional hesitance of courts to get involved in scientific controversies—to announce the scientific "truth"—remained unchanged.[7] Indeed, if Mann's accusers were correct that their published statements were mere scientific opinions, albeit fringe views, Mann would have lost. It was only their provable false statements that supported the verdict.

Part II introduces and surveys the crisis of expertise, the context in which the significance of the Mann verdict is established. Disinformation regarding scientific matters is dangerous, but solutions are hard to find. The institutions of law and of science, the likely allies in any effort to restore trust in consensus science, seem powerless to help. Part III suggests, however, that the Mann verdict could reduce the amount of disinformation; the reaction of scientists to the Mann verdict, by contrast, emphasized the benefits of the verdict in terms of protection from threats to their personal safety. I conclude that Mann's victory demonstrates that courts can help remove artificial controversies, such as the arguments over the honesty of Mann's publications, from the field of genuine scientific disagreements, and thereby begin to resolve the crisis of expertise.

I
CLIMATOLOGIST MANN'S DEFAMATION SUIT

A. Background: "Climategate"

> [C]limate change was a field of research in which . . . the controversies . . . and the uncertainties decreased. The science had been settled. . . . This all changed when in November 2009 e-mails from one of the leading climate research centers . . . at the University of East Anglia . . . were released to the public. The content of the emails made for scandal and revealed some questionable behavior by leading climate scientists [including Michael Mann at Penn State]. All of a sudden, it seemed that the consensus . . . was actually being

7 That hesitance with respect to defamation is, or course, not the case in all areas of law. Courts consider the reliability of scientific evidence when deciding on admissibility of opposing parties' experts (perhaps not allowing one side's experts to testify), thereby arguably getting involved in a scientific controversy. Likewise, courts hearing a challenge to a regulation, based on the lack of scientific support for the regulation, are clearly involved in a scientific controversy.

> orchestrated through the manipulation of data and the peer review process.[8]

The controversy that came to be known as "Climategate" originated in over one thousand hacked emails that seemed to climate denialists to show scientific misconduct and raise doubts about human-caused global warming.[9] Many of the emails between climate scientists were clearly rude and dismissive, but claims of fraud and deceit likely resulted from misrepresentations of such words in the emails as "hiding the decline" (a reference to tree ring data, not temperatures), "fiddling with" illustrations (a reference to the best way to translate data into a graph), and the famous "trick" ("Mike's Nature trick," referring to Mann), which sounded like a *deception* to mask declining temperatures (but was likely meant to reference a *clever* way to add data to a graph).[10] Some of the leaked emails were related to Freedom of Information Act requests, suggesting to critics a lack of transparency, but that criticism overlooked the fact that some of the data was "restricted by [university] non-publication agreements," and all the data was in the end "freely accessible."[11] Finally, critics misunderstood emails concerning the fallibility of the peer review process as a signal of the unreliability of science, but peer review has never guaranteed truth.[12] Perhaps the biggest misunderstanding of the critics concerned the nature of science.

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8 Reiner Grundmann, *"Climategate" and the Scientific Ethos*, 38 SCI., TECH. & HUM. VALUES 67, 68 (2013) ("The term Climategate, invented by a *Daily Telegraph* journalist, suggests wrongdoing").

9 *See* Jess Henig, *'Climategate,'* FACTCHECK.ORG (Dec. 22, 2009), https://www.factcheck.org/2009/12/climategate/ [https://perma.cc/M4M4-GNVV].

10 *See id.* In 2021, the BBC produced *The Trick* for television, a "90-minute drama of the so-called Climategate scandal of November 2009"; see Elle Hunt, *The Trick Review: How the Climategate Scandal Rocked the World*, NEW SCIENTIST (Oct. 18, 2021), https://www.newscientist.com/article/2294061-the-trick-review-how-the-climategate-scandal-rocked-the-world/ [https://perma.cc/6PWG-93TS].

11 *See* Henig, *supra* note 9.

12 David Biello, *Scientists Respond to "Climategate" E-Mail Controversy*, SCI. AM. (Dec. 4, 2009), https://www.scientificamerican.com/article/scientists-respond-to-climategate-controversy/ [https://perma.cc/EKE9-GCTH].

> [Some] parts of the content of the stolen e-mails . . . griped about particular journals (*Climate Research*) or editors (at *Geophysical Research Letters*). "It's important to understand what peer review really is," [Michael] Mann noted [in response to Climategate critics]. "It's not a license for anybody to publish." In essence, he argued, in both cases, some papers that "did not make a credible case to support the conclusions that were reached" were being published. As a result, climate scientists were complaining, among themselves, about the quality of the journals.

Id.

However, British climate modeler Gavin Schmidt suggested that the leak could inadvertently provide some educational value:

> The stolen e-mails may ultimately provide a sociological window into the workings of the scientific community. "This is a record of how science is actually done," Schmidt noted. "They'll see that scientists are human and how science progresses despite human failings. They'll see why science as an enterprise works despite the fact that scientists aren't perfect."[13]

Whatever personal shortcomings of the Climategate scientists were revealed in the hacked emails (lapses in judgment in private conversations?), "nothing in the stolen e-mails . . . undermines in any way the scientific consensus—which exists among scientific publications as well as scientists—that climate change is happening and humans are the cause."[14]

Michael Mann was part of Climategate due to his email conversations with scientists at the Climate Research Unit at the University of East Anglia—Mann had used data from that unit to produce the famous "hockey stick" graph,[15] showing a straight temperature line, from the 1000 A.D. until the late 20th century, when the line turned sharply upward.[16] In July 2010, Penn State University's investigation into the accusations of data manipulation by Michael Mann, in order to "exaggerate the threat of global warming," concluded

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13 *Id.* (Gavin A. Schmidt is the Director of the NASA Goddard Institute for Space Studies and cofounder of the climate science blog *RealClimate*.)

14 *Id.* "'There is a robust consensus that humans are altering the atmosphere and warming the planet,' said meteorologist Michael Mann of The Pennsylvania State University, who . . . was among the scientists whose e-mails have been leaked." *Id.*

15 *See* Michael E. Mann et al., *Global-Scale Temperature Patterns and Climate Forcing over the Past Six Centuries*, 392 NATURE 779, 779–87 (1998); Michael E. Mann et al., *Northern Hemisphere Temperatures During the Past Millennium: Inferences, Uncertainties, and Limitations*, 26 GEOPHYSICAL RSCH. LETTERS 759, 759–62 (1999).

16 Mann et al. "critically revisit" the issue of the so-called Medieval Warm Period . . . in the Northern Hemisphere, from ca. AD 1000-1200. Mann's temperature record relativized this phenomenon, claiming "unrivalled warming" in the late twentieth century. The political implications of this claim are evident: if record warming occurs after industrialization, this may be due to anthropogenic influences. Before the hockey-stick model and its adjustment of the Medieval Warm Period, skeptics could point to warmer periods in recent history . . . as a rationale for doing nothing with regard to greenhouse gas emissions.

Grundmann, *supra* note 8, at 69; *see also* Suzi Feay, *Climategate: Science of a Scandal, BBC4—a Global Storm of Controversy*, FIN. TIMES (Nov. 8, 2019), https://www.ft.com/content/d709367e-f999-11e9-a354-36acbbb0d9b6 [https://perma.cc/4UZ7-6GQS].

that he had not "strayed from accepted practices for 'proposing, reporting or conducting research.'"[17]

B. The Lawsuit

1. A Dispute Between Dr. Mann and Rand Simberg, Mark Steyn, Rich Lowry, the Competitive Enterprise Institute, and the National Review

On July 13, 2012, Rand Simberg, an analyst with the Competitive Enterprise Institute (CEI), authored a blog post for OpenMarket.org, CEI's Blog, entitled "The Other Scandal in Unhappy Valley," alleging a whitewash and cover-up with respect to Penn State's clearing Mann of any wrongdoing.[18] Simberg referred to Mann's climate change model as "hockey-stick deceptions," and clearly accused Mann of "behaving in a most unscientific manner" by "engaging in data manipulation."[19] Two days later, Mark Steyn wrote a post for the *National Review*'s online blog, "The Corner," entitled "Football and Hockey," supporting Simberg's accusations and stating that "Michael Mann was the man behind the fraudulent climate-change "hockey-stick" graph.[20] On July 23, 2012, Mann, through his attorney, demanded a retraction from the *National Review*'s accusations of "academic fraud;" that drew a response (by letter and online[21]) from editor Rich Lowry explaining that there was no accusation of "criminal fraud" but merely that Mann's work was "intellectually bogus and wrong."[22]

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17 Paul Armstrong, *Q&A: 'Climategate' Explained*, CNN (July 7, 2010), https://edition.cnn.com/2010/WORLD/europe/07/07/climategate.emails.explainer/index.html [https://perma.cc/CA2Z-NBYN].

18 Rand Simberg, *The Other Scandal in Unhappy Valley*, COMPETITIVE ENTER. INST. (July 13, 2012), https://cei.org/blog/the-other-scandal-in-unhappy-valley/ [https://perma.cc/N5R2-SN4X].

19 *Id.* ("It's time for a fresh, truly independent investigation").

20 Mark Steyn, *Football and Hockey*, NAT'L REV. (July 15, 2012), https://www.nationalreview.com/corner/football-and-hockey-mark-steyn/ [https://perma.cc/CT32-SAQC].

21 Rich Lowry, *Get Lost*, NAT'L REV. (Aug. 22, 2012), https://www.nationalreview.com/2012/08/get-lost-rich-lowry/ [https://perma.cc/LTW7-LQQ2] (response to demand letter) ("Mann is upset—very, very upset—with this Mark Steyn *Corner* post, which had the temerity to call Mann's hockey stick 'fraudulent'. . . . [P]oor Michael didn't try to engage him in a debate. He sent a laughably threatening letter . . . . My advice to poor Michael is to go away and bother someone else.").

22 Mann v. Nat'l Rev., Inc., No. 2012 CA 008263 B, 2013 WL 4494942, at *3 (D.C. Super. Ct. July 19, 2013) (Trial Order) [hereinafter Trial Order].

Mann filed suit in the Superior Court of Washington D.C. on October 22, 2012, alleging libel and intentional infliction of emotional distress against the *National Review*, Mark Steyn, Competitive Enterprise Institute, and Rand Simberg, based on the following statements by the defendants, respectively:

> (1) Defendant Simberg's statement published in Openmarket.org that Plaintiff [Mann] had engaged in "data manipulation" and "scientific misconduct" and was the "poster-boy of the corrupt and disgraced climate science echo chamber;"
>
> (2) Defendant Steyn's statement in the National Review Online that Plaintiff "was the man behind the fraudulent climate-change 'hockey-stick' graph, the very ringmaster of the tree-ring circus;" and
>
> (3) Mr. Lowry's statement in National Review Online that indicated Plaintiff's work is "intellectually bogus."[23]

Because this Article is focused on the potential social effect of the $1 million punitive damages verdict against Mark Steyn, the following account of Mann's legal journey does not consider the judicial opinions (including responses to motions to dismiss) concerning Simberg, the Competitive Enterprise Institute, or Rich Lowry (although the legal analyses of their statements and conclusions regarding defamation are virtually identical).[24]

Defendants *National Review* and Mark Steyn filed (i) a Special Motion to dismiss Mann's complaint, seeking the protection of Washington D.C.'s law against strategic lawsuits against public participation (Anti-SLAPP),[25] and (ii) a Rule 12(b)(6) motion to dismiss for failure to state a claim upon which relief can be granted.[26] As to the first motion, the initial requirements of Defendants' Anti-SLAPP claim were easily met—the Defendants' statements were published on a public forum, and constituted advocacy on a matter of

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23 *Id.*

24 *See, e.g.*, Mann v. Nat'l. Rev., Inc., No. 2012 CA 008263 B, 2013 WL 4494944 (D.C. Super. Ct. July 19, 2013), which responds to the motions to dismiss filed by Competitive Enterprise Institute and Simberg, and is largely the same as the response to the motions to dismiss by National Review and Steyn; *see* Trial Order, 2013 WL 4494942, at *3, except that the latter includes a discussion of intentional infliction of emotional distress. The defamation claim against Rich Lowry was later dismissed on appeal; see Competitive Enter. Inst. v. Mann, 150 A.3d 1213, 1249–50, 1262 (D.C. 2016).

25 *See* D.C. Code Ann. § 16-5502 (West 2024); *see also* Trial Order, 2013 WL 4494942, at *7 ("The Anti-SLAPP Act protects speech regarding the public interest.").

26 Trial Order, 2013 WL 4494942, at *1.

public interest (climate change)—leaving only the question of whether Mann was likely to prevail on the merits.[27] The court, therefore, reviewed the contours of defamation law,[28] noting that because Mann was a public figure, he would need to prove actual malice.[29] In his response to the Special Motion, Mann argued that he could prove

> "actual malice" by a showing that "the defendant in fact entertained serious doubts" as to the truth of the publication or acted with a high degree of awareness of its probable falsity . . . [and that the] Defendants made these statements with knowledge of their falsity or reckless disregard for their truth. Plaintiff claims whether he engaged in fraud is verifiable by . . . considering the [six] objective investigations conducted regarding his research.[30]

In response, the Defendants presented three losing arguments—that their statements were rhetorical hyperbole,[31] that they were "protected by the 'Fair Comment' privilege which protects opinions based on facts

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27 *Id.* at *4–5. ("The Anti-SLAPP Act protects speech regarding the public interest such as qualifications for public office. [Farah v. Esquire Magazine, Inc., 863 F. Supp. 2d 29, 36 (D.D.C. 2012).] The Anti-SLAPP Act gives 'absolute or qualified immunity to individuals engaged in protected actions.' *Id.* Where the proponent of a motion brought pursuant to the Anti-SLAPP Act 'makes a prima facie showing that the claim at issue arises from an act in furtherance of the right of advocacy on issues of public interest, then the motion shall be granted unless the responding party demonstrates that the claim is likely to succeed on the merits.' *Id.*").

28 *See id.* at *6. (A defamatory statement is one that "injure[s] the plaintiff in his trade, profession or community standing, or lower[s] him in the estimation of the community." Payne v. Clark, 25 A.3d 918, 924 (D.C. 2011) (citing Clawson v. St. Louis Post-Dispatch, LLC, 906 A.2d 308, 313 (D.C. 2006)). A plaintiff presents a prima facie case of defamation where the following elements are met: "(1) Defendant made a false or defamatory statement concerning the plaintiff; (2) . . . defendant published the statement without privilege to the third party; (3) . . . defendant's fault in publishing the statement amounted to at least negligence; and (4) either that the statement was actionable as a matter of law irrespective of special harm or that its publication caused the plaintiff special harm." Payne, 25 A.3d at 924.).

29 Trial Order, 2013 WL 4494942, at *6. The Court of Appeals has stated that to recover for defamation, a public figure must prove that the defamatory statement was made with "actual malice." Nader v. de Toledano, 408 A.2d 31, 40 (D.C. 1979); *see also* Foretich v. CBS, Inc., 619 A.2d 48, 59 (D.C. 1993) (quoting New York Times Co. v. Sullivan, 376 U.S. 254, 297 (1964)). This means the statement was made "with knowledge that it was false or with reckless disregard of whether it was false or not." Foretich, 619 A.2d at 59 (quoting New York Times Co., 376 U.S. at 297).

30 Trial Order, 2013 WL 4494942, at *5. "Plaintiff claims that there were six investigations into whether he committed fraud. Those most notable were done by the EPA and the National Science Foundation (NSF)." *Id.*

31 *Id.* at *8. "Rhetorical hyperbole refers to exaggerations used as a rhetorical device. Rhetorical hyperbole is often a figure of speech that is used to evoke strong feelings or create a strong impression but not intended to be taken literally." *Id.* at n.16.

that are well known to readers,"[32] and most importantly for this Article, that "the alleged defamatory remarks are opinion" and thus not provable as false.[33] Specifically, the Defendants argued, "issues of science are opinion because '[s]cientific truth is elusive,'"[34] and the Court acknowledged that opinions were traditionally "treated as non-defamatory."[35]

The doctrinal key to Mann's eventual victory in his defamation suit, confirmed early in the case, was not new: Statements that merely express "a subjective view, an interpretation, a theory, conjecture, or surmise" are not actionable, but claims to "be in possession of objectively verifiable facts" are.[36] Although the accusations of fraud in this case (that Mann acted in a "most unscientific manner" and manipulated data) were clearly opinions, they were also statements that questioned *facts*, that relied on interpretation of facts in the hacked emails, and that "made conclusions based on facts."[37] The investigations that found Mann's research to be "sound and not based on misleading information" would later give Mann the opportunity at trial to prove the accusations of fraud to be false.[38]

Returning to the issue of whether the Defendant's accusations rose to the level of actual malice, the available evidence was not definitive, but it was sufficient to justify further discovery.[39] The Defendants' motion to dismiss (for failure to state a claim on which relief can be

32 *Id.* (finding that the fair comment privilege was not applicable); *see id.* at *9. (The law in the District of Columbia provides the media the privilege of "'fair comment on matters of public interest.' [Phillips v. Evening Star Newspaper Co., 424 A.2d 78, 88 (D.C. 1980).] The privilege only applies to opinion and not misstatements of fact. *Id.* (finding that the *Evening Star Newspaper* could not employ the fair comment privilege because it printed false facts regarding the existence of a quarrel).").

33 Trial Order, 2013 WL 4494942, at *6.

34 *Id.* The Defendants also argued that they were making fun of Plaintiff rather than accusing him of fraud, and that the term "intellectually bogus" is neither offensive nor suggestive of fraud. *Id.*

35 *Id.*

36 *Id.* at *6 (quoting Guilford Transp. Indus., Inc. v. Wilner, 760 A.2d 580, 597 (D.C. 2000)).

37 Trial Order, 2013 WL 4494942, at *7–8. Importantly, the Court viewed this "as a very close case." *Id.* at n.12.

38 *Id.* at *7.

39 *Id.* at *10.

granted) was denied,[40] and their appeal to the D.C. Court of Appeals followed.[41]

2. Defendants' Appeals of Dismissed Motions Were Unsuccessful

Having decided that the Court of Appeals had jurisdiction, the Court at length parsed the terms "likely to succeed on the merits" under the Anti-SLAPP Act and then turned to whether Mann's claim met that standard.[42] Mark Steyn's statements attacking Mann's scientific integrity were not about the science of global warming, a field of some controversy, but were factually specific—Mann's alleged "deception," "wrongdoing," and "torturing" data "to achieve a deceptive but desired result that will court [university] funding."[43] Along with charges of Penn State's cover-up of Mann's wrongdoing and likening Mann to the notorious Jerry Sandusky, the allegations

> [A]re not . . . purely for rhetorical effect [, but rather] . . . deliver an indictment of reprehensible conduct against Dr. Mann that a reader could take to be an assertion of a true fact. These injurious allegations about Dr. Mann's character and his conduct as a scientist are capable of being verified or discredited. If they are proven to be false, the statements breach the zone of protected speech.[44]

Since Steyn's statements could be defamatory, Mann demonstrated that a jury could find both (i) that Steyn's accusations were "published to a third party" and (ii) that he "either knew [his] accusations of misconduct were false or made those accusations with reckless disregard for their truth."[45] Steyn knew of the public and extensive investigations of Mann's work, "conducted by credentialed academics and professionals," unanimously rejecting the charges of misconduct.[46]

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40 *Id.* at *11; the motion to dismiss "pursuant to the D.C. Anti-SLAPP Act" was "denied for the same reasons." *Id*. at *12.

41 *See* Competitive Enter. Inst. v. Mann, 150 A.3d 1213 (D.C. 2016). The route to the appeal was somewhat convoluted. The Defendant asked the trial court to vacate the denials of their motions, which was denied; Defendants then moved for certification for interlocutory appeal, which was denied, after which Defendants' appeal was dismissed as moot due to Mann's amended complaint filed on June 28, 2013 (virtually unchanged except for the addition of a libel claim based on the comparison of Mann to Jerry Sandusky). Motions to dismiss were renewed and opposed, and denied, and certification for appeal was again denied by the trial court. On appeal, jurisdiction and the appealability of the orders was questioned and briefed, as well as the merits, and all issues were addressed; see *id.* at 1226.

42 *Id.* at 1227.

43 *Id.* at 1248.

44 *Id.* at 1248 (citations omitted).

45 *Id.* at 1250–53.

46 *Id.* at 1253–54.

A reasonable jury could, therefore, find by clear and convincing evidence that Steyn's accusations were made with actual malice.[47] With respect to Steyn, the denial of the special motion to dismiss was affirmed, and the case was remanded to the trial court.[48] The Defendants' request for en banc review was denied on December 27, 2018, and on May 23, 2019, Defendants filed a certiorari petition to the Supreme Court.[49]

3. [Not] at the U.S. Supreme Court

Although certiorari was denied,[50] Justice Alito dissented:

> The petition now before us presents two questions: (1) whether a court or jury must determine if a factual connotation is "provably false" and (2) whether the First Amendment permits defamation liability for expressing a subjective opinion about a matter of scientific or political controversy. Both questions merit our review.[51]

As to the first, there is a division in the lower courts over whether the determination that a statement is provably false is a question of law or a matter for the jury's understanding; that split "deserves a place on our docket."[52] The D.C. Court of Appeals, in this case, "le[ft] it for a jury to decide whether it can be proved as a matter of fact that Mann improperly treated the data in question."[53]

But two factors, Justice Alito argued, make that choice especially important: (i) the technical question of whether a statement about Mann's use of data could be "factually false" may be difficult for jurors to understand; and (ii) the climate change controversy raises a risk that a juror might have a preference for the views of one party over another in a defamation suit.[54] The latter factor reflects a justifiable concern that a jury might be deciding a scientific controversy—e.g., is there human-

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47 *Id.* at 1258, 1260–61 ("A jury could find, by clear and convincing evidence, that appellants 'in fact entertained serious doubts' or had a 'high degree of awareness' that the accusations that Dr. Mann engaged in scientific misconduct, fraud, and deception, were false, and, as a result, acted 'with reckless disregard' for the statements' truth when they were published." (citation omitted). "Once discovery is completed, the legal conclusion that the evidence is sufficient to go to trial could change." *Id.* at 1258 n.61).

48 *Id.* at 1261.

49 Nat'l Rev., Inc. v. Mann, *cert. denied*, 140 S. Ct. 344 (2019).

50 *Id.*

51 *Id.* at 345 (Alito, J., dissenting).

52 *Id.*

53 *Id.*

54 *Id.* at 346.

caused global warming?—rather than deciding whether a provable fact had been denied—e.g., did Mann manipulate data?

The second question (quoted above) is perhaps more important for Justice Alito, since the Constitution protects robust debate and free expression on political and social issues—restrictions should be closely scrutinized to avoid silencing unpopular views.[55] There is a line between merely expressing an opinion on a controversial issue and expressing an opinion that asserts a fact: "When an allegedly defamatory statement is couched as an expression of opinion on the quality of a work of scholarship relating to an issue of public concern," Justice Alito asks, "on which side of the *Milkovich* line does it fall?"[56] We protect all kinds of speech, but we ought to be vigilant "in cases involving disfavored speech on important political or social issues," like climate change, to ensure all opinions are heard.[57]

While expressing no opinion on Mann's defamation claim, Justice Alito concluded that the standard to be applied should be clarified by the Court.[58] One might be concerned, however, because Justice Alito emphasizes the importance of protecting "journalists and others who use harsh language in criticizing opposing advocacy on one of the most important public issues of the day,"[59] but he does not mention the importance of protecting scientists and science from attack, as well as the citizenry from disinformation. Additionally, Justice Alito highlights the fact "that the decision now before us is interlocutory and

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55 *Id.* at 346–47.

56 *Id.* at 347 (Alito, J., dissenting) (Justice Alito questioned the clarity of the line drawn in *Milkovich* and believed it would greatly benefit from clarification by the Court).

> [A] defamation claim could be asserted based on the statement: "In my opinion John Jones is a liar" [because it] implied knowledge that Jones had made particular factual statements that could be shown to be false. . . . [A] statement that could not provide the basis for a valid defamation claim[:] "In my opinion Mayor Jones shows his abysmal ignorance by accepting the teachings of Marx and Lenin." . . . Although *Milkovich* asserted that its hypothetical statement about the teachings of Marx and Lenin would not be actionable, it did not explain precisely why this was so. Was it the lack of specificity or the nature of statements about economic theories or all scholarly theories or perhaps something else?

Id. (citations omitted).

57 *Id.* at 348.

58 *Id.* at 348 ("I recognize that the decision now before us is interlocutory and that the case may be reviewed later . . . . But requiring a free speech claimant to undergo a trial after a ruling that may be constitutionally flawed is no small burden . . . . A journalist who prevails after trial in a defamation case will still have been required to shoulder all the burdens of difficult litigation and may be faced with hefty attorney's fees. Those prospects may deter the uninhibited expression of views that would contribute to healthy public debate.").

59 *Id.* at 344.

. . . the case may be reviewed later if the ultimate outcome below is adverse to" the Defendants, a prospect that may strike fear into scientists who have been attacked for their views on controversial issues such as vaccination requirements or climate change.[60]

4. The Jury Trial

On August 29, 2019, Mann won a dismissal of Steyn's counterclaims under the District of Columbia's anti-SLAPP Act, as well as Steyn's claims of a constitutional tort and "abusive litigation."[61] Steyn's motion for summary judgment was denied on July 22, 2021, as was Mann's motion for partial summary judgment,[62] but on March 19, 2021, the *National Review* succeeded in its motion for summary judgment.[63] The trial finally began on January 16, 2024.[64] Some critics of the outcome argue that the trial seemed to be more about the validity of global warming than the falsity of the allegations against Mann. For example, Mann testified that he felt the Defendants "were not just criticizing him, but they were attacking all of climate science."[65] In his closing argument, "Mann's lawyer asked the jury to send a message to right-wing science deniers and Trump supporters with a large punitive

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60 *Id.* at 348.

61 *See* 08/29/2019 Order, Mann v. Competitive Enter. Inst., CLIMATE CHANGE LITIG. DATABASES, https://climatecasechart.com/case/mann-v-competitive-enterprise-institute/ [https://perma.cc/XM94-4QMR] (last visited May 18, 2025).

62 *See* 07/22/2021 Order, Mann v. Competitive Enter. Inst., CLIMATE CHANGE LITIG. DATABASES, https://climatecasechart.com/case/mann-v-competitive-enterprise-institute/ [https://perma.cc/XM94-4QMR] (last visited May 18, 2025).

63 Anthony J. Dick, *National Review Prevails in High-Profile Defamation Case*, JONES DAY (Mar. 2021), https://www.jonesday.com/en/practices/experience/2021/03/national-review-prevails-in-highprofile-defamation-case [https://perma.cc/A26U-R7AW].

> National Review . . . could not be held liable for Steyn's post because Steyn was not an employee of National Review; no National Review employee played any role in Steyn's post; and Steyn's state of mind could not be attributed to National Review in the absence of an employment relationship. The court's ruling is important . . . because it ensures that the First Amendment protects the right of a publisher to host a discussion forum where third parties can post commentary on public issues without pre-vetting.

Id.

64 See 01/16/2024 Order, Mann v. Competitive Enter. Inst., Climate Change Litig. Databases, https://climatecasechart.com/case/mann-v-competitive-enterprise-institute/ [https://perma.cc/XM94-4QMR] (last visited May 18, 2025).

65 Roger Pielke, Jr., *False Equivalence: Making Sense of Michael Mann's Resounding Defamation Victory*, THE HONEST BROKER (Feb. 9, 2024), https://rogerpielkejr.substack.com/p/false-equivalence [https://perma.cc/X3KM-Y8YG].

damage award."[66] That is likely why Judge Alfred Irving "reminded the jury . . . before they deliberated that their job was not to decide 'whether there's global warming.'"[67] On February 8, 2024, a jury returned a judgment for Mann against Steyn in the amount of $1 in compensatory damages and $1,000,000 in punitive damages.[68]

C. The Contours of Defamation in Scientific Controversies Remain

The context of the Mann defamation suit—debates about the causes or existence of global warming—is an ongoing controversy, involving polarized positions, intense rhetoric, "scientific questions and policy prescriptions of general public interest."[69] But Mann's lawsuit was not about the scientific truth(s) concerning climate change, since courts will not resolve scientific questions. As the court in *Mann* explained,

> To the extent statements in [Defendant's] articles take issue with the soundness of Dr. Mann's methodology and conclusions—i.e., with ideas in a scientific or political debate—they are protected by the First Amendment. But defamatory statements that are personal attacks on an individual's honesty and integrity and assert or imply as fact that Dr. Mann engaged in professional misconduct and deceit to manufacture the results he desired, if false, do not enjoy constitutional protection and may be actionable.[70]

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66 *Id.*; *see also* Peter W. Wood, *The Long Road to the Steyn Verdict*, THE AM. CONSERVATIVE (Apr. 23, 2024), https://www.theamericanconservative.com/the-long-road-to-the-steyn-verdict/ [https://perma.cc/8CWU-BTNY] ("[I]n the closing minutes of the trial, Mann's lawyer . . . turned the case into a referendum on Donald Trump . . . . [He] urged the jury to award punitive damages to send a message to others who might engage in 'climate denialism,' which he likened to Trump's 'election denialism.'").

67 Suman Naishadham, *Jury Awards Climate Scientist Michael Mann $1 Million in Defamation Lawsuit*, ASSOCIATED PRESS (Feb. 8, 2024, 6:36 PM), https://apnews.com/article/climate-change-defamation-michael-mann-penn-state-61289ee2d8d2143768d28995c83899ef [https://perma.cc/CH4R-SYNQ].

68 *See* 02/08/2024 Verdict, Mann v. Competitive Enter. Inst., CLIMATE CHANGE LITIG. DATABASES, https://climatecasechart.com/case/mann-v-competitive-enterprise-institute/ [https://perma.cc/XM94-4QMR]. The verdict against Simberg was in the amount of $1 compensatory and $1,000 punitive damages. *See id.* Professor Lidsky at the University of Florida "said it was clear the jurors found that Steyn and Simberg had 'recklessly disregarded the falsity of their statements.'" *See* Naishadham, *supra* note 67. For a different perspective:

> There is a case to be made that Simberg actually won his case, suffering only $1,001 in damages, and that the big loser was Steyn. Further, a case can be made that had Steyn not represented himself, he too may have won in similar fashion. Perhaps.

Pielke, *supra* note 65, n.7.

69 Competitive Enter. Inst. v. Mann, 150 A.3d 1213, 1242 (D.C. 2016).

70 *Id.*

To illustrate, a recent case in Virginia, *Malone v. WP Co., LLC*,[71] was similar to Mann's case, but with an important difference and therefore a different outcome. Dr. Robert W. Malone sued for defamation when *The Washington Post* published an article stating that Dr. Malone's views on COVID-19 vaccines were wrong, dangerous, and discredited (bolstering "a movement of misinformation"), and that he repeated falsehoods in a speech on the steps of the Lincoln Memorial.[72] The case was dismissed on multiple grounds following a motion by *The Washington Post* for not stating "a plausible claim for relief."[73] The court found that the statements were not actionable because they were "opinions in a scientific debate and, thus, not demonstrably false."

> Courts have . . . been reluctant to "pick sides in . . . scientific debate[s]." . . . Here, all the statements at issue are part of the scientific debate over the efficacy of COVID-19 vaccines. . . . No doubt, "Plaintiff may wish to defend in Court the credibility of [his] conclusions about the dangers of vaccines, the validity of the evidence [he] offers in support of those theories, and the policy choices that flow from those views—as well as [his] own credibility for having advanced those positions." But "[s]cientific controversies must be settled by the methods of science rather than by the methods of litigation."[74]

The *Malone* court relied heavily on another recent, similar case, *McCullough v. Gannett, Co.*[75] In *McCullough*, the court dismissed the defamation claim by Dr. Peter McCullough based inter alia on a news story quoting Dr. Anuj Malik, who called Dr. McCullough's views on COVID-19 vaccines dangerous and "pure quackery," and a second article stating that Dr. McCullough was "fired for spreading COVID misinformation," and that he was "largely discredited by the scientific community" for his views.[76] Allegations of dangerousness or quackery

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71 Malone v. WP Co., LLC, No. 3:22-cv-00046, 2023 WL 6447311 (W.D. Va. Sept. 28, 2023).

72 *Id.* at *1.

73 *Id.* at *3. Notably, but not discussed in the text above, the court failed to find actual malice, viewing Dr. Malone's allegations of Defendant's knowledge of falsity or its recklessness as "either irrelevant, conclusory, or false . . . ." *See id.* at *6; the court also rejected Dr. Malone's claim of defamation by implication as conclusory. *See id.* at *7.

74 *Id.* at *4–5 (citations omitted) (quoting McCullough v. Gannett, Co., No. 1:22-cv-1099, 2023 WL 3075940, at *7 (E.D. Va. Apr. 25, 2023)); *see also* Arthur v. Offit, No. 1:09-cv-1398, 2010 WL 883745, at *6 (E.D. Va. Mar. 10, 2010); *see also* Underwager v. Salter, 22 F.3d 730, 736 (7th Cir. 1994).

75 McCullough, 2023 WL 3075940.

76 *Id.* at *2–3.

are not, however, actionable—they represent "hyperbolic language" that is "not provably false."[77] By contrast, the allegations in the second article (being fired and discredited) are provably false and actionable, *but* Dr. McCullough failed to show actual malice *and* the Defendant had immunity provided by Virginia's anti-SLAPP statute.[78]

In both of the above cases, the courts' analyses were consistent with the legal analysis in the *Mann* case, even though the result in Mann was a surprise to many. Media responses to the verdict were divided along the lines of our politically polarized nation. Steyn's defenders saw the damages award as an injustice that could have a chilling effect on right-wing bloggers,[79] while Mann's supporters saw new opportunities to stop attacks on scientists and announce inconvenient truths to ideological denialists.[80] I explore that polarization in the next Section.

II
THE CRISIS OF EXPERTISE AND ITS RESOLUTION[81]

A. The Culture Wars: A Polarized Society

We hear the questions so often nowadays from colleagues, friends, and family members, whether in discussions of climate change[82] or

77 *Id.* at *8 ("it would be impossible to prove the falsity of Dr. Malik's statement that Dr. McCullough's views are 'dangerous to the public and pure quackery'").

78 *Id.* at *15–16.

79 *See, e.g.*, Pielke, *supra* note 65; *see also* Wood, *supra* note 66.

80 *See, e.g.*, Diane Bernard & Adam Lowenstein, *Michael Mann Wins $1 Million Verdict in Defamation Trial*, DESMOG (Feb. 8, 2024), https://www.desmog.com/2024/02/08/michael-mann-wins-defamation-trial-climate-deniers-rand-simberg-mark-steyn/ [https://perma.cc/NFV8-KTQE] ("Standing in front of the courthouse smiling with his legal team after the verdict was read, Mann [said,] . . . 'One million dollars in punitive damages makes a statement . . . . This is about the defense of science against scurrilous attacks, and dishonest efforts to undermine scientists who are just trying to do our job.' Mann also noted that the trial was about defamatory statements made in an effort to discredit scientists 'whose findings might prove inconvenient to certain ideologically driven individuals and outlets.'").

81 The narrative, arguments, and sources in this Section, concerning the crisis of expertise, are an updated and expanded version of an analytical framework initially developed by the author in two previous publications, namely (i) David S. Caudill, *Trust in Science: The Crisis of Expertise as an Ideological, and Not Only a Scientific, Controversy*, 40 QUINNIPIAC L. REV. 237 (2022), and (ii) DAVID S. CAUDILL, EXPERTISE IN CRISIS: THE IDEOLOGICAL CONTOURS OF PUBLIC SCIENTIFIC CONTROVERSIES (Bristol University Press, 2023). Any reader familiar with either or both of those publications will recognize their similarities in this revision.

82 Regarding the scientific consensus on human-caused global warming, see John Cook, *Countering Climate Science Denial and Communicating Scientific Consensus*, OXFORD RSCH. ENCYCLOPEDIAS OF CLIMATE SCI. (2016), https://doi.org/10.1093/acrefore

vaccine safety:[83] "How can those people ignore the obvious facts? How can they be so lost in their bubble? Who are their so-called experts?" And of course, I do not mean to imply that it is only one side in the culture wars asking those questions. Both sides view the other as living inside a bubble or an echo chamber.[84] Fox News and CNN are said to "report as if from alternate universes."[85] These divisions have legal and policy consequences, as we have seen in the suggestion the Trump administration reflected an antiscientific bias in appointments to head science-related government agencies as well as in its response to the COVID-19 pandemic.[86] And while scholars agree that twenty-first century technological growth and the digital age has exacerbated the

/9780190228620.013.314 [https://perma.cc/4NMQ-6AJV]; Market research, however, shows that many voters "believe that there is no consensus about global warming in the scientific community." *Id.* (quoting Frank Luntz, "The environment: A cleaner, safer, healthier America," report by *Luntz Research Companies*, Alexandria, VA (2002)).

83 Concerns over vaccines causing autism were legitimized by a 1998 study by Dr. Andrew Wakefield in *The Lancet* medical journal, but that article was retracted on Feb. 2, 2010, due to accusations of unethical and irresponsible research. *See* Adam Hadhazy, *Anti-Vaccination Groups Dealt Blow as Lancet Study Is Retracted*, POPULAR MECHS. (Feb. 5, 2010), https://www.popularmechanics.com/science/health/a5008/4344963/ [https://perma.cc/SR4G-7USS]; During the COVID-19 pandemic, there were concerns, likely unjustified, about the dangers of COVID-19 vaccines; *see* Kelly McLaughlin and Yelena Dzhanova, *Experts Warn Anti-Vaxxer Concerns About a COVID-19 Vaccine Could Slow the End of the Pandemic*, BUS. INSIDER (Dec. 3, 2020), https://www.businessinsider.com/anti-vaxxers-concern-covid-19-vaccine-unhelpful-experts-say-2020-12 [https://perma.cc/3RN4-FAR3].

84 Some argue that the term "filter bubble"—a state of intellectual isolation brought on by website algorithms that filter out disagreeable information—is an advance over the term "echo chamber." *See* ELI PARISER, THE FILTER BUBBLE: HOW THE NEW PERSONALIZED WEB IS CHANGING WHAT WE READ AND HOW WE THINK (2011).

> In the filter bubble, there's less room for the chance encounters that bring insight and learning . . . . By definition, a world constructed from the familiar is a world in which there's nothing to learn. If personalization [via filters] is too acute, it could prevent us from coming into contact with the . . . preconception-shattering experiences and ideas that change how we think about the world and ourselves.

Id. at 15. Moreover, when a filter bubble occupant does confront an opposing perspective, logical arguments may not sound compelling due to identity politics:

> [P]olitics is not just about making the most logical argument. It also needs to be appealing to the imagination and identity of the people it concerns, and is often a case of trying to convince people "who we are" in terms of shared identity and values.

MARCUS GILROY-WARE, AFTER THE FACT?: THE TRUTH ABOUT FAKE NEWS (2020).

85 Reed Richardson, *Dueling Chyrons: CNN, Fox News Report from Alternate Universes During Trump's Bizarre Coronavirus Briefing*, MEDIAITE (Apr. 13, 2020), http://www.mediaite.com/news/dueling-chyrons-cnn-fox-news-report-from-alternate-universes-during-trumps-bizarre-coronavirus-briefing/ [https://perma.cc/VM64-5D9T].

86 *See, e.g.*, Shi-Ling Hsu, *Anti-Science Ideology*, 75 U. MIAMI L. REV. 405 (2021).

"tribal" divisions in the United States and internationally,[87] the phenomenon of citizens living in "two different worlds," in "alternative realities," is hardly new. A sixteenth-century example is the sharp division between Catholics and Calvinists during the Protestant Reformation in Europe. Each side was convinced of both the righteousness of their cause—not only of their beliefs but of their acts of violence—and the dangerous blasphemy of the other.

More recently, about thirty years ago, Michiel Schwarz and Michael Thompson, focusing on risk assessment in policy contexts, highlighted the role of cultural cognition in ongoing clashes of contradictory certainties and plural rationalities.[88] Thus, for example, the contradictory *certainties* held respectively by the producer of a genetically modified (GM) food product (that the product is safe) and an anti-GM activist (that the product is unsafe) can be explained by reference to differing perceptions of nature as, respectively, robust and vulnerable. For Schwarz and Thompson, contradictory views of nature "lie beyond the reach of both orthodox ('what are the facts?') scientific method and the conventional notion of 'decision making under uncertainty.'"[89] "Another way of putting it is that each actor is perfectly rational, given his or her convictions as to how the world is. The situation is one of *plural rationality* . . . ."[90]

The relevance of Schwarz and Thompson's analytical framework to our current circumstances is that while much has changed, we should not be provincial and assume that our contemporary cultural divisions over scientific matters are new. On the other hand, the COVID-19 pandemic brought a new set of bright-line divisions, causing many to assert that they have never seen this current level of distrust in consensus science before.

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87 *See, e.g.*, GILROY-WARE, *supra* note 84, at 5 ("[T]echnology platforms [enable] misinformation and disinformation . . . ."); *see also* Hsu, *supra* note 86, at 456 ("Social media certainly feeds oxygen to crackpot science . . . .").

88 MICHIEL SCHWARTZ & MICHAEL THOMPSON, DIVIDED WE STAND: REDEFINING POLITICS, TECHNOLOGY AND SOCIAL CHOICE 33 (1990) ("If different actors, in the same debate, cognize differently (that is, if they *see* things differently and *know* things differently), then they will inevitably be operating with different definitions of what is there. The debate, therefore, will entail the clash of differently drawn boundaries and the contention of incompatible rules of closure.").

89 *Id.* at 4.

90 *Id.* at 6.

B. Expertise in Crisis

What we now call the crisis of expertise[91] seems to be a subpart of the broader "culture wars," the latter of which might include the tribal divisions in the United States (and many other countries) based on differing political parties, human values, economic priorities, and so forth. The "crisis of expertise," on the other hand, refers initially to the distrust of consensus science on the part of a movement or group of citizens, and in most cases those same citizens' strong belief in alternative, minority "scientific" views. The crisis also refers to the politicization of science, insofar as those who, for example, believe in "man-made" climate change (or in the efficacy of mask wearing during a pandemic), and those who do not, become associated with opposing political parties and even opposing politicians (who, like ordinary citizens, may or may not trust consensus science).[92]

Numerous explanations of this phenomenon, and various proposed solutions, are identifiable, but it is not likely that "Trust Science, Not Morons" t-shirts, or the claim that those who doubt consensus science are simply ignoring the "cold, hard facts" produced by science, solve anything. Those on the left who see the culture wars as a struggle between those with apolitical scientific facts against antiscientist ideologues are unwittingly oversimplifying matters. Even with something as clear as the much-needed coronavirus vaccine, there were

> all kinds of extra-scientific variables: moral assumptions about what kinds of vaccine testing we should pursue (one reason we didn't get the "challenge trials" that might have delivered a vaccine much earlier); legal assumptions about who should be allowed to experiment with unproven treatments; political assumptions about how much bureaucratic hoop jumping it takes to persuade Americans that a vaccine is safe.[93]

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91 The term "crisis of expertise" was popularized by Gil Eyal in GIL EYAL, THE CRISIS OF EXPERTISE (2019).

92 Other common examples of the politicization of science include the controversy over perceived dangers of COVID-19 vaccinations—see McLaughlin and Dzhanova, *supra* note 83—or the frequently made claim that the Trump administration downplayed or did not take the pandemic seriously—see Justine Coleman, *Poll Shows Majority of Americans Say Trump Did Not Take COVID-19 Risk Seriously*, THE HILL (Oct. 4, 2020), https://thehill.com/homenews/administration/519516-almost-three-quarters-of-americans-think-trump-did-not-take-necessary/ [https://perma.cc/ZG85-55TJ].

93 Ross Douthat, *When You Can't Just 'Trust the Science,'* N.Y. TIMES (Dec. 19, 2020), https://www.nytimes.com/2020/12/19/opinion/sunday/coronavirus-science.html [https://perma.cc/PPP8-YTLD].

It is never as simple as "following the science." If one assumes science is always right, that position is easily attacked by highlighting the publication by *The Scientist* of the "Top Retractions of 2020."[94]

> The cliché is that people should "follow the science" and do whatever "science says." But the truth is that science says many things at once. Science says that the coronavirus can last one month on surfaces; it also says it's vanishingly rare to get the coronavirus from surfaces. Bad studies, good studies, and mediocre studies are all part of the cacophonous hydra of "science" that is constantly "saying" stuff.[95]

To build trust in science, one needs to be honest about its limitations. Columbia Professor Gil Eyal, in *The Crisis of Expertise* (2019), highlighted how, in an age so dependent on science and expertise, we are seemingly witnessing "increased suspicion, skepticism, and dismissal of scientific findings, expert opinion, or even whole branches of investigation."[96] One problem for scientific expertise in regulatory contexts, Eyal notes, is that scientists cannot simply appeal to "facts"—rather, they have "estimates, models, predictions, forecasts, points on a graph, [and] expert judgments . . . ."[97] The latter, the judgments made in contentious policy disputes, are "trans-scientific" ("Expertise is our name for this realm")—overcoming the inevitable incompleteness of data requires "presuppositions, assumptions, 'priors,' heuristic conventions, 'acceptable levels,' cutoffs, and so on."[98]

Cornell Professor Rogers Brubaker observes that in the crisis of expertise, common sense or lay expertise is "valorized," complexity is

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94 Retraction Watch, *The Top Retractions of 2020: The Retraction Watch Team Takes a Look at the Most Important Publishing Mistakes This Year*, THE SCIENTIST (Dec. 15, 2020), https://www.the-scientist.com/the-top-retractions-of-2020-68284 [https://perma.cc/J4XH-GKAC]. With respect to COVID-19, a research article claiming that the virus was transmitted through surface contact—see Shane Riddell et al., *The Effect of Temperature on Persistence of SARS-CoV-2 on Common Surfaces*, 17 VIROLOGY J. (art 145) 1–7 (2020)—was found to be "a greatest-hits compilation of research errors." *See* Derek Thompson, *Hygiene Theater Is Still a Huge Waste of Time*, ATLANTIC (Feb. 8, 2021), https://www.theatlantic.com/ideas/archive/2021/02/hygiene-theater-still-waste/617939/ [https://perma.cc/YBX2-QYZ9] (grimy surfaces are not the problem; cleaning subways and buses every night is a waste of money).

95 Thompson, *supra* note 94.

96 EYAL, *supra* note 91, at 4.

97 *Id.* at 5–6.

98 *Id.* at 143–44 ("In the end, to rebuild confidence in science, Eyal seeks an institutional solution—a Republic of Trans-science, not based on the model of conventional science or on political think-tanks (or even on the democratization of science through lay 'expertise'), but instead an institution similar to retired U.S. Supreme Court Justice Breyer's notion of an elite civil service corps of inter-agency experts."); *id.* at 148–49; regarding Breyer's proposal, see STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION (1995).

distrusted, announced crises seem overblown as things get better, and the accessibility of a great deal of data makes it easy to find inconsistencies among expert reports.[99] The notion that "experts don't agree on anything" leads to both the "democratization of the means for assessing expertise" as well as a multiplication of pseudo-experts.[100] For example, in the recent lawsuit brought against manufacturers by weight loss drug users, the defense will likely be that no drug is risk free and the drugs are FDA approved: "[But] the FDA's credibility has been under attack. Conspiracy theories about the agency abound on social media. . . . A major legal challenge to weight loss drugs could contribute to the ongoing erosion of trust in the FDA itself."[101]

The digital era exacerbates this democratization, undermines epistemic authority, and rewards populist styles of confrontational and simplistic communication[102]—"anyone with a web browser and an internet connection [can] publish."[103] Brubaker concludes that we inhabit "radically different public worlds," constituted by what each side knows and believes, with no shared definitions of, for example, the COVID-19 pandemic.[104] The institution of science thus appears fragile, not robust, nowadays.

There are two institutions that some believe will solve the crisis of expertise, namely the law and the scientific establishment. In other words, why not just impose scientific *truths* through legal regulation? Or, alternatively, why not just have a majority of scientists announce a compelling consensus that everyone should accept? Both of these institutions, however, have failed, and will likely continue to fail, due

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99 *See* Recording of the Mellon Seminar (comments by Brubaker), *supra* note 6, at 11:49–12:45, 15:11–17:00.

100 *Id.* at 17:10–19:07 (comments by Rogers Brubaker); *see, e.g.*, Abby Olena, *2020 in Scientists' Own Words*, THE SCIENTIST (Dec. 23, 2020), https://www.the-scientist.com/2020-in-scientists-own-words-68307 [https://perma.cc/W422-TA2C] ("Now people are so confused about what science can give you—whether hydroxychloroquine works, it doesn't work, it's fake, it's not fake—that it's going to be very difficult for us scientists then to use any type of article or publication. Now that they know scientists can lie, who will believe us again?").

101 Ana Santos Rutschman, *Lawsuit Could Challenge Trust in Ozempic and Other Popular Weight Loss Drugs*, THE CONVERSATION (June 20, 2024, 8:24 AM), https://theconversation.com/lawsuit-could-challenge-trust-in-ozempic-and-other-popular-weight-loss-drugs-226775 [https://perma.cc/9N7P-VBNR].

102 Recording of the Mellon Seminar (comments by Brubaker), *supra* note 6, at 24:39–25:45.

103 GILROY-WARE, *supra* note 84, at 47.

104 Recording of the Mellon Seminar (comments by Brubaker), *supra* note 6, at 22:38–24:25.

to (i) the arguably recurrent capture of the legal system by political parties, and (ii) the fact that the consensus of a majority of scientists alone is not necessarily compelling nowadays. Indeed, due to these failures, the crisis of expertise sometimes seems intractable.

1. The Failures of Law

Does the solution to the crisis of expertise lie in better legal regulations, based on sound science? One response is that legal initiatives are sometimes ineffective. For example, "evidence suggests that broad mask mandates [did little] to reduce Covid caseloads [from 2020 to 2022]."[105] Another response is to point out that the law is subject to politics. While there may have been a conventional commitment to consensus science in governmental agencies, career advisory scientists can be fired and replaced by scientists with fringe views on matters such as global warming. A "law" by the legislature requiring that consensus science be followed would always be subject to manipulation (and to arguments that there is no consensus) and to repeal by a newly elected legislature.

Many commentators have highlighted *Jacobson v. Massachusetts*, where the U.S. Supreme Court rejected a challenge to smallpox vaccine requirements, as an example of law following science.[106] The Court held that

> the liberty secured by the Constitution of the United States to every person within its jurisdiction does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint. There are manifold restraints to which every person is necessarily subject for the common good. On any other basis organized society could not exist with safety to its members.[107]

One can object that this opinion reflected, and should be limited to, the extreme terror of the smallpox epidemic, but a greater challenge is Professor Scott Burris' concern about the "viability" of *Jacobson* now that recent "courts have unveiled a new view based less on the social contract than on a strong form of libertarianism."[108] Some courts during

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105 David Leonhardt, *Why Masks Work, but Mandates Haven't*, N.Y. TIMES (May 31, 2022), https://www.nytimes.com/2022/05/31/briefing/masks-mandates-us-covid.html [https://perma.cc/PJ55-LS8L].

106 Jacobson v. Massachusetts, 197 U.S. 11 (1905).

107 *Id.* at 26.

108 Scott Burris, *Individual Liberty, Public Health, and the Battle for the Nation's Soul*, THE REGUL. REV. (June 7, 2021), https://www.theregreview.org/2021/06/07/burris-individual-liberty-public-health-battle-for-nations-soul/ [https://perma.cc/S5U5-LE2X] (discussing Wisconsin Legislature v. Palm, 391 Wis. 2d 497 (2020), overturning

the COVID-19 pandemic followed *Jacobson*, as in the challenge to Indiana University's vaccine mandate,[109] but other states with conservative governors prohibited mandates by private employers—revealing "an odd libertarian streak that dislikes government orders to individuals but then says private employers shouldn't be free to choose."[110] In the pandemic, arguably, the major factor destabilizing attempts to require vaccination in retail establishments and places of employment was that the courts could not be relied upon consistently to settle controversies between consensus and fringe scientific beliefs.

Sometimes the legal system seems to support consensus science, as in the case of parents suing a school system for violating their children's constitutional rights by imposing a mask mandate—not only was the suit dismissed for lack of a credible legal claim, but the judge ordered the parents to pay $57,000 in attorneys' fees to the school system for its defense costs.[111] On the other hand, when the Biden administration tried to mandate COVID-19 vaccines for Air Force and Air National Guard servicemembers, a federal judge blocked the mandate because requests for religious exemptions were "sweepingly rejected"—and, of course, the government was "expected to swiftly appeal this decision . . . ."[112] Support for consensus science in legal contexts is clearly not uniform.

2. The Failures of Science

One encouraging feature of the crisis of expertise is the apparent trust, on both sides of the controversy, in scientific research and researchers.

Wisconsin's COVID-19 emergency measures; and County of Butler v. Wolf, No. 2:20-cv-677, 2020 WL 5647480 (W.D. Pa. 2020), overturning the Pennsylvania governor's pandemic restrictions).

109 *See* Klaassen v. Trustees of Indiana University, 549 F. Supp. 3d 836 (N.D. Ind. 2021).

110 Editorial Board, *To Mandate or Not to Mandate Vaccines*, WALL ST. J. (July 27, 2021), https://www.wsj.com/articles/to-mandate-or-not-to-mandate-vaccines-11627425858 [https://perma.cc/CN6M-GNZT].

111 Erika Hanson, *Judge Orders Parents to Pay Hefty Legal Fees in Dismissed School Mask Case*, GO2TUTORS (published 3 years ago), https://go2tutors.com/parents-pay-fees-mask-lawsuit/ [https://perma.cc/DC24-TH2D] (last visited May 18, 2025).

112 Jennifer Edwards Baker, *Cincinnati Federal Judge Blocks Air Force, Air National Guard Globally from Discharging Religious Vaccine Refusers*, WXIX CINCINNATI (July 28, 2022), https://www.fox19.com/2022/07/28/cincinnati-federal-judge-stops-air-force-air-national-guard-globally-discharging-religious-vaccine-refusers/ [https://perma.cc/E32R-VV4M].

> [P]ublic debates rarely feature open resistance to science; the parties to such disputes are much more likely to advance diametrically opposed claims about what the scientific evidence *really* shows. The problem, it seems, is not that members of the public are unexposed or indifferent to what scientists say, but rather that they disagree about what scientists are telling them.[113]

For that reason, arguing that those who believe in fringe scientific theories are antiscientific is less than helpful.[114] But that common belief in "science" is not enough to ensure a collective belief in consensus science, since there are scientists on both sides of many public debates, and people will believe one side or the other, based in part on their worldview—their cultural values and concerns. Research into the cultural cognition of risk indicates that individuals "credit or dismiss evidence of risk in patterns that fit values they share with others," and that research included how individuals credit or dismiss "evidence of what scientific expert opinion is on climate change and other risks."[115] We therefore cannot assume that individuals with diverse outlooks will agree on what scientific consensus is: "[C]ultural cognition influences perceptions of credibility. Individuals more readily impute expert knowledge and trustworthiness to information sources whom they perceive as sharing their worldviews and deny the same to those whose worldviews they perceive as different from theirs."[116]

Individuals also "tend to search out information congenial to their cultural predispositions," and to "systematically overestimate the degree of scientific support for positions they are culturally predisposed to accept."[117] Therefore, scientific consensus established by agreement among experts is not likely "to counteract the polarizing effects of cultural cognition"—those with diverse worldviews will not assess the

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113 Dan M. Kahan et al., *Cultural Cognition of Scientific Consensus*, 14 J. RISK RSCH., 147, 148 (2011).

114 *See, e.g.*, Hsu, *supra* note 86, at 405. Hsu identifies a right-wing attack on scientific research itself, an anti-science ideology, even as he acknowledges that "distrust of science is certainly not limited to . . . those on the political right." *See id.* at 410–12. Despite his effort to be fair, however, the analysis stops short of considering whether the Left has its own bubble—its own assumptions, interpretive lenses, values, cultural identifiers, and in short, its own ideology. Moreover, in his critique of the Trump administration as anti-scientific, an idealized narrative of science seems to appear, namely that Trump was ignoring scientific certainties. That narrative exacerbates the divisions of the crisis of expertise—critics of Trump should have acknowledged the uncertainties in their own risk analyses, and appealed to their current models, probabilities, and data, since the fringe scientists were at least claiming a scientific basis for their views.

115 Kahan et al., *supra* note 113, at 148.

116 *Id.* at 149–50.

117 *Id.* at 150, 166–67.

state of consensus in the same way.[118] Importantly, these conclusions are not a description of one side in the culture wars and crisis of expertise, but involve both sides—everyone has a worldview, which tends "to generate conflict in public deliberations."[119]

The authors of the foregoing study recognize that the "enfeebled power of scientific opinion" is not due to failure of experts to agree and disseminate their opinion:

> When shown risk information (e.g., global temperatures are increasing) that they associate with a conclusion threatening to their cultural values (commerce must be constrained), individuals tend to react dismissively toward that information; however, when shown that the information in fact supports or is consistent with a conclusion that affirms their cultural values (society should rely more on nuclear power), such individuals are more likely to consider the information open-mindedly.[120]

That analysis parallels the concerns in Frank Fischer's *Truth and Post-Truth in Public Policy* (2021): "It is not that facts are unimportant. Rather, it is that they gain meaning in the policy world from the social and political contexts to which they are applied. Thus, the social-subjective meanings that factual information have for political participants need to be brought into the analysis . . . ."[121]

Contrary to the views of some climate change scientists, better facts may not initially be effective to change the minds of those worried about loss of freedom and economic distress—"meanings drawn from ideological value orientations are used discursively to interpret factual data in denial arguments."[122]

C. The Complexity of the Crisis of Expertise

Analysis of the crisis of expertise is complicated by several qualifications, namely that distrust of expertise is sometimes justified, that genuine scientific controversies are common, that conspiracy theories are not always delusional, that politics can get in the way of expertise, and that sometimes the views of nonscientists should be considered.

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118 *Id.* at 150.

119 *Id.* at 170.

120 *Id.* at 169.

121 FRANK FISCHER, TRUTH AND POST-TRUTH IN PUBLIC POLICY 1 (2021).

122 *Id.* at 2.

1. Justifiable Distrust of [Some] Expertise

Sometimes the call to distrust government experts comes from qualified industry or academic experts. Many high-risk "Americans struggled to get COVID-19 antiviral pills," in part because federal prescribing guidance is seen as vague.[123] "[S]ome providers are reluctant to prescribe the pills due to uncertainty over how they interact with other drugs, how to apply the risk factors that qualify people for the treatment, and limited awareness on available supply."[124]

In the case of antiviral medicines like Pfizer Inc.'s Paxlovid or Merck & Co.'s molnupiravir, some infectious disease professors say existing guidelines "don't account for nuances in an individual patient's underlying conditions and medication profile."[125] Concerns with government expertise in this context would seem justified and therefore not exemplary of the crisis of expertise. Nonscientists, therefore, in some cases "can have good reasons to question scientific expertise."[126] Indeed, *pre*-Pandemic studies of public perception of expertise identified, as a factor informing judgments of expert trustworthiness, "the presence or absence of expert consensus on the topic"—absence would seem to justify some level of distrust.[127]

Likewise, distrust based on other conventional factors, including whether the expert (i) is perceived to be competent, (ii) adheres to scientific standards, or (iii) manifests integrity, appear justifiable.[128] In studies of public perception of expert trustworthiness *during* the COVID-19 pandemic, another highly influential factor was identified, namely expert independence from political elites. This factor often interacted with other factors to shape public opinion—e.g., lack of political independence was perceived as compromising integrity.[129] "In some cases, this interaction extended to people's assessment of expert's

123 Celine Castronuovo, *Pfizer Covid Pill Access Stymied by 'Vague' Prescribing Guidance*, BLOOMBERG L. (June 3, 2022, 2:35 AM), https://news.bloomberglaw.com/health-law-and-business/pfizer-covid-pill-access-stymied-by-vague-prescribing-guidance [https://perma.cc/DF8R-ZWBP].

124 *Id.*

125 *Id.*

126 Maja Horst, *Science Communication as a Boundary Space: An Interactive Installation About the Social Responsibility of Science*, 47 SCI., TECH. & HUM. VALUES 459, 461 (2022).

127 Sabina Mihelj et al., *Establishing Trust in Experts During a Crisis: Expert Trustworthiness and Media Use During the COVID-19 Pandemic*, 44 SCI. COMMC'N 292, 293 (2022). In more recent studies as well, "the perceived lack of expert consensus had a detrimental impact on perceived expertise." *Id.* at 304.

128 *Id.* at 293, 295.

129 *Id.* at 304.

handling of public communication; if an expert appeared in a media channel that the participants perceived as politically biased, or out of line with their own convictions, this negatively affected perceived trustworthiness."[130] Scientists are therefore advised, in such studies, to "seek to maintain professional independence," to avoid politicizing expert knowledge, and to carefully consider "suitable channels of communication."[131]

Distrust of expertise based on the factors identified above is both justifiable and irrelevant to the crisis of expertise, which, in most cases, concerns distrust of consensus science. The crisis of expertise is focused on the identifiable, growing phenomenon of *unjustified* distrust of mainstream scientific institutions and consensus science, whether on the basis of political affiliation, religious belief, feelings of estrangement, suspicions concerning elites, or even, with respect to climate change, fear that freedoms (including economic freedom) will be lost.

2. There Are Genuine Scientific Controversies

Public scientific controversies sometimes reflect genuine disagreements among credentialed scientists. However, these disagreements do not in any way signal a crisis of expertise. Science obviously progresses through rigorous debate, whether in the medical field or in climate science, with the hope that a consensus can be reached to settle the disagreements for the enlightenment of society. However, in some contexts, one side is following scientific methodology and the other is, in bad faith, "manufacturing" a controversy simply to call into question scientific consensus. "A scientific controversy is 'manufactured' in the public sphere when an arguer announces that there is an ongoing scientific debate in the technical sphere about a matter for which there is actually an overwhelming scientific consensus."[132] The idea of "manufactured" doubt was popularized by David Michaels in his book *Doubt Is Their Product: How Industry's Assault on Science Threatens Your Health*, which revealed the duplicity of tobacco companies.[133] Other common

130 *Id.* at 311–12.

131 *Id.* at 312.

132 Leah Ceccarelli, *Manufactured Scientific Controversy: Science, Rhetoric, and Public Debate*, 14 RHETORIC & PUB. AFFS. 195, 196 (2011).

133 DAVID MICHAELS, DOUBT IS THEIR PRODUCT: HOW INDUSTRY'S ASSAULT ON SCIENCE THREATENS YOUR HEALTH (2008).

examples include AIDS dissent in South Africa's health policy debates, politically motivated global warming skepticism, and the intelligent design campaign against teaching evolution in secondary schools.[134]

In genuine scientific controversies, there is at least fringe science and some data (even if minimal or weak, or mistaken) offered by honest scientists. For example, there is evidence that "scientists and experts (general practitioners, pediatricians, health care professionals and science journalists)" have seriously criticized "immunization policies and intervene[d] in the public debate" in Italy—this is not a manufactured controversy.[135] While there was scientific consensus supporting the government's policies during the COVID-19 pandemic, the intervention by some pediatricians was neither an example of fraud or bad faith, nor intentional "disinformation."[136]

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134 These are Ceccarelli's examples of manufactured controversies. *See generally* Ceccarelli, *supra* note 132. The AIDS dissent in South Africa is also the primary example of an artificial (not genuine) controversy offered by Martin Weinel, "Recognizing counterfeit scientific controversies in science policy contexts: a criteria-based approach." THE THIRD WAVE IN SCIENCE AND TECHNOLOGY STUDIES: FUTURE RESEARCH DIRECTIONS ON EXPERTISE AND EXPERIENCE (David S. Caudill et al. eds., 2019), at 53–70. Martin Weinel's identifies four criteria by which we can differentiate between genuine and "counterfeit" scientific controversies (if even one criterion is not met, it is not genuine):

1. Are the claims "conceptually continuous with science"?
2. Does the person making the claim have relevant expertise?
3. Is the claim supported "by some kind evidence"?
4. Is the claim subject to "an explicit argument" among scientists, or has it "reached the stage of implicit rejection" (that is, consensus)?

See id.

135 Giampietro Gobo & Barbara Sena, *Questioning and Disputing Vaccination Policies. Scientists and Experts in the Italian Public Debate*, 42 BULL. SCI., TECH. & SOC'Y 25, 25 (2022).

136 For an example of the distinction between a genuine and a bad faith manufactured controversy, the recent criminalization of medical treatment for transgender children in Texas and Alabama (on the basis that it constitutes child abuse) has been challenged as "biased science" because the medical claims justifying these new laws "are not grounded in reputable science and are full of errors of omission and inclusion." Susan D. Boulware et al., *Biased Science: The Texas and Alabama Measures Criminalizing Medical Treatment for Transgender Children and Adolescents Rely on Inaccurate and Misleading Scientific Claims*, Yale L. Sch. Pub. L. Rsch. Paper (Apr. 28, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4102374 [https://perma.cc/G4NL-QYHM] ("These errors, taken together, thoroughly discredit the . . . claim that standard medical care for transgender children and adolescents constitutes child abuse."). The authors of that challenge identify two possibilities: the laws' drafters might genuinely misunderstand "medical protocols and scientific evidence," in which case, this may be a public scientific controversy (for example, an anti-trans fringe group is "repeatedly" cited); or their misstatements are deliberate and therefore fraudulent, indicating no genuine scientific controversy (the authors state that "[t]hese are not close calls or areas of reasonable disagreement"). *Id.* (the drafters' findings

3. Conspiracy Theories Are Not Always Delusional

Jaron Harambam, in his recent ethnographic study of conspiracy groups (in one of which he was embedded), notes that over 20 years ago, Peter Knight (in his own study of conspiracy culture) observed a loss of trust in science, a conventional epistemic authority: "In highly mediatized societies in which scientific disputes are played out in the open, it becomes increasingly difficult, Knight argues, to know 'which expert to trust—and how to decide whether someone is indeed an expert.'"[137]

Conspiracy theorists look for inconsistencies to destabilize pronouncements by scientific experts, and often provide an alternative interpretation of the facts for their followers to "stage a contest over reality."[138] Of course, there are different types of conspiracy groups, so one cannot oversimplify and fail to see this difference between a collective belief that President Biden is a shapeshifting lizard, on the one hand, and a conspiracy theory about the government not revealing certain facts, which has happened, on the other. "It is . . . simply untenable," Harambam warns, "to argue that the belief in conspiracy theories is by definition delusional and paranoid."[139]

4. Politics and Expertise

Sometimes, political goals can get in the way of scientific expertise. For example, President Trump, during his 2024 presidential campaign, said, "the ocean's going to rise a quarter of an inch in the next 500 years," despite the fact that "sea level rise is actually occurring at an exponentially higher rate."[140] Even before Trump moved into politics, in 2009 when "Climategate" began, the number of Americans who believed "that greenhouse gases will cause average temperatures to increase" had dropped from 71% to 51%.[141] Recent polling suggests a partisan divide, with 78% of Democrats and 23% of Republicans

"ignore established medical authorities and repeat discredited, outdated, and poor-quality information").

137 JARON HARAMBAM, CONTEMPORARY CONSPIRACY CULTURE: TRUTH AND KNOWLEDGE IN AN ERA OF EPISTEMIC INSTABILITY 64 (2020).

138 *Id.* at 64.

139 *Id.* at 18.

140 Ja'han Jones, *During Rant on Fox News, Trump Doubles Down on Climate Lies*, MSNBC (Sept. 27, 2024, 12:07 PM), https://www.msnbc.com/the-reidout/reidout-blog/trump-hurricane-helene-fox-news-climate-change-rcna173037 [https://perma.cc/2FC4-MK3N].

141 Biello, *supra* note 12.

describing "climate change as a major threat to the country's well-being."[142]

And yet, there is scientific consensus

> over the reality of human-induced climate change. Scientists predicted a long time ago that increasing greenhouse gas emissions could change the climate, and now there is overwhelming evidence that it *is* changing the climate and that these changes are in addition to natural variability. . . . [S]ome of the changes that are now occurring are clearly deleterious to both human communities and ecosystems.[143]

In the scientific literature, there is very little dissent, which shows "that the mass media have paid a great deal of attention to a handful of dissenters in a manner that is greatly disproportionate with their representation in the scientific community."[144] Most contrarians, it seems, do no new scientific research but simply attack the works of others "in the court of public opinion and in the mass media rather than in the halls of science."[145]

In the previous Trump administration, concerns arose that consensus scientists were removed from regulatory agencies in an effort to relieve businesses from excessive environmental regulation. Newly appointed fringe scientific advisors doubted the seriousness of global warming.[146] The discretion given to agencies to decide how aggressively to enforce environmental laws is arguably a clear example of politics—the

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142 Alec Tyson et al., *What the Data Says About Americans' Views of Climate Change*, PEW RSCH. CTR. (Aug. 9, 2023), https://www.pewresearch.org/short-reads/2023/08/09/what-the-data-says-about-americans-views-of-climate-change/ [https://perma.cc/U76E-PFCB]; *See also* ANTHONY LEISEROWITZ ET AL., CLIMATE CHANGE IN THE AMERICAN MIND: BELIEFS & ATTITUDES: FALL 2023, at 3 (2024).

143 Naomi Oreskes, *The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong?*, *in* CLIMATE CHANGE: WHAT IT MEANS FOR US, OUR CHILDREN, AND OUR GRANDCHILDREN 73 (Joseph F. C. DiMento & Pamela Doughman eds., 2007) ("Therefore, when contrarians try to shift the focus of attention to natural climate variability, they are misrepresenting the situation. No one denies the fact of natural variability, but natural variability alone does not explain what we are now experiencing.").

144 *Id.* at 74.

145 *Id.* at 75 ("[T]he vast majority of materials denying the reality of global warming do not pass the most basic test for what it takes to be counted as scientific—namely, being published in a peer-reviewed journal. Contrarian views have been published in books and pamphlets issued by politically motivated think-tanks and widely spread across the Internet, but so have views promoting the reality of UFOs or the claim that Lee Harvey Oswald was an agent of the Soviet Union.").

146 *See, e.g.*, Coral Davenport & Eric Lipton, *Trump Picks Scott Pruitt, Climate Change Denialist, to Lead E.P.A.*, N.Y. TIMES (Dec. 7, 2016), https://www.nytimes.com/2016/12/07/us/politics/scott-pruitt-epa-trump.html [https://perma.cc/T4JE-QFKR].

political perspective of one party in power—eclipsing consensus science.

5. Listening to the Nonscientist Citizen

Finally, Andrew Lakoff has shown that there is evidence from the sociology of disasters indicating that the public should be listened to in some contexts.[147] Sometimes a nonscientist possesses knowledge, for example, about a farming operation that is superior to an agricultural scientist with academic credentials but no practical experience.[148]

The complexity of the crisis of expertise adds to the sense that it is difficult to solve—how can we eliminate these public science controversies that are artificial, that is, that are based on misinformation and could be settled if trust in consensus science was restored? I argue below that the Mann verdict offers a partial solution.

III
REACTIONS TO MANN'S VICTORY

A. From "Denialists"[149] on the Right

"I would not be surprised to now see a flurry of lawsuits against people who have been critical of climate science or climate scientists. Such legal action may not be limited to climate—debate over Covid-

147 *See* Recording of the Mellon Seminar (comments by Brubaker), *supra* note 6, at 1:36:00–1:37:00.

148 Brian Wynne, for example, sees a need for citizen participation in scientific decision making, based on his famous study of Cumbrian sheep farmers whose sheep suffered due to fallout from the Chernobyl disaster. *See* Brian Wynne, *Sheepfarming After Chernobyl: A Case Study in Communicating Scientific Information*, 31 ENV'T SCI. & POL'Y FOR SUSTAINABLE DEV. 10, 10–39 (1989). The sheep farmers knew more about how sheep walk around the pasture than the scientific experts studying the fallout and issuing a report, while the "experts" made mistakes because they did not know enough about the behaviors of sheep—hence Wynne's argument for citizen participation. Cardiff sociologists Harry Collins and Robert Evans, however, reject the idea that the concerns of ordinary citizens should be reflected in science. *See* HARRY COLLINS & ROBERT EVANS, WHY DEMOCRACIES NEED SCIENCE 16–18 (2017). In short, Wynne's sheep farmers were clearly not ordinary citizens, but rather experts in sheep farming—expertise does not require graduate degrees! Collins and Evans would limit the extension of technical decision-making rights to so-called lay experts, an oxymoron in the context of public policy. We need experts (based on formal training or relevant experience) participating in scientific decision making. Citizens who are not experts in the relevant scientific field (in any public or regulatory debate) should not only be excluded but also identified as illegitimate, external, political influences that should be resisted. *See id.*

149 *See* Wood, *supra* note 66 ("'Denialism' appears to be [Mann's attorney John Williams'] term for disagreeing with the left's established views").

19 also presents a target-rich environment for unwanted speech to silence."[150]

Some conservatives believe that the scientists involved in "Climategate," including Mann, were (i) considering ways to "bury the findings of other researchers who had discovered deep discrepancies in the warmist narrative" and (ii) discussing the "trick" to "make the existence of warm medieval temperatures disappear."[151] Mann's own research is viewed by some as "profoundly flawed," even as Penn State was determined, in their view, to "prop him up." Additionally, "Mann-ian" science has allegedly been "expertly deconstructed."[152] The verdict and award in Mann's lawsuit against Steyn are called, respectively, "absurd" and "outlandish."[153] As to global warming "hysteria," Peter Wood opines that

> the theory of catastrophic anthropogenic global warming is a compound of leftist ideology, mass delusion, biased, self-confirming pseudo-science, and over-interpretation of fragmentary and ambiguous data . . . Millions of people go along with so-called climate science because they don't know any better. A fair number of scientists are so psychologically invested in the theory that they are literally unable to question it.[154]

Wood concludes that since only 27% of Americans consider fighting climate change a top priority, climate change is "by definition a political issue."[155] I would, in contrast, consider that statistic to signal a crisis of expertise—a failure of belief in consensus science by a large segment of the U.S. population. Debates about global warming obviously have a political aspect, but to celebrate the lack of belief in consensus science is to suggest that the existence of global warming is a matter of personal belief.

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150 Pielke, *supra* note 65.

151 Wood, *supra* note 66 ("It was awkward that the Earth had warmed before the invention of the internal combustion engine or indeed the Industrial Revolution").

152 *Id.* (regarding the "trick," "[a]ny sensible person who cares about the integrity of science and good public policy should want to cure the problems presented by Mann's odd ways of conducting 'science.' There is no lack of earnest efforts by well-informed writers to do just that. A. W. Montford's *The Hockey-Stick Illusion: Climategate and the Corruption of Science* (2010) is a classic of the genre . . . .").

153 *Id.*

154 *Id.*

155 *Id.*

B. From Scientists

"We are so far outside the bounds of a civil conversation about facts that I hope this verdict can help us find our way back."[156]

Scientists followed the Mann case closely, given that "misinformation about climate change [grew] on some social media platforms," and seemed to view the verdict with the hope that critics will "think twice before they lie and defame scientists."[157] The verdict signaled that, without strong evidence, charges of "serious misconduct" on the part of scientists will not be tolerated.[158]

In addition to concerns about lies and defamation, our nation's increasing political polarization "has left many scientists . . . vulnerable to verbal abuse and harassment, both online and in person."[159] The scientific profession has become dangerous, subjecting climate (and, with respect to COVID-19 vaccination controversies, biomedical) scientists to threats, stalking, and physical confrontations.[160] A defamation lawsuit is not likely to help stop such abuses, except insofar as the Mann suit could reduce disinformation, the source of the misrepresentations that lead some people to attack scientists as public enemies.[161]

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156 Naishadham, *supra* note 67 (quoting Kate Cell, senior climate campaign manager, the Union of Concerned Scientists, where her job is tracking misinformation).

157 *Id.*; *see also* Julia Simons, *Climate Scientist Michael Mann Wins Defamation Case Against Conservative Writers*, NPR (Feb. 8, 2024, 8:39 PM), https://www.npr.org/2024/02/08/1230236546/famous-climate-scientist-michael-mann-wins-his-defamation-case [https://perma.cc/BN3N-3SPG] ("Kert Davies, director of special investigations at the Center for Climate Integrity, a climate accountability nonprofit . . . says while this ruling may not impact anonymous attackers online, the liability verdict and the dollar figure of this judgment may deter more public figures from attacks on climate scientists. 'It may keep them in check,' Davies says.").

158 Jeff Tollefson, *Climatologist Michael Mann Wins Defamation Case: What It Means for Scientists*, NATURE (Feb. 12, 2024), https://www.nature.com/articles/d41586-024-00396-y [https://perma.cc/S9P9-Z3MQ].

159 *Id.* ("Climate scientists have become accustomed to such attacks over more than a decade; a global survey published last year indicated that scientists are suffering both physically and emotionally as a result.").

160 William Brangham & Dorothy Hastings, *Million-Dollar Legal Victory Shines Light on Conservatives' Attacks on Science*, PBS NEWS (Feb. 9, 2024, 6:40 PM), https://www.pbs.org/newshour/show/million-dollar-legal-victory-shines-light-on-conservatives-attacks-on-science [https://perma.cc/22FV-P2JA] (detailing comments by Dr. Peter Hotez in an interview).

161 *See id.*

C. The Promising Result of the Verdict

"The verdict represents 'a big victory for truth . . . '."[162] "[A]fter the verdict was read, Mann [said,] . . . 'This is about the defense of science against scurrilous attacks . . . .'"[163]

Given that courts do not decide scientific truth in defamation cases—challenges to a scientist's data as weak, or as failing to support the scientist's views, are not defamatory—it seems to make little sense to say that Mann's verdict is a victory for Scientific Truth or that the case was about defending science against attacks. However, the *effect* of Mann's verdict will likely be to reduce the level of disinformation on the internet.

Mark Steyn's goal was, of course, to cast doubt on the *science* of global warming, but attacking the science is difficult when there is an overwhelming consensus among credentialed scientists as to climate change. Steyn is free to argue that there is inadequate support for that strong consensus, but then he comes across as a believer in fringe science. He therefore chose another tactic, namely claiming that a leading climatologist had fraudulently manipulated his data, which, if true, would give a boost to contrarian views of global warming.[164] Even if the claim was not true (that is, it was disinformation, spread on Steyn's blog), Steyn, with rhetorical flair, could build an entire argument (using embarrassing emails that *could* sound like evidence was being ignored and by suggesting a *possible* conflict of interest and bias in Penn State's investigation) to convince a lot of people that the "hockey stick" graph is junk science. The Mann verdict removed that tactic and that type of disinformation (attacking a scientist's integrity with no evidence), leaving denialists the difficult option of attacking consensus science.

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162 Jeff Tollefson & Nature Mag., *What a Climatologist's Defamation Case Victory Means for Scientists*, SCI. AM. (Feb. 14, 2024), https://www.scientificamerican.com/article/what-a-climatologists-defamation-case-victory-means-for-scientists/ [https://perma.cc/TMV8-R9TK].

163 Bernard & Lowenstein, *supra* note 80; *see also* Rob Quinn, *Climate Scientist: Defamation Verdict Is a 'Victory for Science*,*'* NEWSER (Feb. 9, 2024, 10:59 AM), https://www.newser.com/story/346192/climate-scientist-scores-big-win-in-defamation-triai.html [https://perma.cc/R49A-ZNWL] ("Mann said the verdict . . . is a victory for science and scientists").

164 *See* Brangham & Hastings, *supra* note 160 ("[R]emember, the attacks denigrating science and trying to undercut science, both for climate science and biomedicine, is not just about the science. It's now gone the next step to attack the scientists and portray us as public enemies.").

CONCLUSION

Global warming, for better or worse, remains a genuine scientific controversy, defined as a debate between two credible scientific positions, even if one side is properly characterized as "fringe" or weak science. There is not a 100% consensus on climate change, and both sides have credentialed scientists and some evidence for their position.[165] Politically motivated global warming skepticism, however, is not a genuine scientific controversy—it is a manufactured controversy based on falsehoods and on misrepresentations that mislead some citizens. One solution is to remove artificial controversies from the field of public discourse by showing the falsity of a particular misrepresentation, thereby restoring trust in a scientific institution. There are very few contexts in which this can take place—the political sphere is notorious for never settling public scientific controversies in our polarized society.

Mann's defamation trial, however, presented a context for the settlement of *artificial* scientific controversies. The disinformation—the claim that Mann had manipulated the data behind his "hockey stick" graph—was provably false in a court of law, and it was left to the jury to hear evidence (the various investigations of Mann in the wake of Climategate) and find that Steyn's accusations were false and made with "maliciousness, spite, ill will, vengeance or deliberate intent to harm."[166]

Without minimizing the significance of the Mann verdict for scientists concerned about their reputation and their safety, the significance of the verdict for the crisis of expertise merits our attention—reducing disinformation helps reduce the dangerous effects of ignoring scientific expertise, whether with respect to healthcare or protection of the environment. Mann's victory is therefore exemplary of a legal decision with benefits, albeit indirect (the benefits have little to do with free speech doctrine), for social progress. Moreover, while courts do not purport to evaluate scientific truth, the finding that a

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165 *See, e.g.*, Earl J. Ritchie, *Fact Checking the Claim of 97% Consensus on Anthropogenic Climate Change*, FORBES (Dec. 14, 2016, 2:01 PM), https://www.forbes.com/sites/uhenergy/2016/12/14/fact-checking-the-97-consensus-on-anthropogenic-climate-change/ [https://perma.cc/9GFL-L3Z8] (97% is often claimed, but 80–90% is more likely).

166 Naishadham, *supra* note 67 (quoting 02/08/2024 Verdict, Mann v. Competitive Enterprise Institute, CLIMATE CHANGE LITIG. DATABASES, https://climatecasechart.com/case/mann-v-competitive-enterprise-institute/ [https://perma.cc/XM94-4QMR] (last visited May 18, 2025)).

scientist was unfairly attacked for manipulating data is at least a suggestion that the work was sound, even though a scientific position can always be questioned on scientific grounds.