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Government Misinformation Platforms

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ARTICLE

GOVERNMENT MISINFORMATION PLATFORMS

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There is a harmful mismatch between how information published by the government is perceived—as highly trustworthy—and the reality that it is often not. This Article shows that the government frequently collects information from third-party private entities and publishes it with no review or vetting. Although this information is riddled with errors and inaccuracies, scholars, policymakers, and the public treat the information with unwarranted confidence because it derives from the government. Further, institutional imprimatur (and consequent trust) attaches to information even tangentially associated with the government and to information where the government explicitly disclaims review.

This Article highlights the ubiquity of government platforms for private, unvetted information that is easily misinterpreted as authoritative. For example, the EPA encourages the public to rely on emissions data supplied by companies and unreviewed by the agency, the FDA disseminates official-looking information about drugs that is generated by drug manufacturers and posted without agency evaluation, and the CDC publicizes a database of potential vaccine side-effects to which anyone can submit unverified reports.

Many policies push open access to government information under the belief that the public can use this information for valuable ends. Greater access to government information is also touted as promoting transparency and democratizing governance. This Article argues that, contrary to scholarly consensus, policies to promote openness may instead spread misinformation, which often works against the goal of the institution disseminating the information and has broader social harms. These harms

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are aggravated by a growth in public access to government information via private intermediaries. Existing policy tools—disclaimers and sanctions—offer only an incomplete solution to the problem of government misinformation. This Article proposes new solutions including mechanisms to correct inaccurate information and methods to package information in ways that render it less misleading. Without reform, the push towards open access to government information may erode, not build, trust in government.

INTRODUCTION

Which do you trust more?

- A small company's website describing an experimental stem-cell therapy, or a report about the same on the National Institutes of Health's webpage.[1]
- A tweet stating that thousands of people have died after getting the Covid vaccine[2] or a table from the Centers for Disease Control and Prevention showing the same.[3]
- A press release from an inventor claiming to be the first to develop cold fusion[4] or a patent stating the same, granted by the Patent and Trademark Office (PTO) after examination by a technological specialist.[5]

You probably trust the government source more than the private source. Media literacy classes and librarians teach that information from the government "is considered to be from a credible source."[6] And legal scholarship emphasizes the reliability and trustworthiness of government

1 For a poignant illustration of this question, see Laurie McGinley, *Three Women Blinded by Unapproved Stem-Cell 'Treatment' at South Florida Clinic*, WASH. POST (Mar. 15, 2017, 5:00 PM), https://www.washingtonpost.com/news/to-your-health/wp/2017/03/15/three-women-blinded-by-unapproved-stem-cell-treatment-at-south-florida-clinic/ [https://perma.cc/5WY6-WKJN].

2 *See* Davey Alba, *Twitter Permanently Suspends Marjorie Taylor Greene's Account*, N.Y. TIMES (Jan. 2, 2022), https://www.nytimes.com/2022/01/02/technology/marjorie-taylor-greene-twitter.html [https://perma.cc/FZ5M-WMND] (describing a tweet from Marjorie Taylor Greene with this claim).

3 *See* Meredith Wadman, *Antivaccine Activists Use a Government Database on Side Effects to Scare the Public*, SCI. (May 26, 2021), https://www.science.org/content/article/antivaccine-activists-use-government-database-side-effects-scare-public [https://perma.cc/7ABN-QVGM] (discussing deaths reported in the CDC's Vaccine Adverse Events Reporting System (VAERS)).

4 *See* Stephen K. Ritter, *Cold Fusion Died 25 Years Ago, but the Research Lives on*, CHEM. & ENG'G NEWS (Nov. 7, 2016), https://cen.acs.org/articles/94/i44/Cold-fusion-died-25-years.html [https://perma.cc/9V3X-YVGL] (describing press conferences announcing alleged cold fusion developments).

5 *E.g.*, U.S. Patent No. 6,024,935 (issued Feb. 15, 2000) ("Lower-Energy Hydrogen Methods and Structures").

6 *Evaluating Internet Information*, UNIV. OF GA. ONLINE LIB. LEARNING CTR., https://www.usg.edu/galileo/skills/unit07/internet07_08.phtml [https://perma.cc/VA4C-5HB8] (last visited May 5, 2024).

information, often to advocate for increased public access to that information.[7] But the reality is far more complicated.

This Article showcases a different side of government information. Government institutions publish vast quantities of information for many purposes,[8] and frequently disseminate information that is *not* trustworthy. First, much government information is self-reported from private entities.[9] The state often publishes this information without any sort of vetting or review.[10] Perhaps unsurprisingly, unreviewed information contains many errors, both deliberate and unintentional.[11] Despite inaccuracies, consumers give the information unwarranted trust because it is associated with the government.[12] Audiences do not realize that government-published information is often not government-generated or government-reviewed.[13] The divergence between the perception that government information is highly credible and the reality that much of it is not creates significant potential for misinformation and other harms.

Let us revisit the examples above.

- A National Institutes of Health (NIH) website lists clinical trials.[14] Companies submit the information and the NIH does not "independently verify" it for accuracy.[15] One stem-cell therapy provider listed a procedure with the NIH that another stem-cell scientist described as "a form of advertising" to enhance the procedure's perceived legitimacy.[16] The unsafe procedure was not FDA- or NIH-reviewed,[17] and patients were permanently blinded.[18]

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7 *See, e.g.*, Mark Fenster, *The Opacity of Transparency*, 91 IOWA L. REV. 885, 898 (2006) (explaining and then critiquing the "[p]revailing strain[] of liberal democratic political theory and open government legislation [that] share the assumptions that the publicity of open government produces an informed and interested public, and by implication, that secrecy caused by opaque or closed government produces suspicious and/or ignorant masses").

8 For a general discussion of the push to publish additional government information, see Beth Simone Noveck, *Open Data: The Future of Transparency in the Age of Big Data*, *in* TROUBLING TRANSPARENCY 206-13 (David E. Pozen & Michael Schudson eds., 2018).

9 *See infra* Part II.

10 *See id.*

11 *See id.*

12 *See infra* Section II.B.

13 *See id.*

14 *Clinical Trials*, NAT'L INST. HEALTH, https://clinicaltrials.gov [https://perma.cc/C6H6-FQFZ] (last visited Jan. 23, 2023).

15 Clinical Trials Registration and Results Information Submission, 81 Fed. Reg. 64982, 64988 (Sept. 21, 2016).

16 McGinley, *supra* note 1.

17 Many clinical trials must be reviewed by the FDA before enrolling patients, but not all. Further, not all procedures listed on the NIH's clinical trial registry are actually clinical trials. Thus, some entries on the registry are not subject to FDA review. *See infra* subsection II.A.2.

18 McGinley, *supra* note 1.

Patients reported that they had assumed government endorsement because the procedure was on the NIH's website.[19]

- The Centers for Disease Control and Prevention (CDC) maintains a database where anyone can report adverse events that occur after (not necessarily because of) vaccination.[20] The CDC publishes the reports without vetting.[21] Opponents of vaccination highlight the reports—particularly their provenance with the CDC—in anti-vaccine claims.[22]
- Patent and Trademark Office (PTO) examines legal claims in patent applications.[23] The applications also contain scientific information, which is written by the applicants and is, as a practical matter, entirely unreviewed by examiners.[24] Despite this, patentees advertise a patent grant as evidence that the science is correct.[25] Yet patents are routinely obtained with fictional or false science and unworkable technologies.[26]

These are not isolated examples. This Article provides similar illustrations from the Securities and Exchange Commission (SEC), Environmental Protection Agency (EPA), Food and Drug Administration (FDA), Consumer Products Safety Commission (CPSC), the civil litigation system, and others.

There are good reasons for government institutions to publish privately generated information without vetting, most notably fast release of information and low cost.[27] But publicly promulgated misinformation also exacts a price. While the costs of misinformation—impairing common discourse, reducing confidence in institutions, and social polarization—are familiar,[28] misinformation disseminated by the state has additional consequences. Consumers of information tend to trust material from the government because they believe it has been selected and evaluated by

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19 *Id.*

20 *Vaccine Adverse Event Reporting System*, U.S. DEP'T HEALTH & HUM. SERVS., https://vaers.hhs.gov/ [https://perma.cc/K2TV-N2DX] (last visited Sept. 8, 2022).

21 *Vaccine Adverse Event Reporting System (FAQs)*, U.S. DEP'T HEALTH & HUM. SERVS., https://vaers.hhs.gov/faq.html [perma.cc/RRZ9-H2QQ] ("VAERS accepts reports of adverse events following vaccination without judging the cause or seriousness of the event.").

22 *See* Wadman, *supra* note 3 (describing an instance where media personality Tucker Carlson used data from VAERS to question vaccine safety).

23 *See* 35 U.S.C. § 131 ("The Director shall cause an examination to be made of the application and the alleged new invention . . . .").

24 *See infra* subsection II.A.4.

25 *See id.*

26 *See id.*

27 *See infra* Section III.A.

28 *See, e.g.*, Abby K. Wood & Ann M. Ravel, *Fool Me Once: Regulating "Fake News" and Other Online Advertising*, 91 S. CAL. L. REV. 1223, 1228-237 (2017) (collecting ways in which disinformation "hurts our democracy").

experts.[29] As shown in this Article, even information that is only tangentially associated with a government institution has the institution's imprimatur and is therefore perceived to be credible. The combination of apparent imprimatur and incorrect information makes unvetted information from the government a particularly powerful source of misinformation.[30]

Beyond the general harms of misinformation, incorrect information from government institutions imperils the ability of these institutions to carry out their mission. The NIH seeks to improve health, but its website misleads patients into trying unsafe treatments;[31] the CDC urges vaccination, but its recommendation is countered by the public's misinterpretation of the agency's own data;[32] the PTO tries to disseminate new discoveries so that science can progress more efficiently, but scientists waste time trying to build on unsubstantiated information.[33] Further, if the public discovers that information that the government avers is trustworthy is in fact unvetted and incorrect, it risks eroding confidence in government institutions and expertise, deepening the crisis of distrust in the State.[34]

Government misinformation has implications for scholars and policymakers. The ideal of openness and transparency directly motivates important policies: the Freedom of Information Act, an executive order that agencies should publicly release data, the bipartisan Open Courts Act which would eliminate fees for access to dockets, and others.[35] Scholars advocate for increased public access to government information both for purposes of accountability and because the government has (or has the capability to acquire) substantial amounts of information that can be usefully applied towards a broad range of goals.[36] Cass Sunstein notes that much government

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29 *See* Helen Norton, *The Measure of Government Speech: Identifying Expression's Source*, 88 B.U. L. REV. 587, 594 (2008) (explaining that government "endorsement gives the ideas it trumpets . . . more acceptance than they would otherwise enjoy").

30 *See infra* Section II.C.

31 *See, e.g.*, McGinley, *supra* note 1 (noting that the patients incorrectly believed that they were participating in a government-sanctioned trial).

32 *See* Wadman, *supra* note 3 (detailing how the public misinterpreted vaccine data from the CDC's VAERS).

33 *See* Janet Freilich & Lisa Larrimore Ouellette, *Science Fiction: Fictitious Experiments in Patents*, 364 SCI. 1036, 1036-37 (2019) (describing how reliance on "prophetic examples," predicted—but not actual—experimental results, creates confusion).

34 *See infra* Section II.C.

35 *See infra* Section I.A.

36 *E.g.*, Atinuke O. Adediran, *Disclosures for Equity*, 122 COLUM. L. REV. 865, 876 (2022) (noting that "[p]ublicly available government data is crucial to . . . understanding racial and ethnic disparities [and] to establishing laws and policies to address these disparities"); Oona A. Hathaway, Curtis A. Bradley & Jack L. Goldsmith, *The Failed Transparency Regime for Executive Agreements*, 134 HARV. L. REV. 629, 694 (2020) (recommending disclosure of information pertaining to executive agreements); Margaret B. Kwoka, *FOIA, Inc.*, 65 DUKE L.J. 1361, 1429 (2016) (arguing for "[t]argeted, strategic affirmative disclosure"); Christopher J. Morten, *Publicizing Corporate Secrets*, 171

information should be "freely available to the public as a matter of course" because the benefits "are significant" and "the costs . . . are trivial."[37] To the extent that there is scholarly pushback against openness, it involves worries that agencies are overburdened, that access to information is uneven in practice, and that the government struggles with controlling both secrets and transparency.[38] In this line of critique, scholars are concerned about process but do not question the benefits of the information itself.[39]

This Article argues that while openness and transparency have real benefits, there is also a danger that increased access to government information instead misinforms.[40] Institutions increasing access to information must consider the resultant possibility of increased misinformation and associated harms. This is particularly true as institutions build online platforms to ease access to information which, while democratizing, also increases the potential for misinformation by broadening access to non-experts.[41] Further, institutions must recognize that their information may pass through intermediaries who can remove safeguards intended to prevent misinformation. For example, while the CDC attaches a prominent disclaimer to its adverse events database, anti-vaccine activists have scraped data from the CDC into their own database which omits the disclaimer (and gets more traffic than the CDC's database).[42] This Article

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U. PA. L. REV. 1319, 1329-30 (2023) (suggesting that the government should "cultivate carefully bounded 'gardens' of information," even though it should not "simply disclose information to all comers"); Wendy E. Wagner, *Commons Ignorance: The Failure of Environmental Law to Produce Needed Information on Health and the Environment*, 53 DUKE L.J. 1619, 1671 (2004) (arguing that the EPA should do more to collect data).

37 Cass R. Sunstein, *Output Transparency vs. Input Transparency*, *in* TROUBLING TRANSPARENCY 187, 188 (David E. Pozen & Michael Schudson eds., 2018).

38 *E.g.*, MARK FENSTER, THE TRANSPARENCY FIX 6 (2017) (describing the risks of declassifying government information); Mark Fenster, *The Implausibility of Secrecy*, 65 HASTINGS L.J. 309, 313-14 (2014) (critiquing both "secrecy" and "transparency" proponents); David E. Pozen, *Transparency's Ideological Drift*, 128 YALE L.J. 100, 102-04, 124-25 (2018) (describing the diverging ideological proponents of "transparency" over time and how transparency-oriented processes have been "dominate[d]" by certain groups); David E. Pozen, *Freedom of Information Beyond the Freedom of Information Act*, 165 U. PA. L. REV. 1097, 1148 (2017) (arguing that FOIA—a major tool for government transparency—"not only fails to deliver on ostensible goals such as . . . full agency disclosure, but also has evolved to *subvert* some of [those] goals").

39 *See infra* Section I.A.

40 *See infra* Section II.C.

41 *See infra* Section III.D.

42 *See* Devika Khandelwal & Pallavi Sethi, *Double Check: How Does OpenVAERS Misrepresent Data?*, LOGICALLY (Aug. 12, 2021, 3:00 PM), https://www.logically.ai/articles/double-check-how-does-openvaers-misrepresent-data [https://perma.cc/GZ36-FL8B]; David Gilbert, *This Woman Secretly Runs One of the World's Biggest Anti-Vax Websites From Her House*, VICE (Aug. 12, 2021, 9:57 AM), https://www.vice.com/en/article/qj8mm3/this-woman-secretly-runs-one-of-the-worlds-biggest-anti-vax-websites-from-her-house [https://perma.cc/YX2U-5VDL].

provides a detailed look at these and other structural contributors to misinformation.

In addition, this Article has important consequences for First Amendment jurisprudence and scholarship. In several First Amendment cases, the Supreme Court has suggested that disclaimers can make clear that information does not derive from the government.[43] But this may be incorrect, as this Article shows that government imprimatur attaches even to information clearly disclaimed by the government.[44] Moreover, the question of whether the public "reasonably perceives" expression to be private or government speech arises in many cases.[45] This Article argues that the public attributes mixed speech to the government more often that the Court realizes.[46] Finally, the discussion herein complements a line of scholarship concerned that the public may mistakenly perceive government speech to be private speech (believing, for instance, that a doctor's statements about abortion are the doctor's choice when they are actually required by the government).[47] Scholars frequently raise concerns about government speech stealthily masquerading as private speech.[48] This Article suggests that the opposite problem—private speech masquerading as government speech—is also of vital concern and should not be overlooked.[49]

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43 *See* PruneYard Shopping Ctr. v. Robins, 447 U.S. 74, 87 (1980); Pac. Gas & Elec. Co. v. Pub. Util. Comm'n of Cal., 475 U.S. 1, 16 (1986); *see also* Capitol Square Rev. & Advisory Bd. v. Pinette, 515 U.S. 753, 776 (1995) (O'Connor, J., concurring) (concluding that, "[i]n context, a disclaimer helps remove doubt about state approval of respondents' religious message," and providing case law in support).

44 *See infra* subsection II.B.2.

45 *See, e.g.*, Matal v. Tam, 137 S. Ct. 1744, 1758 (2017) (suggesting that it is "far-fetched" that the public perceives the content of a registered trademark to be government speech).

46 For an explanation of mixed speech, see Caroline Mala Corbin, *Mixed Speech: When Speech is Both Private and Governmental*, 83 N.Y.U. L. REV. 605, 618-26 (2008).

47 See Rust v. Sullivan, 500 U.S. 173, 179-80 (1991) and scholarly commentaries thereon. *E.g.*, Dorothy E. Roberts, Rust v. Sullivan *and the Control of Knowledge*, 61 GEO. WASH. L. REV. 587, 590 (1993) (terming the speech in *Rust* "government's control of knowledge"); Ann B. Weeks, *The Pregnant Silence:* Rust v. Sullivan, *Abortion Rights, and Publicly Funded Speech*, 70 N.C. L. REV. 1623, 1666 (1992) (explaining that the notion of doctors' choice of speech breaks down in the *Rust* context because, in the context of government programs, many "women effectively have no choice but to take the information proffered by the project as their only source of medical information").

48 *E.g.*, Abner S. Greene, *Government of the Good*, 53 VAND. L. REV. 1, 6 (2000) (noting the "problem of the government's failure to disclose . . . that it is the speaker"); Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943, 1017 (1995) (explaining how the government was able to convey a message regarding abortion more powerfully because it required doctors to provide the message and thus "deceiv[ed] poor women about the source of the message"); *see also* Johanns v. Livestock Mktg. Ass'n, 544 U.S. 550, 578-80 (2005) (Souter, J., dissenting) (arguing that statements the government makes via "deception by omission (or by misleading statement)" cannot circumvent First Amendment interests).

49 To the extent it is discussed in First Amendment scholarship, it is in the context of worries that "the government may be seen as approving views it does not condone," rather than misinterpretation of factual information. Corbin, *supra* note 46, at 647; *see also* Abner S. Greene,

This Article concludes with concrete policy recommendations. First, that unvetted information should always be released with a disclaimer so specifying—although this is not a complete solution because disclaimers can be ignored by readers or deliberately removed by intermediaries.[50] Second, sanctions for submission of false information can help, but they too are not a complete solution because much of the problem lies not in intentional fraud but in misinterpreting early-stage evidence—which is often necessary for the government's task—as definitive conclusions.[51] Third, the government should investigate the extent to which the information it publishes is misleading.[52] Fourth, there must be mechanisms to correct inaccurate information, which currently do not always exist.[53] Finally, government institutions that disseminate unvetted information cannot abdicate responsibility for the information; institutions sometimes attempt to blame others to avoid taking charge of reforms.[54]

Lastly, a caveat. There is great variation in the category of government information—from statutes to prosecutors' evidence at trial to reports from the U.S. Surgeon General to private documents such as contracts, and others. Processes for generating, evaluating, and publishing information also vary vastly.[55] This Article focuses on privately generated, unvetted information published by agencies and courts, which is one specific category of government information—though a ubiquitous and important one. However, some conclusions from this Article, including the ease with which government imprimatur occurs and the potential for misinformation, apply to government information more broadly.

The Article proceeds as follows. Part I provides background on the push for open access to government information and why such information is generally perceived as trustworthy. Part II shows that some government information cannot be trusted. Section II.A examines information from a variety of government sources to demonstrate that it is both unvetted and often inaccurate. Section II.B explores examples of information that gains institutional imprimatur and is trusted by readers, including information where the publishing institution clearly states that it does not vet the information. Section II.C discusses specific harms of misinformation from

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"Not In My Name" Claims of Constitutional Right, 98 B.U. L. REV. 1475, 1475 (2018) (explaining how individuals may mistake private speech as being endorsed by the government in the context of religion and the Establishment Clause).

50 *See infra* subsection IV.A.1.

51 *See infra* subsection IV.A.2.

52 *See infra* subsection IV.B.1.

53 *See infra* subsection IV.B.3.

54 *See infra* subsection IV.B.4.

55 *See infra* Section I.B.

government institutions. Part III explains why significant amounts of government information are wrong, including reasons institutions publish unvetted information, incentives for submission of incorrect information, and how third-party intermediaries contribute to the spread of misinformation. Part IV turns to policy reform, showing that current policies are inadequate and suggesting new policies.

I. GOVERNMENT INSTITUTIONS AS INFORMATION PLATFORMS

This Article's emphasis on how government information can misinform diverges significantly from traditional conceptions of government information. Theoretical discussions and policy choices tend to emphasize two aspects of government information: first, that it should be openly accessible[56] and, second, that it is reliable and trustworthy.[57] This Part provides background on these two features of current treatments of government information.

Section I.A explains that government information is widely available to the public by design—public access to information is a key goal of the legal system with longstanding theoretical underpinnings. And although there are critiques of open access to information, they are not focused on misinformation. Section I.B turns to uses of government information and explores how this widely available information is used, with emphasis on why the audience for government information finds such information reliable and trustworthy.

A. *Openness and Transparency*

Many government institutions in the United States operate under the lofty ideal of openness and transparency. Informational inputs and outputs from government institutions ought to be available for the public to scrutinize.[58] This policy achieves two basic goals. First, it contributes to transparency and accountability by ensuring that the public can review government decision-making and uncover malfeasance.[59] Second, because government institutions often generate and possess unique and useful

56 *See infra* Section I.A.

57 *See infra* Section I.B.

58 *See* Sunstein, *supra* note 37, at 188 ("[T]he benefits of transparency are significant.").

59 *See* Mark Fenster, *The Transparency Fix: Advocating Legal Rights and Their Alternatives in the Pursuit of a Visible State*, 73 U. PITT. L. REV. 443, 446-47 (2012) (noting that access to information helps to "identify and stigmatize" bad actors in government).

information, sharing the information allows the public to use it collaboratively and entrepreneurially to inform decisionmaking.[60]

The ideal of openness is codified in the 1966 Freedom of Information Act ("FOIA"), which mandates that "each agency shall make available to the public" a substantial amount of agency information[61] and allows the public to request information which the agency must then make "promptly available."[62] The Supreme Court has emphasized that FOIA reflects "a general philosophy of full agency disclosure"[63] and "seeks to permit access to official information long shielded unnecessarily from public view."[64] Although FOIA is often conceived of as a method to ensure public scrutiny of government activities, it also facilitates the transmission and dissemination of all manner of information created or collected by agencies.[65]

More recently, the Obama Administration published a Memorandum on Transparency and Open Government, committing "to creating an unprecedented level of openness in government," explaining that "[i]nformation maintained by the Federal Government is a national asset," and promising to "disclose information rapidly in forms that the public can readily find and use."[66] The Office of Management and Budget implemented these principles by requiring agencies to publish at least three "high-value data sets" within forty-five days.[67] The purpose of this requirement was to "increase accountability, promote informed participation by the public, and create economic opportunity."[68] This approach has been adopted in a number of countries and is praised as a mechanism to facilitate both public engagement with government and innovative use of government data.[69]

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60 *See* Beth Simone Noveck, *Rights-Based and Tech-Driven: Open Data, Freedom of Information, and the Future of Government Transparency*, 19 YALE HUM. RTS. & DEV. L.J. 1, 4 (2017) (arguing that information sharing promotes public collaboration); Harlan Yu & David G. Robinson, *The New Ambiguity of "Open Government,"* 59 UCLA L. REV. DISCOURSE 178, 202 (2011).

61 Freedom of Information Act of 1996, 5 U.S.C. § 552(a).

62 5 U.S.C. § 552(a)(3).

63 Dep't of Air Force v. Rose, 425 U.S. 352, 360 (1976) (quoting S. REP. NO. 89-813, at 3 (1965)).

64 Env't Prot. Agency v. Mink, 410 U.S. 73, 80 (1973).

65 *See, e.g.*, Kwoka, *supra* note 36, at 1381 (showing that commercial requesters use FOIA extensively to request and resell various government records).

66 Transparency and Open Government, 74 Fed. Reg. 4685, 4685 (Jan. 21, 2009).

67 OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, M-10-06, MEMORANDUM FOR THE HEADS OF EXECUTING DEPARTMENTS AND AGENCIES (Dec. 8, 2009), https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/memoranda_2010/m10-06.pdf [https://perma.cc/MGT5-QY93].

68 *Id.*

69 *See* Noveck, *supra* note 60, at 4 (claiming that open data "foster[s] greater public engagement and collaboration" and "anticipates what institutions and citizens *can do together* to create value of different kinds"); *see also* Beth Simone Noveck, *Is Open Data the Death of FOIA?*, 126 YALE L.J. F. 273, 275-76 (2016) (explaining how seven countries have committed to providing information to the

Many agencies operate as information platforms with explicit goals of generating and sharing information to achieve a policy objective.[70] The SEC, for example, requires companies to disclose certain information to investors.[71] These disclosures are important tools in the SEC's mission to protect investors, in keeping with Justice Brandeis' aphorism that "[s]unlight is said to be the best of disinfectants; electric light the most efficient policeman."[72] In another example, patent laws require patent applicants to disclose information about how their invention is made and used.[73] This information is then published by the Patent and Trademark Office[74] so that it can be accessed by other scientists who can build on new discoveries to further the goal of the patent system: "promot[ing] the progress of Science."[75]

The judiciary also encourages public access to information. The public can attend court proceedings, a practice the Supreme Court has traced back to English law before the Norman conquest.[76] English courts viewed public access as "one of the essential qualities of a Court of Justice."[77] Court records are also presumptively public.[78] Court documents are an important source of information for journalists.[79] Further, many companies collect and collate information from court records into large databases.[80]

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public in accessible and understandable formats and commenting that open data allows the public to "achieve impressive results").

70 The concept of government as an information platform was pioneered in the First Amendment context by Abner Greene. *See* Abner S. Greene, *(Mis)Attribution*, 87 DENV. U. L. REV. 833, 833 (2010) (discussing "how much content-based decision-making is appropriate for the state when creating speech opportunities"); Abner S. Greene, *Speech Platforms*, 61 CASE W. RES. L. REV. 1253, 1255 (2011) (characterizing the state as "speaker and sponsor" of speech); Abner S. Greene, *The Concept of the Speech Platform:* Walker v. Texas Division, 68 ALA. L. REV. 337, 338 (2016) (noting that "[g]overnment often provides space for private speech").

71 EVA SU, CONG. RSCH. SERV., IF11256, SECURITIES DISCLOSURES: BACKGROUND AND POLICY ISSUES 1 (June 25, 2019).

72 LOUIS BRANDEIS, OTHER PEOPLE'S MONEY 92 (1914).

73 35 U.S.C. § 112(a).

74 35 U.S.C. § 122.

75 U.S. CONST. art. I, § 8, cl. 8.

76 Richmond Newspapers, Inc. v. Virginia, 448 U.S. 555, 565 (1980) (explaining that "[i]n the days before the Norman Conquest, cases in England . . . were attended by the freemen of the community").

77 Daubney v. Cooper (1829), 109 Eng. Rep. 438, 440 (KB 1829).

78 Nixon v. Warner Commc'n, Inc., 435 U.S. 589, 597 (1978) ("[T]he courts of this country recognize a general right to inspect and copy public records and documents, including judicial records and documents.").

79 *See* Roy Shapira, *Law as Source: How the Legal System Facilitates Investigative Journalism*, 37 YALE L. & POL'Y REV. 153, 155 (2018) (discussing the use of court documents by journalists in their efforts to uncover sexual abuse of children in the Catholic Church).

80 Daniel J. Solove, *Access and Aggregation: Public Records, Privacy and the Constitution*, 86 MINN. L. REV. 1137, 1139 (2002). Public use of court records can be problematic; for instance, employers and landlords may use information obtained from court documents in discriminatory ways. *See* Kristen M. Blankley, *Are Public Records Too Public—Why Personally Identifying Information Should be*

Similarly, the legislative branch encourages open access to information. As a policy matter, statutes are publicly available because they are "intrinsically public domain material" of which "the People are the owners."[81] Congressional records are also often publicly available, and there has been a push to limit instances in which they are classified.[82] Open Congressional proceedings are frequently cited as a vital element of a democratic law-making process.[83]

While openness is a widely lauded goal, it has drawbacks. Many scholars raise privacy concerns as a reason to limit public access to information produced by government institutions.[84] Recent backlash against openness worries that policies mandating government transparency overburden institutions[85] and can be weaponized to hinder governance goals.[86] Scholars are further concerned that open information may be primarily accessible to corporations and special interests but not, in practice, to individuals.[87]

Removed from Both Online and Print Versions of Court Documents, 65 OHIO ST. L.J. 413, 419 (2004) (noting that the Fair Credit Reporting Act does not bind private employers, who could use information in court documents to deny employment or housing based on an independent credit check).

81 Code Revision Comm'n v. Public Resource.Org, Inc., 906 F.3d 1229, 1232 (11th Cir. 2020); *see also* Georgia v. Public.Resource.Org, Inc., 140 S. Ct. 1498, 1507 (2020) ("The animating principle . . . is that no one can own the law. 'Every citizen is presumed to know the law,' and 'it needs no argument to show . . . that all should have free access' to its contents." (citing Nash v. Lathrop, 142 Mass. 29 (1886))).

82 *See, e.g.*, Kristen Wilhelm, *Researchers as Constituents*, 29 J. GOV'T INFO. 402, 404 (2002) (giving examples of declassification); WALTER J. OLESZEK, CONG. RSCH. SERV., R42108, A PERSPECTIVE ON SECRECY AND TRANSPARENCY 12 (Nov. 30, 2011) (concluding that, though "secrecy and confidentiality" continue to serve several objectives, the contemporary Congress conducts its business in public "perhaps more so than ever in its over 200-year history").

83 *See, e.g.*, 147 CONG. REC., S5,322 (daily ed. June 23, 2010) ("I believe the more people are aware of what we are doing in the Senate and the Congress, or in Washington generally, the more accountable we are. The more accountable we are, the better job we will do.") (statement of Sen. Charles Grassley).

84 *See, e.g.*, Blankley *supra* note 80, at 419 (cautioning that increased accessibility of public records could enable discriminatory practices by employers and landlords); Solove, *supra* note 80, 1139 ("[T]he threat posed to privacy by public records is rapidly becoming worse."); Hon. Lewis A. Kaplan, *Litigation, Privacy and the Electronic Age*, 4 YALE SYMP. L. & TECH. 1, at II (2001) (identifying a tension between the "privacy interests of litigants" and the "openness" of court records). These discussions include both whether information is accessible and the extent to which it is easily available. *E.g.*, Woodrow Hartzog & Frederic Stutzman, *The Case for Online Obscurity*, 101 CALIF. L. REV. 1, 20-21 (2013) (discussing the notion of "practical obscurity" of court records).

85 *See* Pozen, *Freedom of Information*, *supra* note 38, at 1099 (noting the burdensome volume of FOIA requests).

86 *See* Pozen, *Transparency's Ideological Drift*, *supra* note 38, at 123 (relating advocacy for transparency to various ideological agendas).

87 *See* Kwoka, *supra* note 36, at 1367.

B. *Trust in Government Information*

Government information is not only readily available, but also often more trustworthy than information from other sources. This is an enormous benefit, particularly in the modern information age where it is a great challenge to filter for useful, relevant, and reliable information.[88] University librarians teach students to look for ".gov" websites which are "among the most reliable sources on the web"[89] and "considered to be from a credible source."[90] The US government itself notes that "[f]inding reliable and official information can be a challenge" and that government information is a good place to start.[91]

Legal processes are also designed to generate reliable and truthful information. One "basic purpose of a trial is the determination of truth."[92] Agencies, even when not adjudicating disputes, employ experts to uncover evidence and make factual findings.[93] Agencies also ask private parties to submit various pieces of information, which the agency then reviews and assesses.[94] Agencies can require private parties to test certain claims in order to ascertain whether they are correct—for instance the FDA's requirement for clinical trials[95] or the EPA's regulation of emissions.[96] Further, a variety of

88 *See* Soroush Vosoughi, Deb Roy & Sinan Aral, *The Spread of True and False News Online*, 359 SCI. 1146, 1147-48 (2018) (discussing how false rumors diffuse faster than the truth on social media); Ari Ezra Waldman, *The Marketplace of Fake News*, 20 U. PA. J. CONST. L. 845, 863 (2018) (arguing that falsehoods saturate the marketplace of ideas and thereby make the truth less accessible).

89 *E.g.*, *Evaluating Your Sources*, MENLO COLLEGE BOWMAN LIBRARY, (last updated Feb. 21, 2024), https://library.menlo.edu/c.php?g=1123648&p=8195788 [https://perma.cc/3LAF-TAJ8].

90 *Evaluating Internet Information*, UNIV. OF GA. ONLINE LIB. LEARNING CTR., https://www.usg.edu/galileo/skills/unit07/internet07_08.phtml [https://perma.cc/VA4C-5HB8].

91 Press Release, United States of America, USAGov: Your Guide to Reliable and Official Government Information (May 27, 2020), https://www.prnewswire.com/news-releases/usagov-your-guide-to-reliable-and-official-government-information-301066303.html [https://perma.cc/FQ58-GTKQ].

92 Tehan v. United States *ex rel.* Shott, 382 U.S. 406, 416 (1966).

93 *See, e.g.*, Paul MacMahon, *Soft Adjudication*, 69 ADMIN. L. REV. 529, 547 (2017) (giving as an example the National Transportation Safety Board, which conducts inspections after accidents and gathers physical evidence).

94 *See, e.g.*, W. Nicholson Price II, *Drug Approval in a Learning Health System*, 102 MINN. L. REV. 2413, 2416 (2018) (explaining that the FDA gathers information from clinical trials during its drug approval process); Wagner, *supra* note 36, at 1665 (criticizing the shortcomings of the EPA's requirements and noting that the EPA does not require production of important environmental information).

95 *See* Rebecca S. Eisenberg, *The Role of the FDA in Innovation Policy*, 13 MICH. TELECOMM. & TECH. L. REV. 345, 367 (2007) (noting the FDA's "modern function of getting [private] firms to conduct rigorous clinical trials of drugs"); Rachel E. Sachs, *Administering Health Innovation*, 39 CARDOZO L. REV. 1991, 1999-2000 (2018) (noting similar NIH requirements).

96 *See* 40 C.F.R. § 1066 (2023) (setting forth procedures by which auto makers must conduct emissions testing and requiring submission of test results to the EPA); *see also* Wagner, *supra* note 36, at 1663 (criticizing the EPA's information-gathering processes).

legal rules prohibit, punish, or discourage lying and falsehoods, making information covered by those rules more reliable.[97]

Mere participation in a legal process, mechanism, or institution can render parties or resultant information more credible because the association with law serves as a signal of trustworthiness.[98] For example, contract terms can be used to signal whether a franchisor is a good investment for a potential franchisee,[99] and warranties may signal quality to consumers.[100]

The threat of legal enforcement also improves the reliability of information. Advertising is credible (in a factual sense, disregarding puffery) because it is regulated by false advertising laws.[101] Similarly, strict enforcement of defamation laws may make an audience more likely to believe a statement.[102] And a legal institution's oversight over a category of information makes that information more trustworthy. For instance, information in patents is considered credible because the patent undergoes an examination process.[103]

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97 *E.g.*, 18 U.S.C. § 1621 ("Whoever having taken an oath . . . that he will testify [truthfully] . . . willfully and contrary to such oath states or subscribes any material matter which he does not believe to be true . . . is guilty of perjury."). Defamation law also has the effect of enhancing credibility. *See* Yonathan A. Arbel, *The Credibility Effect: Defamation Law and Audiences*, 52 J. LEGAL STUD. 417, 418 (2023). *But see* Courtney M. Cox, *Legitimizing Lies*, 90 GEO. WASH. L. REV. 297, 303, 371-73 (2022) (arguing that law views lying as a "dual-use technolog[y] . . . that can be used either responsibility or illicitly, for good ends or bad"). Legal rules also promote truthfulness between private parties. *See* Courtney M. Cox, *This is a Chapter About Deception*, in Interstitial Private Law (Samuel L. Bray, John C.P. Goldberg, Paul B. Miller & Henry E. Smith eds., forthcoming) (manuscript at 12-13), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4705457 [https://perma.cc/EG7J-KEHU] (discussing reliance on false statements as an element of common-law fraud); John C.P. Goldberg, Anthony J. Sebok & Benjamin C. Zipursky, *The Place of Reliance in Fraud*, 48 ARIZ. L. REV. 1001, 1015-25 (2006) (surveying the role of reliance in various wrongs involving misrepresentation).

98 The field of economics has developed a literature on signaling as a response to information asymmetry, where one party has information that the other party cannot directly observe the information. Brian L. Connelly, S. Trevis Certo, R. Duane Ireland & Christopher R. Reutzel, *Signaling Theory: A Review and Assessment*, 37 J. MGMT. 39, 42 (2011). The classic example in economics is a job applicant who desires to convey their capacity for productivity to a potential employer—education may serve as a signal of such, whereas a mere statement like "hire me, I'll be good at the job" is unlikely to be persuasive because it is easily imitated by someone lacking education (and thus potential). *See* Michael Spence, *Informational Aspects of Market Structure: An Introduction*, 90 Q.J. ECON. 591, 592 (1976).

99 Francine Lafontaine, *Contractual Arrangements as Signaling Devices: Evidence from Franchising*, 9 J.L. ECON. & ORG. 256, 259 (1993).

100 William Boulding & Amna Kirmani, *A Consumer-Side Experimental Examination of Signaling Theory: Do Consumers Perceive Warranties as Signals of Quality?*, 20 J. CONSUMER RSCH. 111, 111 (1993).

101 Yonathan A. Arbel & Murat Mungan, *The Case Against Expanding Defamation Law*, 71 ALA. L. REV. 453, 547 (2019) (noting that false advertising laws increase "confidence in the marketplace").

102 *Id.*

103 *See* Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 650 (2002) ("If a firm merely issued press releases about its research, investors could have no way of knowing if the information

Information that is produced, reviewed, or governed by a legal institution or process is (rightfully) viewed as relatively reliable. To be sure, there is a substantial literature on problems with government information. For instance, much of the field of evidence is concerned with whether information is reliable enough to be used in court proceedings.[104] Agencies have been accused of bias towards industry in producing ostensibly neutral reports,[105] and Supreme Court opinions may accept facts from outside the adversarial process, presented in amicus briefs.[106] But for the reasons outlined above, as a general matter, information from government institutions is trusted more than information from other sources.

II. LIES, DAMNED LIES, AND GOVERNMENT MISINFORMATION

Scholarship and doctrine both view the government as a purveyor of trustworthy information.[107] This is often true—government information is frequently produced by experts or carefully examined and can be trusted.[108] Indeed, this Article cites hundreds of government sources for authority!

However, much is missing from the traditional conception of government institutions as platforms for trusted information. This Part argues that government institutions often function as *mis*information platforms, disseminating information that is *not* trustworthy. Many government institutions are set up as information clearinghouses where private parties can submit information that the institution publishes without any review.[109] Lack of vetting means that the information may be wrong, in some circumstances deliberately so.[110] And because government information is perceived as trustworthy, it can be particularly difficult for audiences to uncover government misinformation.[111]

This Part begins with several examples of government institutions functioning as misinformation platforms: instances where the institutions host and transmit unvetted and sometimes incorrect information to the public. Section II.B then explains that even information loosely associated

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was credible . . . . If, on the other hand, a firm got a patent on its research results, investors would know that the statements made in the patent were probably credible.").

104 *See, e.g.*, Maggie Wittlin, *Theorizing Corroboration*, 108 CORNELL L. REV. 911, 917 (2023).

105 *See, e.g.*, Dean A. Elwell, *Industry-Influenced Evidence: Bias, Conflict, and Manipulation in Scientific Evidence*, 61 B.C. L. REV. 2155, 2175 n.148 (2020) (discussing possible bias in an Environmental Protection Agency report on the carcinogenicity of glyphosate).

106 *See, e.g.*, Allison Orr Larsen, *Confronting Supreme Court Fact Finding*, 98 VA. L. REV. 1255, 1257 (2012).

107 *See supra* Section I.B.

108 *See id.*

109 *See infra* Section II.A.

110 *See id.*

111 *See infra* Section II.B.

with a government institution gains the imprimatur of the institution, meaning that the information is viewed as reliable even when the institution explicitly says the information is unverified.

A. *Unvetted and Inaccurate Information*

As outlined above, government institutions often carefully review information.[112] However, it is also common for government institutions to publish unvetted information. This would not be a problem if the information were generally accurate. But it is not. This Section explores unvetted and inaccurate information published by the government.

The examples below showcase the variation in the processes by which unvetted information is published: some institutions clearly state that they do not review information, while others claim to review information but actually leave substantial amounts of information unreviewed. There is also considerable variation in the audience for and impact of unvetted information. The information is sometimes aimed at the general public and sometimes at specialized or expert audiences. With respect to impact, some unvetted information is only intended to communicate, while other categories of unvetted information provide economic benefits and legal rights.

1. Toxic Release Inventory

The Environmental Protection Agency's (EPA) Toxics Release Inventory (TRI) compiles information about facilities that release certain chemicals into the environment.[113] The program aims to inform the public of pollutants in their local environments so that they can make choices about where to live and to encourage companies to reduce emissions.[114] The program requires companies to self-report data to the EPA,[115] which the EPA publishes on its "Toxics Tracker" website.[116] For example, a search for the address of Fordham Law School shows no nearby emitting facilities but finds a Con Edison

112 *See supra* Section I.A.

113 *What is the Toxics Release Inventory?*, ENV'T PROT. AGENCY (last updated June 29, 2023), https://www.epa.gov/toxics-release-inventory-tri-program/what-toxics-release-inventory [https://perma.cc/NF3U-B2HK].

114 By forcing companies to disclose emissions data, "right to know" initiatives can allow interested parties to pressure high emitters. John H. Cushman Jr., *E.P.A. Is Pressing Plan to Publicize Pollution Data*, N.Y. TIMES, Aug. 12, 1997, at A1.

115 *See* Susan E. Dudley, *It is Time to Reevaluate the Toxic Release Inventory*, 12 MO. ENV'T L. & POL'Y REV. 1, 2-3 (2004) (describing the process by which the EPA receives and enters "toxic chemical release inventory" information).

116 *Toxics Release Inventory (TRI) Program*, ENV'T PROT. AGENCY (last updated Mar. 21, 2024), https://www.epa.gov/toxics-release-inventory-tri-program [https://perma.cc/5MSA-L8SF].

facility on the other side of Manhattan that emitted thousands of pounds of ammonia in 2020.[117]

The EPA does not check the data for accuracy before publication.[118] Although the EPA can fine facilities with inaccurate or incomplete data, it does not commonly do so: the agency reported only two such instances in 2021.[119]

The lack of vetting leads to information errors.[120] A 1991 report from the US Government Accountability Office ("GAO") described inaccuracies in data from half of the facilities.[121] The EPA disputed the GAO's conclusions, hiring a consulting firm to review data quality and concluding that data "were generally accurate and reasonable."[122] The GAO responded that "in our view, the [consultant's] conclusions are questionable."[123] Data accuracy does not seem to have improved substantially in the decades since the GAO report. Several more recent studies also found extensive inaccuracies.[124] One study found general congruence between self-reported data and actual emissions but also explained that the effectiveness of the EPA's program is "severely questioned due to potential inaccuracy, under-reporting, and lack of monitoring of self-reporting data."[125]

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117 *TRI Toxics Tracker*, ENV'T PROT. AGENCY, https://edap.epa.gov/public/extensions/TRIToxicsTracker/TRIToxicsTracker.html (search for "150 w 62nd St, New York, NY, 10023, USA") (last visited Feb. 22, 2024).

118 Dudley, *supra* note 115, at 12.

119 And four in 2022. Environmental Protection Agency, *TRI Compliance and Enforcement*, ENV'T PROT. AGENCY (May 1, 20223) [https://web.archive.org/web/20230501083355/https://www.epa.gov/toxics-release-inventory-tri-program/tri-compliance-and-enforcement]. The EPA notes that it "does not issue press releases for every enforcement action", so the true number of enforcements may be higher. Tens of thousands of facilities report data to the TRI. *Toxics Release Inventory*, U.S. DEP'T OF HEALTH & HUM. SERVS., https://health.gov/healthypeople/objectives-and-data/data-sources-and-methods/data-sources/toxics-release-inventory-tri [https://perma.cc/EY6X-U7WS].

120 *See, e.g.*, *Poisoned Places*, NAT'L PUB. RADIO (Nov. 7, 2011), https://www.npr.org/2011/11/07/142024951/poisoned-places-about-the-data [https://perma.cc/M3NN-KS5D] ("It is widely acknowledged that the TRI also contains some reporting errors, and in some instances facilities underreport.").

121 U.S. GOV'T ACCOUNTABILITY OFF., GAO/RCED-91-121, TOXIC CHEMICALS: EPA'S TOXIC RELEASE INVENTORY IS USEFUL BUT CAN BE IMPROVED 45 (1991), https://www.gao.gov/assets/rced-91-121.pdf [https://perma.cc/T8QR-SR7P].

122 *Id.* at 44.

123 *Id.*

124 *E.g.*, Dinah A. Koehler & John D. Spengler, *The Toxic Release Inventory: Fact or Fiction? A Case Study of the Primary Aluminum Industry*, 85 J. ENV'T MGMT. 296, 297 (2007) (finding underreporting of toxic release inventory in the aluminum industry); Scott de Marchi & James T. Hamilton, *Assessing the Accuracy of Self-Reported Data: An Evaluation of the Toxics Release Inventory*, 32 J. RISK & UNCERTAINTY 57, 60 (2006) (finding that self-reported pollution reductions "are not fully supported by the chemical monitoring data tracked by the EPA").

125 Muye Ru, Arlene Fiore, Wolfram Schlenker & Enrico Dammers, *Applying Satellite Data in Evaluating Accuracy of Self-Report Environmental Release Policies: Evidence from the United States Toxic*

2. Clinical Trials

The National Institutes of Health ("NIH") hosts ClinicalTrials.gov, a website listing clinical trials conducted on drugs and medical devices.[126] Congress mandated the website in part to provide help patients find and enroll in clinical trials.[127] Public access and availability is a foundational goal of the project.[128] The information on the website is submitted by the entity conducting the trial (generally a company or university) and not vetted for accuracy by the NIH.[129]

Often—but not always—clinical trial sponsors must obtain FDA approval before beginning a trial.[130] The FDA looks at safety evidence from lab and animal experiments before approving a trial in humans.[131] However, companies can list trials on ClinicalTrials.gov even if they have not been FDA-approved, and information about whether listed trials have been FDA-approved is hard to find.[132] As a result, companies use ClinicalTrials.gov as "a form of advertising for products that don't have FDA approval"[133] and "to solicit prospective clients by claiming that they are conducting studies registered with the NIH."[134] Some of the treatments listed on

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Release Inventory, AGU FALL MEETING (December 2021), https://ui.adsabs.harvard.edu/abs/2021AGUFMGC45B0835R/abstract [https://perma.cc/QU7J-T299].

126 *See Clinical Trials*, NAT'L INST. HEALTH, https://clinicaltrials.gov/ [https://perma.cc/GUG2-PMLS] (last visited Apr. 2, 2024).

127 42 U.S.C. § 282(j)(2)(A)(i) & (2)(B)(iii) ("To enhance patient enrollment and provide a mechanism to track subsequent progress of clinical trials . . . [t]he Director of the NIH shall ensure that the registry data bank [ClinicalTrials.gov] is made publicly available through the Internet.").

128 *Id.*

129 *See* 42 U.S.C. § 282(j); McGinley, *supra* note 1 (noting the NIH's admission that information on ClinicalTrials.gov "is provided by study sponsors" and that the NIH "doesn't independently verify the scientific validity of the trial"). The NIH does review trial listings for completeness and conformity with certain requirements. 42 U.S.C. § 282(j)(3)(D)(v)(III).

130 *See Frequently Asked Questions*, NAT'L INST. HEALTH: CLINICALTRIALS.GOV (last updated Mar. 19, 2024), https://clinicaltrials.gov/ct2/manage-recs/faq [https://perma.cc/69H7-G52Y] (indicating that those performing studies requiring human subjects review board approval "may register [the] study on ClinicalTrials.gov prior to getting approval" in certain circumstances).

131 *What Are Clinical Trials and Studies?*, NAT'L INST. HEALTH (Mar. 22, 2023), https://www.nia.nih.gov/health/what-are-clinical-trials-and-studies [https://perma.cc/AYN4-Y5RX].

132 Brian Mansfield, Remarks at the FDA Public Workshop on Scientific Evidence in Development of HCT/Ps, at 295-96 (Sept. 8, 2016) (transcript available at https://web.archive.org/web/20210306183856/https://www.fda.gov/media/128052/download).

133 McGinley, *supra*, note 1.

134 Leigh Turner, *ClinicalTrials.gov, Stem Cells, and 'Pay-to-Participate' Clinical Studies*, 12 REGENERATIVE MED. 705, 716 (2017), http://www.stem-art.com/Library/ClinicalTrials/ClinicalTrials.gov,%20stem%20cells%20and%20%E2%80%98pay-to-participate%E2%80%99%20clinical%20studies.pdf [https://perma.cc/J7XB-VEPJ].

ClinicalTrials.gov are not actually clinical trials, but merely fee-for-service procedures.[135]

When a procedure is listed on ClinicalTrials.gov, some readers believe it has the NIH's endorsement (making it a more effective advertising strategy for companies).[136] The NIH states that "inclusion of data and information in the *ClinicalTrials.gov* platform . . . [does] not constitute a government affirmation or verification that the information . . . [is] truthful and non-misleading."[137] However, consumers do not always realize this. A company conducting an experimental stem-cell therapy involving injecting fat cells into the eye listed its procedure on ClinicalTrials.gov.[138] One patient—a statistician who was involved in clinical research—noted that she "was under the impression that the ClinicalTrials.gov website lended some credibility to the study."[139] Another patient stated that "from the web [she] was referenced to the ClinicalTrials.gov website and . . . was also under the impression that she was participating in a [government-sanctioned] clinical trial."[140]

But they were not, and the procedure proved ineffective and dangerous—ultimately blinding several patients.[141] A doctor who treated the patients in the hospital after the failed procedures testified to the FDA that "I mean some things in retrospect you say how on earth could you have let this happen to you. But [the patients] go back to well it was on ClinicalTrials.gov."[142]

Note that the problem here is not that the clinical trial listing contained inaccurate information,[143] but that readers misunderstood the process for listing a clinical trial on the NIH website and assumed that inclusion on ClinicalTrials.gov meant the government had reviewed the procedure in some capacity. After the events described here, the NIH added a prominent

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135 *Id.* at 706. A clinical trial is a "research study in human volunteers to answer specific health questions." *Registering with Clinicaltrials.gov*, NAT'L INST. HEALTH (Aug. 2019), https://www.niams.nih.gov/grants-funding/conducting-clinical-research/register-trials-gov [https://perma.cc/ZA8Q-PR38].

136 Letter from Charles E. Grassley, Chairman, U.S. Senate Comm. on the Judiciary to Alex Azar, Sec'y of the Dep't of Health & Hum. Servs. and Dr. Scott Gottlieb, Comm'r, U.S. Food & Drug Admin. (Apr. 13, 2018), https://www.grassley.senate.gov/imo/media/doc/2018-04-13%20CEG%20to%20HHS%20and%20FDA%20(Stem%20Cell%20Trial).pdf [https://perma.cc/Y6UG-WJK9].

137 Clinical Trials Registration and Results Information Submission, 81 Fed. Reg. 64982, 64988 (Sept. 21, 2016) (codified at 42 C.F.R. pt. 11).

138 McGinley, *supra* note 1.

139 Thomas Albini, Remarks at the FDA Public Workshop on Scientific Evidence in Development of HCT/Ps, at 306 (Sept. 8, 2016) (transcript available at https://web.archive.org/web/20210306183856/https://www.fda.gov/media/128052/download).

140 *Id.* at 308-09.

141 *Id.* at 305-06.

142 *Id.* at 332.

143 Which can lead to sanctions. 21 U.S.C. § 331(jj)(3) (prohibiting the submission of false or misleading clinical trial information).

disclaimer that "[t]he U.S. government does not review or approve the safety and science of all studies listed on this website."[144] However, there are doubts about the disclaimer's efficacy for lay readers—one of the website's target audiences.[145]

3. Orange Book Listings and Use Codes

Another example of unvetted information comes from the FDA. When a new drug is approved, the FDA publishes a list of patents that cover the drug and "use codes," brief descriptions of the condition(s) the drug is meant to treat.[146] The information is compiled in a book (now website) informally called the Orange Book.[147] For example, searching the FDA's Orange Book for the drug Tegsedi™, a treatment for nerve damage, turns up four listed patents and the use code "Treatment of Polyneuropathy of Hereditary Transthyretin Amyloidosis."[148] The purpose of the FDA's Orange Book is to provide public information about FDA-approved drugs and which drugs and conditions are covered by patents, and there are strict rules about which patents and use codes can be included.[149] The Orange Book has many audiences, including public health agencies, doctors, pharmacists, and pharmaceutical companies.[150]

Although the FDA publishes the Orange Book, it does not vet the information contained in the publication.[151] The list of patents and

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144 *Clinical Trials*, NAT'L INST. HEALTH, https://clinicaltrials.gov [https://perma.cc/T9GR-EG83] (last visited Mar. 30, 2024).

145 *E.g.*, Turner, *supra* note 134, at 715-16 ("[N]otwithstanding the NIH's disclaimer, [ClinicalTrials.gov] is regarded by many of its users as a reliable and trustworthy source of information.").

146 *See Approved Drug Products with Therapeutic Equivalence Evaluations: Orange Book*, U.S. FOOD & DRUG ADMIN. (Apr. 12, 2024), https://www.fda.gov/drugs/drug-approvals-and-databases/approved-drug-products-therapeutic-equivalence-evaluations-orange-book [https://perma.cc/QSX6-FPNR].

147 *Id.*

148 *Patent and Exclusivity for: N211172, Product 001, Inotersen Sodium (Tegsedi) Solution*, U.S. FOOD & DRUG ADMIN., https://www.accessdata.fda.gov/scripts/cder/ob/patent_info.cfm?Product_No=001&Appl_No=211172&Appl_type=N (accessed Feb. 2, 2024) [https://perma.cc/53HE-SVMY].

149 *See* 21 U.S.C. §§ 355(a), (b)(1); Listing of Patent Information in the Orange Book, 85 Fed. Reg. 33,169, 33,170 (June 1, 2020) (detailing rules for submission).

150 U.S. FOOD AND DRUG ADMIN., REPORT TO CONGRESS: THE LISTING OF PATENT INFORMATION IN THE ORANGE BOOK 4 (2022).

151 Rebecca S. Eisenberg, *Patents and Regulatory Exclusivity*, *in* THE OXFORD HANDBOOK ON THE ECONOMICS OF THE BIOPHARMACEUTICAL INDUSTRY 167, 178 (Patricia Danzon & Sean Nicholson eds., 2012); *see also* John R. Thomas, Remarks at the Listening Session on Joint USPTO-FDA Collaboration Initiatives, at 1 (Jan. 19, 2023) (transcript available at https://cdn.patentlyo.com/media/2023/01/PTO-P-2022-0037-0010_attachment_1.pdf), ("Orange Book patent listings hold extraordinary consequences for public healthy. . . . Despite their impact, Orange Book patent listings receive no FDA oversight.").

descriptions of the drug's use are submitted by brand name drug manufacturers (the patent owners) and not reviewed by the FDA.[152] The FDA takes the position that it need not assess the accuracy of the information, describes its role as "ministerial,"[153] and notes that it "does not have the resources or the expertise to review" Orange Book patent information "for its accuracy and relevance."[154]

Because Orange Book listings have significant economic impact, there is an incentive for brand name drug manufacturers to behave strategically when submitting information to the Orange Book.[155] If a patent is listed in the Orange Book, the FDA will not approve a generic version of the drug; if a use code is listed in the Orange Book, the FDA will prevent a generic from including the disease corresponding to that code in its label.[156] Information in the Orange Book thus allows brand-name manufacturers to block generic entry, which can increase brand name profits by hundreds of millions of dollars per year.[157]

The economic value of Orange Book information, combined with lack of review, incentivizes incorrect listings, sometimes deliberate.[158] For example, eleven hours before the patent on BuSpar® (buspirone hydrochloride) would have expired and generic versions of the drug would have entered the market, Bristol Myers-Squibb listed a new patent in the Orange Book, which caused the FDA to suspend its planned approval of the generics.[159] In later litigation, the court found that the listing was improper.[160] This is not an isolated example. The Federal Trade Commission reported numerous examples of

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152 Thomas, *supra* note 151, at 1.

153 Application for FDA Approval to Market a New Drug, 68 Fed. Reg. 36676, 36682-83 (2003); *see also* Caraco Pharm. Laboratories, Ltd. v. Novo Nordisk, 566 U.S. 399, 407 (2012).

154 Abbreviated New Drug Application Regulations; Patent and Exclusivity Provisions, 59 Fed. Reg. 50338, 50345 (Oct. 3, 1994).

155 Natalie M. Derzko, *The Impact of Recent Reforms of the Hatch-Waxman Scheme on Orange Book Strategic Behavior and Pharmaceutical Innovation*, 45 IDEA: J.L. & TECH. 165, 175-76 (2005).

156 S. Sean Tu & Aaron S. Kesselheim, *Preserving Timely Generic Drug Competition with Legislation on "Skinny Labeling,"* 115 CLINICAL PHARMACOLOGY & THERAPEUTICS 22, 22-23 (2024).

157 When a generic is approved, brand name market share decreases by approximately 80%. Henry Grabowski, Genia Long, Richard Mortimer & Mehmet Bilginsoy, *Continuing Trends in U.S. Brand-Name and Generic Drug Competition*, 24 J. MED. ECON. 908, 913 (2021).

158 *See, e.g.*, *Caraco*, 566 U.S. at 408 ("In the late 1990s, evidence mounted that some brands were exploiting [the statutory scheme governing the FDA's regulation of the Orange Book] to prevent or delay the marketing of generic drugs . . . .").

159 Mylan Pharms., Inc. v. Thompson, 268 F.3d 1323, 1327-28 (Fed. Cir. 2001).

160 The decision was a motion for a preliminary injunction, so the court found a "substantial likelihood that this court will issue a declaratory judgment stating that" the listing was improper. Mylan Pharms., Inc. v. Thompson, 139 F. Supp. 2d 1, 29 (D.D.C. 2001).

incorrect listings[161] and one lawsuit over an incorrect listing made it to the Supreme Court.[162] A recent FDA report to Congress on the Orange Book noted that stakeholders complained of "an increase in the listing of ineligible [incorrectly listed] patents."[163]

Exacerbating the problem of incorrect listings, the FDA does not have any mechanism to correct listings, even if they are shown to be erroneous.[164] Rather, if the FDA is informed of a suspected error in a listing, the FDA's response is to "send the statement of dispute to the" brand name drug manufacturer (who provided the incorrect listing) and request that they "confirm the correctness" of the information or amend it.[165] If the brand name drug manufacturer declines to make a correction, "the Agency will not change the patent information."[166] In the example of BuSpar® above, although the district court found that the patent was improperly listed and ordered it removed from the Orange Book, the Federal Circuit reversed because there was no remedy for improper listings—the court did not have the power to order changes to the Orange Book.[167]

After the FTC's study of errors in the information published by the FDA, Congress passed a statute permitting generic drug manufacturers sued for patent infringement to counterclaim that the patent should not have been listed by the FDA.[168] This is, however, a relatively narrow path to correcting listing information. There may also be antitrust consequences for incorrect listings in bad faith, although bad faith can be difficult to prove.[169]

4. Patents

Beyond FDA listings of patents, information in patents themselves is another instance where the government publishes unvetted and often

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161 *See* FTC, GENERIC DRUG ENTRY PRIOR TO PATENT EXPIRATION: AN FTC STUDY iii-iv (2002) (reporting eight instances of strategic listings to delay generic entry between 1992 and 2000).

162 *Caraco*, 566 U.S. at 399.

163 U.S. FOOD AND DRUG ADMIN., REPORT TO CONGRESS: THE LISTING OF PATENT INFORMATION IN THE ORANGE BOOK 13 (2022).

164 Jane F. Djung, *Insufficient Mechanisms for Orange Book Corrections and the FDA's Ministerial Role: A Need for Reform*, 47 CONN. L. REV. 229, 243 (2014).

165 21 C.F.R. § 314.53(f)(1)(i) (2011).

166 *Id.* The FDA recently also implemented the "Orange Book Patent Listing Dispute List" which includes information on whether a patent listed has been disputed. 21 C.F.R. § 314.53(f)(1).

167 Mylan Pharms., Inc. v. Thompson, 268 F.3d 1323, 1325 (Fed. Cir. 2001).

168 21 U.S.C. § 355(j)(5)(C)(ii)(I).

169 *See, e.g.*, *In re* Lantus Direct Purchaser Antitrust Litig., 284 F. Supp. 3d 91, 104-05 (D. Mass. 2018) (noting that a decision to list a patent in the Orange Book was not "objectively baseless" given the FDA's ambiguous requirements for listing). The First Circuit reversed, finding that "the fact that the law in this area is complicated does not by itself mean that" the listing "was reasonable." *In re* Lantus Direct Purchaser Antitrust Litig., 950 F.3d 1, 14 (1st Cir. 2020).

incorrect information. Patents differ from the examples above because the United States Patent and Trademark Office ("PTO") examines patent applications.[170] However, examination does not ensure information accuracy because, while the PTO reviews patent applications to ensure that the invention meets certain criteria such as novelty,[171] it does not, as explained below, evaluate most of the information in the patent.

Examiners focus their review on the "claims" of the patent, which are legal language that sets out the scope of the patentee's right.[172] Although the quality of that review is often criticized,[173] examiners do pick out blatantly incorrect statements most of the time (a claim to godly powers, for instance).[174] Examiners can reject claims, pointing out when they fail to meet a requirement for patentability, and the applicant can delete or amend the claims.[175] Through this back-and-forth procedure, patent claims are reviewed and improved before the patent is granted.[176]

However, most of the informational content in a patent is not in the claims.[177] Patents also contain a section called the "specification," which includes an extensive narrative description of the invention and how the invention is made and used, and can run over a dozen pages (sometimes hundreds of pages).[178] The aim of this information is to teach scientists and

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170 Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91, 95-96 (2011) ("Congress has charged the United States Patent and Trademark Office (PTO) with the task of examining patent applications, 35 U.S.C. § 2(a)(1), and issuing patents if 'it appears that the applicant is entitled to a patent under the law,' § 131.").

171 *Id.* at 96.

172 *See* 35 U.S.C. § 112(b) (describing general requirements for a patent claim); Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996) (defining "patent claim" as definitive of a patentee's rights); Sepehr Shahshahani, *The Fact-Law Distinction: Strategic Factfinding and Lawmaking in a Judicial Hierarchy*, 37 J. L. ECON. & ORG. 440, 463 (2020) (observing that "whether the claim is construed narrowly or broadly often determines whether" patent infringement has occurred).

173 For a critique of Patent Office examination, see, e.g., Michael D. Frakes & Melissa F. Wasserman, *Does the U.S. Patent and Trademark Office Grant Too Many Bad Patents?*, 67 STAN. L. REV. 613, 619 (2015).

174 *See* U.S. Patent Application No. 11/161,354, at [1] (filed July 29, 2005) (seeking "exclusive right to the ethical use and financial gain in the use of godly powers on planet Earth").

175 Bhaven Sampat & Mark A. Lemley, *Examining Patent Examination*, 2010 STAN. TECH. L. REV. 2, ¶ 6 (2010), https://law.stanford.edu/wp-content/uploads/sites/default/files/publication/259450/doc/slspublic/lemley-sampat-examining-patent.pdf [https://perma.cc/N2JZ-KUBC].

176 *Id.* (describing the application process as a "negotiation between the applicant and the examiner")

177 *See* Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 567 (2009) (noting the importance of the patent specification to "infuse meaning in sparsely worded claims").

178 35 U.S.C. § 112(a). *See generally* Lidiya Mischenko, *Thank You for Not Publishing (Unexamined Patent Applications)*, 47 BYU L. REV. 1563, 1569-70 (2022) (describing the patent specification).

engineers about new inventions, and public disclosure of information for this purpose is a key goal of the patent system.[179]

The specification is functionally unvetted through the examination process. Some examiners do not even read the specification.[180] And even when examiners do read the specification, the application generally does not change at all during the examination process.[181] This is true even when the applicant is aware that the specification contains incorrect information.[182] When the PTO publishes the granted patent, it therefore contains a specification that has not been changed during the examination process—the agency is publishing unreviewed information.[183] Further, there are generally no sanctions for including incorrect information in a patent.[184]

Perhaps due to the combination of lack of review and lack of sanctions, patents frequently contain incorrect information.[185] Approximately 25% of experiments in chemistry and biology patents are fictional (which is not considered fraud by the patent system).[186] This includes experiments that are notoriously wrong, like a description from Theranos of a machine that could make diagnoses from tiny quantities of blood.[187] Moreover, when patents contain information that has been explicitly retracted (acknowledged as wrong) in the scientific literature, examiners are no less likely to grant the

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179 Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 494 (1974).

180 *See* Lauren Anderson & Ryan Cagle, *An Examiner's Tips for Speedier Patent Prosecution*, IPWATCHDOG (Dec. 19, 2016), http://www.ipwatchdog.com/2016/12/19/examiners-tips-speedier-patent-prosecution [https://perma.cc/KUX8-SLFW] (citing an interview with an examiner where the examiner stated "that one view is that the drawings and claims are most important during review of a patent application and the specification is mostly skimmed"). However, other examiners do read the specification. *See* Shine Sean Tu, *Patenting Fast and Slow*, 38 CARDOZO ARTS & ENT. L. J. 391, 396 (2020) (reporting that both primary and secondary examiners read the specification).

181 Dan L. Burk, *Patent Silences*, 69 VAND. L. REV. 1603, 1621 (2016); Janet Freilich, *The Uninformed Topography of Patent Scope*, 19 STAN. TECH. L. REV. 150, 171 n.85 (2015); Jeanne C. Fromer, *Dynamic Patent Disclosure*, 69 VAND. L. REV. 1715, 1719 n.16 (2016).

182 *See* Janet Freilich & Soomi Kim, *Is the Patent System Sensitive to Incorrect Information*, REV. ECON. & STAT. (forthcoming 2023) (manuscript at 12), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4200747 ("[M]ore than half of [patent] applicants continued to invest resources in unsupported patents and continue legal proceedings.").

183 Patent applications that contain truly outlandish claims may not be granted. However, non-granted applications are also published by the PTO, and many outlandish claims do make it into granted patents. *See* Janet Freilich, *Prophetic Patents*, 53 U.C. DAVIS L. REV. 663, 666, 668 (2019) (noting the prevalence of "prophetic examples"—fictional experiments or illustrative hypotheticals relating to a claimed invention that sometimes "border[] on miraculous").

184 *See* Sean B. Seymore, *Unclean Patents*, 102 B.U. L. REV. 1491, 1502-3 (2022) (explaining that fabricating data is often not sanctionable unless there is further misrepresentation by the applicant).

185 See Janet Freilich, *The Replicability Crisis in Patent Law*, 95 IND. L.J. 431, 435-36 (2020) (noting the inaccuracy of early-stage experiments that form the basis of a patent grant).

186 Freilich, *supra* note 183, at 668.

187 *See* U.S. Patent No. 7,291,497 col. 1-2; Freilich & Ouellette, *supra* note 33, at 1037 (noting that Patent No. 7,291,497 included a fictional experiment).

patent.[188] Famously, the journal *Science* retracted a paper by a team claiming to have cloned human embryos—and ten years later the team received a U.S. patent on the same invention.[189]

B. *Imprimatur and Unwarranted Trust*

Publication of unvetted and incorrect information is only a problem if the information misleads readers. This Section shows that readers are predisposed to trust information published by government institutions. This trust applies not only to information an institution appears to vet, but also to information more loosely associated with the institution, and even to information that the publishing institution clearly labels as unvetted.[190]

The generalizable point is that information touched by government institutions, however lightly, gains the imprimatur of the institution. Readers associate institutional imprimatur with expert review and consequently believe the information. This Section reveals a fundamental mismatch between reader expectations and the reality that much of the information published by government institutions is unvetted.

This Section begins by revisiting the examples above—the Toxics Release Inventory, Orange Book listings, and patents—and showing why they appear trustworthy. In these examples, the publishing institution is either silent on the question of review or explicitly endorses the information, so readers unsurprisingly associate the information with the publishing institution's review.

This Section then provides examples where it may be more obvious that information published by a government institution has not been reviewed by that institution. In these instances, the institution does not contend or imply that it has vetted information and often disclaims any review. Yet there is still substantial confusion about whether the information has been vetted. This effect shows the power—and potential harm—of information associated with government institutions.

1. Information Endorsed by Government Institutions

It is not surprising that readers are confused into thinking that some of the categories of information in the previous section have been vetted by the institution promulgating the information. Take ClinicalTrials.gov: the NIH

188 Freilich & Kim, *supra* note 182 (manuscript at 13-14).

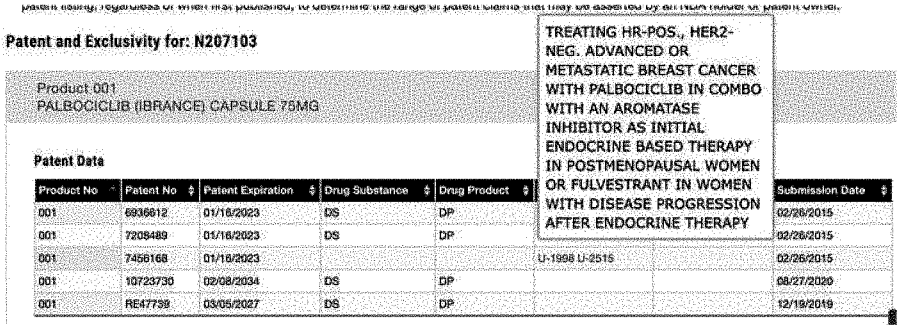
189 Andrew Pollack, *Disgraced Scientist Granted U.S. Patent for Work Found to Be Fraudulent*, N.Y. TIMES (Feb. 14, 2014), https://www.nytimes.com/2014/02/15/science/disgraced-scientist-granted-us-patent-for-work-found-to-be-fraudulent.html [https://perma.cc/6529-87FQ].

190 Cognitive psychologists have found that messages from credible speakers are generally more persuasive. Norton, *supra* note 29, at 592.

prominently displays its logo on ClinicalTrials.gov, suggesting some form of government review. At the time the problems described above occurred, there was no effective disclaimer on the website, although the website now does include a clear disclaimer.[191]

FDA listings and use codes are similarly easy to trust based on method of publication and visual appearance. They are accessed through the FDA's website, and there is nothing on the page to indicate either that the drug manufacturer submits the use code or that the FDA does not verify it before publication. To illustrate, below is a screenshot from the FDA website showing use codes for Pfizer's drug Ibrance™, a treatment for breast cancer.[192]

FIGURE 1: FDA-PUBLISHED USE CODES FOR IBRANCE™



Patent and Exclusivity for: N207103

Product 001
PALBOCICLIB (IBRANCE) CAPSULE 75MG

TREATING HR-POS., HER2-NEG. ADVANCED OR METASTATIC BREAST CANCER WITH PALBOCICLIB IN COMBO WITH AN AROMATASE INHIBITOR AS INITIAL ENDOCRINE BASED THERAPY IN POSTMENOPAUSAL WOMEN OR FULVESTRANT IN WOMEN WITH DISEASE PROGRESSION AFTER ENDOCRINE THERAPY

Patent Data

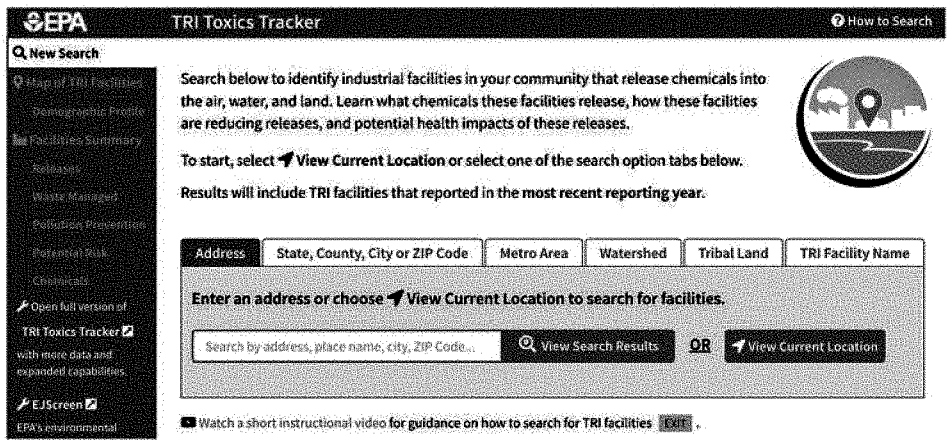
Product No	Patent No	Patent Expiration	Drug Substance	Drug Product			Submission Date
001	6936612	01/16/2023	DS	DP			02/26/2015
001	7208489	01/16/2023	DS	DP			02/26/2015
001	7456168	01/16/2023			U-1998 U-2515		02/26/2015
001	10723730	02/08/2034	DS	DP			08/27/2020
001	RE47739	03/05/2027	DS	DP			12/19/2019

191 *See Clinical Trials*, NAT'L INST. HEALTH, https://clinicaltrials.gov/ [https://perma.cc/ET7U-VR2E] (last visited Apr. 1, 2024) ("The U.S. government does not review or approve the safety and science of all studies listed on this website.").

192 The screenshot was taken on Sept 22, 2022, from the website https://www.accessdata.fda.gov/scripts/cder/ob/patent_info.cfm?Product_No=001&Appl_No=207103&Appl_type=N [https://perma.cc/7HYR-Q64L]. It is used to illustrate, not to imply any inaccuracy in the information depicted.

The EPA's Toxics Release Inventory website also implies agency endorsement of the information in the database ("[s]earch below to identify industrial facilities in your community that release chemicals"), and the main page of the website does not indicate that the data are unvetted.[193] Further, the database is clearly targeted to a lay audience ("communities") who may have more trouble understanding the extent to which the information has been vetted.[194]

FIGURE 2: TRI TOXICS TRACKER HOMEPAGE



193 Screenshot taken on Sept. 22, 2022, from https://www.epa.gov/toxics-release-inventory-tri-program [https://perma.cc/L7XK-GJ2B?type=standard].

194 *TRI for Communities*, ENV'T PROT. AGENCY (last updated Jan. 30, 2024), https://www.epa.gov/toxics-release-inventory-tri-program/tri-for-communities [https://perma.cc/YEE2-86ZJ].

Information in patents is likewise targeted at the public. One purpose of patents is to provide a public repository of cutting-edge technical information so that scientists and engineers can learn about and build upon new technologies to fulfill the Constitution's mandate to "promote the Progress of Science and useful Arts."[195]

When patents are published, they appear on the PTO website in an official-looking document with the words "United States Patent" in large letters at the top of the page. This publication, as well as the PTO's examination process, make information in the patent appear credible to lay readers. Scientists often believe that information in patents is particularly well-vetted because it has gone through an examination process, stating, for instance, that "[i]n patents . . . there are more stringent requirements about reduction to practice [than there are in scientific papers], so I trust patents more when I need to try other people's technologies."[196] Yet as outlined above, this is not always true.

FIGURE 3: EXAMPLE U.S. PATENT

(12) **United States Patent**
Olson et al.

(10) **Patent No.: US 10,918,099 B2**
(45) **Date of Patent: Feb. 16, 2021**

(54) **COMPOSITION FOR DETECTION AND TREATMENT OF BED BUGS**

(58) **Field of Classification Search**
CPC A01M 1/02; A01M 1/023; A01M 1/026;

195 U.S. CONST. art. I, § 8, cl. 8; Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480 (1974); *see also* Jonathan H. Ashtor, *Does Patented Information Promote the Progress of Technology?*, 113 NW. U. L. REV. 943, 978 (2019) ("[P]atents facilitate literal knowledge transfer through their written descriptions as well as tacit knowledge transfer through embodiments of their claimed inventions.").

196 Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 545, 575 (2012).

The impact of PTO imprimatur on the trustworthiness of the information in patents is strong enough that judges expressly warn that a patent on a drug or health-related technology does not indicate its efficacy.[197] Consumers are (erroneously) inclined to believe health claims in patents because the examination process gives those claims credibility.[198]

2. Information Disclaimed by Government Institutions

In the instances outlined above, readers view information as having institutional imprimatur because it is implied by the institution. But there are other instances where it is more difficult to imagine that readers will find unvetted claims credible. This Section highlights circumstances where some readers will find it obvious that information is unvetted. However, for many, particularly those without expertise in the subject matter of the information, mere association with a government institution gives information credibility.

a. *Consumer Databases*

Many agencies publish databases of unvetted consumer reports.[199] Although these databases clearly indicate that they consist of consumer reports and some include prominent disclaimers explaining that the agency does not vet that information, reports in consumer databases nonetheless gain credibility merely by association with the publishing agency. To illustrate, a discussion of agency imprimatur for two databases, from opposite sides of the political spectrum, follows.

The CDC's Vaccine Adverse Events Reporting System (VAERS). The CDC hosts a database where doctors and patients can report adverse events occurring after vaccination.[200] The CDC generally does not vet entries prior

197 *See, e.g.*, *In re* Hartop, 311 F.2d 249, 263 (C.C.P.A. 1962) (Smith, J., concurring) ("[T]he issuance of a patent is not in fact an 'imprimatur' as to . . . safety"); *Ex Parte* Moore, 128 U.S.P.Q. 8, 9, 1960 Pat. App. LEXIS 3 (B.P.I.A. Dec. 20, 1960) (quoting Isenstead v. Watson, 157 F. Supp. 7, 9 (D.D.C. 1957)) ("While the granting of a patent does not legally constitute a certificate that the medicine to which it relates is a good medicine . . . the granting of such a patent gives a kind of official imprimatur . . . on which . . . some members of the public are likely to rely.").

198 *See* Sean B. Seymore, *Patent Forfeiture*, 72 DUKE L.J. 1019, 1052 (2023) (describing "a belief among consumers that the federal government never issues patents on products that don't work as described").

199 *Cf.* Nathan Cortez, *Regulation by Database*, 89 U. COLO. L. REV. 1, 47-69 (2018) (discussing databases published by the CFPB, CPSC, CMS, and FDA).

200 *See Vaccine Adverse Event Reporting System (VAERS)*, CTRS. FOR DISEASE CONTROL & PREVENTION (last updated Oct. 19, 2023), https://www.cdc.gov/vaccinesafety/ensuringsafety/monitoring/vaers/index.html [https://perma.cc/3MNR-5TBK].

to publication and clearly so states.[201] Those accessing the database, which is available online through the Department of Health and Human Services, first have to click through a prominent disclaimer stating, in bold, that "[a]nyone . . . can submit reports to the system. . . . VAERS reports may contain information that is incomplete, inaccurate, coincidental, or unverifiable."[202]

Despite the prominent disclaimer, the CDC's expertise and reputation are associated with entries in the database, and information from the database is sometimes taken as authoritative. Dr. Kawsar Talaat, who specializes in vaccine research, explained that "[s]ince [the database is] so transparent, people don't really understand what it's for. They think it's . . . vetted."[203] Journalists have reported that adverse event reports from the CDC website are trusted more than similar reports elsewhere on the internet.[204]

In May 2021, several months after Covid-19 vaccines became widely available to the public, then-Fox News host Tucker Carlson claimed that data from the CDC showed that 4,000 people had died after receiving a Covid vaccine.[205] Carlson was correct—data from VAERS did indeed show thousands of deaths among vaccine recipients[206]—but VAERS data does not in any way prove that Covid vaccines kill people.[207] Carlson was clearly

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201 *See id.* ("VAERS accepts reports from anyone . . . . VAERS is not designed to determine if a vaccine caused or contributed to an adverse event. . . . VAERS reports . . . sometimes lack details or contain errors."); *Vaccine Adverse Event Reporting System*, U.S. DEP'T HEALTH & HUM. SERVS., https://vaers.hhs.gov/data.html [https://perma.cc/ZJ65-54FB] (last visited Apr. 1, 2024) (providing the same warnings but also noting that reports "that appear to be potentially false or fabricated with the intent to mislead . . . may be reviewed before they are added to the VAERS database").

202 *Disclaimer*, CTRS. FOR DISEASE CONTROL & PREVENTION https://wonder.cdc.gov/vaers.html [https://perma.cc/U6XF-NYFJ] (last visited Apr. 1, 2024).

203 Amy Dusto, *What VAERS Is (And Isn't)*, JOHNS HOPKINS BLOOMBERG SCH. OF PUB. HEALTH (May 3, 2022), https://publichealth.jhu.edu/2022/what-vaers-is-and-isnt [https://perma.cc/MD9S-CCMQ].

204 Lucinda Beaman & Esther Chan, *VAERS: How to Stop Misinformation Related to the US Vaccine Database*, FIRST DRAFT (July 23, 2021), https://firstdraftnews.org/articles/vaers-how-to-stop-misinformation-related-to-the-us-vaccine-database/ [http://perma.cc/7ERC-FG9N] ("In First Draft's daily monitoring, vaccine misinformation citing VAERS appears more frequently than similarly misleading claims building upon the equivalent national reporting systems elsewhere . . . .").

205 Wadman, *supra* note 22.

206 *Id.*

207 *See supra* notes 201–202 and accompanying text. Even if the information in VAERS is accurate, it shows only correlation, not causation. Given that millions of Americans were vaccinated against Covid, it is to be expected that some would die shortly thereafter for reasons unrelated to the vaccine. For instance, one report in the VAERS database notes that "My [85-year-old] grandmother died a few hours after receiving the moderna covid vaccine booster 1. While I don?t [sic] expect that the events are related, the treating hospital did not acknowledge this and I wanted to be sure a report was made." Saranac Hale Spencer, *Tucker Carlson Misrepresents Vaccine Safety Reporting Data*, FACTCHECK.ORG (May 14, 2021), https://www.factcheck.org/2021/05/scicheck-tucker-carlson-misrepresents-vaccine-safety-reporting-data/ [https://perma.cc/M3W8-9FP4].

appealing to the authority of data published by a government agency in order to increase the impact and clout of his statistic[208] (which is ironic, given the likelihood that many of his vaccine-skeptical viewers also distrust the government).[209]

Consumer Products Safety Commission's (CPSC) SaferProducts.gov. The CPSC's online database for consumer reports of unsafe products, SaferProducts.gov, is subject to a similar risk of perceived government imprimatur. The database publishes consumer reports[210] and does not review the accuracy of those submissions.[211]

When the database was created, several CPSC commissioners and elected officials criticized the database for its potential to mislead. Commissioner Anne Northup wrote that the website would "put a government imprimatur on voluntarily supplied external data that the agency has not validated."[212] Mike Pompeo, then a congressman, explained that "I firmly believe that a consumer 'database' . . . carrying the government's imprimatur must only include data that is accurate."[213] Consumer groups, unsurprisingly, disagreed.

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208 *Cf.* Beaman & Chan, *supra* note 204 ("The fact that [VAERS] reports are published by the CDC and FDA may also lend authority and a sense of authenticity to false claims and narratives.").

209 Pascaline Van Oost, et al., *The Relation Between Conspiracism, Government Trust, and COVID-19 Vaccination Intentions: The Key Role of Motivation*, 301 SOC. SCI. & MED. 114926, at *2 (2022).

210 U.S. CONSUMER PROD. SAFETY COMM'N: SAFERPRODUCTS.GOV, https://www.saferproducts.gov/ [https://perma.cc/6BJ7-UYK6]. For example, the top result for the search "toaster" on June 14, 2023 was a report concerning a Cuisinart Toaster: "51 YOF put [a] piece of bread in toaster. Later it made [a] loud pop & some smoke was coming out of it. After she unplugged [the] toaster, it started smoking more & some flames started coming out." *Incident Report ID 1196854*, U.S. CONSUMER PROD. SAFETY COMM'N: SAFERPRODUCTS.GOV (Sept. 7, 2011), https://www.saferproducts.gov/PublicSearch/Detail?ReportId=1196854 [https://perma.cc/VM6E-36Y6].

211 U.S. GOV'T ACCOUNTABILITY OFF., GAO 12-30, CONSUMER PRODUCT SAFETY COMMISSION: ACTION NEEDED TO STRENGTHEN IDENTIFICATION OF POTENTIALLY UNSAFE PRODUCTS 8 (2011), https://www.gao.gov/assets/gao-12-30.pdf [https://perma.cc/8T5E-XL6W] ("CPSC officials . . . explained that they are not required to determine the accuracy of submitted reports of harm."). The database webpage includes a disclaimer so stating at the bottom of the page: "CPSC does not guarantee the accuracy, completeness, or adequacy of the contents of the . . . [d]atabase." *Id.*

212 U.S. Consumer Prod. Safety Comm'n, STATEMENT OF COMMISSIONER ANNE M. NORTHUP REGARDING THE NOTICE OF PROPOSED RULEMAKING ON THE PUBLICLY AVAILABLE CONSUMER PRODUCT SAFETY INFORMATION DATABASE 7 (Apr. 22, 2010), https://www.cpsc.gov/s3fs-public/pdfs/northup04232010.pdf [https://perma.cc/6DH4-G4Q5].

213 Timothy Noah, *Who's Afraid of the CPSC?*, SLATE (Mar. 8, 2011), https://slate.com/business/2011/03/consumer-product-database-why-the-hysteria.html [https://perma.cc/9PCZ-KXRD]; *see also Oversight of the Consumer Product Safety Commission: Hearing Before the Subcomm. on Com., Mfg., and Trade of the H. Comm. on Energy and Com.*, 112th Cong. 188 (2012) (testimony of Mary Bono Mack, Commissioner, Consumer Product Safety Commission), https://www.govinfo.gov/content/pkg/CHRG-112hhrg82725/pdf/CHRG-112hhrg82725.pdf [https://perma.cc/J5PC-HRFY] ("[SaferProducts.gov] has become a public

Consumer groups, also unsurprisingly, felt it was "completely unconvincing" that consumers would be confused by government publication of consumer reports.[214]

Although the question of the CPSC's imprimatur has not been directly studied, a GAO report on consumer uses of SaferProducts.gov suggests that consumers could easily misunderstand the purpose of the database.[215] The report found that some consumers equated incident reports (submitted by the public) and recall notices (written by the agency).[216] Further, after reviewing the SaferProduct.gov homepage, more than a quarter of testers expected the database to indicate which products met certain safety standards.[217] Even expert readers are confused. The Consumer Federation of America, an association of over 250 non-profit consumer organizations, notes on its website that "unlike Yelp or Angie's [L]ist," SaferProducts.gov "contains reports of harm about a product that *are reviewed* before being posted."[218]

b. *Civil Litigation*

As every law student knows, a civil case begins with the complaint,[219] which must provide "a short and plain statement" of the plaintiff's claim.[220] The complaint generally also includes other pieces of information about the plaintiff's case.[221] Although the complaint and other pleadings are directed to the opposing party and to the court, they are also available to the public.[222] Parties have complete discretion over the contents of the pleadings they

website bearing the imprimatur of the Federal Government that is . . . populated by unverifiable reports of dubious accuracy.").

214 *Reauthorization of the Consumer Product Safety Commission (CPSC): Hearing before the Subcomm. on Consumer Affs. and Prod. Safety of the S. Comm. on Com., Sci., and Transp.*, 108th Cong. 30 (2003) (statement of R. David Pittle, Ph.D., Senior Vice President, Technical Policy, Consumers Union).

215 U.S. GOV'T ACCOUNTABILITY OFF., GAO-13-306, AWARENESS, USE, AND USEFULNESS OF SAFERPRODUCTS.GOV 27-28 (2013), https://www.gao.gov/assets/gao-13-306.pdf [https://perma.cc/36L6-4QLW].

216 *Id.* at 28.

217 *Id.* at 27.

218 Rachel Weintraub, *SaferProducts.gov Puts Power Into the Hands of the Consumer*, CONSUMER FED'N OF AM. (Aug. 20, 2018), https://consumerfed.org/saferproducts-gov-puts-power-into-the-hands-of-the-consumer/ [https://perma.cc/BS84-WWWB] (emphasis added).

219 FED. R. CIV. P. 3 ("A civil action is commenced by filing a complaint with the court.").

220 FED. R. CIV. P. 8(a)(2).

221 *See* Howard M. Erichson, *What Is the Difference Between a Conclusion and a Fact?*, 41 CARDOZO L. REV. 899, 907-19 (2020) (providing examples of information pled in a complaint).

222 *See* Solove, supra note 80, at 1152-54. Public access to court documents is in strong contrast with arbitration proceedings, which are traditionally private. Pamela K. Bookman, *Arbitral Courts*, 61 VA. J. INT'L L. 161, 171 (2021).

author.[223] The rules of civil procedure do provide disincentives for certain misuse of pleadings,[224] but the rules are relatively toothless.[225] A pleading is just "a tweet with a filing fee."[226]

And yet, pleadings are more than just tweets with a filing fee. Although they are clearly drafted by parties (for instance, they must be signed by the party's attorney[227]), they bear the imprimatur of the court and derive some credibility from that association. As Professor Kishanthi Parella notes, "Courts produce factual information for public consumption in the form of pleadings [and other documents]. Not all these products result from a judge's hand, yet the public tends to aggregate all these products under the common, sacrosanct umbrella of 'the court.'"[228]

This perception is exacerbated by the way in which the media reports on cases. While media sources are often careful to specify that information in complaints represents allegations, not proven facts, this best practice is not always followed. For instance, an article in the *Washington Post* about a lawsuit against a fertility clinic repeatedly wrote that "court records state" various facts, including that a couple had conceived through in vitro fertilization and that

> The baby was okay, court records state, but . . . [t]here was a zero percent probability the couple . . . were the biological parents. Specialists

223 Some rules impose guiding principles. For instance, an answer must, among other things, "admit or deny the allegations asserted against it by an opposing party." FED. R. CIV. P. 8(b)(1)(B).

224 Rule 11 requires attorneys to represent to the court that, to the best of their "knowledge, information, and belief, formed after an inquiry reasonable under the circumstances . . . the factual contentions have evidentiary support . . . [and] the denials of factual contentions are warranted on the evidence." FED. R. CIV. P. 11(b)(3), (4).

225 Rule 11 provides that when a party alleges the rule has been violated, that party must serve a motion for sanctions on the opposing party and allow the opposing party twenty-one days to withdraw the problematic pleading or portion thereof. FED. R. CIV. P. 11(c)(2). Only if the opposing party does not withdraw or correct the pleading may the moving party file the motion for sanctions with the court, at which point the court can impose sanctions at its discretion. *Id.* Many practitioners and judges have "questioned whether or not Rule 11 has been effective." Peter A. Joy, *The Relationship Between Civil Rule 11 and Lawyer Discipline: An Empirical Analysis Suggesting Institutional Choices in the Regulation of Lawyers*, 37 LOY. L.A. L. REV. 765, 765 (2004).

226 @_JustinLevitt_, TWITTER (Nov. 5, 2020, 2:05 PM), https://twitter.com/_justinlevitt_/status/1324427760589135872 [https://perma.cc/7729-B2XT].

227 FED. R. CIV. P. 11(a) ("Every pleading, written motion, and other paper must be signed by at least one attorney of record.").

228 *See* Kishanthi Parella, *Reputational Regulation*, 67 DUKE L.J. 907, 923 (2018). They should also be taken more seriously than a tweet because there are barriers to filing lawsuits that do not exist with tweets (filing and attorney's fees, for one) and because complaints are presumably more likely to lead to additional litigation as compared to a mere tweet.

> . . . repeatedly assured the couple that the test was not a problem and that they were, in fact, the biological parents, court records state.[229]

The court record in question was a complaint.[230] While the term "court records" imbues the allegations with authority, they are in fact unsubstantiated at this stage of the case.

Motions to dismiss may be an even more misleading form of litigation information than complaints. In a motion to dismiss, the moving party argues that, even if all facts pled by the opposing party are true, they are not sufficient to meet the legal standard in question.[231] Accordingly, when deciding a motion to dismiss, courts take facts pled by the non-moving party as true.[232] The court's opinion then recites those facts as if they were true.[233] Although courts will typically preface their opinion with an explanation that they are taking all facts as true for purposes of deciding the motion to dismiss, a reader without legal training might find that explanation difficult to understand and may assume that these facts have been assessed and found reliable by the opining judge.[234]

c. *Securities Filings*

Securities filings are another instance where unvetted information can accrue undue impact from its association with the government. Companies offering securities to the public must provide certain disclosures about the offerings so that potential investors can make informed decisions.[235] The Securities and Exchange Commission (SEC) requires disclosure of material information and prohibits misrepresentation, deceit, and fraud in such disclosures.[236]

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229 Andrea Salcedo, *Couple Sues Fertility Clinic, Saying They Had to Abort Stranger's Baby*, WASH. POST (Apr. 6, 2022), https://www.washingtonpost.com/nation/2022/04/06/fertility-lawsuit-wrong-embryo/ [https://perma.cc/R6YS-2XCJ].

230 The complaint in the case in question was filed approximately ten days before the article was published and the docket, at that point, contained no other substantive court documents. Doe v. N.Y. Fertility Inst., No. 1:22-cv-02442 (S.D.N.Y. Mar. 25, 2022).

231 Swierkiewicz v. Sorema N.A., 534 U.S. 506, 508 n.1 (2002) ("Because we review here a decision granting respondent's motion to dismiss, we must accept as true all of the factual allegations contained in the complaint.").

232 *Id.*

233 *See, e.g.*, *id.* at 508-09.

234 In my experience teaching civil procedure, the concept requires detailed explanation even to bright and motivated law students.

235 *The Laws that Govern the Securities Industry, Securities Act of 1933*, INVESTOR.GOV, https://www.investor.gov/introduction-investing/investing-basics/role-sec/laws-govern-securities-industry#secact1933 [https://perma.cc/GTS7-73EU].

236 *Id.*

The SEC reviews some securities filings to "monitor and enhance compliance with the applicable disclosure and accounting requirements."[237] The SEC checks these disclosures to ensure that they comply with relevant standards and appear to be complete.[238] When the review process is complete, the SEC deems the registration statement "effective."[239] However, the SEC explicitly notes that it does not review the merits of the filing, meaning that it does not guarantee that the security is an "appropriate" investment.[240] Nor does the SEC review filings to ensure accuracy.[241]

Under this regulatory scheme, the SEC publicly posts extensive information from companies about their securities—information unvetted by the SEC.[242] The SEC's role in publicizing this information can lead lay readers to erroneously believe that the SEC has reviewed or approved of the information in some way.[243]

The SEC is aware of and concerned about the possibility that investors will unduly trust securities because of their association with the SEC. It has issued several investor warnings to that effect, stating (in bold and italics) that "***you should know that a filing does not mean that the SEC has in any way validated or approved of the offering. Indeed, the SEC never 'approves' an offering.***"[244]

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237 *Filing Review Process*, U.S. SEC. & EXCH. COMM'N, (Sept. 27, 2019), https://www.sec.gov/divisions/corpfin/cffilingreview [https://perma.cc/4KGE-F7QC].

238 *Id.*

239 *Id.*

240 *Id.* ("The Division does not evaluate the merits of any transaction or determine whether an investment is appropriate for any investor.").

241 *Id.* ("The Division's review process is not a guarantee that the disclosure is complete and accurate"). The SEC emphasizes that it "does not vouch for the accuracy of a 10-K or 10-Q." *How to Read a 10-K/10-Q*, U.S. SEC. & EXCH. COMM'N (Jan. 25, 2021), https://www.sec.gov/fast-answers/answersreada10khtm.html#:~:text=The%20SEC%20does%20not%20vouch,companies'%20compliance%20with%20the%20requirements [https://perma.cc/3NR4-6NFQ].

242 For the SEC's complete database, see *EDGAR—Search and Access*, U.S. SEC. & EXCH. COMM'N (Sept. 27, 2021), https://www.sec.gov/edgar/search-and-access [https://perma.cc/TA3B-WMQY].

243 *See* Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473, 489 (2007) (worrying that "the mandatory [disclosure] regime may garner undeserved credibility, conferring a false imprimatur on malfeasant corporate actors").

244 *Investor Alert: Beware of Claims That the SEC Has Approved Offerings*, INVESTOR.GOV (April 30, 2019), https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-1 [https://perma.cc/U2K2-SWT7]. The SEC repeated this general warning in specific contexts. For example, the SEC cautioned investors that "***the [Form 1-A] filing itself does not mean the offering has been qualified by, or registered with, the SEC***" and that "**SEC staff does not take any action on Form C filings, and a Form C does not represent approval by the SEC.**" *Id.* (bold and italics in original).

These warnings demonstrate the SEC's concern that publication of a form on its database could lend false weight to unvetted information.[245] And the SEC has good reason to be concerned. A survey of U.S. residents found that "[r]espondents, on average, understood that the government at least sometimes engages in merit review of securities offerings . . . to ensure that investments are 'safe' or that a business is 'profitable.'"[246] Relatedly, the SEC has noted that its registration requirement for financial advisers can be manipulated to erroneously create "some official imprimatur" of the adviser.[247] Notably, although the SEC's rules about misrepresentation and fraud may deter false statements in disclosures, they do not ensure that offerings are good or profitable or that advisers will give helpful advice. Fear of sanctions therefore does not protect consumers who suffer this sort of misunderstanding.

C. *The Problem with Government Misinformation*

Having explained that information published by government institutions is often wrong, but that it is nonetheless perceived as trustworthy by the public, this Section explores the harm of this combination: misinformation.

In a sense, misinformation is old news. While we may not have a good solution, the prevalence of misinformation, "fake news," or "alternative facts" is widely recognized and deplored.[248] When people base their decisions on incorrect information, the outcome is often harmful to themselves and others.[249] Misinformation can contribute to political polarization and conflict by sowing distrust and solidifying divergent narratives.[250] It can be used to target individuals and marginalized groups by spreading false evidence.[251]

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245 *See* Spencer G. Feldman, *The SEC Warns Prospective Investors to Beware of Claims that the SEC Has Approved a Securities Offering (Because It Hasn't, Technically)*, OLSHAN L.: SEC. L. BLOG (May 10, 2019), https://www.olshanlaw.com/Securities-Law-Blog/the-sec-warns-prospective-investors-to-beware [https://perma.cc/SML3-4XUJ] (explaining that "the SEC has been sensitive to the claim that its filing review and comment process of registration statements and other reviewed offering and disclosure documents . . . is equivalent to or otherwise implies the SEC's substantive approval of such documents").

246 Andrew K. Jennings, *The Public's Companies*, 29 FORDHAM J. CORP. & FIN. L. 191, 224 (2023).

247 Amendments to Form ADV, 75 Fed. Reg. 49234, 49236 n.29 (Aug. 12, 2010) (to be codified at 17 C.F.R. pts. 275, 279).

248 *See, e.g.*, Daniela C. Manzi, *Managing the Misinformation Marketplace: The First Amendment and the Fight Against Fake News*, 87 FORDHAM L. REV. 2623, 2625 (2019) (discussing the problem of fake news).

249 *Id.*

250 *See, e.g.*, Mary Anne Franks & Ari Ezra Waldman, *Sex, Lies, and Videotape: Deep Fakes and Free Speech Delusions*, 78 MD. L. REV. 892, 896 (2019) (describing how deep-fake videos could "easily be harnessed to sow political and social discord").

251 *Id.*

And it is used to justify political and legislative decisions that run counter to scientific evidence.[252]

These are grievous harms. Misinformation generated through the mechanisms discussed in this Article can contribute to all of these ills. But misinformation from government platforms also has specific harms that have not been previously explored. These are discussed below.

First, the reach and impact of misinformation from government institutions may be greater than that of misinformation from many other platforms because the institutions are viewed as credible information sources.[253] That means that readers are more likely to believe and trust information associated with government institutions as compared to information found elsewhere.[254] And a common solution to misinformation—improved education and information literacy—may not easily resolve the problem of misinformation from government institutions because educators often specifically cite government information as trustworthy.[255]

The essence of the problem is a mismatch between how government institutions are perceived and the information they provide. When government institutions are trusted to disseminate accurate information but instead put out inaccurate information, trust in the institution renders that information more misleading than if it came from an untrusted source. Worse, when government institutions actively seek to build trust in the institution and its processes for reviewing information but then disseminate unreviewed information, the former actively undermines the public's ability to interpret the latter.

Further, promulgating unreviewed information may ultimately diminish trust in the institution. If audiences first believe information published by government institutions but then realize that the information is unvetted or incorrect, they may pivot to skepticism about all information originating from that institution. Because much information from the government *is* carefully vetted, this is an overreaction.[256] However, when it is difficult to distinguish

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252 *See* Joseph Landau, *Broken Records: Reconceptualizing Rational Basis Review to Address "Alternative Facts" in the Legislative Process*, 73 VAND. L. REV. 425, 432-42 (2020) (describing the use of alternative facts by policymakers in light of unfavorable data); Ari Ezra Waldman, *Manufacturing Uncertainty in Constitutional Law*, 91 FORDHAM L. REV. 2249, 2253 (2023) (describing situations where litigants suggest that there is ongoing debate on subject matter on which there is actually consensus).

253 *See supra* Section I.B.

254 *See supra* note 29 and accompanying text.

255 *See supra* notes 91–96 and accompanying text.

256 For example, the FDA carefully reviews information from drug developers before approving a drug. *See* 21 C.F.R. § 314.50 (2023) (describing the information that drug developers must submit to the FDA); *Development & Approval Process: Drugs*, U.S. FOOD & DRUG ADMIN. (Aug. 8, 2022), https://www.fda.gov/drugs/development-approval-process-drugs

between vetted and unvetted information published by a government institution, readers may opt for one of two extremes—believing all of it or believing none of it—both of which are incorrect.

When government institutions are distrusted, it becomes more difficult for them to effectively disseminate correct information. This is powerfully illustrated by the CDC's challenges in encouraging vaccination during the Covid-19 pandemic.[257] Further, an important step in minimizing the impact of misinformation is to provide venues containing trustworthy information. Government institutions can and should be purveyors and repositories of trustworthy information, but they cannot fulfill this function if they are not trusted.

Beyond the general costs to the integrity of institutions, misinformation interferes with the specific missions of government institutions. For example, the CDC's mission is public health—its motto is "Saving Lives, Protecting People."[258] If a CDC database erroneously scares people away from getting life-saving vaccines, it worsens public health. The patent system has a Constitutional mandate to "promote the Progress of Science."[259] It accomplishes this in part by requiring that patents disclose information about an invention so that scientists can build on cutting-edge technology.[260] However, because much information in patents is incorrect, scientists either ignore the information in patents or use it in counterproductive ways, such as wasting time attempting to replicate incorrect experiments.[261]

III. STRUCTURAL UNDERPINNINGS OF GOVERNMENT MISINFORMATION

The Section above provided examples of unvetted information published by government institutions and explained why government imprimatur

[https://perma.cc/5QZ2-L99M] (describing the FDA's review process for that information). Courts carefully review facts before making a decision. *Cf.* Jerome N. Frank, *Judicial Fact-Finding and Psychology*, 14 OHIO ST. L.J. 183, 183-84 (1953) (describing and critiquing some aspects of courts' fact-finding processes). These institutions may not always arrive at the correct answer, but they have review protocols in place.

257 *See, e.g.*, Ada Petriczko, *First-Time Vaccination Rates in The U.S. Are At a New Low*, N.Y. TIMES (Feb. 25, 2022), https://www.nytimes.com/2022/02/25/us/covid-vaccination-rate.html [https://perma.cc/WN4Y-SAKV] (describing the decreasing number of people receiving their first Covid shot).

258 CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/ [https://perma.cc/XPP2-TF49].

259 U.S. CONST. art. I, § 8, cl. 8.

260 Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480-81 (1974).

261 *See* Mark A. Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 21 (2008) (explaining that many scientists ignore patents); Janet Freilich, *The Replicability Crisis in Patent Law*, 95 IND. L. J. 431, 442, 456-58 (2020) (discussing the cost of irreplicable experiments and showing that these are frequently found in patents).

renders it particularly misleading. The focus was on how information is perceived by its audience. This Part turns to the structural underpinnings of misinformation platforms, exploring features of government institutions, information submitters, and the broader world that lead to the creation of misinformation platforms.

Section III.A begins with an exploration of why government institutions publish unvetted information, with an emphasis on the benefits of this arrangement for the institutions themselves. Section III.B turns to information submitters and their incentives to present incorrect information to the government. Sections III.C and III.D look at outside trends that reinforce misinformation: the role of third parties in disseminating government misinformation and how the internet and easy availability of information exacerbates the misinformation problem.

A. *Why do Government Institutions Publish Unvetted Information?*

Despite the potential for misinformation, repositories of unvetted information hosted by government institutions have significant benefits. This Part explains why collection, use, and dissemination of unvetted information is often necessary—either in the strict sense of the word or at least in a practical financial sense—to achieve policy goals.

As a preliminary question, why do government institutions publish information sourced from private entities? The answer is straightforward: much important information has no other source. Although government institutions can and do conduct their own investigations to collect information—for example, USDA meat inspectors observe live animals before slaughter to check for signs of disease[262]—a significant amount of information cannot be obtained except by asking private entities. How would the CDC know that a rare side effect of the Johnson & Johnson Covid-19 vaccine is blood clots unless affected individuals, their doctors, or hospitals reported it?[263] How would the patent office know about novel unpublicized inventions unless inventors disclosed them? Gathering information from private sources is also often easier and cheaper (for the government) than having the government gather it directly—for instance, asking companies to

262 GEOFFREY S. BECKER, CONG. RSCH. SERV., RS22819, USDA MEAT INSPECTION AND THE HUMANE METHODS OF SLAUGHTER ACT 2 (2008) https://www.everycrsreport.com/files/20080226_RS22819_10f70bd09ef48cc7cf1a202ec2ba30868728a109.pdf [https://perma.cc/N2B5-EQZN].

263 *Selected Adverse Events Reported After COVID-19 Vaccination*, CTRS. FOR DISEASE CONTROL & PREVENTION (Sept. 12, 2023), https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/adverse-events.html [https://perma.cc/DWR7-EZLT] (reporting the risk and listing several studies that used VAERS data).

report emissions as opposed to having EPA officials visit each location and take measurements.

The more complicated question is why government institutions do not vet information from private sources. The answer is threefold: timing, cost, and expertise.

Timing. Some unvetted information involves preliminary data that will later be incorporated into a review process. The CDC explains that its VAERS database is intended to be an "early warning system" of problems with vaccines.[264] The database itself is part of the process of determining whether certain health problems are associated with vaccination;[265] as such, it may not be practical (or medically possible) to definitively determine if a symptom is caused by a vaccine before it is included in the database.

Similarly, a complaint is filed in court at the beginning of a case.[266] If the case continues, the facts alleged will eventually be vetted by the court, but there is value in public access early in the case. Journalists often wish to report on cases as they commence, others may be inspired by a complaint to file similar cases, and the reputational cost to defendants may profitably (or problematically) encourage early settlement.[267] A significant criticism of settlement is that the settlement's terms are often not publicly available and neither is the case's resolution;[268] avoiding public dissemination of factual allegations until a court has ascertained their validity would seriously dampen the public's ability to engage with, supervise, and benefit from the litigation process.

Securities are another example where the constraints of timing mean that information cannot realistically be verified. Lay audiences may believe that SEC review indicates that certain securities are good investments, but even

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264 *Vaccine Adverse Event Reporting System (VAERS)*, CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/vaccinesafety/ensuringsafety/monitoring/vaers/index.html [https://perma.cc/29DE-6SL7].

265 *Id.*

266 FED. R. CIV. P. 3.

267 *See* Shapira, *supra* note 79, at 155; Emily Suran, *Title IX and Social Media: Going Beyond the Law*, 21 MICH. J. GENDER & L. 273, 298 (2014) (noting that litigants may hope to inspire others to file similar suits); Roy Shapira, *Reputation Through Litigation: How the Legal System Shapes Behavior by Producing Information*, 91 WASH. L. REV. 1193, 1240 (2016) (describing incentives for "the defendant company [to push] for a settlement precisely because it wants to prevent unfavorable information from getting out").

268 *See* Elizabeth E. Spainhour, *Unsealing Settlements: Recent Efforts to Expose Settlement Agreements That Conceal Public Hazards*, 82 N.C. L. REV. 2155, 2157-75 (2003) (discussing states' approaches to private settlement disclosures and arguing that "states considering limitations on protective orders that conceal public hazards should adopt policies . . . declaring such private settlements void as a matter of public policy"); Jack B. Weinstein, *Comments on Owen M. Fiss, Against Settlement*, 78 FORDHAM L. REV. 1265, 1267-68 (2009) ("[I]n some cases full litigation of claims should be encouraged to avoid settlements that hide critical facts or substantive developments from the public.").

if the SEC did review securities filings on the merits, it could not guarantee that securities would increase in value. The sort of vetting that lay audiences would like—indeed, that everyone would like!—is simply not possible because the future is unknowable.

Cost. Reviewing information is expensive. The federal judiciary, a major part of whose job is assessing factual information, had a budget of over $8 billion in fiscal year 2023.[269] And this does not include the costs that parties to litigation bear individually. Discovery, which is aimed at vetting factual allegations, is staggeringly expensive. In 2008, a report estimated that e-discovery cost $3.5 million in a typical mid-size case.[270]

There is surely more that institutions could do to review information they publish. The EPA could send inspectors to review emissions information from reporting facilities or the CPSC could collect and examine products reported to have caused injuries. But these steps are all, to varying degrees, expensive. If the level of misinformation is relatively low or the harm of that misinformation minimal, the additional expense may be unmerited.

Expertise. The institution publishing the information does not always have the expertise or ability to review it. For example, Patent Office examiners often have only a Bachelor's degree, and do not necessarily have the qualifications to check for errors in patent applications.[271] Further, the Patent Office does not have the facilities to test inventions to check whether an applicant's claims are correct.[272] Both lack of expertise and lack of facilities could, perhaps, be remedied with more money, but the expense would be significant and not necessarily worthwhile depending on the level of harm from misinformation.

Relatedly, even if institutions did have sufficient expertise to thoroughly review information, there are benefits to utilizing outside reviewers. Publishing unvetted information allows third parties to conduct their own analyses of the data, which may differ in useful ways from those conducted by the government institution. For example, medical experts not affiliated with the CDC review data in the VAERS database. When several patients

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269 *Federal Court Funding*, AM. BAR ASS'N (June 1, 2023), https://www.americanbar.org/advocacy/governmental_legislative_work/priorities_policy/independence_of_the_judiciary/federal-court-funding/?login [https://perma.cc/8LBV-B72Q].

270 INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., ELECTRONIC DISCOVERY: A VIEW FROM THE FRONT LINES 3-4, 25 (2008) (using a hypothetical employment dispute with a small firm to explain that a mid-size case is one involving up to 500 GB of possibly relevant data).

271 *Cf.* Ronald J. Mann, *The Idiosyncrasy of Patent Examiners: Effects of Experience and Attrition*, 92 TEX. L. REV. 2149, 2163, 2174-75 fig.2 (2014) (observing that most examiners have a bachelor's degree or less).

272 *Cf. In re* Antor Media Corp., 689 F.3d 1282, 1289 (Fed. Cir. 2012) ("[A]n examiner, who has no access to experts or laboratories, is not in a position to test each piece of prior art for enablement in citing it, and requiring him to do so would be onerous, if not impossible.").

reported to their doctors that they had experienced sudden hearing loss after a Covid-19 vaccine, those doctors analyzed VAERS data for signs that hearing loss was tied to the vaccine, and found it wasn't.[273] In the context of a consumer complaints database hosted by the Consumer Financial Protection Bureau,[274] consumer groups advocating for disclosure of unvetted narratives "noted that data do not need to be fully verified or random to be of some use to outside parties. For example, the data might alert outside researchers and consumers to potentially harmful trends."[275] The Board agreed, noting that it "maintain[s] significant controls to authenticate complaints" and adding that "experience shows that outside parties have, in fact, made reasonable use of non-random complaint databases disclosed by other agencies."[276]

B. *Incentives for Submitting Incorrect Information*

The Section above discussed why institutions publish unvetted information. This Section addresses why submitting entities provide incorrect information to government institutions. The Section begins with reasons for inadvertent submission of incorrect information and then turns to motives for deliberate submission of incorrect information, concluding with information that is correct but that submitters encourage the reader to misinterpret in misleading ways.

1. Inadvertent Incorrect Information

Often, entities who submit incorrect information to the government do not do so deliberately. Several of the institutions described above seek disclosure of early-stage or preliminary information, asking for the submitter's perception of what might have happened. Filings in civil litigation, patent applications, and submissions to consumer databases all inevitably have speculative components.[277] Some amount of incorrect information is therefore to be expected, even if the submitting party is both honest and cautious in the information provided.

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273 Eric J. Formeister, Wade Chien & Yuri Agrawal, *Preliminary Analysis of Association Between COVID-19 Vaccination and Sudden Hearing Loss Using US Centers for Disease Control and Prevention Vaccine Adverse Events Reporting System Data*, 147 JAMA OTOLARYNGOLOGY-HEAD & NECK SURGERY 674, 675-76 (2021).

274 *Consumer Complaint Database*, CONSUMER FIN. PROT. BUREAU, https://www.consumerfinance.gov/data-research/consumer-complaints/ [https://perma.cc/B4XN-JXUK] (last accessed Apr. 3, 2024).

275 Disclosure of Certain Credit Card Complaint Data, 77 Fed. Reg. 37558, 37561 (June 22, 2012).

276 *Id.* at 37561-62.

277 *See supra* Part II.

Parties may also submit incorrect information because they do not want to expend resources—money, time—on verifying the information. If there are few consequences for incorrect information, there is little incentive to carefully review information before its submission.[278] Indeed, there are costs to careful review: if doing so takes time, it may mean that a case does not get filed before the statute of limitations expires or that a competitor files a patent first.[279] An entity who is not trying to lie may nonetheless generate misinformation by cutting corners.

2. Deliberate Incorrect Information

However, entities also deliberately submit incorrect information. There are various ways in which information submitters benefit from doing so, which create incentives for misinformation. Several such benefits are outlined below.

Parties to litigation (or their lawyers) can launder information through government institutions to produce credible evidence for a case. Parties involved in litigation over vaccine side effects appear to frequently submit reports to VAERS, "presumably in an attempt to create the appearance of a causal connection between certain vaccines and medical conditions."[280] A study found that one third of VAERS reports of autism in 2002 were linked to litigation, showing "possible misuse of VAERS in the litigation process" and raising concerns that VAERS data "are used by litigants . . . as evidence that as the number of immunizations has increased . . . the rate of autism has increased."[281] SaferProducts.gov, the consumer products safety database, is subject to concerns that attorneys could submit reports "to generate new lawsuits or provide fresh evidence to existing ones."[282] Similarly, industry groups worry that "third parties . . . could use [the Consumer Financial Protection Bureau] complaint submission as a strategic tool to unfairly aid their clients."[283]

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278 Sanctions (and lack thereof) are discussed further in subsection IV.A.2, *infra*.

279 Because patents are awarded to the first inventor to file, there is substantial pressure to file patents early, which diminishes information quality. *See* Christopher A. Cotropia, *The Folly of Early Filing in Patent Law*, 61 HASTINGS L.J. 65, 69-70, (2009) (discussing the problems of incentivizing early filing even before the US shifted to first-to-file).

280 *U.S. Consumer Prod. Safety Comm'n Public Hearing: Letter on Public Hearing on Establishment of a Public Consumer Product Safety Incident Database from Geoffrey R. Hartenstein and Dave P. Stankovich* 48 (2009) [https://web.archive.org/web/20171024213425/https://www.cpsc.gov/PageFiles/89660/pubdb.pdf].

281 Michael J. Goodman & James Nordin, *Vaccine Adverse Event Reporting System Reporting Source: A Possible Source of Bias in Longitudinal Studies*, 117 PEDIATRICS 387, 388-89 (2006).

282 Noah, *supra* note 213.

283 Disclosure of Consumer Complaint Narrative Data, 80 Fed. Reg. 15572, 15576 (Mar. 24, 2015).

In other instances, entities may submit deliberately incorrect information to a government institution for financial gain. Adding incorrect patent listings and use codes means keep generic competition off the market for years.[284] Listing a trial on ClinicalTrials.gov can encourage patients to pay for the treatment.[285]

Incorrect information can also provide reputational gains. For example, pleadings are often targeted just as much to the public as to the court.[286] Litigating parties may leverage the credibility (and visibility) of court proceedings to publicize their stories and gain attention.[287] Inventors of ethically dubious technologies may seek patents in order to leverage PTO imprimatur to enhance the credibility and acceptability of those technologies.[288] Developers of experimental treatments point patients to the treatment's listing on ClinicalTrials.gov to suggest that the treatment is reviewed by the government and therefore safe.[289] In another example, anti-vaccine groups burnish the credibility of their claims by submitting information to the CDC's reporting system.[290]

These are examples of information laundering, exploiting an institution's imprimatur to make information more credible—laundering "dirty" (incorrect) information through a government institution to render it "clean" (trustworthy) and impactful.

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284 For a discussion of incorrect drug patent listings, see *supra* notes 150–166 and accompanying text.

285 *See* Turner, *supra* note 134, at 706 (describing "pay-to-participate" treatments costing many thousands of dollars).

286 *See* Roy Shapira, *Reputation Through Litigation*, 91 WASH. L. REV. 1193, 1232 (2016) ("Plaintiffs, defendants, and third-party intermediaries may use tidbits from earlier stages (complaint, motion to dismiss, expert testimonies) to help their specific interpretations gain traction in the court of public opinion.").

287 *See id.* (discussing the interaction between media coverage and litigation).

288 *See, e.g.*, Margo A. Bagley, *Patent First, Ask Questions Later: Morality and Biotechnology in Patent Law*, 45 WM. & MARY L. REV. 469, 475-76 (2003) (arguing that "[t]he availability of a government imprimatur granting exclusive rights over morally controversial inventions is especially problematic in the area of biotechnology"); Timothy R. Holbrook, *The Expressive Impact of Patents*, 84 WASH. U. L. REV. 573, 577 (2006) ("The government imprimatur attending the patent grant can confirm the technical and, potentially, moral legitimacy of a technology."); Peter Lee, *Patents, Paradigm Shifts, and Progress in Biomedical Science*, 114 YALE L.J. 659, 676 (2004) ("[T]he government imprimatur of patents helps legitimate novel technologies and the theories they apply.").

289 Thomas Albini, Remarks at the FDA Public Workshop on Scientific Evidence in Development of HCT/Ps, at 306 (Sept. 8, 2016) ("[T]hese patients were under the impression that the clinicaltrials.gov website lended some credibility to the study.") (transcript available at https://web.archive.org/web/20210306183856/https://www.fda.gov/media/128052/download).

290 *See supra* subsection II.B.2.a.

3. Deliberate Encouragement of Misinterpretation

Separately, even when the information itself is not incorrect, information submitters have an incentive to encourage audiences to misinterpret the information. In this scenario, information submitters promote information's association with government institutions and with the credibility of the institution to imply that the information itself is credible, even when the information is unvetted. For example, patent owners promote their scientific accomplishments by pointing to information in patents.[291] These messages are directed to consumers, competitors, and investors. A commercial created by Mercedes Benz shows a car trailing pieces of paper (patents, presumably) while a narrator explains that "[t]o hold a patent that has changed the modern world would define you as an innovator. . . . To hold over 80,000 [patents], well, that would make you the creators of the 2013 Mercedes Benz E class . . . ."[292] A survey found that consumers perceive patented technologies as superior, although patents in no way guarantee this.[293] The information in the patents may be entirely correct, but the consequence of that information is inflated.

With respect to competitors, there is evidence that companies deliberately file "decoy patents" to "direct competitors into unprofitable fields of research."[294] For instance, oil companies frequently patent multiple inventions, many of them not true research projects, in order to distract competitors.[295] This strategy is effective because patents are credible signals of invention.[296] Patent holders also exploit the imprimatur of legitimacy granted by the PTO to enhance the signaling function of patents in other respects, such as pitches to venture capital firms, who give more weight to technological details disclosed in a patent than to the same details provided in another format.[297]

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291 *See* Long, *supra* note 103, at 627-28 ("[P]atents [are] a means of credibly publicizing information. . . . [F]irms can use the patent document itself to convey information that would not be as credible when revealed in other contexts.").

292 NPTEL-NOC IITM, *Mercedes Benz TV Commercial Patents*, YOUTUBE (May 6, 2019), https://www.youtube.com/watch?v=pFhuBEK_L6I [https://perma.cc/9FN7-ZWUH].

293 *See Using Patents as a Marketing Tool—Good, Bad and the Ugly!*, INVNTREE (Aug. 23, 2011), https://www.invntree.com/blogs/using-patents-marketing-tool-good-bad-and-ugly [https://perma.cc/7V6W-QGZ7] (describing results of a survey that found consumers perceived patented products as superior).

294 Corinne Langinier, *Using Patents to Mislead Rivals*, 38 CAN. J. ECON. 520, 522 (2005).

295 *Id.*

296 Long, *supra* note 103, at 647 (noting that patents are a low-cost way to convey information to the public).

297 *See id.* at 627-28 (describing the signaling function of patents); *see also* David H. Hsu & Rosemarie H. Ziedonis, *Patents As Quality Signals for Entrepreneurial Ventures*, 2008 ACAD. MGMT. PROCS. 1, 2-3 (2008) (noting that venture capitalists and firms use patents as evidence of management proficiency, research progress, and marketability).

In the context of securities, companies may boast of their association with the SEC in the hopes that the SEC's imprimatur will make investors favor the offering (though the SEC aggressively discourages this). For instance, Blockvest LLC claimed to be "registered" and "approved" by the SEC—a claim the SEC disputed.[298] The SEC subsequently issued a warning to investors that companies sometimes "tout[] SEC forms and filings as indications that the investment has been 'approved' by the SEC. That is not true."[299]

In sum, there are many ways in which information submitters can benefit from using their own unvetted information once it has been published by a government institution. This creates incentives both for deliberate submission of incorrect information and for encouraging unwarranted trust in government-published information.

A. *Misinformation Intermediaries*

The Sections above explored why government institutions and information submitters tolerate or encourage misinformation. This Section turns to third parties, exploring the role of intermediaries in spreading misinformation from unvetted government information.

The audience for information disseminated by the government often does not obtain the information directly from the government institution, but rather through a third-party intermediary.[300] It is common, for instance, to access litigation documents through private databases rather than directly from the court system—if you search Google for a case, the complaint, sourced by a database called casetext.com, often appears as one of the first search results.[301]

Private databases are helpful to increase access to information, but because they remove information from its original context, they can exacerbate misinformation, sometimes deliberately. For example, the website OpenVAERS—called "one of the most powerful tools in the anti-vaxxer

298 *See* SEC v. Blockvest, L.L.C., No. 18-CV-2287, 2020 WL 2786869, at *2 (S.D. Cal. Oct. 3, 2018) ("According to the SEC, Blockvest and Ringgold falsely claim their ICO has been "registered" and/or "approved" by the SEC, the Commodity Futures Trading Commission ("CFTC") and the National Futures Association ("NFA"), when in fact, it has not.").

299 *Investor Alert: Beware of Claims That the SEC Has Approved Offerings*, INVESTOR.GOV (April 30, 2019), https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-1 [https://perma.cc/EM3U-RVHF].

300 For a thorough examination of the strengths and weaknesses of intermediaries for government information, see generally Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267 (2017).

301 For example, a Google search for "Doe v. N.Y. Fertility Institute" reveals at least three different private legal databases: Justia, Casetext, and Law360. [https://perma.cc/8DX2-8FH2].

community"—contains data from the CDC's VAERS.[302] Its front-page states—in large letters—"37,231 COVID Vaccine Reported Deaths" and "214,906 Total COVID Vaccine Reported Hospitalizations" (as of Feb. 23, 2024).[303] Although the CDC VAERS website contains a prominent disclaimer explaining the limitations of the data, the front page of OpenVAERS does not contain the CDC disclaimer.[304] OpenVAERS gets more traffic than the CDC website from which it pulls its data.[305]

Third parties can also deliberately spread misinformation by emphasizing that a piece of information comes from the government—playing on the credibility of the institution—but omitting any statement that the information is unvetted and may not be reliable. For example, U.S. Representative Marjorie Taylor Greene cited the CDC's VAERS database in a tweet stating that there were "extremely high amounts of Covid vaccine deaths."[306] Senator Ron Johnson stated VAERS data showed that "we're over 3000 deaths . . . after within 30 days of taking the vaccine"[307] and later tweeted that "[s]adly, we passed two milestones on VAERS. Over 1 million adverse events and over 21,000 deaths" and shared a chart sub-titled "FDA and CDC Data."[308]

Finally, third parties can scrape government databases for information that they incorporate into other applications. This is increasingly common as the creators of artificial intelligence systems seek data to input into their system.[309] For instance, the text of patents is commonly fed into artificial

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302 Gilbert, *supra* note 42.

303 OPENVAERS, https://openvaers.com/ [perma.cc/LCK6-QHYE] (last accessed Apr. 3, 2024). The site notes (in small text at the bottom of the page) that "Reports are not proof of causality." *Id.*

304 *Id.*

305 Devika Khandelwal, Nick Backovic & Edie Miller, *California Woman Behind Anti-Vax Site Outperforming Government Database*, LOGICALLY (Aug. 12, 2021), https://www.logically.ai/articles/california-woman-anti-vax-site-openvaers [https://perma.cc/9YE9-2BCR] (finding 1.23 million people visited OpenVAERS in six months, while 800,000 visited the CDC's site).

306 Davey Alba, *Twitter Permanently Suspends Marjorie Taylor Greene's Account*, N.Y. TIMES (Jan. 2, 2022), https://www.nytimes.com/2022/01/02/technology/marjorie-taylor-greene-twitter.html [https://perma.cc/Y7J8-GEAR].

307 *Sen. Johnson Falsely Cites VAERS Reports to Question Covid-19 Vaccine Safety*, CNN: FACTS FIRST (last visited Apr. 2, 2024), https://www.cnn.com/factsfirst/politics/factcheck_ba6b9bac-407c-4c88-ac6e-06d6e7acff28 [https://perma.cc/457G-XDJ7].

308 Senator Ron Johnson (@senronjohnson), TWITTER (Jan. 3, 2022, 11:49 AM), https://twitter.com/senronjohnson/status/1478045946034495494?lang=en [https://perma.cc/MS52-KPJG].

309 *See, e.g.*, Alessandro Piscopo, Ronald Siebes & Lynda Hardman, *Predicting Sense of Community and Participation by Applying Machine Learning to Open Government Data*, 9 POL'Y & INTERNET 55, 56 (2017) (describing Project Stentor, a UK-based project intended to "address issues connected with the accessibility of government data" by "create[ing] a platform to enable local administrators and policy makers to access, compare and analyse datasets from different sources").

intelligence systems to generate reports about the state of technology and to guide technological development and investment decisions.[310] The accessibility and perceived trustworthiness of government information might make it a particularly appealing input for such systems, but if the information is wrong, then the output will be as well.[311]

D. *Broader Audiences for Government (Mis)Information*

The increasingly broad audience for government information further contributes to the harms of misinformation. Some of the information discussed in this Article was historically obscure and difficult to find, restricting the audience to subject-matter experts.[312] The push for openness of both agency documents and court filings has rendered more information available to more people.[313] And the internet has, of course, made information easier to access. This is democratizing in the sense that anyone can now find and use government databases and court filings.[314]

However, broadening the audience beyond experts exacerbates the potential for misinformation. For instance, the ease with which patents can be searched for the term "coronavirus" appears to have sparked several persistent hoaxes.[315] When a search turned up patents using the word "coronavirus" from before 2019 (the beginning of the Covid-19 pandemic), a number of videos—including *Plandemic*—claimed these as evidence that the scientists named on the patents created the Covid-19 virus.[316] This is not correct—the term "coronavirus" refers generally to a class of viruses that includes both Covid-19 and other viruses that were known before 2019—but

310 *See* Janet Freilich, *Patents' New Salience*, 109 VA. L. REV. 595, 598, 622-27 (2023).

311 For a more extensive discussion of such concerns, see, e.g., Tabrez Y. Ebrahim, *Algorithms in Business, Merchant-Consumer Interactions, & Regulation*, 123 W. VA. L. REV. 873, 888 (2021) and Shlomit Yanisky-Ravid & Sean K. Hallisey, *Equality and Privacy by Design: A New Model of Artificial Intelligence Data Transparency Via Auditing, Certification, and Safe Harbor Regimes*, 46 FORDHAM URB. L.J. 428, 449 (2019), which describe problematic algorithmic outcomes from faulty inputs.

312 Patents, for instance, were only available in person at the Patent Office or at specialized libraries, but they are now available online. *See* Jeffrey L. Furman, Markus Nagler & Martin Watzinger, *Disclosure and Subsequent Innovation: Evidence from the Patent Depository Library Program*, 13 AM. ECON. J. 239, 240 (2021).

313 *Supra* Section I.A.

314 *See* Noveck, *supra* note 60, at 4 (explaining how open data fosters greater public participation and collaboration). The internet of course is also democratizing in the sense that it makes information of all sorts, not just government, broadly available. *See* Olivier Sylvain, *Network Equality*, 67 HASTINGS L.J. 443, 445 (2015) (discussing the potential for the internet to be democratizing by providing a gateway to information typically outside a user's reach).

315 Jonathan Jarry, *Patently False: The Disinformation Over Coronavirus Patents*, MCGILL UNIV. OFF. FOR SCI. & SOC'Y (Aug. 28, 2020), https://www.mcgill.ca/oss/article/covid-19-pseudoscience/patently-false-disinformation-over-coronavirus-patents [https://perma.cc/JJ7G-9ZDS].

316 *Id.*

the easy availability of information in patents and the apparent trustworthiness of the documents combined to spread misinformation.[317]

Moreover, broadening the audience for government information requires changes in how the government communicates.[318] Government institutions that publish unvetted information often explain that the information is unvetted, but do so in terms that are only accessible to or understandable by experts.[319] When information is targeted at expert readers but available to anyone, the mismatch may cause confusion.

Sometimes, the focus on getting more information to more people can obscure misinformation problems. For instance, the creation of ClinicalTrials.gov was intended to facilitate public enrollment in clinical trials.[320] There has subsequently been significant policy efforts aimed at *increasing* public access and the volume of information provided. Legislation enlarged categories of clinical trials that must be submitted to ClinicalTrials.gov.[321] And much scholarship has been devoted to remedying concerns that not enough information is submitted to ClinicalTrials.gov.[322] This emphasis may be why the detrimental effects of increasingly accessible information have been overlooked.

Broader audiences are a challenge not only for the spread of misinformation but also the spread of socially harmful information. Social media sites, for example, prevent users who are under eighteen from seeing certain content, including posts promoting sales of firearms and depictions of weight loss products and dangerous cosmetic procedures.[323] There are no such

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317 *See id.* I do not claim that the information in those patents is incorrect, merely that it was misinterpreted, which illustrates how incorrect information in patents could also spread.

318 For example, there is widespread debate among scholars and policy makers about whether and how the SEC should target disclosures to lay audiences. *E.g.*, Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosures*, 159 U. PA. L. REV. 647, 732 (2011) (arguing securities disclosures are "aimed directly at sophisticated intermediaries"); Lisa M. Fairfax, *The Securities Law Implications of Financial Illiteracy*, 104 VA. L. REV. 1065, 1095 (2018) ("There is considerable debate regarding the intended audience of disclosure.").

319 *Supra* subsection II.B.2.

320 *See supra* note 127.

321 Carolyne R. Hathaway, John R. Mathei, J. Ben Haas & Elizabeth D. Meltzer, *The Web of Clinical Trial Registration Obligations*, 64 FOOD & DRUG L.J. 261, 264 (2009).

322 *See, e.g.*, Reshma Ramachandran, Joseph S. Ross & Christopher J. Morten, *Strengthening the FDA's Enforcement of ClinicalTrials.gov Reporting Requirements*, 326 J. AM. MED. ASSOC. 2131, 2132 (2021) (suggesting steps the FDA could take to "ensure timely submission of trial results information"). This emphasis is understandable since compliance with information disclosure requirements on ClinicalTrials.gov are regrettably low. *Id.* at 2131 ("[R]ecent estimates suggest that approximately 60% of trials fail to report results on time and more than 30%. . . . have not yet reported results.").

323 *See, e.g.*, *Restricted Goods and Services*, META https://transparency.fb.com/policies/community-standards/regulated-goods/ [https://perma.cc/KUW4-PUQM] (last accessed Jan. 23, 2024). In the context of social media, see Olivier Sylvain, *Platform Realism, Informational Inequality, and Section 230 Reform*, 131 YALE L.J.

restrictions on, for instance, patents, where any user can find instructions for 3D printing a gun[324] or compounds that purport to treat weight loss.[325] This is unfortunate because the combination of easy access and PTO imprimatur leads people to believe even outlandish claims in patents. For example, one patent claims that patients can cure AIDS by injecting themselves with silver.[326] It is easy to find approving tweets about this patent, many of which specifically associate the alleged cure with the government, presumably to make the claim more credible.[327] Infectious disease doctors confirm that the treatment outlined in the patent does not work to cure AIDS, although it may turn you blue.[328]

IV. REFORMING MISINFORMATION PLATFORMS

Having outlined both the reasons for government-hosted misinformation and its harms, this Part turns to solutions. Section IV.A discusses existing solutions and explains why they, although useful, cannot fully solve the misinformation problem. Section IV.B explores new approaches to minimize the ills of government misinformation.

A. *Existing Policies are Necessary but Insufficient*

Government institutions currently address the potential for misinformation in three ways: disclaimers, sanctions, and hurdles. As explained below, all are important and should be expanded, but none can entirely address the problem.

FORUM 475, 476-77 (2021), which describes the increased attention to the ways in which social media sites encourage the spread of harmful content.

324 U.S. Patent Application No. 15/118,076 (filed Feb. 10, 2015).

325 *E.g.*, U.S. Patent No. 10,258,738 (filed Apr. 21, 2017) (issued Apr. 16, 2019); U.S. Patent No. 11,278,544 (filed Mar. 25, 2019) (issued Mar. 22, 2022); U.S. Patent No. 10,226,490 (filed June 17, 2016) (issued Mar. 12, 2019).

326 U.S. Patent No. 5,676,977 (filed May 31, 1996) (issued Oct. 14, 1997).

327 @Julie23507494, TWITTER (Nov. 23, 2021, 8:58 AM), https://twitter.com/Julie23507494/status/1463144874979516421 [https://perma.cc/6QR4-MYUC] (citing the patent and noting that "the US government patented a cure [for HIV/AIDS] in 1996"); @TehDissident, Twitter (May 6, 2013, 7:51 PM), https://twitter.com/TehDissident/status/331556823259807744 [https://perma.cc/6F97-36H2] ("Cure for AIDS, US Patent #5,676,977, SOURCE: US Patent Office"); @AaronCohen13, TWITTER (Sept. 10, 2012, 12:39 AM), https://twitter.com/AaronCohen13/status/245018684156964864 [https://perma.cc/E39Y-AYDT] ("If you don't believe in government conspiracies just simply google or lookup the U.S. Patent 5,676,977!! WE HAVE THE CURE FOR AIDS !!!!!!!!!!").

328 *Colloidal Silver*, MEMORIAL SLOAN KETTERING CANCER CLINIC (Feb. 10, 2023), https://www.mskcc.org/cancer-care/integrative-medicine/herbs/colloidal-silver [https://perma.cc/2NUT-T5GM].

1. Disclaimers

Consumer databases, securities filings, and some civil litigation documents have disclaimers intended to inform readers that the information contained therein is not vetted and may not be accurate.[329] The CFPB's complaints database includes a statement that "narratives are not verified before publication" on its front page.[330] The CDC's VAERS database states—in bold—that "[a]nyone, including . . .the public can submit reports to the system. . . . VAERS reports may contain information that is incomplete, inaccurate, coincidental, or unverifiable."[331] The NIH's ClinicalTrials.gov website states that "[t]he U.S. government does not review or approve the safety and science of all studies listed on this website."[332] The SEC states that it "does not evaluate the merits of any transaction or determine whether an investment is appropriate for any investor."[333] Courts, when presenting unverified facts in a motion to dismiss, generally include a statement along the lines of "[a]ccepting the allegations in th[e] complaint as true . . . the relevant facts are as follows."[334]

Disclaimers are important because they caution readers that content may be incorrect. They are particularly important for government information because of the mismatch between the quality of that information and the general expectation that government information is examined and trustworthy. While not perfect solutions, disclaimers are a necessary minimum solution. Some of the examples discussed in this paper, including patents and complaints in litigation, do not have disclaimers.[335] Adding a disclaimer is a relatively simple and low-cost way to reduce reader confusion.

Existing disclaimers can also be improved. Some are not comprehensible to the lay reader—courts' disclaimers in the context of motions to dismiss, for example. Others are not placed prominently and are easy for readers to miss. For instance, the SEC's repository for securities filings, EDGAR, does

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329 *Supra* subsection II.B.2.

330 *Consumer Complaint Database*, CONSUMER FIN. PROT. BUREAU, https://www.consumerfinance.gov/data-research/consumer-complaints/ [https://perma.cc/62PY-N2V5] (last accessed Jan. 22, 2024).

331 *VAERS Data*, U.S. DEP'T HEALTH & HUM. SERVS., https://vaers.hhs.gov/data.html [https://perma.cc/ZJ65-54FB].

332 *Clinical Trials*, NAT'L INST. HEALTH, https://clinicaltrials.gov/ [https://perma.cc/T9GR-EG83].

333 *Filing Review Process*, U.S. SEC. & EXCH. COMM'N, (Sept. 27, 2019), https://www.sec.gov/divisions/corpfin/cffilingreview [https://perma.cc/4KGE-F7QC].

334 Hughes v. Nw. Univ., 142 S. Ct. 737, 740 (2022).

335 *Supra* subsection II.B.1.

not say on its front page that the information is unvetted.[336] And the CFPB's disclaimer is on its front page, but the reader must scroll down to see it.[337]

However, even the most prominent and clearest disclaimers are not a complete solution. First, many people simply ignore disclaimers or do not read them.[338] Second, many readers access information not through a government website but through a third-party website or through an intermediary.[339] Government institutions cannot ensure that third parties include disclaimers and, as explained above, some third parties omit disclaimers to purposefully mislead.[340] Disclaimers alone therefore cannot prevent misinformation.

This has implications beyond the misinformation problem discussed in this Article. First Amendment cases often ask whether the public reasonably associates particular speech with the government or with private parties.[341] In several cases, the Supreme Court has stated that, if the government wishes to avoid being perceived as the source of a message, it can provide a disclaimer.[342] However, the challenges of implementing disclaimers that effectively convey the message that information does not come from the

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336 *EDGAR*, U.S. SEC. EXCH. COMM'N, https://www.sec.gov/edgar/search/ [https://perma.cc/LXQ6-MZNF] (last accessed Apr. 1, 2024).

337 *Consumer Complaint Database*, CONSUMER FIN. PROT. BUREAU, https://www.consumerfinance.gov/data-research/consumer-complaints/ [https://perma.cc/62PY-N2V5].

338 OMRI BEN-SHAHAR & CARL E. SCHNEIDER, MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE 7-8 (2014).

339 *See supra* Section III.C.

340 *Id.*

341 These are "mixed speech" cases where the speech has some government and some private elements. Corbin, *supra* note 46, at 618-19. The First Amendment requires viewpoint neutrality when the government regulates private speech, but does not so require when the government regulates its own speech. Pleasant Grove City v. Summum, 555 U.S. 460, 467-68 (2009). In determining whether the government can regulate speech in certain ways, courts must therefore classify speech as either government or private. *See, e.g.*, *id.* at 470-73 (finding a permanent monument on public property constituted government, not private, speech); Walker v. Texas Div., Sons of Confederate Veterans, Inc., 576 U.S. 200, 207-19 (2015) (finding that specialty license plates constitute government, not private, speech).

342 Capitol Square Rev. & Advisory Bd. v. Pinette, 515 U.S. 753, 776 (1995) (O'Connor, J., concurring) (writing that "the presence of a sign disclaiming government sponsorship or endorsement" made it clear that the cross was private, not government, speech); *id.* at 784 (Souter, J., concurring) ("I vote to affirm in large part because of the possibility of affixing a sign to the cross adequately disclaiming any government sponsorship or endorsement of it."); PruneYard Shopping Ctr. v. Robins, 447 U.S. 74, 87 (1980) (explaining that a (privately owned) shopping mall could "expressly disavow any connection with the message [of political groups passing out pamphlets in the mall] by simply posting signs"); Pac. Gas & Elec. Co. v. Pub. Util. Comm'n of Cal., 475 U.S. 1, 15 n.11 (1986) ("The disclaimer serves only to avoid giving readers the mistaken impression that TURN's words are really those of appellant."). Note that *Pacific Gas and Electric* is not about the government avoiding attribution to itself, rather, a private company was challenging a law compelling it to disseminate another's speech.

government suggests that, contrary to the Court's belief, disclaimers may not be sufficient.

2. Sanctions

Sanctions are a partial solution to misinformation. For instance, the SEC, whose mission is to protect investors, aggressively pursues and prosecutes those who make false statements and exploit the public's trust in the SEC to promote their offerings.[343] Sanctions can, and should, be expanded to other circumstances where entities are deliberately submitting false information in ways that are harmful to readers.[344]

In other instances, sanctions are available but not used. Both the CDC[345] and CPSC[346] warn that false submissions to their database can result in fines under 18 U.S.C. § 1001, which provides penalties for "knowingly and willfully" making "any materially false, fictitious, or fraudulent statement" "in any matter within the jurisdiction of the executive, legislative, or judicial branch."[347] However, there are no records of the CPSC or CDC pursuing penalties under this statute,[348] even though the latter recognizes that some submissions are clearly false.[349] In the case of patents, some types of fraud in patent applications can be punished by rendering the patent unenforceable,[350] but it is not clear that all deliberate inclusion of misinformation is punishable in this way. Patent applicants must disclose all information "material to patentability."[351] However, because patents can be granted even if they

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343 *See, e.g.*, Press Release, U.S. Sec. Exch. Comm'n, SEC Stops Fraudulent ICO That Falsely Claimed SEC Approval (Oct. 11, 2018), https://www.sec.gov/news/press-release/2018-232 [https://perma.cc/X3FV-QD6S].

344 For example, this has been suggested in the context of patents. *See, e.g.*, JORGE L. CONTRERAS, PATENT REALITY CHECKS: ELIMINATING PATENTS ON FAKE, IMPOSSIBLE AND OTHER INOPERATIVE INVENTIONS 16 (June 22, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3872710 [https://perma.cc/Z3PY-W594] (arguing penalties for deceptive patent practices "should be expanded . . . to include both criminal penalties and substantial fines").

345 *Report an Adverse Event to VAERS*, U.S. DEP'T HEALTH & HUM. SERVS., https://vaers.hhs.gov/reportevent.html [https://perma.cc/6HZX-E87D].

346 Publicly Available Consumer Product Safety Information Database, 75 Fed. Reg. 76832, 76836 (Dec. 9, 2010) (to be codified at 16 C.F.R. pt. 1102).

347 18 U.S.C. § 1001(a).

348 Westlaw searches for the statute and ("VAERS" OR "Vaccine Adverse Event" OR "Consumer Safety" OR "saferproducts.gov") yield no relevant results.

349 *See* Wadman, *supra* note 22 (noting the CDC "removes data that are clearly fake, such as a recent report purportedly filed by Brazilian President Jair Bolsonaro," but also that "deliberate, false reporting to VAERS . . . appears to be rare").

350 *See* 37 C.F.R. § 1.56 (2022) ("[N]o patent will be granted on an application in connection with which fraud on the [PTO] was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct.").

351 *Id.*

include some details that do not work, including false information may not be "material."[352] In practice, therefore, few sanctions for misinformation in patents are imposed.[353]

More frequent sanctions could alleviate some of the harms described in this Article. However, sanctions are not a complete fix. Most notably, the harm of misinformation in many of this Article's examples does not result primarily from the submission of false information. Rather, it arises from the mismatch between the reader's expectation that government information will be filtered and vetted, and reality that the information is speculative or incomplete. If a litigant alleges facts in a complaint that turn out to be incorrect, the litigant has not necessarily done anything sanctionable.[354] Rather, the nature of litigation is that some facts alleged early in the process will be uncertain and will be investigated as litigation progresses. Moreover, courts do not want to over-deter speculative legal or factual theories as long as there is some reasonable basis for the contention.[355] Similarly, someone who wakes up with a rash after getting a vaccine and reports it to the VAERS database has not done anything wrong, even if the rash is entirely unrelated to the vaccine. In both cases, the process is designed to gather uncertain information. Uncertain information harms the reader only if the reader puts unwarranted weight on the information and trust in the publishing institution—and that is not the fault of the party submitting the information.

3. Hurdles

Some institutions impose barriers to submission of information in order to deter frivolous or thoughtless submissions. Courts, for instance, require a fee to submit a complaint.[356] The Patent Office's fee requirement also deters

352 *Cf.* Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1571 (Fed. Cir. 1997) (finding "no inequitable conduct occurred in the procurement of the patent" because the examiner's decision would not have been different had a misidentification not been made); Seymore, *supra* note 184, at 1506-07 (discussing the inequitable conduct defense, under which a challenger must demonstrate that the patent would not have been approved but-for "misrepresented or omitted information" and that the patent holder acted with "a specific intent to deceive the [PTO]").

353 *Cf.* Freilich & Kim, *supra* note 182, at 2 (presenting data that suggests "the patent system largely does not react to incorrect information, either during examination or downstream").

354 Assuming that there was some reason to suspect the facts were true. *See* FED. R. CIV. P. 11(b) (requiring factual claims and denials to have some minimal basis in evidence).

355 This goal motivates the current minimal availability of sanctions, which "may not be imposed unless a particular allegation is utterly lacking in support." O'Brien v. Alexander, 101 F.3d 1479, 1489 (2d Cir. 1996).

356 *See* Rafael Mery Nieto, *Court Fees: Charging the User as a Way to Mitigate Judicial Congestion*, 1 LATIN AM. & IBERIAN J. L. & ECON. 110, 115-18 (2015) (discussing the economic justification for court fees and their ability to deter less meritorious suits).

low-quality patent applications.[357] The Consumer Product Safety Commission requires that submissions be accompanied by various pieces of biographical information and will not publish anonymous reports,[358] which may decrease the likelihood of fraudulent or unreliable reports. Information in securities filings is reviewed by private, third-party gatekeepers before submission to the SEC, improving its reliability.[359]

These hurdles may make information submitted by private parties to government institutions more reliable. But hurdles cannot entirely solve the problem of misinformation. Because submitting parties sometimes benefit from misinformation, where that benefit is sufficiently large submitting parties will find it worthwhile to overcome any hurdles presented. Fees and other hurdles can be increased, of course. But many of the institutions discussed in this Article *want* to encourage submission of information, and raising fees or creating other barriers may defeat the purpose of the programs.

Hurdles are thus difficult to implement effectively. The balance between deterring frivolous lawsuits and ensuring access to justice is a classic example of this tension between encouraging submissions and discouraging misinformation. To file a successful complaint, the plaintiff must overcome certain hurdles—including paying a fee and ensuring that the complaint contain sufficient factual allegations to render its claims plausible.[360] This latter hurdle has been both lauded for reducing frivolous lawsuits and criticized for impeding access to justice for meritorious suits.[361] Sanctions face similar criticism in the civil litigation context: standards for incorrect

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357 Gaétan de Rassenfosse & Adam B. Jaffe, *Are Patent Fees Effective at Weeding Out Low-Quality Patents?*, 27 J. ECON. & MGMT. STRATEGY 134, 135 (2018) (finding increased fees led to a reduction in low-quality patents); *see also* Jonathan Masur, *Costly Screens and Patent Examination*, 2 J. LEGAL ANALYSIS 687, 688 (2010) ("This price barrier forces potential applicants to draw upon private information about the value of their inventions, information that the patent office is otherwise unable to obtain.").

358 *Frequently Asked Questions*, CONSUMER PROD. SAFETY COMM'N, https://www.saferproducts.gov/FAQs/FrequentlyAskedQuestions3#item2-2-2 [https://perma.cc/N2N7-GYEL] (last accessed Apr. 3, 2024).

359 *See* Reinier H. Kraakman, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, 2 J.L. ECON. & ORG. 53, 54 (1986) (describing gatekeepers as parties able "to prevent misconduct by withholding support"); JOHN C. COFFEE, GATEKEEPERS: THE PROFESSIONS AND CORPORATE GOVERNANCE 2 (2006) ("[T]he gatekeeper is an agent who acts as a reputational intermediary to assure investors as to the quality of the 'signal' sent by the corporate issuer. The reputational intermediary does so by lending or 'pledging' its reputational capital to the corporation, thus enabling investors or the market to rely on the corporation's own disclosures or assurances where they otherwise might not.").

360 For an example of filing fees, see *U.S. Courts of Federal Claims Fee Schedule*, U.S. CTS. (Dec. 1, 2023), https://www.uscourts.gov/services-forms/fees/us-court-federal-claims-fee-schedule [https://perma.cc/TL27-KTHC], which charges a $350 filing fee. For a discussion of the plausibility requirement, see *Ashcroft v. Iqbal*, 556 U.S. 662, 670 (2009).

361 *See* Alexander A. Reinert, *The Costs of Heightened Pleading*, 86 IND. L.J. 119, 121-23 & nn.15-16 (2011) (summarizing the post-*Twombly/Iqbal* debates about the merits of the pleading standard).

factual contentions or unwarranted legal arguments are condemned as too permissive (under-deterring false or frivolous representations) and too strict (overly-deterring advocacy).[362]

B. *New Policies for Misinformation Platforms*

Disclaimers, sanctions, and hurdles all play important roles in averting the negative consequences of misinformation. As explained above, they can be improved to maximize their ability to fulfill this function, but none are complete solutions to the problem. New policies are needed. Several suggestions are outlined below.

An initial question is which parties are best able to ameliorate the harms of misinformation from government institutions. There are three parties involved in the problem: the audience, the information provider, and the government institution disseminating the information. The audience is not well-positioned to avoid being misled because they are—by definition, in the misinformation scenario—confused about the reliability of information.[363] While improving general education and greater discussion about how to understand data sources is important, this is unlikely to be a complete solution because it can be difficult to determine whether government information has been vetted. The information provider is also unlikely to entirely solve the misinformation problem. As explained above, while sanctions can deter false information, misinformation often derives from situations where submission of speculative information is proper, and harm can occur even when the information provider is behaving appropriately.

This leaves the government institution as the entity best positioned to prevent the harms of misinformation.

Before discussing solutions, a caveat is in order. The problems of misinformation discussed in this Article vary significantly depending on the context. Thus, there is no one-size-fits-all solution and not all suggestions will be appropriate in all contexts. Rather, the Sections below set forth

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362 William W. Schwarzer, *Rule 11 Revisited*, 101 HARV. L. REV. 1013, 1013 (1988) (describing the complaints, prior to Rule 11 reform, about litigation abuse and the contemporary, post-reform complaints about chilled behavior).

363 In related work on misinformation, Yonathan Arbel and Michael Gilbert note that information reforms fall into "three categories: increasing the numerator of true information, decreasing the denominator of false information, and assisting people with making the distinction." Yonathan A. Arbel & Michael D. Gilbert, *Truth Bounties: A Market Solution to Fake News* 9-10, (Va. Pub. L. & Legal Theory Rsch. Paper No. 2022-61, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4204862 [https://perma.cc/56D5-FUUG]. In the language of Arbel and Gilbert's framework, it is difficult to fully ensure that audiences can distinguish truth and falsity in the government context (although their ability to do so can be improved); thus, recourse to the other buckets of reforms is necessary.

general guidelines, coupled with some suggestions targeted at specific instances of misinformation.

1. Information about Misinformation

A preliminary step is to gather information about the scope of the misinformation problem. At present, it is not clear how much inaccurate information government institutions publish or the extent to which that inaccurate information confuses readers. Some attempts to gather such data have come to contradictory conclusions without clarifying *why* those conclusions differ. For instance, the EPA hired a consultant to review the accuracy of its Toxics Release Inventory.[364] The consultant concluded that the data were "generally accurate."[365] A later GAO report found the consultant's report "questionable," and presented evidence of inaccuracies in the EPA's data.[366] In other instances, institutions are aware that data problems exist, but do not know their extent. After the onset of Covid-19, the CDC noted a "huge increase" in "obviously false" reports to VAERS, but also explained that it "cannot always identify reports that are fraudulent."[367] Sometimes, institutions simply are unable to determine whether information is correct. For instance, the PTO "has no way, in many cases, to ascertain the truthfulness of the representations made" by applicants.[368]

Without good evidence about the extent of information problems, reform efforts are made on faith. For instance, the FDA explained that "[w]e agree that there have been a few cases in which legitimate concerns have been raised about" the accuracy of patent listing and use-code information published by the FDA.[369] The FDA then declined requests to institute proceedings to review this information because "[w]e believe that these concerns [about accuracy] will be adequately and efficiently addressed by the clarification of [what] must and must not be submitted."[370] However, several years later in litigation concerning inaccurate use codes published by the FDA, Justice Sotomayor noted that "I find FDA's guidance as to what is required of brand

364 U.S. GOV'T ACCOUNTABILITY OFF., GAO/RCED-91-121, TOXIC CHEMICALS: EPA'S TOXIC RELEASE INVENTORY IS USEFUL BUT CAN BE IMPROVED 44 (1991), https://www.gao.gov/assets/rced-91-121.pdf [https://perma.cc/T8QR-SR7P].

365 *Id.*

366 *Id.*

367 Jessica McDonald, *Increase in Covid-19 VAERS Reports Due to Reporting Requirements, Intense Scrutiny of Widely Given Vaccines*, FACTCHECK.ORG (Dec. 22, 2021), https://www.factcheck.org/2021/12/scicheck-increase-in-covid-19-vaers-reports-due-to-reporting-requirements-intense-scrutiny-of-widely-given-vaccines/ [https://perma.cc/NN6U-WDJV].

368 Corning Glass Works v. Anchor Hocking Glass Corp., 253 F. Supp. 461, 470 (D. Del. 1966), *aff'd in part, rev'd in part*, 364 F.2d 473 (3d Cir. 1967).

369 68 Fed. Reg. 36676, 36684 (2003) (to be codified at 21 C.F.R. pt. 314).

370 *Id.*

manufacturers in use codes remarkably opaque."[371] She criticized this lack of guidance "[p]recisely because the regulatory scheme depends on the accuracy and precision of use codes."[372] The FDA averred that its clarified rules were clear enough to prevent misinformation, but it has since offered no evidence that this is correct. Instead, a decade after the reform, its process was still unclear, and thus unsuited to minimize misinformation.

Without good information about the extent of misinformation, it is difficult to know whether reforms are necessary, how to target proposed reforms, and whether implemented reforms succeed. This Article therefore recommends that institutions publishing unvetted information periodically vet a randomly selected sample of the information to determine if it is accurate.[373] Even more importantly, institutions should survey the audience(s) accessing the information to determine how that information is being used. With those findings in mind, institutions can conduct a cost-benefit analysis that weighs the harms of misinformation against the utility of collecting and publishing unvetted information.

2. Follow Social Media (Partially)

The past few years have generated a broad and rich scholarship on misinformation in the context of social media.[374] The consensus is that solutions to the problem of social media misinformation are difficult and contextual.[375] Further, the solutions (and problems) are ever-changing.[376] This is also true of government misinformation. As outlined above, the types of misinformation and their causes, audiences, and effects vary greatly. There is therefore no one-size-fits-all solution. Similarly, not all solutions from social

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371 Caraco Pharm. Labs. v. Novo Nordisk, 566 U.S. 399, 428 (2012) (Sotomayor, J., concurring).

372 *Id.*

373 Where applicable. This solution is more suited to, for instance, the EPA's Toxics Release Inventory and may not be applicable to complaints in litigation.

374 *See, e.g.*, Jack M. Balkin, *How to Regulate (and Not Regulate) Social Media*, 1 J. FREE SPEECH L. 71 (2021); Hannah Bloch-Wehba, *Automation in Moderation*, 53 CORNELL INT'L L.J. 41 (2020); Céline Castets-Renard, *Algorithmic Content Moderation on Social Media in EU Law: Illusion of Perfect Enforcement*, 2020 U. ILL. J.L. TECH. & POL'Y 283 (2020); Kate Klonick, *The Facebook Oversight Board: Creating an Independent Institution to Adjudicate Online Free Expression*, 129 YALE L.J. 2418 (2020); Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598 (2018).

375 *See, e.g.*, Evelyn Douek, *Governing Online Speech: From "Posts-As-Trumps" to Proportionality and Probability*, 121 COLUM. L. REV. 759, 762-63 (2021) ("There are no easy answers . . . . [C]ontent moderation is a question of *systemic balancing*: Rules are written to encompass multiple interests . . . and with awareness of the error rates inherent in enforcing any rule . . . .").

376 *Id.* at 833 ("Successful online speech governance is not an end point to be arrived at, but an ongoing project of iteration, calibration, and explanation based on changing rules, norms, and technical capacity.").

media will apply. But they are a good place to start because scholars and policy makers have already poured significant energy into thinking about solutions to social media misinformation that are relevant to government misinformation as well.

For example, social media scholars have suggested increased audience segmentation (restricting who can see what types of information),[377] a strategy that has also been suggested in the context of government disclosure of some currently secret information.[378] While there are certainly tensions with goals of transparency and openness, such a strategy may be helpful if misinformation becomes sufficiently prevalent. Another strategy is to create obstacles to accessing certain information—clicking through a menu, for example, or clicking to acknowledge certain questions.[379] A somewhat analogous approach has been employed the CDC's counterparts in other countries. EudraVigilance, the European equivalent of the CDC's VAERS, has a search function that is difficult to navigate and publishes an overview of reports but not the reports themselves.[380] These obstacles to accessing raw data make it harder to spread misinformation.[381] Some social media sites (YouTube, for instance) have included disclaimers or contextualization with certain videos.[382] This could be used in a variety of government databases, although as explained above, it is not a perfect solution.[383] And, like social media sites, government institutions may need to engage in some form of

377 *See, e.g.*, Eric Goldman, *Content Moderation Remedies*, 28 MICH. TECH. L. REV. 1, 54 (2021) ("[S]ervices might impose remedies that affect the experience of only a segment of their communities, such as age-gating content to reduce its exposure to children while preserving it for adults.").

378 *See* Christopher J. Morten, *Publicizing Corporate Secrets*, 171 U. PA. L. REV. 1319, 1329-30 (2023) ("Transparency is not an end unto itself. Its benefits and costs depend entirely on its context—who is using the information, in what ways, to what ends . . . . [This] article proposes agency-administered programs of information publicity that do not simply disclose information to all comers, unconditionally, but instead cultivate carefully bounded 'gardens' of information.").

379 *See, e.g.*, Klonick, *supra* note 373, at 1648 (noting that Twitter, instead of removing certain sensitive content, "requires users to click through a warning" before they can view the content).

380 Beaman & Chan, *supra* note 204.

381 See *id.* ("One reason vaccine misinformation citing VAERS seems to be more prevalent [than misinformation citing other national reporting systems] is that the reports are published on the platform in their unverified form and are viewable as is.").

382 *See Find Fact Checks in YouTube Search Results*, GOOGLE: YOUTUBE HELP (2022), https://support.google.com/youtube/answer/9226322hl=en [https://perma.cc/7HZV-5MN3] ("When you search YouTube for something related to a specific claim, sometimes you'll notice an information panel. These panels include a fact check from an independent third-party publisher.").

383 *See* subsection IV.A.1 for a more extensive discussion of the efficacy (or lack thereof) of disclaimers.

content moderation,[384] although this might create First Amendment challenges.[385]

3. Correcting Information

In many of the examples described in this Article, there is no way to correct or update wrong information. The FDA's Orange Book, for instance, was created without a mechanism for third-parties to force corrections.[386] For patents, an incorrect patent can—in limited circumstances—be invalidated or held unenforceable because of incorrect information, but there is no procedure for correcting the patent document itself.[387] In other situations, corrections can be made, but the original document with the erroneous information is still publicly available.[388] If information in a litigation complaint is incorrect, for example, the filing party can file an amended complaint, the opposing party can contest the information in their own filing, and the court can note in an opinion that some piece of information has been found wrong, but the original complaint is generally not changed and remains accessible.[389]

Policies allowing third parties to challenge erroneous information or originating parties to update information in ways that are reflected on the original document would help mitigate misinformation. A study of patent–paper pairs where the same information was published both in a patent and in a retracted journal paper found that, while citations to the journal paper dropped significantly after retraction, citations to the patent were largely

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384 For a discussion of content moderation in the social media context, see Evelyn Douek, *Content Moderation as Systems Thinking*, 136 HARV. L. REV. 526, 528-32 (2022).

385 It is not clear whether some of the examples discussed in this paper would be classified as government speech or as private speech. If private speech, the First Amendment requires viewpoint neutral regulation. Pleasant Grove City v. Summum, 555 U.S. 460, 467-70 (2009); *see also* Greene, *The Concept of the Speech Platform*, *supra* note 70, at 342-53 (describing the Court's limited public forum doctrine).

386 *See* Mylan Pharms., Inc. v. Thompson, 268 F.3d 1323, 1325 (Fed. Cir. 2001) (finding a manufacturer could not bring a declaratory judgment action in order to obtain an injunction requiring the patentee to delist a patent from the Orange Book).

387 *Cf.* Freilich & Kim, *supra* note 182, at 48-49 (describing the circumstances under which patents with incorrect information are found invalid).

388 The discussion here regarding correction of erroneous information is somewhat analogous to an active debate in criminal law over the ability to expunge court records. *See, e.g.*, Michael Pinard, *Criminal Records, Race and Redemption*, 16 N.Y.U. J. LEGIS. & PUB. POL'Y 963, 989-96 (2013) (advancing a "redemptive-focused approach to criminal records" that would remove public access to now-irrelevant convictions).

389 There are a narrow set of circumstances—for instance, inadvertent filing of confidential information—where courts will remove a filed document from the docket. *E.g.*, *Correcting E-filing Mistakes*, U.S. DIST. CT. FOR THE N. DIST. OF CAL., https://www.cand.uscourts.gov/cases-e-filing/cm-ecf/support-and-troubleshooting/correcting-e-filing-mistakes/ [https://perma.cc/KTG3-X5DP] (last visited Apr. 3, 2024).

unchanged.[390] When a journal article is retracted, the journal publishes a retraction notice in its current issue and also places a large, easily-visible notice on the original publication.[391] Patents contain no such retraction notice, and even when a patent is invalidated or rendered unenforceable, there is no indication of that on the document itself.[392] This discrepancy in the visibility of retraction may account for the difference in how the public uses (the same) incorrect information in patents and in papers.[393]

Updates and corrections do not have to reflect only incorrect information; they can also be useful to inform readers of how a situation has progressed, given that many documents published by government institutions reflect early-stage information.[394]

Of course, corrections will not entirely solve the misinformation problem. First, it is difficult—and sometimes impossible—to definitively establish that a supposition is *not* true, particularly when data is limited. Government institutions will therefore have to determine whether some threshold of likely error is sufficient to merit correction. This level will differ depending on the misinformation and institution in question. Second, the institution may not find it worthwhile to expend the resources to adjudicate correction requests. The role that a government institution should play in governing corrections will also vary depending on the degree of misinformation. Third, updating records is particularly difficult in the internet age when information intermediaries which take information from a government institution may have little incentive to update the information.[395] Fourth, other parties may not have sufficient incentive to find and correct mistakes in some contexts, particularly when there is a free rider problem (that is, correcting a piece of information must be undertaken at the cost of one party but benefits the

390 Freilich & Kim, *supra* note 182 at 2-3, 27.

391 *See, e.g.*, Carlo Fischer et al., *Gradual Emergence Followed by Exponential Spread of the SARS-CoV-2 Omicron Variant in Africa*, 378 SCI. 1 (2022) (with the word "retracted" written both in the title of the article and at the top of each page). The journal also published a separate retraction notice for the article. Carlo Fischer et al., *Retraction*, 378 SCI. 1284 (2022).

392 *Cf.* Freilich & Kim, *supra* note 182 at 18 (noting patents based on retracted papers "have no visual notice indicating retraction"); *see also, e.g.*, U.S. Patent No. 9,349,183 (filed July 21, 2008) (issued May 24, 2016) (lacking any indication of invalidity even though the Federal Circuit held the patent invalid for obviousness in D3D Technologies, Inc. v. Microsoft Corp., 2024 WL 678005, at *1 (Fed. Cir. 2024)).

393 *Cf.* Freilich & Kim, *supra* note 182, at 19 ("Lack of knowledge is also likely why downstream examiners continue to cite unsupported patents.").

394 Fromer has proposed implementation of this type of continuing information disclosure in the patent context. Fromer, *supra* note 181, at 1722-31.

395 *See, e.g.*, Clay Calvert & Jerry Bruno, *When Cleansing Criminal History Clashes With the First Amendment and Online Journalism: Are Expungement Statutes Irrelevant in the Digital Age?*, 19 COMMLAW CONSPECTUS 123, 135-43 (2010) (discussing the challenges of expunging criminal records after the information is disseminated on the internet).

public more generally).[396] Finally, corrections can of course also be a source of misinformation—for instance, third parties might be incentivized to contest correct but unfavorable information from competitors. But some procedure for correction, adapted to the specific circumstances of the government institution and the information it publishes, may be useful in reducing the harm of misinformation.

4. Assigning Responsibility

For the proposals above to be effective, at least one entity must take responsibility for monitoring misinformation and, if necessary, taking corrective actions. At present, this does not always happen.[397] For instance, the FDA acknowledges that patent listings and use codes are sometimes inaccurate,[398] but its position is that verification of the information is the responsibility of the courts.[399] Courts have "the experience, expertise, and authority" to address patent law issues in which the FDA "lack[s] expertise."[400] But courts do not systematically check whether use codes are accurate.[401] In another example of shifting responsibility for information accuracy, the PTO does not seek to verify whether medical information in patents is correct. Rather, "[t]esting for the full safety and effectiveness of a [patented] device is more properly left to the Food and Drug Administration."[402] The FDA, however, does not police information in patents.[403]

Offloading responsibility for information accuracy to other institutions can mean that no institution takes responsibility. This Article therefore

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396 This problem is well described in the context of incentives to invalidate erroneously granted patents. *See* Joseph Scott Miller, *Building a Better Patent Bounty*, 19 BERKELEY TECH. L.J. 667, 685-88 (2004).

397 In a sense, this mimics how social networking applications view their lack of responsibility for misinformation on their platforms—the company is merely a "conduit" for information, not a regulator of information. *See* Olivier Sylvain, *Intermediary Design Duties*, 50 CONN. L. REV. 203, 205-06 (2018).

398 *See* Application for FDA Approval to Market a New Drug, 68 Fed. Reg. 36676, 36682 (2003) (to be codified at 21 C.F.R. pt. 314).

399 *Id.* at 33683 (declining to implement an administrative process for challenging listings because "[a] fundamental assumption of the [relevant statutory framework] is that the courts are the appropriate mechanism for the resolution of disputes about the scope and validity of patents").

400 *Id.*; *see also* Caraco Pharm. Labs. v. Novo Nordisk, 566 U.S. 399, 407 n.2 (2012) (noting that several appellate courts "have affirmed the FDA's view of its ministerial role" but "express[ing] no view" on the question because it was not before the Court).

401 They do so only on occasion, when a challenge is brought. Courts do not affirmatively seek cases to review, they do so only when a case or controversy is brought by a plaintiff with standing to do so. *E.g.* William A. Fletcher, *The Structure of Standing*, 98 YALE L.J. 221, 222 (1988).

402 Scott v. Finney, 34 F.3d 1058, 1063-64 (Fed. Cir. 1994).

403 *Cf.* Application of Anthony, 414 F.2d 1383, 1395 (C.C.P.A. 1969) ("[A]pproval by the FDA 'is not a prerequisite' for the patenting of a new drug . . . .").

recommends a default rule that the government institution responsible for publishing the information also bears the responsibility for assessing whether misinformation has a negative impact and, if so, implementing the solutions above.

CONCLUSION

Scholarship, news coverage, and punditry have all dedicated enormous amounts of attention to misinformation in recent years, a testament to the topic's importance and the critical problems it creates. The dominant focus of this attention is misinformation from private sources, such as social media or influential individuals. By contrast, government information is often seen as a safe haven from the scourge of fake news. This is not, alas, the case. This Article has highlighted widespread misinformation from government institutions, with an emphasis on how those institutions function as platforms to host and disseminate privately generated, unreviewed information that is often incorrect. This situation, coupled with a strong policy push towards open access to and increased availability of government information, drives a rising amount of misinformation from a traditionally trusted source. Further, while some attention has been paid to the potential for "influential" government information to mislead,[404] this Article shows that much misinformation stems from aggregation of individual pieces of relatively inconsequential information. The situation is not untenable—policy reform can help—but it requires an enhanced awareness of government misinformation, a new commitment by government institutions to prevent misinformation, and novel approaches to disseminating government information.

404 After the passage of the Information Quality Act, the Office of Management and Budget required agencies to create quality standards before disseminating information considered "influential." *See* Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 8452, 8458-60 (Feb. 22, 2002).