

NOTE

The Technology Canon

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Technology evolves quickly but statutes do not. Congress passed laws that govern computer hacking, electronic surveillance, and intermediary liability for online platforms at a time when most of its members did not have access to the Internet. As these statutes remain frozen in time, courts struggle to determine their meaning as applied to technology that did not exist when they were enacted.

Traditional tools used by purposivists and textualists do not adequately account for this disconnect. For purposivists, imagining what the legislature would have thought about something it could not conceive requires an additional layer of hypothesis. Meanwhile, textualists' reliance on ordinary meaning at the time of enactment is incomplete because contemporaneous meaning does not fully capture innovations that did not yet exist. These methodological gaps expand judicial discretion, lead to unpredictable results, and ultimately hinder innovation.

To address these practical and methodological problems, and recognizing the current importance of canons of construction, this Note proposes a "technology canon": Where a technology fairly falls within the scope of a statute but is materially different from the state of the art at the time the statute was enacted, the statute should be interpreted in light of the mischief that it was enacted to address. Mischief exists outside of the legislature and can be identified from a variety of extra-legislative sources, making it potentially more objective than legislative purpose or intent. It asks not how the enacting legislature would have received a new technology but what technological functions it chose to govern through its choice of words. Mischief thus respects the primacy of the text while allowing the interpreter to focus more on the function rather than the form of the technology being governed.

To illustrate the technology canon, this Note investigates the mischief behind several important statutes governing technology, including the Computer Fraud and Abuse Act, the Copyright Act, and Section 230 of the Communications Decency Act.

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TABLE OF CONTENTS

INTRODUCTION	937
I. UNIQUE CHALLENGES OF TECHNOLOGY IN STATUTORY INTERPRETATION	940
A. TECHNOLOGY EVOLVES FASTER THAN THE LAW	940
B. COURTS LACK TOOLS TO DEAL WITH TECHNOLOGICAL GROWTH	943
II. THE INCOMPLETENESS OF TRADITIONAL INTERPRETIVE APPROACHES AS APPLIED TO TECHNOLOGY	947
A. PURPOSIVISM	948
1. Purposive Principles	948
2. Purposivism Applied to Technology	949
B. TEXTUALISM	950
1. Textualist Principles	950
2. Textualism Applied to Technology	952
<i>a. ReDigi and the Copyright Act</i>	952
<i>b. Van Buren and the CFAA</i>	955
III. MISCHIEF AND THE TECHNOLOGY CANON	957
A. THE MISCHIEF RULE	957
1. The Idea of Mischief	957
2. Mischief as a Textualist Tool	959
3. Applying Mischief	962
B. DEFINING THE TECHNOLOGY CANON	964
1. First Requirement: New Technology	967
2. Second Requirement: Fairly Falling Within the Scope of the Statute	968
IV. APPLYING THE TECHNOLOGY CANON	969
A. COMPUTER FRAUD AND ABUSE ACT	969
B. COPYRIGHT ACT	974
C. SECTION 230	979

INTRODUCTION

As technology evolves, it exposes gaps in existing law. The mid-1980s were a pivotal time for technology law. The case of Captain Midnight is one early example. Captain Midnight was upset that premium movie channels, such as HBO, were cracking down on people who streamed the channels' content without paying. For the first half of the 1980s, nonsubscribers could easily intercept the satellite broadcast signals from premium channels because they were not encrypted. At the beginning of 1986, HBO scrambled its satellite signals to encourage subscriptions.¹ Showtime and The Movie Channel soon followed suit.² Then, on April 27, HBO subscribers in the eastern United States received a surprise message during a late-night movie.³ "GOODEVENING HBO FROM CAPTAIN MIDNIGHT," read a color-barred screen. "\$12.95/MONTH? NO WAY! [SHOWTIME/MOVIE CHANNEL BEWARE!]"⁴

That night, Captain Midnight's interruption showed the country that existing laws were insufficient to punish and deter similar exploits of evolving satellite technology. In other words, Captain Midnight caused "mischief." Despite being "the most notorious pirate of the airwaves,"⁵ he was charged only with the misdemeanor of transmitting an interfering signal without a license—a statute that the Justice Department was not even responsible for enforcing.⁶ In response, the Federal Communications Commission issued regulations that led to a new communications protocol for satellite television.⁷ Congress enacted the sweeping Electronic Communications Privacy Act of 1986 (ECPA), which in part made it a felony to interfere with a communications satellite.⁸

1. Bill McCloskey, *Captain Midnight Arrested, FCC Says*, AP NEWS ARCHIVE (July 22, 1986, 3:30 PM) [<https://web.archive.org/web/20170921145108/http://www.apnewsarchive.com/1986/Captain-Midnight-Arrested-FCC-Says/id-deb8acefb1bf49f38a3a9da149683c20>]; see Zeus Brothers Entertainment, *Captain Midnight Broadcast Signal Intrusion Part 1*, YOUTUBE, at 03:00 (Apr. 20, 2019), <https://youtu.be/YzcjyE0EPaU>.

2. McCloskey, *supra* note 1.

3. David M. Ewalt, *The Tale of Captain Midnight, TV Hacker and Folk Hero*, FORBES (Mar. 18, 2013, 12:55 PM), <https://www.forbes.com/sites/davidewalt/2013/03/18/the-tale-of-captain-midnight-tv-hacker-and-folk-hero/>.

4. See *Captain Midnight HBO Broadcast Intrusion* (HBO television broadcast Apr. 27, 1986) [<https://archive.org/details/CaptainMidnightHBO1986>].

5. 'Captain Midnight' Unmasked, BROADCASTING, July 28, 1986, at 90, 90, <https://worldradiohistory.com/Archive-BC/BC-1986/BC-1986-07-28.pdf> [<https://perma.cc/V9ZK-AHWB>].

6. See *id.* Captain Midnight was charged under the Communications Act of 1934, which the Federal Communications Commission enforces. See 47 U.S.C. § 301; *The Communications Act of 1934*, U.S. DOJ: BUREAU OF JUST. ASSISTANCE, <https://bja.ojp.gov/program/it/privacy-civil-liberties/authorities/statutes/1288> [<https://perma.cc/S29C-45CZ>] (last visited Feb. 25, 2024).

7. See 47 C.F.R. § 25.281 (2001); *In re Implementation of Section 25.281(b) Transmitter Identification Requirements for Video Uplink Transmissions*, 32 FCC Rcd. 6233 (2017).

8. Electronic Communications Privacy Act of 1986, Pub. L. No. 99-508, § 303(a), 100 Stat. 1848, 1872 (codified at 18 U.S.C. § 1367(a)).

When Congress legislates in an area governing technology, it often does so to address a mischief in the world—such as not sufficiently punishing the exploitation of satellite communications protocols. As technology evolves but statutory language remains stagnant, the mischief behind a law becomes particularly relevant for determining the meaning of its terms.

Consider how much the gap between technological and statutory innovation has widened since Captain Midnight took to the airwaves. In the mid-1980s, computers were becoming popular in the commercial world but had not reached most households.⁹ There were only 25,000 cell phone users in the United States.¹⁰ Yet in 1986, Congress passed two statutes that continue to govern much of what happens on our cell phones and computers: ECPA and the Computer Fraud and Abuse Act (CFAA).¹¹ Today, despite 97% of Americans now owning a cell phone and over 90% of households having a computer at home,¹² many core provisions of ECPA and the CFAA remain unchanged.

The year was also an important one for the Judiciary. Justice Antonin Scalia joined the Supreme Court, launching textualism on its path to becoming today's dominant method of statutory interpretation.¹³ In 2015, Justice Elena Kagan famously credited Justice Scalia as the reason that “we’re all textualists now.”¹⁴ Textualism often looks to the ordinary meaning of the terms at the time of the statute’s enactment.¹⁵ But when technology far outpaces the evolution of the

9. See, e.g., *How the Computer Changed the Office Forever*, BBC NEWS (Aug. 1, 2013), <https://www.bbc.com/news/magazine-23509153> [<https://perma.cc/TLN8-8A7G>]; Oscar Holland, *Designing the World's First Home Computers*, CNN STYLE (May 3, 2020, 10:00 PM), <https://www.cnn.com/style/article/home-computers-design-history/index.html> [<https://perma.cc/Q7FU-ZT88>] (“Long before they found their way into living rooms around the world, computers were the preserve of universities, research institutes and corporate headquarters.”); Mike Moore, *The 10 Biggest Tech Breakthroughs of the 1980s*, TECHRADAR (Aug. 10, 2018), <https://www.techradar.com/news/the-10-biggest-tech-breakthroughs-of-the-1980s> [<https://perma.cc/24YE-7ZE8>] (describing the January 1984 debut of the Apple Macintosh computer and November 1985 release of Microsoft Windows operating system). IBM helped lead home-computing efforts, launching its first personal computer in August 1981 at a price of \$1,565 (over \$5,000 in 2024 dollars when adjusted for inflation). *The IBM PC*, IBM, <https://www.ibm.com/history/personal-computer> [<https://perma.cc/R7QX-PRV5>] (last visited Feb. 25, 2024).

10. By 2000, there were over 100 million cell phone users in the United States. *Testing the First Public Cell Phone Network*, AT&T TECH CHANNEL (June 13, 2011) [<https://web.archive.org/web/20131029194138/http://techchannel.att.com/play-video.cfm/2011/6/13/AT%26T-Archives-AMPS%3A-coming-of-age>].

11. Electronic Communications Privacy Act of 1986, 100 Stat. 1848; Computer Fraud and Abuse Act of 1986, Pub. L. No. 99-474, 100 Stat. 1213.

12. See *Mobile Fact Sheet*, PEW RSCH. CTR. (Jan. 31, 2024), <https://www.pewresearch.org/internet/fact-sheet/mobile/> [<https://perma.cc/2D2U-JJ84>]; Press Release, U.S. Census Bureau, Computer and Internet Use in the United States: 2018 (Apr. 21, 2021), <https://www.census.gov/newsroom/press-releases/2021/computer-internet-use.html> [<https://perma.cc/9WXM-88YT>].

13. See Tara Leigh Grove, *The Misunderstood History of Textualism*, 117 NW. L. REV. 1033, 1070 (2023) (“The campaign for modern textualism began in earnest after Justice Scalia joined the Supreme Court in 1986.”).

14. Harvard Law School, *The 2015 Scalia Lecture: A Dialogue with Justice Elena Kagan on the Reading of Statutes*, YOUTUBE, at 08:30 (Nov. 25, 2015), <https://youtu.be/dpEtszFT0Tg>.

15. See, e.g., *Bostock v. Clayton County*, 590 U.S. 644, 654 (2020) (Gorsuch, J., majority opinion) (“This Court normally interprets a statute in accord with the ordinary public meaning of its terms at the time of its enactment.”).

statute that governs it, the ordinary meaning of the law at the time of enactment cannot fully capture the innovation—the technology did not exist. Textualist theory, therefore, does not adequately account for the rate at which technological development outpaces statutory growth.¹⁶ Meanwhile, nontextualist approaches—particularly purposivism—continue to face the same problems that textualism was designed to address, asking a judge to imagine what the legislature would have thought about technology that the legislature itself could not have imagined.¹⁷

This Note seeks to address the methodological gaps that technology creates for statutory interpretation. Recognizing the increasingly important role of interpretive “canons” in a textualist world,¹⁸ this Note introduces a “technology canon.” The technology canon suggests:

Where a technology fairly falls within the scope of a statute but is materially different from the state of the art at the time the statute was enacted, the statute should be interpreted in light of the mischief that it was enacted to address.

By looking to contemporaneous “mischief,” an interpreter can search for a more objective state of affairs at the time of enactment. Mischief provides historical context that informs the meaning of the terms chosen by legislators, even where lawmakers and the public could not conceive of a specific future innovation. This context allows the interpreter to focus more on the function rather than the form of the technology embraced by a statute’s terms. By shifting the interpreter’s focus, the canon recognizes that the form of technology—including its inner technological workings—will inevitably change and can be difficult to understand. At the same time, unlike purpose or legislative intent, mischief avoids asking what a particular legislator or even the collective lawmaking body *would* have thought about a nonexistent technology. While the technology canon is not a silver bullet, it provides a more predictable and legitimating path for judging technology in the age of textualism.

Part I of this Note highlights the problems that technology creates for statutory interpretation. Technology will continue to outpace statutory developments, and traditional interpretive methods do not equip courts to deal with this reality. Part II dives deeper into purposive and textualist theory, illustrating how each can create unpredictable results when applied to technology statutes. To address these problems, Part III discusses the compatibility of mischief with textualism before introducing the technology canon and its requirements. Finally, Part IV applies the technology canon to three important tech statutes: the CFAA, the Copyright Act, and Section 230 of the Communications Decency Act.

16. See *infra* Part I; Section II.B.

17. See *infra* Section II.A.

18. Jarrod Shobe, *Congressional Rules of Interpretation*, 63 WM. & MARY L. REV. 1997, 2006 (2022); cf. Ryan D. Doerfler, *Late-Stage Textualism*, 2021 SUP. CT. REV. 267, 271, 275–82 (2021) (exploring the “fall and rise of interpretive canons”).

I. UNIQUE CHALLENGES OF TECHNOLOGY IN STATUTORY INTERPRETATION

Technology is a driving force behind the “age of statutes” in which we live.¹⁹ When two independently complex processes—technology and legislation—converge, the product is difficult for courts to analyze. Innovation benefits from predictability,²⁰ so it matters how consistently courts treat new technologies. Even in 1982, Judge Guido Calabresi described the costs of legal uncertainty around technology law as “intolerably high.”²¹ Today, the costs are even higher. When unchanged statutes are applied decades later to new inventions, they create “cases that no legislator could possibly have imagined at the time of enactment.”²² Interpretations of statutes such as Section 230 have the potential to “crash the digital economy”—an outcome that courts “are not equipped to account for.”²³ Congress is responsible for setting online rules,²⁴ but it is increasingly unable to modernize statutes.

This Part describes two of the most salient problems that drive unpredictability when interpreting tech statutes. First, technology develops at a faster pace than the law governing it. Over time, statutes remain in force but become less tailored to emerging technologies. Meanwhile, it has become increasingly difficult for Congress to update statutes in light of new technology, undermining the traditional interpretive assumption that Congress would update a statute if it wanted. Second, courts struggle when forced to use traditional interpretive tools to account for these different paces. Compounding this problem is the technology itself, which can be complex and analyzed by courts at an inconsistent level of generality. These problems cause unpredictable legal results, which can ultimately hinder innovation.

A. TECHNOLOGY EVOLVES FASTER THAN THE LAW

When passing ECPA in 1986, Congress recognized that existing laws had “not kept pace with the development of communications and computer technology.”²⁵ The following year, Judge Frank Easterbrook noted that it is often the case that “technology has done more to change [the object of a law] than the . . . legislature

19. Judge Guido Calabresi attributes the proliferation of statutes in the twentieth century to “the fact that major technological change has occurred faster in [the] century and has dated common law rules more rapidly,” requiring laws “that were technically hard for courts to fashion . . . or were in areas where the costs of uncertainty were intolerably high” (in other words, requiring statutes). GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* 76 (1982).

20. See *infra* Section I.B.

21. CALABRESI, *supra* note 19, at 76.

22. Caleb Nelson, *What Is Textualism?*, 91 VA. L. REV. 347, 409–10 (2005).

23. Transcript of Oral Argument at 54, *Gonzalez v. Google LLC*, 598 U.S. 617 (2023) (No. 21-1333); accord The Lawfare Podcast, *The Supreme Court Hears Oral Arguments in Gonzalez and Taamneh*, LAWFARE INST., at 30:52–32:54 (Feb. 23, 2023, 12:00 PM), <https://www.lawfaremedia.org/article/lawfare-podcast-supreme-court-hears-oral-arguments-gonzalez-and-taamneh> [<https://perma.cc/L7E9-NPCW>] (describing “twenty-seven years of business reliance interests” on one interpretation of Section 230 doctrine).

24. See Transcript of Oral Argument, *supra* note 23, at 54.

25. S. REP. NO. 99-541, at 2 (1986).

has done to change” the law itself.²⁶ And though any law can become obsolete, that “is particularly true of laws that deal with technology.”²⁷ Courts must apply laws such as the Copyright Act—much of which was enacted “prior to the internet,”²⁸ in 1976—to modern technology. When laws such as the Copyright Act “struggle[] to address the nuances and novelty that can arise at the intersection of copyright law and technology,” that in turn makes it “exceedingly difficult for courts to find proper solutions to unique legal issues while still appropriately applying the statute.”²⁹

The consequence is that antiquated laws remain on the books: they must be followed by the public, enforced by the Executive, and interpreted by the Judiciary. But traditional interpretive theories are incomplete as applied to rapidly evolving technology.³⁰ The disconnect between innovations and the statutes governing them only grows over time as Congress does not update the laws. Consequently, tech statutes are “likely to be even more over- or under-inclusive than rules often are, because the enacting legislature had no opportunity to tailor its rule with modern technology in mind.”³¹

The problem only gets worse as the pace of legislation slows. Some delay is inherent in legislation, which is often passed as a reaction to problems rather than proactively. However, as technology evolves rapidly, it creates problems faster than the legislature addresses them. Moreover, a legislature has difficulty proactively addressing problems that arise from a technology that does not itself exist.

Even when Congress wants to respond to the problems raised by technology, it has become harder to do so. Due to rising partisanship and gridlock, “unorthodox lawmaking” has become the norm, with more legislation being passed through expansive omnibus bills.³² Omnibus legislation is not refined in committee,

26. *In re Erickson*, 815 F.2d 1090, 1092 (7th Cir. 1987) (Easterbrook, J., majority opinion).

27. Linda Greenhouse, *The Wiretapping Law Needs Some Renovation*, N.Y. TIMES (June 1, 1986), <https://www.nytimes.com/1986/06/01/weekinreview/the-wiretapping-law-needs-some-renovation.html>; accord, e.g., Thomas B. Norton, Note, *Watch What You *Bleeping* Want: Interpretation of Statutes Dealing with Advancing Technology in Light of the Ninth Circuit Case of Disney Enterprises, Inc. v. VidAngel, Inc.*, 25 J. INTELL. PROP. L. 287, 308 (2018) (“Given the rapid rate at which technology changes, and the inefficient rate at which a majority of legislation is passed, it is obvious that pure reliance on Congress would result in nothing short of inhibiting growth and development in certain areas of technology.”).

28. See *FurnitureDealer.Net, Inc. v. Amazon.com, Inc.*, No. 18-cv-232, 2022 WL 891473, at *8 (D. Minn. Mar. 25, 2022).

29. *Id.*

30. See *infra* Section II.B (discussing textualism and the challenges of applying it to new technologies).

31. Nelson, *supra* note 22, at 413.

32. See, e.g., Abbe R. Gluck, Anne Joseph O’Connell & Rosa Po, *Unorthodox Lawmaking, Unorthodox Rulemaking*, 115 COLUM. L. REV. 1789, 1800 tbl.1, 1828–29 (2015) (highlighting studies that demonstrate rise of legislative gridlock and a “hostile political climate” in Congress, which have “forced [political leaders] to modify traditional legislative practices to achieve their goals in this hyperpartisan environment”); Frank Newport, *The Impact of Increased Political Polarization*, GALLUP (Dec. 5, 2019), <https://news.gallup.com/opinion/polling-matters/268982/impact-increased-political-polarization.aspx> [<https://perma.cc/L8QD-GCFW>] (“[T]oday’s increase in partisanship in the U.S. also has significant harmful effects. Most importantly, polarization and partisan conflict lead to inaction, as ‘my way or the highway,’ ideologically rigid mentalities lower the probability of achieving the

where legislators compile evidence and tailor the language of the bill.³³ When the stars align for Congress to act, it may not get a later chance to update the law. Therefore, even intermittent congressional action may inadvertently “freeze[] things” and make it “hard to adapt [the law] to the new technologies.”³⁴ Paired with the rise of omnibus legislation, this adaptability problem is particularly salient.³⁵

The inescapable result is that laws governing technology are often “hopelessly out of date.”³⁶ To illustrate how far apart technology and the statute governing it can be, consider Section 230 of the Communications Decency Act of 1996 (CDA).³⁷ Though Section 230 is a small portion of the CDA, it continues to immunize many online platforms from civil suits and has been described as the “twenty-six words that created the Internet.”³⁸ Despite the continuing force of Section 230, over half of the senators who voted in favor of the CDA did not have an Internet connection at the time.³⁹ The Court did not hear a Section 230 case for almost thirty years, until *Gonzalez v. Google LLC*, where it faced the daunting task of applying the “pre-algorithm statute . . . in a post-algorithm world.”⁴⁰ Perhaps due in part to the scale of the problem, the Court decided the case on other grounds, issuing a per curiam opinion⁴¹ that will allow uncertainty around Section 230 to grow.

Or consider the CFAA.⁴² In the 1980s, some stressed the urgency of creating federal computer crime legislation because “[n]ineteenth-century statutes are

compromise that should be at the heart of legislative functioning.”); PEW RSCH. CTR., PARTISAN ANTIPATHY: MORE INTENSE, MORE PERSONAL 5 (2019), <https://www.pewresearch.org/politics/wp-content/uploads/sites/4/2019/10/10-10-19-Parties-report.pdf> [<https://perma.cc/GG34-MCDB>]; cf. Gluck et al., *supra*, at 1800 tbl.1 (referencing a 2012 empirical study finding that omnibus packages “made up about 12% of major legislation”).

33. See, e.g., Gluck et al., *supra* note 32, at 1829–30, 1838; JAMES V. SATURNO & JESSICA TOLLESTRUP, CONG. RSCH. SERV., RL32473, OMNIBUS APPROPRIATIONS ACTS: OVERVIEW OF RECENT PRACTICES (2016) (describing the “customary concern” of omnibus legislation as “sacrificing the opportunity for debate and amendment for greater legislative efficiency”).

34. *An Interview with David Vladeck of the F.T.C.*, N.Y. TIMES: MEDIA DECODER (Aug. 5, 2009, 2:24 PM), <https://archive.nytimes.com/mediadecoder.blogs.nytimes.com/2009/08/05/an-interview-with-david-vladeck-of-the-ftc/>.

35. See, e.g., *id.* (“[I]f you look at most pieces of omnibus legislation they basically exist for a decade before Congress returns to it. And I’m not sure [privacy legislation] is an area where you want Congress to legislate and sort of forget about for a decade.”).

36. S. REP. NO. 99-541, at 2 (1986) (quoting Sen. Patrick Leahy) (discussing applicability of wiretap law from 1968 to the different state of the telecommunications industry eighteen years later).

37. Pub. L. No. 104-104, sec. 509, § 230, 110 Stat. 133, 138 (codified at 47 U.S.C. § 230).

38. See generally JEFF KOSSEFF, THE TWENTY-SIX WORDS THAT CREATED THE INTERNET (2019).

39. See Robert Cannon, *The Legislative History of Senator Exon’s Communications Decency Act: Regulating Barbarians on the Information Superhighway*, 49 FED. COMM’NS L.J. 51, 71 n.103 (1996). Legislators’ familiarity with the Internet was strongly associated with their thoughts on regulating it. “Of those who opposed [adding the CDA to a Senate bill], . . . 94% had an Internet connection of some type. Of those who had no Internet connection, 98% voted in favor of the CDA.” *Id.*

40. Transcript of Oral Argument, *supra* note 23, at 9.

41. See *Gonzalez v. Google LLC*, 598 U.S. 617, 622 (2023) (per curiam) (“We . . . decline to address the application of § 230 to a complaint that appears to state little, if any, claim for relief.”).

42. Computer Fraud and Abuse Act of 1986, Pub. L. No. 99-474, 100 Stat. 1213 (codified as amended at 18 U.S.C. § 1030).

simply incapable of dealing with 20th-century crimes.”⁴³ Now, well into the twenty-first century, computers and the Internet have evolved “from the domain of a few computer geeks to a routine part of daily life for most Americans.”⁴⁴ Still, much like Section 230, the CFAA “sat unexamined by the Supreme Court” for thirty-five years.⁴⁵ Finally, in 2021, the Court issued a clear ruling on the CFAA in *Van Buren v. United States*.⁴⁶ But the Court’s textual analysis, as this Note discusses, may not have completely accounted for the historical context that likely influenced the statutory terms Congress chose.⁴⁷

B. COURTS LACK TOOLS TO DEAL WITH TECHNOLOGICAL GROWTH

Courts have limited tools to help them apply old laws to new technology, which complicates cases such as *Gonzalez* and *Van Buren*. Jurists have long recognized these limitations. The Court has warned that “[t]he judiciary risks error by elaborating too fully on the . . . implications of emerging technology before its role in society has become clear.”⁴⁸ Justice Kagan put it more memorably: “[W]e’re a court. . . . [T]hese are not like the nine greatest experts on the Internet.”⁴⁹

Courts face two main challenges in dealing with technology: (1) understanding the technology itself and (2) applying appropriate interpretive tools, whose theoretical bases and practical benefits unravel when applied to new technology. These obstacles lead to unpredictable results, which can even stifle innovation.

First, a court must understand how a given technology operates. If a party improperly proposes—or the judge mistakenly adopts—an application of a statute based on the wrong understanding of the technology,⁵⁰ the statute becomes over- or under-inclusive in practice.⁵¹ But sometimes “[j]udges cannot readily understand how the technologies may develop” or “easily appreciate context.”⁵² As a result, courts often strain analogies between technology and examples in the “physical” world.⁵³

43. See, e.g., Irving J. Sloan, *On the Need for a Law to Fight Computer Fraud*, N.Y. TIMES (July 1, 1984), <https://www.nytimes.com/1984/07/01/nyregion/westchester-opinion-on-the-need-for-a-law-to-fight-computer-fraud.html>.

44. Orin S. Kerr, *Focusing the CFAA in Van Buren*, 2021 SUP. CT. REV. 155, 155.

45. See *id.*

46. *Id.* (discussing *Van Buren v. United States*, 141 S. Ct. 1648 (2021)).

47. See *infra* Section IV.A (exploring evidence of the mischief behind the CFAA, which is in tension with *Van Buren*’s holding).

48. *City of Ontario v. Quon*, 560 U.S. 746, 759 (2010).

49. Transcript of Oral Argument, *supra* note 23, at 45.

50. See Richard Raysman, *Of Computers and the Law*, N.Y. TIMES (Sept. 14, 1980), <https://www.nytimes.com/1980/09/14/archives/point-of-view-of-computers-and-the-law.html> (describing prosecutors in 1980 as “frequently ha[ving] absolutely no knowledge of computers”).

51. See Nelson, *supra* note 22, at 413.

52. Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 858 (2004).

53. See, e.g., Pascale Chapdelaine, *The Undue Reliance on Physical Objects in the Regulation of Information Products*, 20 J. TECH. L. & POL’Y 65, 68 (2015) (“Courts and legislatures have been grappling for some time with the application of traditional legal doctrines to the immaterial world.”).

One common analogy for modern technology is to cars. For example, writing for the Court in *American Broadcasting Cos. v. Aereo, Inc.*, a copyright case explored in detail below,⁵⁴ Justice Breyer concluded that dedicated antennas, which streamed television programs to individual customers, did not transmit to “the public” in the same way that “a valet parking attendant returns cars to their drivers” and not to “the public.”⁵⁵ Some categorize *Aereo*’s analogy to the physical world as taking a “technology-blind” interpretive approach.⁵⁶ More recently, the Court’s consideration of the CFAA in *Van Buren* allowed Justice Thomas to pen a dissent in which he argued that a person “exceeds authorized access” to a computer system when the person accesses the system for an impermissible purpose, like a valet who “may take possession of a person’s car to park it, but . . . cannot take it for a joyride.”⁵⁷ Even an independent congressional agency report that informed the CFAA characterized the “[u]nauthorized use of computers and computer services” as “the electronic equivalent of ‘joyriding.’”⁵⁸

However, the differences between modern technology and physical analogues will continue to multiply. Orin Kerr posits that the “need for different rules governing digital devices eventually will seem obvious.”⁵⁹ So what happens when there is no analogy to a car available? The better approach is to formulate guidelines for the non-zero set of litigants and judges who do not always understand technology fully.⁶⁰ Kerr has proposed one solution, arguing that “the best way of translating our doctrines and our values from the physical world to a virtual one” involves focusing on the “function rather than form” of a given technology.⁶¹ Judges do not have to tie analogies to the physical world, nor do they have to treat

54. See *infra* Section II.A.2.

55. 573 U.S. 431, 448 (2014).

56. See Yvette Joy Liebesman, *When Does Copyright Law Require Technology Blindness? Aiken Meets Aereo*, 30 BERKELEY TECH. L.J. 1383, 1383 (2015) (“The [*Aereo*] majority affirmatively construed the [law] as it related to several technology-specific sections of the [Copyright] Act in a technology-blind matter.”). Similar to a “technology-blind” approach, some have called for courts to ignore the inner workings of technology and treat it like a “black box.” See Peter V. Roman, *The Black Box Canon of Statutory Interpretation: Why the Courts Should Treat Technology Like a Black Box in Interpreting Computer Crime Statutes*, 26 J. MARSHALL J. COMPUT. & INFO. L. 487, 487–88 (2009) (arguing that “ignoring the transitory and legally irrelevant behavior of information systems” will allow courts to “reflect the moral and constitutional underpinnings of computer criminal law,” thus “mak[ing] the interpretation of computer crime statutes more consistent with congressional intent and the relevant decisions more predictable”).

57. 141 S. Ct. 1648, 1662–63 (2021) (Thomas, J., dissenting).

58. OFF. OF TECH. ASSESSMENT, CONG. OF THE U.S., OTA-CIT-297, FEDERAL GOVERNMENT INFORMATION TECHNOLOGY: MANAGEMENT, SECURITY, AND CONGRESSIONAL OVERSIGHT 86 & tbl.5-1 (1986), <https://nsarchive.gwu.edu/sites/default/files/documents/6442925/National-Security-Archive-Office-of-Technology.pdf> [<https://perma.cc/2BFW-C7L8>].

59. Orin S. Kerr, *Foreword: Accounting for Technological Change*, 36 HARV. J.L. & PUB. POL’Y 403, 407–08 (2013).

60. See, e.g., Transcript of Oral Argument, *supra* note 23, at 45 (Justice Kagan stating “we’re a court. . . . You know, these are not like the nine greatest experts on the Internet.”).

61. Orin S. Kerr, *Are We Overprotecting Code? Thoughts on First-Generation Internet Law*, 57 WASH. & LEE L. REV. 1287, 1300 (2000).

technology like a “black box”⁶² and ignore technological specifications altogether. Rather, they can focus on the function of modern innovations as compared to the general functions of technology as they existed when a law was passed. Though it remains the responsibility of litigants to provide convincing and thorough explanations of technology,⁶³ courts are the final word on how to understand a tech statute.

Beyond the challenge of understanding technology itself, courts face a second problem: applying a wide range of interpretive tools that lack strong theoretical or pragmatic justifications as applied to technology. For example, courts often treat congressional inaction as evidence that Congress did not intend to bring a statute current with the times.⁶⁴ But this arguably has less force when Congress *cannot* act, perhaps due to some combination of unorthodox lawmaking and technological developments that naturally outpace statutory updates.⁶⁵ As a corollary, courts sometimes “punt” to Congress, thinking that Congress will legislate if it decides that a change is required. For example, in *Teleprompter Corp. v. Columbia Broadcasting System, Inc.*, the Court noted that an evolving market in 1974—which included the introduction of cable television—“simply cannot be controlled by means of litigation based on copyright legislation enacted more than half a century ago, when neither broadcast television nor [cable television] was yet conceived.”⁶⁶ Rather, “[d]etailed regulation . . . and any ultimate resolution of the

62. See generally Roman, *supra* note 56.

63. Judge M. Margaret McKeown has explained that, when it comes to technology, it is “incumbent on lawyers to educate the judges on a case-by-case basis.” *Cybercrime and the Fourth Amendment*, C-SPAN, at 21:52–21:59 (Dec. 4, 2014), <https://www.c-span.org/video/?323068-3/cybercrime-fourth-amendment> [<https://perma.cc/S8X6-R22Z>].

64. One of the best illustrations of courts giving weight to congressional inaction is *Flood v. Kuhn*, 407 U.S. 258 (1972). In 1922, the Court held that Major League Baseball (MLB) was exempt from federal antitrust laws. See *Fed. Baseball Club of Balt., Inc. v. Nat’l League of Pro. Baseball Clubs*, 259 U.S. 200, 208–09 (1922). Thirty-one years later, in *Toolson v. N.Y. Yankees, Inc.*, 346 U.S. 356, 357 (1953) (per curiam), the Court affirmed *Federal Baseball*, reasoning that Congress was aware of *Federal Baseball* and decided not to act to overrule it. Nineteen years after that, in *Flood*, the Court again upheld MLB’s exemption, explaining that it was “loath, 50 years after *Federal Baseball* and almost two decades after *Toolson*, to overturn those cases judicially when Congress, by its positive inaction, has allowed those decisions to stand for so long and, far beyond mere inference and implication, has clearly evinced a desire not to disapprove them legislatively.” *Flood*, 407 U.S. at 283–84. Dissenting, Justice Marshall disagreed with the majority’s reliance on congressional inaction, alluding to the challenges that players would face in lobbying Congress to act on their behalf. See *id.* at 292 (Marshall, J., dissenting). See WILLIAM N. ESKRIDGE JR., JAMES J. BRUDNEY, JOSH CHAFETZ, PHILIP P. FRICKEY & ELIZABETH GARRETT, *CASES AND MATERIALS ON LEGISLATION AND REGULATION: STATUTES AND THE CREATION OF PUBLIC POLICY* 442–43 (6th ed. 2020) (discussing *Flood*). See generally Morgen A. Sullivan, Note, “*A Derelict in the Stream of the Law*”: *Overruling Baseball’s Antitrust Exemption*, 48 DUKE L.J. 1265 (1999). For a more thorough discussion of “asymmetries in inertia” when it comes to updating outdated statutes, which Justice Marshall seemed to recognize, see CALABRESI, *supra* note 19, at 124–29.

65. See *supra* notes 32–36 and accompanying text.

66. 415 U.S. 394, 414 (1974), *superseded by statute*, Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541, *as recognized in* *ABC, Inc. v. Aereo, Inc.*, 573 U.S. 431, 441 (2014).

many sensitive and important problems in this field,” the Court concluded, “must be left to Congress.”⁶⁷

Despite recognizing Congress’s role in answering significant technology questions, when courts apply traditional interpretive tools to technology statutes, they create unpredictable results, which can hinder innovation. To illustrate the costs of uncertainty, consider two cases that are discussed in more detail in Part II: *Aereo*⁶⁸ and *Capitol Records, LLC v. ReDigi Inc.*⁶⁹ While each involved a markedly different interpretive approach—purposivism versus textualism, respectively—the impact was the same. The innovative business did not survive, though it may have if the court had applied a different interpretive method.

In *Aereo*, the Supreme Court considered a service that allowed users to stream broadcast television through the Internet.⁷⁰ *Aereo* did not own the copyright in the programs it streamed, so its engineers devised a technical solution to avoid “publicly” performing the works—an exclusive right held by the copyright owner.⁷¹ Using a single antenna to broadcast the program to *multiple* subscribers would be a “public” performance. But dedicating a *separate* antenna to *each* subscriber, *Aereo* reasoned, could get around this problem.⁷² The Court disagreed. Writing for the Court, Justice Breyer read the Copyright Act purposively, explaining that “behind-the-scenes” “technological differences” make no difference to “Congress’ regulatory objectives.”⁷³ That purposive approach caused *Aereo* to shut down and gave pause to other streaming innovators considering technological workarounds to the Copyright Act.⁷⁴

67. *Id.* After *Teleprompter Corp.*, it is worth noting that Congress responded uncommonly quickly to the judicial call to action, acting within two years to “completely overturn[]” the Court’s decision. *Aereo*, 573 U.S. at 441 (quoting H.R. REP. NO. 94-1476, at 86–87 (1976)). However, that may be due in part to the uniquely strong public and business interests in copyright laws. Where a party has significant resources available to influence legislation, it may benefit from “asymmetries in inertia” that give it a better chance to change the law than a party with fewer resources. See CALABRESI, *supra* note 19, at 124–29; see also *supra* note 64 (discussing Justice Marshall’s dissent in *Flood v. Kuhn*). Given the significant economic value of a copyright, it is possible that the Copyright Act may be more susceptible than other tech statutes to “asymmetries in inertia” that ultimately create changes. But that empirical question is beyond the scope of this Note.

68. *Aereo*, 573 U.S. 431.

69. 934 F. Supp. 2d 640 (S.D.N.Y. 2013), *aff’d*, 910 F.3d 649 (2d Cir. 2018).

70. *Aereo*, 573 U.S. at 436.

71. See *id.* at 438; 17 U.S.C. § 106(4) (giving copyright owner of “motion pictures and other audiovisual works” exclusive right to “perform the copyrighted work publicly”).

72. The Copyright Act defines this public-performance right to include the right to “transmit or otherwise communicate a performance . . . of the [copyrighted] work . . . to the public, by means of any device or process, whether the members of the public *capable of receiving the performance* . . . receive it in the same place or in separate places and at the same time or at different times.” 17 U.S.C. § 101 (emphasis added). By dedicating a single antenna to each subscriber, *Aereo* claimed there would only be one “member[] of the public”—that individual subscriber—who was “capable of receiving the performance.” See *Aereo*, 573 U.S. at 436–37.

73. *Aereo*, 573 U.S. at 446.

74. *Aereo* shut down its service three days after the Court published its opinion and filed for bankruptcy five months later. See Emily Steel, *Aereo Concedes Defeat and Files for Bankruptcy*, N.Y. TIMES (Nov. 21, 2014), <https://www.nytimes.com/2014/11/22/business/aereo-files-for-bankruptcy.html>; see also Vikas Bajaj, *After Aereo*, N.Y. TIMES: TAKING NOTE (July 1, 2014, 9:23 AM), <https://archive.nytimes.com/>

A year earlier, in *ReDigi*, the Southern District of New York took a textualist view of the Copyright Act. ReDigi allowed users to sell digital music files they previously purchased.⁷⁵ To transfer a file, ReDigi’s platform made an incidental copy of the file before sending the copy to ReDigi’s server and deleting the original from the seller’s devices.⁷⁶ Pairing the technological details of the service with the “plain text of the Copyright Act,” the court held that ReDigi unlawfully “reproduce[d]” users’ files by creating incidental copies during upload to ReDigi’s servers.⁷⁷ Though the textualism of *ReDigi* stood in contrast to *Aereo*’s purposivism, its application similarly destroyed ReDigi’s business and caused major companies to halt plans for similar digital resale markets.⁷⁸ However, a purposive reading—one that, like *Aereo*, paid less attention to the “behind-the-scenes” technological operations—may have disregarded the incidental copying required as an intermediate step in ReDigi’s program. Such a reading may instead focus on the broader function of ReDigi’s business—digital resale—and find that ReDigi did not violate the Act. Ultimately, the effects of both *Aereo* and *ReDigi* arguably stood contrary to the constitutional priority of “promot[ing] the Progress of Science”⁷⁹ that underlies copyright law.

The fate of a groundbreaking technology should not depend on whether a textualist or purposivist judge is assigned a case involving the invention. These unpredictable results are tied to the shortcomings of interpretive theories as applied to technology.

II. THE INCOMPLETENESS OF TRADITIONAL INTERPRETIVE APPROACHES AS APPLIED TO TECHNOLOGY

With textualism as today’s dominant mode of interpretation,⁸⁰ this Note focuses primarily on the compatibility of textualism with a mischief-based technology canon. That is not to ignore the compatibility of purposivism with the proposed canon. Quite the opposite, because mischief is already generally accepted

takingnote.blogs.nytimes.com/2014/07/01/after-aereo/ (quoting Aereo executives as “lament[ing] the decision as a ‘massive setback’—not just for its business but also for the entire technology industry”).

75. *Capitol Recs., LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640, 645 (S.D.N.Y. 2013), *aff’d*, 910 F.3d 649 (2d Cir. 2018).

76. *Id.* at 645–46.

77. *Id.* at 648, 651; *see* 17 U.S.C. § 106(1) (giving copyright owner exclusive rights to “reproduce the copyrighted work in copies or phonorecords”).

78. While the *ReDigi* litigation was in the district court, Amazon received “a patent for a secondhand digital marketplace,” and Apple applied for one as well. Eduardo Porter, *Copyright Ruling Rings with Echo of Betamax*, N.Y. TIMES (Mar. 26, 2013), <https://www.nytimes.com/2013/03/27/business/in-a-copyright-ruling-the-lingering-legacy-of-the-betamax.html>. Those services never took off, likely due to *ReDigi*. *See* Marc J. Rachman & Joshua B. Podolnick, *ReDigi and the Application of the First Sale Doctrine to Digital Works*, NYSBA BRIGHT IDEAS, Spring/Summer 2019, at 9, 12 (“Currently, there does not appear to be any digital resale technology that avoids unlawful reproduction on a new device. . . . [A]bsent a reversal by the Supreme Court, the most likely result of *ReDigi* is that there is no secondary market for purchasers to sell their ‘used’ digital media files . . .”).

79. U.S. CONST. art. I, § 8, cl. 8.

80. *See, e.g.*, Harvard Law School, *supra* note 14.

by purposivists.⁸¹ Textualists, on the other hand, have not embraced mischief. Much of the reason lies in the origins of textualism: a direct response to the perceived shortcomings of purposivism. To understand this connection, this Part explores both purposivism and the textualism it spurred. For each approach, this Part outlines the theory and illustrates its application to technology cases, such as those involving the Copyright Act and the CFAA. In doing so, this Part lays the groundwork for a discussion of mischief and the introduction of the technology canon in Part III.

A. PURPOSIVISM

1. Purposive Principles

Purposivists seek to “[i]nterpret the words of the statute . . . so as to carry out the purpose as best [they] can.”⁸² Their commitment to identifying a statute’s purpose proceeds from a model of legislative supremacy.⁸³ By “focus[ing] on identifying a statute’s underlying purpose or policy objectives,” purposivists are “willing[] to prioritize [legislative] purpose over text when the two conflict.”⁸⁴

In practice, purposivists often look to a statute’s legislative history to provide evidence of meaning. Purposivists argue that considering policy context can allow a statute to adapt to “unforeseen circumstances over time.”⁸⁵ In the context of technology, purposivists “might be somewhat more apt to ask how the enacting legislature would have varied the statutory language if it had known about the new technology.”⁸⁶

81. See, e.g., Anita S. Krishnakumar, *Statutory History*, 108 VA. L. REV. 263, 323 (2022) (highlighting mischief as a “time-honored purposive interpretive tool[]”). Early concepts of mischief and purpose “seem to have been entirely overlapping,” though over time, “mischief stayed narrower and more grounded.” Samuel L. Bray, *The Mischief Rule*, 109 GEO. L.J. 967, 973 (2021).

82. See Anita S. Krishnakumar, *Backdoor Purposivism*, 69 DUKE L.J. 1275, 1282 (2020) (alterations and omission in original) (quoting HENRY M. HART, JR. & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 1374 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994)).

83. See, e.g., John F. Manning, *The New Purposivism*, 2011 SUP. CT. REV. 113, 120; Richard A. Posner, *Legal Formalism, Legal Realism, and the Interpretation of Statutes and the Constitution*, 37 CASE W. RESV. L. REV. 179, 189 (1986) (“In our system of government the framers of statutes and constitutions are the superiors of the judges. The framers communicate orders to the judges through legislative texts”); John F. Manning, *What Divides Textualists from Purposivists?*, 106 COLUM. L. REV. 70, 96 (2006) [hereinafter Manning, *What Divides?*] (“Purposivists argue that legislative supremacy is better served not by the judge who attends to every last clue about the social usage of the chosen words, but rather by someone who is sensitive to the policy concerns underlying the legislative choice—even when they contradict the apparent import of the text.”).

84. Krishnakumar, *supra* note 82, at 1282; see also *id.* at 1283–84 (“[P]urposivists are willing to reject a statute’s seemingly plain meaning when contrary indications of purpose cut strongly against such meaning.”).

85. Manning, *What Divides?*, *supra* note 83, at 99; accord William N. Eskridge, Jr., *Spinning Legislative Supremacy*, 78 GEO. L.J. 319, 326 (1989) (“[T]he legislature will often speak on a specific question just once, leaving it to the judge (agent) to fill in details and implement the statute in unforeseen situations over what is often a long period of time. Hence, like the relational agent, the judge will often exercise great creativity in applying prior legislative directives to specific situations.”).

86. Nelson, *supra* note 22, at 415.

2. Purposivism Applied to Technology

One of the most prominent examples of purposivism in the technology context is *Aereo*.⁸⁷ Writing for the Court, Justice Breyer took a purposive approach to the Copyright Act to conclude that a “technologically complex” television streaming service infringed copyrights held by ABC.⁸⁸

Recall that *Aereo* attempted to innovate around the Copyright Act and avoid “publicly” performing the works that it streamed to subscribers.⁸⁹ A customer could select a television program on *Aereo*’s website, at which point *Aereo* dedicated one of its antennas to that specific subscriber. That antenna tuned into the program chosen by the subscriber, then transcoded the program to *Aereo*’s server.⁹⁰ The data on *Aereo*’s server existed in a folder specific to that subscriber, creating a “personal” copy for the subscriber.⁹¹ The subscriber could then stream the program on their device from their personal folder on *Aereo*’s server, from which no other *Aereo* customer could stream content.⁹² *Aereo* claimed that it did not perform the works “publicly” because “one and only one subscriber”—not “the public”—was “capable of receiving the performance.”⁹³

The Court first determined that *Aereo* “performed” the copyrighted works. Justice Breyer looked to the legislative history of the 1976 Copyright Act, referencing a House Judiciary Committee report that described the Act as “completely overturn[ing]” two of the Court’s earlier cases regarding the precursor to cable television.⁹⁴ The Court cited the report as evidence that Congress’s intent was “to bring the activities of cable systems within the scope of the Copyright Act.”⁹⁵ However, Justice Scalia’s dissent pointed out that the two earlier cases involved a *constant* transmission of content, while *Aereo* only sent a copy to a customer when they requested it.⁹⁶ The majority dismissed this difference, instead emphasizing “*Aereo*’s overwhelming likeness to the cable companies targeted by the 1976 amendments.”⁹⁷

The Court then held that *Aereo*’s performances were “public,” rejecting *Aereo*’s argument that creating “personal cop[ies]” for subscribers prevented transmission “to the public.”⁹⁸ Justice Breyer’s opinion analogized to the physical world to explain how what is “public” may depend upon a person’s “relationship

87. *ABC, Inc. v. Aereo*, 573 U.S. 431 (2014).

88. *Id.* at 436.

89. *Id.* at 436–37.

90. *Id.* at 436.

91. *Id.* at 436–37.

92. *Id.* at 437.

93. *Id.* at 445; see 17 U.S.C. § 101 (defining a “public” performance).

94. *Aereo*, 573 U.S. at 441 (quoting H.R. REP. NO. 94-1476, at 86–87 (1976)).

95. *Id.* at 442.

96. *Id.* at 458 (Scalia, J., dissenting) (“[C]ommunity-antenna television systems [in one of the cases] captured the full range of broadcast signals and forwarded them to all subscribers at all times, whereas *Aereo* transmits only specific programs selected by the user, at specific times selected by the user.”); see also *id.* at 443 (majority opinion).

97. *Id.* at 443–44.

98. *Id.* at 445–46.

to the underlying work.”⁹⁹ Whereas a “valet parking attendant” returns a car to its owner and not “to the public,” Aereo’s subscribers did not own the underlying copies.¹⁰⁰ Moreover, the Court emphasized that “behind-the-scenes” “technological differences” make no difference to “Congress’ regulatory objectives.”¹⁰¹ By disregarding Aereo’s mechanical details, this purposive approach could even be described as “technology-blind.”¹⁰²

Justice Scalia criticized the Court for relying too much on the cases that Congress overturned with the 1976 amendments, where there were “salient differences” between the complex technology of Aereo and the “dumb pipes” that made up cable systems in the early days.¹⁰³ He expressed concern with the Court’s lack of “criteria for determining when its cable-TV-lookalike rule applies,” which could end up imperiling cloud services and cable systems despite the majority’s insistence that its rule did not affect those businesses.¹⁰⁴ This uncertainty was due in part to the majority’s purposive analysis, which relied on a single report from the House Judiciary Committee. Textualism, as Justice Scalia highlighted, was crafted specifically to address the uncertainty and subjectivity that arise from relying on legislative history.

B. TEXTUALISM

1. Textualist Principles

Modern textualism took form in the 1980s as a direct response to purposivism.¹⁰⁵ “[T]extualism is a formalist theory that focuses on the ordinary meaning of a statute’s text and prides itself on its ability to cabin judicial discretion through the use of neutral, objective interpretive tools.”¹⁰⁶ It is rooted in a different understanding of the separation of powers. For textualists, “the constitutional role of the legislature is to enact statutes, not to have intent or purposes.”¹⁰⁷ Textualists give great weight to the Article I legislative process, particularly the requirements of bicameralism and presentment.¹⁰⁸ Because the text of a statute is

99. *Id.* at 448.

100. *See id.*

101. *Id.* at 446.

102. *See* Liebesman, *supra* note 56, at 1383.

103. *Aereo*, 573 U.S. at 458–59 (Scalia, J., dissenting).

104. *Id.* at 460–61; *see id.* at 450–51 (majority opinion) (explaining that Court would wait for issues of cloud storage and other issues to be “squarely presented,” and suggesting that in the meantime, concerned businesses “are of course free to seek action from Congress”).

105. *E.g.*, Tara Leigh Grove, Comment, *Which Textualism?*, 134 HARV. L. REV. 265, 271 (2020).

106. Krishnakumar, *supra* note 82, at 1330; *see, e.g.*, *Bostock v. Clayton County*, 590 U.S. 644, 654 (2020) (Gorsuch, J., majority opinion) (“This Court normally interprets a statute in accord with the ordinary public meaning of its terms at the time of its enactment.”).

107. William N. Eskridge, Jr., *Textualism, the Unknown Ideal?*, 96 MICH. L. REV. 1509, 1511 (1998) (reviewing ANTONIN SCALIA, *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW* (Amy Gutmann ed., 1997)).

108. *See* Manning, *What Divides?*, *supra* note 83, at 73; U.S. CONST. art. I, § 7, cls. 2, 3. In textualists’ view, “only the text voted upon by the House of Representatives and the Senate and signed by the President . . . constitutes the law.” Grove, *supra* note 105, at 273 & n.48; *see also* Frank H. Easterbrook, *Statutes’ Domains*, 50 U. CHI. L. REV. 533, 539 (1983) (“Under article I of the

what Congress passed and the President signed, courts should “apply the words and only the words” of a statute.¹⁰⁹ Early leaders of the movement included Justice Scalia, John Manning,¹¹⁰ and Judge Easterbrook.¹¹¹

In contrast to purposivists, textualists reject the use of legislative history in interpretation as “illegitimate” and “unreliable.”¹¹² Legislative history is illegitimate because bicameralism and presentment are not required to publish conference reports, committee reports, and sponsor statements.¹¹³ Legislators who vote on a bill may not even be aware of everything captured in the legislative history.¹¹⁴ In terms of reliability, textualists worry that legislative history may only represent the views of one person or a handful of legislators. Even worse, legislative history may be manipulated by a party that inserts particular language into a debate or report with the hope that it is later cited as evidence of collective legislative intent.¹¹⁵ Excerpting helpful “snippets”¹¹⁶ from the statements of individual legislators, as a purposivist may be prone to do, is “akin to ‘looking over a crowd and picking out your friends.’”¹¹⁷ These ideas were central to Justice Scalia’s *Aereo* dissent, which criticized the majority for citing “a few isolated snippets of legislative history” as “authoritative evidence of congressional intent even though they come from a single report issued by a committee whose members make up a small fraction of one of the two Houses of Congress.”¹¹⁸

While the early textualists rejected purposivism, they also resisted charges of literalism—a critique of earlier text-focused approaches.¹¹⁹ “[T]he good textualist is not a literalist,” Justice Scalia explained.¹²⁰ However, modern textualism has

Constitution, . . . support is not enough for legislation. If the support cannot be transmuted into an enrolled bill, nothing happens.”).

109. Eskridge, Jr., *supra* note 107, at 1511.

110. See generally, e.g., Antonin Scalia & John F. Manning, *A Dialogue on Statutory and Constitutional Interpretation*, 80 GEO. WASH. L. REV. 1610 (2012); Manning, *What Divides?*, *supra* note 83.

111. See, e.g., Frank H. Easterbrook, *Text, History, and Structure in Statutory Interpretation*, 17 HARV. J.L. & PUB. POL’Y 61, 64 (1994).

112. Frank H. Easterbrook, *The Absence of Method in Statutory Interpretation*, 84 U. CHI. L. REV. 81, 90–91 (2017); accord Manning, *What Divides?*, *supra* note 83, at 84.

113. See John F. Manning, *Textualism as a Nondelegation Doctrine*, 97 COLUM. L. REV. 673, 710–25 (1997).

114. See *id.* at 686 & n.58. Textualists often assume that legislators read a statute’s text but not always supplemental materials, such as committee reports. However, recent scholarship suggests that members of Congress may do the opposite. See Jesse M. Cross & Abbe R. Gluck, *The Congressional Bureaucracy*, 168 U. PA. L. REV. 1541, 1549 (2020) (“[M]embers [of Congress] themselves always read other documents produced by [congressional] ‘staff’ and virtually never read statutory text.”).

115. See *Blanchard v. Bergeron*, 489 U.S. 87, 98–99 (1989) (Scalia, J., concurring in part and in judgment).

116. Manning, *supra* note 113, at 687.

117. Patricia M. Wald, *Some Observations on the Use of Legislative History in the 1981 Supreme Court Term*, 68 IOWA L. REV. 195, 214 (1983) (attributing quotation to Judge Harold Leventhal).

118. *ABC, Inc. v. Aereo, Inc.*, 573 U.S. 431, 458 (2014) (Scalia, J., dissenting).

119. See Grove, *supra* note 13, at 1034–35.

120. Antonin Scalia, *Common-Law Courts in a Civil-Law System: The Role of United States Federal Courts in Interpreting the Constitution and Laws*, in *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW*, *supra* note 107, at 3, 24.

evolved since the 1980s. The different strands of textualism were on full display in the majority and two dissenting opinions the Court produced in *Bostock v. Clayton County*.¹²¹ As Justice Gorsuch's majority opinion suggests, a more "formalistic textualism" that focuses on semantic context (rather than social and policy context) may be taking shape, ostensibly to limit judicial discretion.¹²² Similarly, Justice Barrett's opinion for the Court in *Van Buren*, which interpreted the CFAA, may also demonstrate more formalistic textualism.¹²³ But by shedding social and policy context for semantic context, formalistic textualism can trend back toward literalism.¹²⁴

Textualism thus exhibits tension between cabining judicial discretion and avoiding literalism. As Part III argues, for technology cases in particular, considering the mischief behind a statute eases this tension. Mischief respects the primacy of the text because it simply offers additional evidence of meaning, much like contemporary dictionaries. While mischief provides context that may help a textualist avoid charges of literalism, it does not import the core problems that textualists have with purposivism.¹²⁵

2. Textualism Applied to Technology

Two cases provide salient examples of what textualism looks like in the technology context when it is not informed by mischief. *ReDigi* dealt with the Copyright Act (as *Aereo* did), while *Van Buren* concerned the CFAA.

a. *ReDigi and the Copyright Act*

ReDigi launched in 2011 as "the world's first and only online marketplace for digital used music."¹²⁶ It was the digital equivalent of a record store, where owners of digital music files could "recoup value on their unwanted music."¹²⁷ While

121. 590 U.S. 644 (2020). Tara Grove has offered a thorough analysis of the different approaches of *Bostock*'s three opinions, each of which claimed to apply textualism to Title VII. See Grove, *supra* note 105, at 281–86. Grove argues that Justice Gorsuch's majority opinion exhibits "formalistic textualism," which involves "carefully pars[ing] the words of Title VII, focusing closely on semantic context." *Id.* at 281. In contrast, the dissenting opinions written by Justices Alito and Kavanaugh demonstrate a more "flexible textualism," "emphasiz[ing] not the statutory language, but rather how the public would have expected Title VII to apply" at the time of enactment. *Id.* at 285–86 (emphasis omitted). The mischief rule that this Note advocates in the technology context fits better into Grove's "flexible textualism" bucket. See *id.* at 304.

122. See Grove, *supra* note 105, at 281–82.

123. See *infra* Section II.B.2.b (analyzing *Van Buren* and the Court's focus on the word "so").

124. See, e.g., Doerfler, *supra* note 18, at 305 (characterizing recent applications of textualism by the Court as "wooden" or "mechanical"); Samuel Bray, *The Mischief Rule*, VOLOKH CONSPIRACY (June 11, 2021, 2:55 PM), <https://reason.com/volokh/2021/06/11/the-mischief-rule/> [<https://perma.cc/JJ5E-T85U>] ("[T]extualism should not be narrowed to an inquiry about words alone, as if the law is simply words on a page, words that can be interpreted without context. . . . I think that kind of textualism ends in literalism. And a literalistic textualism will not last.").

125. See *infra* Section III.A.2; cf. Bray, *supra* note 124 (arguing that a text-only, "crabbed textualism that rejects the mischief rule is a dangerous path" for textualists).

126. *Capitol Recs., LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640, 645 (S.D.N.Y. 2013), *aff'd*, 910 F.3d 649 (2d Cir. 2018).

127. *Id.*

Aereo attempted to get around the Copyright Act's prohibitions, ReDigi sought to leverage its affirmative protection. In addition to the right of public performance considered in *Aereo*, the owner of a copyright has the exclusive right both "to reproduce the copyrighted work in copies or phonorecords" (the "reproduction" right) and "to distribute copies or phonorecords of the copyrighted work to the public by sale" (the "distribution" right).¹²⁸ With respect to the distribution right only, the Copyright Act's "first sale doctrine" establishes that "the owner of a particular copy or phonorecord *lawfully made*" may "sell or otherwise dispose of the possession of that copy or phonorecord" without violating the copyright owner's distribution right.¹²⁹

Like Aereo, ReDigi sought a legal solution through deliberate engineering. To use ReDigi, a user first had to download software, which verified that the user lawfully owned a music file.¹³⁰ If a user wanted to sell a file they owned, they could upload it to ReDigi's "Cloud Locker," which simultaneously deleted the file from the user's devices.¹³¹ From the cloud, the user could either stream the song for themselves or offer it for sale.¹³² If the user sold the song, ReDigi removed it from the seller's Cloud Locker and transferred it to the Cloud Locker of the buyer, who could keep the song in their locker or download it to their devices.¹³³ By keeping only one copy of a file in circulation at a time, ReDigi believed its users could dispose of their lawfully acquired copies under the first sale doctrine without infringing the copyright owners' distribution rights.¹³⁴

Capitol Records, LLC v. ReDigi Inc. tested the legality of this technological solution. Capitol Records argued that ReDigi violated its exclusive (1) reproduction right by digitally copying a file on a ReDigi user's computer to upload it to the Cloud Locker and (2) distribution right because the first sale doctrine does not apply to digital resales.¹³⁵

In contrast to *Aereo*'s purposivism, the *ReDigi* court took a textualist approach. Starting with the reproduction issue, the court looked to the "plain text of the Copyright Act" to conclude that "reproduction occurs when a copyrighted work is fixed in a new *material object*."¹³⁶ Transferring a file over the Internet, the court reasoned, "results in a material object being 'created elsewhere at its

128. 17 U.S.C. § 106(1), (3).

129. *Id.* § 109(a) (emphasis added); *see also* *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 350–51 (1908) (recognizing first sale protection at common law).

130. *ReDigi*, 934 F. Supp. 2d at 645.

131. *Id.* at 645–46.

132. *Id.* at 646.

133. *Id.*

134. *See id.* at 655.

135. *See id.* at 648.

136. *Id.*; *see* 17 U.S.C. § 106(1) ("[T]he owner of copyright . . . has the exclusive right[] . . . to reproduce the copyrighted work in copies or phonorecords . . ."); *id.* § 101 (defining "phonorecords" as "material objects in which sounds . . . are fixed by any method now known or later developed, and from which the sounds can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device" (emphasis added)).

finish.”¹³⁷ Specifically, the hard disk on which the file is fixed for availability in the cloud constitutes a “new material object.” Therefore, ReDigi’s “embodiment” of users’ files in the server hosting ReDigi’s Cloud Locker was a reproduction.¹³⁸ For the court, it did not matter whether a user lawfully owned the original file or that embodiment in the server was merely an incidental and “essential step in the utilization of the computer program”¹³⁹ to the transfer of the file to another user.

On the distribution issue, there was no dispute that ReDigi *distributed* copies of Capitol’s records. The question was whether ReDigi could enjoy the affirmative defense of the first sale doctrine.¹⁴⁰ As with the reproduction right issue, the court looked to the text of the first sale defense, which protects “the owner of a *particular* copy or phonorecord *lawfully made*.”¹⁴¹ Having determined that ReDigi violated Capitol’s reproduction right, the court held that ReDigi’s copies were not “lawfully made” and were thus ineligible for first sale protections.¹⁴² Taking another textual step, the court reasoned that the first sale doctrine “protects only distribution by ‘the owner of a *particular* copy or phonorecord . . . of *that* copy or phonorecord.’”¹⁴³ When ReDigi copied files from users’ devices to the Cloud Locker, the court explained, its users were no longer selling their “particular” copy of the song; they were selling the new phonorecord embodied in the ReDigi server.¹⁴⁴

Notably, in its reproduction analysis, the court explained that the “embodiment” rule applied “whether one or multiple copies of the file exist.”¹⁴⁵ In other words, the court constructed “a literal meaning of the act of reproduction rather than taking a functional and purposive approach”—“an attempt to replicate in the digital online world what occurs in the world of physical objects.”¹⁴⁶ The result of this textualist reading—focusing on the incidental embodiment of a file in another location, which was an essential step for technological reasons—had far-reaching implications across the digital economy, causing other businesses to shy away from an online secondhand market for digital files.¹⁴⁷

137. *ReDigi*, 934 F. Supp. 2d at 649 (quoting *London-Sire Recs., Inc. v. Doe 1*, 542 F. Supp. 2d 153, 173 (D. Mass. 2008)).

138. *See id.* at 649–51.

139. *Cf.* 17 U.S.C. § 117(a) (establishing in a different context that the owner of a copy of software can load it into another machine for limited purposes, where doing so is an “essential step in the utilization of the computer program”).

140. *See ReDigi*, 934 F. Supp. 2d at 655.

141. 17 U.S.C. § 109(a) (emphasis added); *accord ReDigi*, 934 F. Supp. 2d at 655.

142. *ReDigi*, 934 F. Supp. 2d at 655.

143. *Id.* (omission in original) (quoting 17 U.S.C. § 109(a)).

144. *Id.*

145. *Id.* at 650.

146. Chapdelaine, *supra* note 53, at 88.

147. *See supra* note 78 and accompanying text; Nicholas Costanza, *Digital Music Garage Sale: An Analysis of Capitol Records, LLC v. ReDigi Inc. and a Proposal for Legislative Reform in Copyright Enabling a Secondary Market for Digital Music*, 37 HASTINGS COMM’NS & ENT. L.J. 135, 142 (2015) (“The Southern District’s decision in *ReDigi*, while undoubtedly appropriate under a textualist application of section 109, ultimately hindered innovative efforts in digital music.”).

On the other hand, following a purposive approach—as the Court did in *Aereo* by explaining that “behind-the-scenes” technological differences make no difference to “Congress’ regulatory objectives”¹⁴⁸—may have saved ReDigi’s business. A more functional reading, as over two dozen copyright scholars later argued on appeal, may find that incidental copying is consistent with the first sale doctrine’s common law roots, which were codified in the 1909 Act.¹⁴⁹ ReDigi also had another engineering solution to keep its business going. Right before the close of discovery, ReDigi launched “ReDigi 2.0.”¹⁵⁰ This new version would have kept users’ songs in their Cloud Locker from the time they originally purchased them. With the files already in the cloud, there was no need to separately “embody” a file before transferring it.¹⁵¹ Under the court’s analysis, this would likely not be a “reproduction” because a copy of the file on the seller’s device would not be newly “fixed” in ReDigi’s servers. But ReDigi 2.0 came too late in the lawsuit,¹⁵² and the court found ReDigi liable. Faced with this liability, ReDigi (like *Aereo*) did not recover from the court’s rejection of its core technology.¹⁵³

b. *Van Buren and the CFAA*

Like *ReDigi*, the Court’s textual analysis of the CFAA in *Van Buren v. United States*,¹⁵⁴ which featured an “extended discussion” of individual words, “invited mockery”¹⁵⁵ from some, similar to the charges of literalism that textualists have faced. The Court did not look to the mischief behind the CFAA, though doing so may have addressed some of these critiques.¹⁵⁶

Nathan Van Buren, a Georgia police officer, agreed to look up a license plate in a law enforcement database on behalf of an acquaintance in exchange for \$5,000.¹⁵⁷ Unbeknownst to Van Buren, the acquaintance was working with the FBI.¹⁵⁸ Federal prosecutors charged Van Buren under the CFAA, which prohibits an individual from “‘intentionally access[ing] a computer without authorization or exceed[ing] authorized access,’ and thereby obtain[ing]”

148. *ABC, Inc. v. Aereo, Inc.*, 573 U.S. 431, 446 (2014).

149. Brief of Copyright Law Scholars as *Amici Curiae* in Support of Defendants-Appellants and Reversal at 1, 12–19, *Capitol Recs., LLC v. ReDigi Inc.*, 910 F.3d 649 (2d Cir. 2018) (No. 16-2321), 2017 WL 663709 (analyzing purpose of first sale protections at common law and as reflected in the Copyright Act’s legislative history); see *infra* notes 323–25 and accompanying text.

150. *ReDigi*, 934 F. Supp. 2d at 646 n.3.

151. *See id.*

152. *Id.*

153. See Andrew Albanese, *ReDigi, Key Digital ‘First Sale’ Case, Heating Up on Appeal*, PUBLISHERS WKLY. (May 13, 2017), <https://www.publishersweekly.com/pw/by-topic/digital/copyright/article/73608-redigi-key-digital-first-sale-case-heating-up-on-appeal.html> [<https://perma.cc/NHL5-BJF5>].

154. 141 S. Ct. 1648 (2021) (Barrett, J., majority opinion). Leading textualist Justice Barrett wrote for the 6–3 Court, joined by fellow textualists Gorsuch and Kavanaugh, as well as Justices Breyer, Sotomayor, and Kagan. Justice Thomas authored the dissent, also focusing on text but, as discussed below, giving more consideration to the function of the CFAA.

155. See Doerfler, *supra* note 18, at 311.

156. For a discussion of the mischief behind the CFAA, see *infra* Section IV.A.

157. *Van Buren*, 141 S. Ct. at 1653.

158. *Id.*

information.¹⁵⁹ The government argued that Van Buren “exceed[ed] authorized access” by using the database—which his credentials enabled him to access—for a non-law-enforcement purpose.¹⁶⁰ A jury convicted Van Buren, and the Eleventh Circuit affirmed.¹⁶¹

The CFAA defines “exceeds authorized access,” so the Court focused its analysis on that statutory definition: “to access a computer with authorization and to use such access to obtain . . . information in the computer that the accesser is *not entitled so to obtain*.”¹⁶² For the majority, the case turned on the meaning of “so.” Van Buren argued that if an individual is able to obtain information, the *purpose* for which they do so is irrelevant. In contrast, the government contended that “so” is tied to “the particular manner or circumstances” in which the individual obtains the information.¹⁶³

The Court agreed with Van Buren. Consistent with textualist practice, Justice Barrett’s majority opinion surveyed contemporaneous dictionaries to help determine the statute’s ordinary meaning.¹⁶⁴ The Court found Van Buren’s reading of “so” to be consistent with the understanding of an “appropriately informed” individual—a perspective that matters to textualists.¹⁶⁵ And although the government described “guardrails” for its proposed definition, the Court rejected the government’s argument because it did not have “any textual basis” for them.¹⁶⁶

Dissenting, Justice Thomas, joined by Chief Justice Roberts and Justice Alito, would have affirmed Van Buren’s conviction.¹⁶⁷ Instead of focusing on “so,” Justice Thomas argued that Van Buren was not “*entitled so to obtain*” the information.¹⁶⁸ Analogizing computer access to the physical world, Justice Thomas offered the example of a valet (just as Justice Breyer did in *Aereo*¹⁶⁹). While a valet is “entitled” to access the car and use that access to park and retrieve the car, he is not “entitled” to joyride using that access.¹⁷⁰

Justice Thomas’s entitlement-based analysis may get closer to the mischief that informed the CFAA’s terms. As discussed later in Part IV, the majority’s characterization of the CFAA as focused on outside threats—that is, “hacking[.]”¹⁷¹—is incomplete. Although outside threats drew more media attention in 1986, sources

159. *Id.* at 1652 (quoting 18 U.S.C. § 1030(a)(2)).

160. *Id.* at 1653.

161. *Id.* at 1653–54.

162. *Id.* at 1654 (omission in original) (emphasis added) (quoting 18 U.S.C. § 1030(e)(6)).

163. *Id.*

164. *See id.* at 1654–55 (citing definitions of “so” in 1979 edition of Black’s Law Dictionary and 1989 Second Edition of Oxford English Dictionary).

165. *Id.* at 1657 (quoting Nelson, *supra* note 22, at 354). The Court also cited Justice Scalia’s statutory interpretation treatise, co-authored with lexicographer Bryan Garner, as evidence that “courts take note of terms that carry ‘technical meaning[s].’” *Id.* (quoting ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 73 (2012) (alteration in original)).

166. *Id.* at 1655.

167. *See id.* at 1662, 1669 (Thomas, J., dissenting).

168. *See id.* at 1663–65 (emphasis added); 18 U.S.C. § 1030(e)(6).

169. *See supra* notes 99–100 and accompanying text.

170. *Van Buren*, 141 S. Ct. at 1664 (Thomas, J., dissenting).

171. *See id.* at 1652 (majority opinion).

beyond the CFAA's legislative history reveal the "nearly unanimous" view that the primary mischief came from *insider* threats—particularly schemes like Van Buren's in which employees used their access to sensitive information through work for personal pecuniary gain.¹⁷²

III. MISCHIEF AND THE TECHNOLOGY CANON

Mischief can fill the gaps that technology creates in traditional purposive and textualist methods. This Part first discusses the old and misunderstood "mischief rule," which can both approximate ordinary meaning at the time of a statute's enactment and retain more objectivity than legislative history. After identifying the benefits of mischief and establishing its compatibility with textualism, this Part introduces the "technology canon," which proposes using mischief where an old statute is applied to new technology.

A. THE MISCHIEF RULE

This Section introduces the mischief rule in three parts. First, it provides an overview of the rule, including its centuries-old roots and Samuel Bray's recent, notable effort to revive it.¹⁷³ Second, this Section frames mischief as a tool of particular interest to textualists because it serves many textualist values without the purposive pitfalls of legislative history or intent. Third, this Section explores sources of mischief and how to apply the rule in practice.

1. The Idea of Mischief

Mischief is a problem in the world that is not adequately remedied by existing law.¹⁷⁴ Mischief is "logically prior to the enactment of a statute" and exists outside of the legislature.¹⁷⁵ Because mischief exists independently of the lawmaking body, it represents a more objective state of affairs than legislative purpose or intent (to which a purposivist may turn). In other words, mischief exists in the "background" for legislators and may "motivat[e]" their efforts.¹⁷⁶ Mischief exists where a problem has not been addressed in *any* way by the law. But it is also present where a law exists but is *inadequate* to address a problem—think Captain Midnight's interference with HBO's satellites.¹⁷⁷ Though often neglected today, the concept dates at least back to the sixteenth century.¹⁷⁸

172. See OFF. OF TECH. ASSESSMENT, *supra* note 58, at 87–88; *infra* Section IV.A.

173. See *generally* Bray, *supra* note 81. This Note builds on Bray's work, highlighting technology statutes as the context where the mischief rule is perhaps most appropriate.

174. See *id.* at 992 (recognizing that "some statements of the mischief rule emphasize the social and some the legal," and arguing that "mischief has a compound significance: it is the social problem, and it is also the inadequacy in the law that allowed or allows that problem").

175. *Id.*

176. See Krishnakumar, *supra* note 82, at 1278 n.9.

177. See *supra* notes 1–8 and accompanying text.

178. In *Heydon's Case*, (1584) 76 Eng. Rep. 637; 3 Co. Rep. 7a, an English court explained that courts should consider "(1) the old law; (2) the defect in the old law; (3) the new law; and (4) how the new law connects to the defect in the old law." Bray, *supra* note 81, at 979.

Because mischief exists independently of any statute, it does not override text. Rather, mischief matters because the words in a statute “may acquire scope and function from the history of events which they summarize or from the purpose which they serve.”¹⁷⁹ As Justice Cardozo explained, this includes background mischief and “contemporaneous discussion” at the time of enactment.¹⁸⁰

Still, textualists may conflate mischief with purpose.¹⁸¹ Bray observes that Justice Scalia and lexicographer Bryan Garner even define “purposivism” and the “mischief rule” by reference to one another, framing the mischief rule simply as “a primarily British name for purposivism.”¹⁸² But the two are not equivalent. Consider the Hansard Rule, which says that English courts may not determine “the meaning of the words used by Parliament” by looking to commissioners’ reports—the rough equivalent of committee reports in Congress, which are favored by purposivists.¹⁸³ Nevertheless, English courts may consider commissioners’ reports “solely for the purpose of ascertaining the mischief which the statute was intended to cure.”¹⁸⁴

Another way to distinguish mischief from purpose is through Peter Strauss’s idea of “legislative” versus “political” history. Compared to legislative history, political history represents a more objective account of “what problems concerned Congress and what was the general thrust of its response.”¹⁸⁵ In this way, mischief is more like political history. Further distinguishing itself from legislative history, mischief shares elements of a process-based approach, under which an interpreter “does not try to assume the perspective of a legislator (or staffer) who *actually* participated in the drafting of the relevant statute.”¹⁸⁶ As mere “background” for a statute’s passage, considering mischief respects the separation of powers by giving deference to Congress without launching into a full inquiry of congressional intent.¹⁸⁷

179. Felix Frankfurter, *Some Reflections on the Reading of Statutes*, 47 COLUM. L. REV. 527, 536–37 (1947).

180. See *Duparquet Huot & Moneuse Co. v. Evans*, 297 U.S. 216, 221 (1936) (Cardozo, J., majority opinion) (“[H]istory is a teacher that is not to be ignored.”); Bray, *supra* note 81, at 1002 n.195. In other words, courts may “recur to the history of the times when [a statute] was passed . . . in order to ascertain the reason as well as the meaning of particular provisions in it.” *Smith v. Townsend*, 148 U.S. 490, 494 (1893) (quoting *United States v. Union Pac. R.R. Co.*, 91 U.S. 72, 79 (1875)); see Bray, *supra* note 81, at 992 & n.138.

181. See, e.g., Krishnakumar, *supra* note 82, at 1278 n.9 (recognizing that both “purposivists and intentionalists tend to rely on the same interpretive sources — e.g., legislative history [and] background mischief motivating the statute”).

182. SCALIA & GARNER, *supra* note 165, at 433; see *id.* at 438 (“Broadly speaking, *purposivism* is synonymous with *mischief rule*.”). Bray identifies this interesting connection. Bray, *supra* note 81, at 984–85.

183. See Stefan Vogenauer, *A Retreat from Pepper v. Hart?: A Reply to Lord Steyn*, 25 OXFORD J. LEGAL STUD. 629, 630 (2005); Bray, *supra* note 81, at 970 & n.18, 995.

184. Vogenauer, *supra* note 183, at 630.

185. Peter L. Strauss, *The Courts and the Congress: Should Judges Disdain Political History?*, 98 COLUM. L. REV. 242, 243 n.3 (1998); see Bray, *supra* note 81, at 993 & n.143.

186. Amy Coney Barrett, *Congressional Insiders and Outsiders*, 84 U. CHI. L. REV. 2193, 2201 (2017).

187. Cf. Robert A. Katzmann, *Response to Judge Kavanaugh’s Review of Judging Statutes*, 129 HARV. L. REV. F. 388, 398 (2016) (responding to Brett M. Kavanaugh, *Fixing Statutory Interpretation*,

Bray formalizes the mischief rule clearly: “[W]e can distinguish the mischief (‘*a*’), the statute that is the legislative act (‘*b*’), and the purpose (‘*c*’): ‘Because of *a*, *b*, so that *c*.’”¹⁸⁸ Under this formulation, the mischief, “*a*,” is wholly independent of what the legislature both *does* (“*b*”) and *intends* to do (“*c*”). Accordingly, the meaning of the text, “*b*,” can be shaped by mischief *without* searching for subjective legislative purpose, “*c*.”

Accepting the theoretical justifications behind mischief, the question becomes what impact mischief can have in practice. For textualists, the meaning of a statute’s terms is fixed at the time of enactment. Meanwhile, technology continues to evolve—rapidly. Over time, statutes can become increasingly over- or under-inclusive of new technologies.¹⁸⁹ As Bray argues, one function of mischief is as a “stopping point” for interpreting the text (thus narrowing the scope of the statute),¹⁹⁰ which can be particularly helpful in the technology context.

2. Mischief as a Textualist Tool

Given the prominence of textualism today, this Note focuses on why textualists should embrace a technology canon. A mischief-based canon is consistent with textualism, even where it may seem not so. For example, Bray argues that mischief should be invoked early in the interpretive process to determine *whether* a statute is ambiguous.¹⁹¹ At first glance, this order of operations—initially looking to outside mischief in order to clarify the text, rather than looking first for a plain meaning to determine whether the statute is ambiguous—may seem hard to reconcile with textualism. But consider that Bray’s argument is “directed at [his] fellow textualists.”¹⁹² To show the compatibility of mischief with textualism, Bray cites four Supreme Court opinions in which he asserts that “the mischief was logically anterior to the text, something the interpreter knew while reading the text itself.”¹⁹³ Anita Krishnakumar similarly observes that the Roberts Court has “textualized” the mischief rule, “ground[ing] [a] statute’s core meaning not just in the history that motivated its enactment, but also in linguistic aids such as dictionary

129 HARV. L. REV. 2118 (2016), and warning that “undue reliance on various semantic and linguistic sources to the exclusion of reliable legislative history or *background inquiries* may not reflect the ‘best reading’ of the statute” because “it does not reflect appropriate deference to Congress as the institution that produced the text, to the legislature’s underlying plan” (emphasis added)).

188. Bray, *supra* note 81, at 997.

189. See Nelson, *supra* note 22, at 413 (“[A]s applied to modern technology, the rule stated by the statute is likely to be even more over- or under-inclusive than rules often are, because the enacting legislature had no opportunity to tailor its rule with modern technology in mind.”).

190. See Bray, *supra* note 81, at 999–1005. Like Bray’s stopping-point argument, a leading treatise on statutory interpretation describes a narrowing role for mischief: “where there is doubt about how inclusive a statute should be, it applies only so far as needed to remedy the perceived mischief.” 2B NORMAN J. SINGER & J.D. SHAMBIE SINGER, STATUTES AND STATUTORY CONSTRUCTION § 54:4, at 412 (7th ed. 2012).

191. See Bray, *supra* note 81, at 974–75.

192. Bray, *supra* note 124; see also *id.* (“[T]extualism should not be narrowed to an inquiry about words alone . . . without context.”). Recall Justice Scalia’s admonition that “the good textualist is not a literalist.” Scalia, *supra* note 120, at 24. Mischief, Bray argues, can steer textualists away from the “dangerous path” of trending toward literalism. Bray, *supra* note 124.

193. Bray, *supra* note 81, at 991.

definitions, the whole act rule, and language canons like *noscitur a sociis*—that is, in textualist interpretive tools.”¹⁹⁴

Mischief is essentially a corollary of two textualist principles: determining ordinary meaning at the time of enactment¹⁹⁵ and interpreting terms in context.¹⁹⁶ Ordinary meaning, for example, can further “rule of law and democratic accountability.”¹⁹⁷ But critically, ordinary meaning is incomplete where a technology did not exist at the time of a statute’s enactment; the statute cannot define such a thing with precision. Mischief also provides an appropriate opening to consider context, particularly for textualists who consider social or policy context to be relevant.¹⁹⁸

By looking to a more objective state of the world—and not the legislature’s subjective purpose or intent—mischief sidesteps the textualist critique that identifying purpose or intent is akin to “looking over a crowd and picking out your friends.”¹⁹⁹ Unlike legislative purpose or intent, “mischief is external to the legislators.”²⁰⁰ It can be identified through a variety of extra-legislative materials that do not reflect the subjective views of any one lawmaker or even the legislative body as a whole.²⁰¹

194. Anita S. Krishnakumar, *Passive Avoidance*, 71 STAN. L. REV. 513, 574 (2019); see also Timothy J. Bradley, *Getting into Mischief: Reflections on Statutory Interpretation and the Mischief Rule*, 109 GEO. L.J. ONLINE 199, 221–23 (2021) (exploring “mischief-conscious textualism as a descriptive theory”), https://www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2021/06/Bradley_Getting-into-Mischief.pdf [<https://perma.cc/KX3W-67RV>].

195. See, e.g., *Bostock v. Clayton County*, 590 U.S. 644, 705 (2020) (Alito, J., dissenting) (“[W]hen textualism is properly understood, it calls for an examination of the social context in which a statute was enacted because this may have an important bearing on what its words were understood to mean at the time of enactment.”); SCALIA & GARNER, *supra* note 165, at 15–16 (describing the “oldest and most commonsensical interpretive principle” to be that “[i]n their full context, words mean what they conveyed to reasonable people at the time they were written”).

196. See, e.g., John F. Manning, *The Absurdity Doctrine*, 116 HARV. L. REV. 2387, 2393 (2003) (explaining that the “modern understanding of textual interpretation” “recognizes that the literal or dictionary definitions of words will often fail to account for settled nuances or background conventions that qualify the literal meaning of language and, in particular, of legal language”).

197. *Bostock*, 590 U.S. at 785 (Kavanaugh, J., dissenting); see *supra* notes 107–18 (describing separation of powers values underlying textualism).

198. Traditional textualist accounts identify the importance of “semantic context” versus “policy context” as a dividing line between textualists and purposivists. Manning, *What Divides?*, *supra* note 83, at 92–96. More recently, Tara Grove has provided a nuanced discussion of the different types of context that textualists may consider, including semantic context, social context, and policy context. See Grove, *supra* note 105, at 280–81. Grove ultimately argues that textualists should prefer semantic over social or policy context—or, in Grove’s framing, prefer “formalistic textualism” over “flexible textualism.” See *id.* at 303–07; *supra* note 121; see also, e.g., *Bostock*, 590 U.S. at 716 (Alito, J., dissenting) (criticizing majority for “ignoring the social context in which Title VII was enacted”); *id.* at 784 (Kavanaugh, J., dissenting) (arguing that “settled nuances or background conventions” are relevant to textualism (quoting Manning, *supra* note 196, at 2393)); Grove, *supra* note 105, at 282–85 (discussing use of social and policy context in *Bostock*); Benjamin Minhao Chen, *Textualism as Fair Notice?*, 97 WASH. L. REV. 339, 344 (2022) (“New textualism . . . counsels sensitivity to the time, circumstance, purpose, and structure of an enactment.”).

199. Wald, *supra* note 117, at 214.

200. Bray, *supra* note 81, at 992.

201. See *infra* Section III.A.3.

Even for textualists who reject substantive canons of construction,²⁰² mischief is a valid tool. While arguing that substantive canons are incompatible with textualism, Benjamin Eidelson and Matthew Stephenson observe that substantive canons do not include—and textualism is therefore compatible with—canons that “trade [on information] of the sort that the textualist’s reasonable reader, rightly understood, possesses (and would take the lawmaker to have known they would possess as well).”²⁰³ Similarly, John Manning has recognized that “in cases of ambiguity, textualists are sometimes willing to make rough estimates of purpose from sources such as . . . public knowledge of the problems that inspired [a statute’s] enactment.”²⁰⁴ He argues that “interpreters can (at least sometimes) draw a suitably objective inference of purpose—presumably one that a ‘reasonable user of words’ would arrive at after reading the entire text in context.”²⁰⁵ And although these accounts do not explicitly mention mischief, Manning’s characterization of “problems that inspired [a statute’s] enactment”—those of which both the public and legislators were aware—is synonymous with mischief.²⁰⁶ In other words, mischief simply provides “information about *what* lawmakers are likely to be trying to accomplish in the world, rather than about *how* they are likely to express themselves in pursuing whatever worldly aims they may have.”²⁰⁷ Because mischief approximates public knowledge at the time of enactment, it informs “what Congress *actually* said”—not “what Congress *ought* to have said in order best to advance any given substantive aim”²⁰⁸—and is therefore not a substantive canon.

In practice, applying the mischief rule is similar to employing familiar textual tools. Statutes commonly include a list of terms, raising the question of what falls

202. Benjamin Eidelson and Matthew Stephenson describe substantive canons as ones that “purport[] to speak to a statute’s proper legal effect in a way that is not mediated by its evidentiary bearing on what a reasonable reader would take a lawmaker to have said in enacting the statute.” Benjamin Eidelson & Matthew C. Stephenson, *The Incompatibility of Substantive Canons and Textualism*, 137 HARV. L. REV. 515, 533–34 (2023). They argue that “substantive canons are generally just as incompatible with textualists’ jurisprudential commitments as they first appear.” *Id.* at 521. Then-Professor Barrett offered the competing view that substantive canons are compatible with textualism in limited circumstances. See Amy Coney Barrett, *Substantive Canons and Faithful Agency*, 90 B.U. L. REV. 109, 110–12 (2010). To demonstrate that mischief is compatible with an even more restrictive definition of textualism, this Note proceeds under Eidelson and Stephenson’s view.

203. Eidelson & Stephenson, *supra* note 202, at 536. Eidelson and Stephenson identify four justifications for using canons in general, two of which they argue are consistent with textualism. *See id.* at 533–37. Mischief fits neatly into one of these textualism-approved justifications: using information to make “[i]nferences from [p]urpose to [c]ommunicative [c]ontent.” *See id.* at 535–36.

204. Manning, *What Divides?*, *supra* note 83, at 84–85.

205. *Id.* at 85.

206. *See Mischief Rule*, BLACK’S LAW DICTIONARY (11th ed. 2019) (defining the mischief rule in statutory construction as “the doctrine that a statute should be interpreted by first identifying the problem (or ‘mischief’) that the statute was designed to remedy and then adopting a construction that will suppress the problem and advance the remedy”).

207. Eidelson & Stephenson, *supra* note 202, at 535 (emphasis added).

208. *Id.* at 533. Similarly, Manning observes that textualists will not consider mischief to determine purpose “because they believe that it ‘is what the lawmakers must have had in mind . . . , but because it is [the judiciary’s] role to make sense rather than nonsense out of the *corpus juris*.’” Manning, *What Divides?*, *supra* note 83, at 85 (omission and alteration in original) (quoting *W. Va. Univ. Hosps., Inc. v. Casey*, 499 U.S. 83, 100–01 (1991) (Scalia, J., majority opinion)).

within the scope of the list. Textualists frequently turn to the linguistic canons of *ejusdem generis*²⁰⁹ and *noscitur a sociis*²¹⁰ to interpret lists. These are not only “two tried-and-true textualist canons”²¹¹ but are also approaches that ordinary people apply naturally to interpret lists.²¹² Moreover, the canons are consistent with more process-based interpretive approaches, because they are two of the most common canons used by the congressional staffers that draft legislation.²¹³ Applying both *ejusdem* and *noscitur* involves identifying commonalities among the terms in a list. Because the process of applying these canons is familiar to judges and ordinary people alike, jurists should feel comfortable identifying common technological functions among items in a list. During that task, the interpreter can use mischief to identify the relevant technological functions embraced by the text.²¹⁴ The result is that the interpreter is better able to understand what the legislature *actually said*, and not what it *ought* to have said or *intended* to say. And that is the heart of textualism.

3. Applying Mischief

Like any interpretive tool, applying mischief should “start with the text of the statute.”²¹⁵ Mischief allows an interpreter to look beyond dictionaries for evidence of what the terms of a statute meant at the time of enactment. And while mischief may be *reflected* in legislative history, it is not *derived* from legislative history. This Section surveys a nonexhaustive list of sources of mischief, including enacted findings and purposes, news coverage, reports prepared by independent congressional research bodies, and even discrete parts of legislative history.

The most straightforward sources of mischief are enacted findings and enacted purposes.²¹⁶ Because both are part of a statute itself—and thus the product of

209. *Ejusdem generis* provides “that when a general word or phrase follows a list of specifics, the general word or phrase will be interpreted to include only items of the same class as those listed.” *Ejusdem Generis*, BLACK’S LAW DICTIONARY (11th ed. 2019).

210. *Noscitur a sociis* instructs “that the meaning of an unclear word or phrase, [especially] one in a list, should be determined by the words immediately surrounding it.” *Noscitur A Sociis*, BLACK’S LAW DICTIONARY (11th ed. 2019).

211. Krishnakumar, *supra* note 82, at 1305.

212. See Kevin Tobia, Brian G. Slocum & Victoria Nourse, *Statutory Interpretation from the Outside*, 122 COLUM. L. REV. 213, 258–60, 270–71, 271 tbl.4 (2022) (providing statistical evidence that lay people intuitively invoke the *noscitur a sociis* and *ejusdem generis* canons).

213. See Abbe R. Gluck & Lisa Schultz Bressman, *Statutory Interpretation from the Inside—an Empirical Study of Congressional Drafting, Delegation, and the Canons: Part I*, 65 STAN. L. REV. 901, 933 (2013) (“With respect to the general concept underlying both the *noscitur* and *ejusdem* rules, 71% of [congressional staffers surveyed] (ninety-seven) said that terms in a statutory list always or often relate to one another, and only two respondents said they rarely or never did.”).

214. See Krishnakumar, *supra* note 194, at 574 (describing how the Roberts Court has combined mischief with “textualist interpretive tools” such as *noscitur*).

215. *E.g.*, *Babb v. Wilkie*, 589 U.S. 399, 404 (2020).

216. *See, e.g.*, Bray, *supra* note 81, at 994; Jarrod Shobe, *Enacted Legislative Findings and Purposes*, 86 U. CHI. L. REV. 669, 680 (2019) (“[F]indings often recite facts that Congress found as part of developing the legislation, which are generally an explanation of the ‘mischief’ that prompted the statute.”).

bicameralism and presentment—textualists can feel comfortable using them.²¹⁷ Still, the two are not equivalent. Jarrod Shobe explains that enacted *findings* may describe anything from “the reason why Congress decided to act” to “the purpose of the bill and what Congress expected the legislation to do.”²¹⁸ While the reason why Congress acted can demonstrate the motivating mischief, inquiring into Congress’s purpose or expectations veers into purposive territory. To the extent that enacted findings describe empirical facts or the impetus for the law, they can be a first step in identifying the mischief behind a statute. Enacted *purposes*, on the other hand, may be more likely to describe the legislature’s intention rather than simply “the background problems that gave rise to the legislation.”²¹⁹ In Bray’s formulation of mischief—“[b]ecause of *a*, *b*, so that *c*”²²⁰—enacted findings often identify the mischief (“*a*”) that led to the enacted purposes (“*c*”). Although enacted purposes also enjoy democratic legitimacy because they are part of the text that Congress approved, they can be “more subjective than [enacted] findings.”²²¹ Due to this potential subjectivity, enacted findings can be preferable sources of mischief. They are also more common than enacted purposes.²²²

A main strength of mischief is the opening it provides an interpreter to look beyond dictionaries and legislative history to a variety of more objective, contemporaneous secondary sources. Mischief can be reflected in news coverage and scholarly publications, for example.²²³ The interpreter can use these sources to identify preexisting problems or debates at the time over how to address an issue.²²⁴ Unlike members of the legislature, the authors of these sources have less incentive to shade their account in favor of one reading of a specific law.²²⁵ Indeed, these accounts often precede and are independent from the introduction of a bill.

Reports by independent congressional agencies can provide excellent evidence of mischief. These reports are nonpartisan, rigorous, and comprehensive. Though often requested by a member of Congress, they comprise findings of fact and do not represent the views of any individual legislator, or even Congress as an

217. See *supra* notes 108–13.

218. Shobe, *supra* note 216, at 680.

219. *Id.* at 683.

220. Bray, *supra* note 81, at 997.

221. Shobe, *supra* note 216, at 683.

222. *Id.* Compare *id.* at 682 tbl.1 (enumerating statutes with enacted findings), with *id.* at 685 tbl.2 (enumerating statutes with enacted purposes).

223. See Bray, *supra* note 81, at 995 & nn.151 & 154 (listing cases that cite secondary sources); Manning, *supra* note 113, at 733 (describing how “a book or newspaper or law review article may reveal the reasons for passing legislation” because they are “produced by well-informed observers”).

224. See Bray, *supra* note 81, at 995.

225. Justice Scalia argued that legislative history was unreliable, in part because a single congressional staffer—“at best . . . on his or her own initiative, and at worst . . . at the suggestion of a lawyer-lobbyist”—could strategically insert language into a committee report with the intention that a court later cite the language as authoritative evidence of legislative intent. *Blanchard v. Bergeron*, 489 U.S. 87, 98–99 (1989) (Scalia, J., concurring in part and in judgment).

institution.²²⁶ The Congressional Research Service (CRS) is the most prolific author.²²⁷ For technology issues, the now-defunct Office of Technology Assessment (OTA) published dozens of detailed reports between 1974 and 1996.²²⁸

Though requiring more careful use, even some portions of legislative history can reveal mischief to the extent that they describe the problems of the time and do not give legislators room to characterize facts as “friends.”²²⁹ For example, committee reports are often divided into sections, with earlier sections containing findings or a recitation of the current legal landscape. These can both be legitimate bases for identifying mischief. However, a committee report’s subsequent discussions of “what this bill does” and what individual legislators think about the bill are closer to evidence of purpose and intention, and they should be considered more cautiously, if at all. In the context of the House Judiciary Committee’s CFAA report, the sections titled “Computer Crime—Present Law” and “Need for Legislation” provide helpful evidence of mischief, because they describe how existing computer crime law was insufficient.²³⁰ On the other hand, the following sections, titled “What H.R. 4718 Does” and “Section-by-Section Analysis,”²³¹ veer into the territory of legislative purpose and intent.

Mischief is not a perfect tool, and the process of identifying mischief is neither scientific nor entirely objective. What it does offer, however, is an improvement—both theoretically and practically—over considering legislative purpose or relying solely on ordinary meaning at the time of enactment. This improvement is greatest when applied to technology statutes.

B. DEFINING THE TECHNOLOGY CANON

Mischief and textualism are generally compatible, but particularly so in the technology context. This connection is captured in the “technology canon,” which provides the following guidance to interpreters:

226. See *Values*, LIBR. CONG. (Nov. 15, 2012), <https://www.loc.gov/crsinfo/about/values.html> [<https://perma.cc/7TFK-AQKQ>].

227. While CRS has been around since 1914, many of its reports only became public starting in 2018. See *History and Mission*, LIBR. CONG. (Sept. 16, 2021), <https://loc.gov/crsinfo/about/history.html> [<https://perma.cc/F4BF-VJ5K>]; Joe Mullin, *Congress Will Finally Make Its Research Reports Public*, ELEC. FRONTIER FOUND. (Apr. 2, 2018), <https://www.eff.org/deeplinks/2018/04/you-always-wanted-read-crs-reports-now-you-can> [<https://perma.cc/W8UX-SBZJ>].

228. Several organizations provide a collection of OTA’s reports, including the Federation of American Scientists. *OTA Publications*, OFF. TECH. ASSESSMENT ARCHIVE, <https://ota.fas.org/otareports/> [<https://perma.cc/DFD6-5NPH>] (last visited Feb. 25, 2024). In 2019, the nonpartisan Government Accountability Office launched a comparable Science, Technology Assessment, and Analytics (STAA) team, whose work may help identify mischief for technology legislation passed around 2019 or later. See *Our New Science, Technology Assessment, and Analytics Team*, U.S. GOV’T ACCOUNTABILITY OFF.: WATCHBLOG (Jan. 29, 2019), <https://www.gao.gov/blog/2019/01/29/our-new-science-technology-assessment-and-analytics-team> [<https://perma.cc/75MQ-AKYS>].

229. See Wald, *supra* note 117, at 214; Bray, *supra* note 81, at 995–96.

230. H.R. REP. NO. 99-612, at 4–6 (1986).

231. See *id.* at 6–7, 9–13.

Where a technology fairly falls within the scope of a statute but is materially different from the state of the art at the time the statute was enacted, the statute should be interpreted in light of the mischief that it was enacted to address.

The canon does not claim that “the state of technology is irrelevant to interpreting Congress’ intent as to statutory structure.”²³² Instead, it recognizes that the meaning of statutory terms should be considered relative to the capabilities of technology at the time of enactment. The legislature chose to regulate certain concepts and characteristics as presented through technological capabilities at the time. By identifying both the motivating concepts behind a statute and the state of the art at the time, an interpreter can identify functional similarities to modern technology without being puzzled by the different forms technology takes²³³ or having to strain analogies to the physical world.²³⁴ The technology canon is not a theory of everything. Rather, it serves as one tool that an interpreter can use when applying old statutes to technology—an inescapable task in the “age of statutes.”²³⁵

Leading textualists recognize (at least implicitly) that technology creates room to consider mischief. Scalia and Garner identify the “oldest and most commonsensical interpretive principle” to be that “[i]n their full context, words mean what they conveyed to reasonable people at the time they were written—with the understanding that general terms may embrace *later technological innovations*.”²³⁶ They give the example of a modern statute referring to “aircraft,” which, “if still in effect” one hundred years later, “would embrace whatever inventions the label *fairly embraces*, even inventions that could not have been dreamed of” at the time of enactment.²³⁷ These “later technological innovations,” by definition, do not exist when the law is enacted. Yet, there must be some way to determine what concepts and characteristics reasonable people understood to be captured in a statute’s terms. Mischief can do just that. But for mischief to have a role, there must be a textual anchor. The technology canon mirrors Scalia and Garner’s idea through one of its two requirements, applying only to new technology that “fairly falls within the scope” of the statute.²³⁸

Also consider the approach that Judge Easterbrook took in a 1987 case, *In re Erickson*, which concerned Wisconsin’s Depression-era statute that made certain property of a farmer unavailable to satisfy a civil judgment.²³⁹ The statute was amended in 1935 to allow a debtor farmer to retain “one hay loader” and “one mower.”²⁴⁰ While the statute remained unchanged thereafter, farm equipment

232. *E.g.*, *VMG Salsoul, LLC v. Ciccone*, 824 F.3d 871, 884 (9th Cir. 2016).

233. A focus on function over form aligns with Kerr’s suggestions. *See* Kerr, *supra* note 61, at 1300.

234. *See supra* notes 54–58 and accompanying text.

235. *See* CALABRESI, *supra* note 19, at 76; Bray, *supra* note 81, at 1007–12.

236. SCALIA & GARNER, *supra* note 165, at 15–16 (emphasis added).

237. *Id.* at 16 (emphasis added).

238. For additional discussion of this requirement, see *infra* Section III.B.2.

239. 815 F.2d 1090, 1091 (7th Cir. 1987).

240. *Id.* at 1091–92.

evolved over the next fifty years. Horse-drawn “mowers” became tractor-mounted with hydraulic lifts.²⁴¹ Because “technology ha[d] done more to change farm implements than the Wisconsin legislature ha[d] done to change [the statute],”²⁴² the questions for the court were whether a modern “baler” qualified as a “hay loader” and whether a contemporary “haybine” was a “mower.”²⁴³

The court held that the fifty-year-old terms embraced the new technology.²⁴⁴ Attempting to toe the line between an overly “liberal” and a “literal” interpretation of the text, Judge Easterbrook explained that the “function of [the statute] is to enable farmers to keep a minimal set of equipment to work the fields,”²⁴⁵ preventing them from completely losing their source of sustenance in bankruptcy. Though in not so many words, Judge Easterbrook appears open to considering the mischief: what role the machinery plays in a farm’s operation.²⁴⁶ Accordingly, Judge Easterbrook “inferred what ‘function’ (purpose) a reasonable person would ascribe to a statute that contained the particular pattern of exclusions.”²⁴⁷

True to textualism, Judge Easterbrook’s approach was not to “update” the statute.²⁴⁸ He recognized that the “statute needs legislative attention” and the court could not “provide more than emergency care.”²⁴⁹ Still, just like Scalia and Garner’s “aircraft” example, Judge Easterbrook recognized that statutes remain in force long after their enactment and must be applied to contemporary technologies.

This dilemma gives rise to the other defining element of the technology canon: that it applies where the technology at issue “is materially different from the state of the art at the time the statute was enacted.” When it is unclear what the old words mean in the new context, mischief can help fill the gap.

Despite implicit endorsements of mischief by Scalia, Garner, and Easterbrook, “the dominant positions [of textualists] on the mischief rule seem to be rejection and silence.”²⁵⁰ Pragmatically, this Note argues that textualists should feel

241. *Id.* at 1093.

242. *Id.* at 1092.

243. *See id.* (“We concentrate on the haybine, because the same principles influence the treatment of both haybine and baler.”).

244. *See id.* at 1094–95.

245. *Id.* at 1094.

246. By his own words, Judge Easterbrook does not explicitly embrace mischief. Bray notes that “Judge Easterbrook rejects the mischief rule and has apparently never used it in a judicial opinion.” Bray, *supra* note 81, at 988 n.115. Nevertheless, Bray highlights “another line of thought in Judge Easterbrook’s work that is more consistent with the mischief rule.” *Id.*; *see also id.* at 1010 n.244 (citing Judge Easterbrook’s scholarship). For example—and of particular relevance to technology cases—Judge Easterbrook has recognized that “texts do not settle disputes their authors and their contemporary readers could not imagine.” Frank H. Easterbrook, *Abstraction and Authority*, 59 U. CHI. L. REV. 349, 361 (1992). This Note’s discussion of *In re Erickson* is in the context of new technology, where there may at least be implicit room for mischief in Judge Easterbrook’s textualism.

247. Manning, *What Divides?*, *supra* note 83, at 85 n.54.

248. *Cf.* CALABRESI, *supra* note 19, at 112 (discussing the power of courts to “update” “anachronistic statutes”).

249. *In re Erickson*, 815 F.2d at 1095.

250. Bray, *supra* note 81, at 989.

comfortable invoking the mischief-based technology canon. This requires defining criteria for when to employ the canon.²⁵¹ To that end, as outlined above, the technology canon claims that mischief is particularly relevant where the technology at issue (1) is materially different from the state of the art at the time the statute was enacted and (2) fairly falls within the scope of the statute's terms.

1. First Requirement: New Technology

The first requirement for the technology canon is that the technology at issue "is materially different from the state of the art at the time the statute was enacted." When that is the case, as Scalia and Garner's aircraft example highlights,²⁵² the contemporaneous ordinary meaning of a statutory term is unclear because people struggle to describe what they cannot conceive. Accordingly, pursuing a term's ordinary meaning at the time of enactment (which is often done with dictionaries) is incomplete.

What constitutes a "material difference" in technology depends on context. The idea is that there is *something* about the new technology that people at the time of enactment would not have understood completely, even if the invention was not entirely unimaginable. This leaves room to apply mischief to technologies that have a certain function in context, like the hay loader and mower in *In re Erickson*. The canon could apply to a technology that existed at a general level, but which the public did not conceive as applying in the present circumstances. For example, when the CFAA was passed in 1986, computers existed but were used primarily by companies and the government.²⁵³ But because people in 1986 likely had no way to anticipate or describe the ubiquity of laptops or tablets, there may be room to consider the mischief of computer fraud as it existed in the mid-1980s.²⁵⁴ On the other hand, if a technology is not materially different from the past state of the art, there is less of a need for mischief to fill gaps in our understanding of contemporaneous meaning.

By looking to mischief, the technology canon recognizes that statutes remain in force even when they are inevitably outpaced by innovation. Along with technology, "language evolves," as Judge Easterbrook recognized in *In re Erickson*.²⁵⁵ Further, the "more compelling" reason not to read a statute's terms too literally or narrowly is that "[a] statutory word of description does not designate a particular item . . . but a *class* of things that share some important feature."²⁵⁶ The feature(s) in common among a set of terms can often be determined

251. Cf. *ABC, Inc. v. Aereo, Inc.*, 573 U.S. 431, 460–61 (2014) (Scalia, J., dissenting) (criticizing majority opinion, which compared new and old technologies, for its lack of "criteria for determining when its cable-TV-lookalike rule applies").

252. See *supra* notes 236–38 and accompanying text.

253. See *supra* note 9 and accompanying text.

254. For a discussion of the specific mischief behind the CFAA and whether the technology canon's requirements are met in *Van Buren*, see *infra* Section IV.A.

255. 815 F.2d 1090, 1092 (7th Cir. 1987).

256. *Id.* (emphasis added).

by looking to the function and audience of the word.²⁵⁷ When there is at least one material difference between a new technology and the state of the art at the time of enactment, the interpreter can look to mischief to identify the *class of things* that existed at the time, along with their *function* in the context of what the statute was enacted to address.

2. Second Requirement: Fairly Falling Within the Scope of the Statute

Mischief merely informs the text; it does not supersede it. Accordingly, for mischief to have a role, a fair reading of the text must be able to bear any interpretation of a technology. The idea of “fair” readings is familiar in statutory interpretation. The “purest form” of textualism, Scalia and Garner explain, “begins and ends with what the text says and fairly implies.”²⁵⁸ The idea of fair readings appears in other statutory interpretation tools and is a relatively low bar.²⁵⁹

This requirement serves mostly as a limit to ensure that an interpretation does not extend beyond what the text can bear. For example, if a baler and a haybine weren’t fairly embraced by Wisconsin’s statute, Judge Easterbrook’s analysis in *In re Erickson* would be cursory: The statute does not apply. This follows Manning’s idea that mischief will not prevail where “the text of a particular provision . . . seem[s] incongruous with the . . . ‘evil’ that inspired Congress to act.”²⁶⁰ Justice Robert Jackson, even when articulating the importance of statutory purpose, concedes that an interpretation can only go “so far as the meaning of the words fairly permits.”²⁶¹ In this way, the technology canon has a built-in “stopping point” to prevent interpreters from applying mischief to terms where there is no colorable argument that the *text itself* can support a mischief-informed reading.²⁶²

Recognizing that the text must bear any interpretation, the technology canon does not require a preliminary finding of ambiguity, because mischief—as evidence of what the legislature *actually* said—informs *whether* a statute is ambiguous. Additionally, to the extent ambiguity requires finding a “doubleness of interpretation,”²⁶³ textualists often find that terms are not

257. *See id.*

258. SCALIA & GARNER, *supra* note 165, at 16.

259. For example, the canon of constitutional avoidance asks broadly which constructions are “fairly possible.” *See, e.g.,* *United States v. Locke*, 471 U.S. 84, 92 (1985) (“[T]his Court will not pass on the constitutionality of an Act of Congress if a construction of the Act is fairly possible . . . by which the constitutional question can be avoided.”). And more recently, in *Moore v. Harper*, the Court cited an opinion by Chief Justice Rehnquist, joined by Justices Scalia and Thomas, which argued that review of a state court’s interpretation of its election law should be “deferential” but not permit anything “beyond what a fair reading required.” 600 U.S. 1, 28 (2023) (quoting *Bush v. Gore*, 531 U.S. 98, 114–15 (2000) (Rehnquist, C.J., concurring)).

260. Manning, *What Divides?*, *supra* note 83, at 71.

261. *SEC v. C. M. Joiner Leasing Corp.*, 320 U.S. 344, 350–51 (1943).

262. *See* Bray, *supra* note 81, at 1004 (“Over time, . . . the mischief rule will tend to suggest a narrower scope, a domain for the statute that does not broaden. The reason is that the evil is fixed at a moment in time, even while new circumstances constantly arise.”).

263. *Ambiguity*, BLACK’S LAW DICTIONARY (11th ed. 2019).

ambiguous.²⁶⁴ For textualists, mischief can be used like dictionaries to determine whether a statute is susceptible to alternative meanings. To the extent that a judge understands “ambiguity” not to require multiple meanings but merely a “doubtful meaning of words,”²⁶⁵ the judge must still determine how “a reasonable reader would understand the statute—a task that requires respecting the distinction between what Congress *actually* said and what Congress *ought* to have said in order best to advance any given substantive aim.”²⁶⁶ And as explained above, the job of mischief is to inform what the legislature actually said. Similarly, the technology canon does not require that a technology fit the “most natural reading” of the statute before invoking mischief,²⁶⁷ because mischief itself informs the natural reading of a term.

Paired with the canon’s first requirement of new technology, ensuring that the text can support any mischief-informed interpretation allows a textualist to apply the technology canon comfortably.

IV. APPLYING THE TECHNOLOGY CANON

The goal of this Note is to establish the theoretical foundation for a mischief-based technology canon, which can better equip courts to apply outdated statutes to new innovations. To illustrate what the canon might look like in practice, this Part considers three important tech statutes with the benefit of mischief: (1) the CFAA, (2) the Copyright Act, and (3) Section 230.

As this Part demonstrates, mischief does not always produce a clear answer. Sources of mischief may support opposing conclusions, and there may be room to argue whether the technology canon’s requirements are met. Because this Part is illustrative, the analysis below does not take positions on the proper outcome of the cases discussed. This is consistent with the modest aim of the technology canon: to be one more tool on the interpreter’s belt.

A. COMPUTER FRAUD AND ABUSE ACT

As an initial matter, whether to apply the technology canon is not always clear, as the case of Nathan Van Buren shows. Recall that Van Buren, a Georgia police officer, was convicted under the CFAA for “exceeding authorized access” to a law enforcement database when he accessed the information for a personal, non-law-enforcement purpose.²⁶⁸ Now consider whether the technology canon could apply.

264. Cf. Eidelson & Stephenson, *supra* note 202, at 530 (“[F]aced with what is usually thought to be a paradigm case of uncertainty or indeterminacy, Justice Scalia maintained that textualism yields a bevy of determinate results.”); *Kisor v. Wilkie*, 139 S. Ct. 2400, 2415 (2019) (“[B]efore concluding that a rule is genuinely ambiguous, a court must exhaust all the ‘traditional tools’ of construction.” (quoting *Chevron U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 843 n.9 (1984))).

265. *Ambiguity*, *supra* note 263 (quoting RUPERT CROSS, STATUTORY INTERPRETATION 76 (1976)).

266. Eidelson & Stephenson, *supra* note 202, at 532–33.

267. Cf. Ryan D. Doerfler, *High-Stakes Interpretation*, 116 MICH. L. REV. 523, 531 (2018) (quoting *King v. Burwell*, 576 U.S. 473, 497 (2015), in the context of the canon of constitutional avoidance).

268. See *supra* Section II.B.2.b.

The easy question is whether the law enforcement database “fairly falls” within the CFAA’s text: here, its definition of a “protected computer.”²⁶⁹ Because “protected computers” include any computer “used in or affecting interstate or foreign commerce or communication”²⁷⁰—which “essentially covers every computer connected to the Internet”²⁷¹—Van Buren’s laptop certainly falls within a fair reading of this definition.

The tougher question is whether Van Buren’s case involves a technology with a material difference from the state of the art at the time of § 1030’s enactment in 1986. The first laptop was released in mid-1982.²⁷² In the mid-1980s, computers were used primarily by businesses and the government.²⁷³ The FBI did not start building an expansive law enforcement database until the early 1990s, and even then it did not anticipate officers accessing the information from their cars until 1999.²⁷⁴ In that sense, Van Buren’s ability to access a comprehensive database of sensitive information—instantaneously, from a laptop mounted in his cruiser—is not something that was possible when the CFAA was enacted in 1986. Those differences seem material. On the other hand, one could argue that Congress and the public in 1986 were able to conceive of such mobile information repositories. At the time, employees could access sensitive business information through office computers (indeed, causing much of the mischief behind the CFAA²⁷⁵); they could probably imagine one day doing so from outside the office. As these arguments show, even the technology canon’s initial requirements can leave room for debate. But complexity and argument are nothing new for lawyers and judges, and they can reason their way through the canon’s two requirements like they do for other legal disputes, focusing on the facts and technology at issue in each case.

Assuming the canon’s requirements were met in Van Buren’s case, mischief may tilt in a different direction than the Court’s conclusion. Going into the 1970s, there were no computer crime statutes in the United States.²⁷⁶ As businesses and the government began to introduce computers into their offices, the tools of criminals were “no longer Smith & Wesson, but I.B.M. and Apple.”²⁷⁷ In response,

269. 18 U.S.C. § 1030(a)(2)(C) (prohibiting the obtainment of “information from any protected computer” by someone “intentionally access[ing] a computer without authorization or exceed[ing] authorized access”).

270. *Id.* § 1030(e)(2)(B).

271. *United States v. Calonge*, 74 F.4th 31, 35 (2d Cir. 2023).

272. *HC-20*, IPSJ COMPUT. MUSEUM, <https://museum.ipsj.or.jp/en/computer/personal/0081.html> [<https://perma.cc/9K8L-84EL>] (last visited Feb. 25, 2024).

273. *See supra* note 9 and accompanying text.

274. *Under Fire, FBI Vows to Meet Database Deadline*, GOV’T COMPUT. NEWS (Mar. 31, 1997) [https://web.archive.org/web/20080525102947/http://www.gcn.com/print/16_10/32700-1.html] (exploring delays behind upgrades to the National Crime Information Center that “would let officers in mobile units fingerprint suspects, take mug shots, print the information and transmit the data to police stations”).

275. *See infra* notes 286–92 and accompanying text.

276. Orin S. Kerr, *Cybercrime’s Scope: Interpreting “Access” and “Authorization” in Computer Misuse Statutes*, 78 N.Y.U. L. REV. 1596, 1605 (2003).

277. *See* Linda Greenhouse, *House Approves Measure to Make Computer Fraud a Federal Crime*, N.Y. TIMES (June 4, 1986) (quoting Rep. William J. Hughes, Chairman, Subcomm. on Crime, H.

states began to craft computer crime laws, often analogizing to common law crimes like trespass and burglary.²⁷⁸ However, common law crimes did not fully translate to the computer environment,²⁷⁹ and localized laws created a patchwork of digital regulation across the country. The result was that laws governing computers were in “a constant state of flux” entering the 1980s.²⁸⁰

To bridge this gap, many called for “special legislative attention” to address the unique problems posed by crimes relating to data stored on computers rather than simply theft of a computer itself.²⁸¹ For example, in 1983, the FBI identified a hacker who breached the email service Telemail.²⁸² The government struggled to bring the hacker to justice “[b]ecause there [was] no Federal law against entering a computer without authorization,” leaving authorities with a case under only generalized wire fraud statutes.²⁸³ Congress eventually recognized the need for a federal computer crime law.²⁸⁴

Looking beyond the legislative history to the mischief that motivated the CFAA, a more complete picture of the law begins to emerge: one that differs from the Court’s focus on “outside” threats in *Van Buren*.²⁸⁵ Contemporaneous sources reveal widespread concern with employees’ misuse of information for personal gain. In 1985, Richard Cashion, chairman of the computer crime subcommittee of the Data Processing Management Association (DPMA),²⁸⁶ explained the need for uniform laws to address unauthorized behavior on computers.²⁸⁷ “It goes without saying that abuse of resources, stealing computer time to run a business on the side and stealing information are unauthorized acts,” Cashion claimed.²⁸⁸ Reflecting public sentiment at the time, the DPMA surveyed

Comm. on the Judiciary), <https://www.nytimes.com/1986/06/04/us/house-approves-measure-to-make-computer-fraud-a-federal-crime.html>.

278. See Kerr, *supra* note 276, at 1605. For example, states like Arkansas, Georgia, New York, Virginia, and Washington enacted “Computer Trespass” statutes. *Id.* at 1617–18, 1618 n.89.

279. See, e.g., OFF. OF TECH. ASSESSMENT, *supra* note 58, at 85 (“Since the 1970s, there has been a growing consensus that existing laws covering the variety of crimes that can be committed using a computer (e.g., fraud, theft, embezzlement, invasion of privacy, trespass) either do not cover some computer abuses, or are not strong and clear enough to discourage computer crimes and allow expeditious prosecution.”).

280. Raysman, *supra* note 50.

281. OFF. OF TECH. ASSESSMENT, *supra* note 58, at 86.

282. Joseph B. Treaster, *F.B.I. Reveals How It Traces Computer Service Intruders*, N.Y. TIMES (Oct. 24, 1983), <https://www.nytimes.com/1983/10/24/us/fbi-reveals-how-it-traces-computer-service-intruders.html>.

283. *Id.*

284. See H.R. REP. NO. 99-612, at 5 (1986) (“[T]he criminal justice system is presently ill-equipped to deal with this changing technology. Prosecution of computer abuse cases, for example, is difficult since much of the property involved does not fit well into traditional categories of property subject to abuse or theft. A computer program, for example, may exist only in the form of magnetic impulses and where a program of substantial commercial value is accessed, the information stolen almost always remains in the possession of the original owner.”).

285. See *Van Buren v. United States*, 141 S. Ct. 1648, 1652, 1658 (2021).

286. The DPMA is now called the Association of Information Technology Professionals (AITP). *AITP History: AITP National*, AITP N. CENT. FLA., <https://aitp-ncfl.org/home/about-2/about/> [https://perma.cc/QH2D-HE7K] (last visited Feb. 25, 2024).

287. See *Survey on Computer Crime May Serve as Basis for Legislation*, J. ACCT., May 1985, at 38, 38.

288. *Id.*

businesses and found that “[u]nauthorized *employee* use”—not intrusion by individuals outside the organization—“[was] the leading category of [computer] crime committed.”²⁸⁹

In February 1986, two months before the House introduced the bill that would become the CFAA,²⁹⁰ OTA released a comprehensive report on the mischief caused by the lack of computer crime legislation. Summarizing the problems, the OTA report drew a line between “computer crimes committed by outsiders who penetrate a system through communication lines (commonly known as ‘hackers’) and crimes committed by insiders who are authorized to use the computer.”²⁹¹ While OTA noted that recent media attention on outside hackers was “some of the motivation” behind debates about new computer crime laws, it emphasized that “computer and security experts are nearly unanimous in their view that the significance of outside penetration into computer systems pales in comparison with abuses by insiders who are authorized to use the computer.”²⁹²

The CFAA’s text adopted the outsider–insider dichotomy, distinguishing between accessing a computer “without authorization” and doing so by “exceeding authorized access.”²⁹³ Outsiders are often charged under the “without authorization” provision, while “exceeding authorized access” applies to insiders.²⁹⁴ In practice, reflecting DPMA and OTA’s findings, the CFAA has been used more frequently to combat insider threats.²⁹⁵

289. *Id.* (emphasis added). Following its survey, DPMA set out to draft model legislation. Specific categories to be addressed in the bill appear aimed at conduct by employees that use their access for impermissible purposes, including “the unauthorized use of computing resources with the intent to defraud and for the purpose of experimentation.” *Id.*

290. H.R. 4718, 99th Cong. (1986).

291. OFF. OF TECH. ASSESSMENT, *supra* note 58, at 87 (footnote omitted).

292. *Id.* at 87–88. OTA did recognize how technology could evolve, recognizing that “[e]xternal threats may grow in severity . . . as computers are more and more frequently linked by telecommunications systems.” *Id.* at 88.

293. *See* 18 U.S.C. § 1030(a). The CFAA defines “exceeds authorized access” but not “without authorization.” *See id.* § 1030(e)(6) (defining “exceeds authorized access” as “access[ing] a computer with authorization and [using] such access to obtain or alter information in the computer that the accessor is not entitled so to obtain or alter”).

294. *See* COMPUT. CRIME & INTELL. PROP. SECTION, U.S. DOJ, PROSECUTING COMPUTER CRIMES 5–6 (2010) (first citing S. REP. NO. 99-432, at 10 (1986); and then citing S. REP. NO. 104-357, at 11 (1996)), <https://www.justice.gov/criminal/file/442156/download> [<https://perma.cc/C887-PQ67>]; *see also id.* at 5–12 (collecting cases discussing CFAA’s authorization provisions).

295. In 2016, Jonathan Mayer published an empirical study of civil and criminal litigation under the CFAA through 2012. *See* Jonathan Mayer, *Cybercrime Litigation*, 164 U. PA. L. REV. 1453, 1471 & n.81 (2016). He explains that “[c]ivil defendants appear nothing like the outsider rogues that initially captivated Congress and state legislatures.” *Id.* at 1480–81, 1480 tbl.1 (demonstrating that the “overwhelming majority of private cybercrime claims arise in business disputes . . . , most follow[ing] from previous employment,” rather than the mere twelve percent of civil cases filed against “strangers”). The majority of private claims related to “information misappropriation” or “modification or deletion” of information—conduct that “look[s] nothing like ‘hacking,’ even construed broadly.” *Id.* at 1481–82, 1482 tbl.3; *see also id.* at 1482 (explaining that “[o]nly a minority of claims could be reasonably characterized as involving the circumvention of a technical protection measure”). Similarly in the criminal context, most criminal charges “arise from a preexisting relationship” between the victim and defendant, with only about one-third of CFAA prosecutions fitting the “hacker archetype.” *Id.* at 1483–84, 1483 tbl.4.

Under this historical understanding of computer crime in the mid-1980s, Van Buren posed an insider threat when he accessed an official database for a non-official purpose and for personal gain.²⁹⁶ His actions fall into the category of “abuses by insiders who are authorized to use the computer,” which OTA explained were far more prevalent than outsider threats.²⁹⁷ Or in the DPMA’s terms, trading a database search for cash is just like “stealing information” and “computer time to run a business on the side.”²⁹⁸ During oral argument, Justice Alito, who ultimately joined Justice Thomas’s dissent, picked up on this concern, asking Van Buren’s counsel to explain why an employee who “uses [customer] information to sell for a personal profit” was not “of concern when Congress enacted this statute.”²⁹⁹ Van Buren’s counsel claimed it was not, insisting that “[w]hat Congress was concerned about was computer hacking.”³⁰⁰

Without considering the evidence that inside profiteers posed a greater threat than outside hackers in 1986, the Court held that “exceed[ing] authorized access” under the CFAA does not cover insiders that misappropriate their access for personal gain.³⁰¹ Addressing mischief in passing, the Court referenced only outside threats—specifically, a “series of highly publicized hackings”—as motivation for the CFAA.³⁰² But the OTA report makes clear that high-profile intrusions by outsiders were only “some of the motivation” behind the CFAA, while threats by misappropriating insiders were far greater in reality.³⁰³ Although the Court claimed to focus on the meaning of whether a user is “entitled *so* to obtain” information, its view of the CFAA notably aligns with Van Buren’s characterization of the law as an outsider-focused “anti-hacking statute.”³⁰⁴

If mischief were an accepted textualist tool, the Justices may have understood the CFAA’s outsider–insider dichotomy differently. Because the Court does not currently embrace mischief, neither party relied on it. The closest the parties got to mischief was in the government’s merits brief, which argued that the history of the CFAA “makes clear that Congress has consistently understood Section 1030 not solely as an anti-hacking statute, but as a statute that protects computer information as property.”³⁰⁵ The government stayed within the legislative history and cited House and Senate reports to demonstrate that Congress intended to supplant

296. See *Van Buren v. United States*, 141 S. Ct. 1648, 1653 (2021).

297. OFF. OF TECH. ASSESSMENT, *supra* note 58, at 88.

298. *Survey on Computer Crime May Serve as Basis for Legislation*, *supra* note 287, at 38.

299. Transcript of Oral Argument at 14, *Van Buren*, 141 S. Ct. 1648 (No. 19-783).

300. *Id.*

301. See *Van Buren*, 141 S. Ct. at 1652 (“This [authorization] provision covers those who obtain information from particular areas in the computer—such as files, folders, or databases—to which their computer access does not extend. It does not cover those who, like Van Buren, have improper motives for obtaining information that is otherwise available to them.”).

302. See *id.*

303. See OFF. OF TECH. ASSESSMENT, *supra* note 58, at 87.

304. *Van Buren*, 141 S. Ct. at 1654; Transcript of Oral Argument, *supra* note 299, at 3; see, e.g., Nicholas A. Wolfe, *Hacking the Anti-Hacking Statute: Using the Computer Fraud and Abuse Act to Secure Public Data Exclusivity*, 13 NW. J. TECH. & INTELL. PROP. 301, 314 (2015).

305. Brief for the United States at 30, *Van Buren*, 141 S. Ct. 1648 (No. 19-783).

common law property crimes, thus sweeping in Van Buren's conduct.³⁰⁶ Although the dissent seemed persuaded by this common-law-analogue argument, neither the majority nor dissent was swayed by references to the legislative history.³⁰⁷

Looking to the mischief could suggest that whether an individual is "entitled so to obtain" information depends on their purpose for accessing the information, because the prevailing mischief at the time was insiders who used work information for personal gain. Cashion's statements and the OTA report are secondary sources that describe Congress's motivation to act. Because neither Cashion nor OTA drafted or voted on the CFAA, a textualist can be confident that their statements have not been skewed to align with the subsequent legislative history.³⁰⁸ Even limited portions of legislative history can be instructive, such as when the House Judiciary Committee cited the OTA report, incorporating it by reference into a Committee report.³⁰⁹ But again, the Committee's citation merely confirms the relevance of the OTA report as evidence of mischief; the mischief itself existed outside of Congress.

Though mischief weighs against the Court's conclusion, applying the technology canon may not have changed the outcome. Other factors may support the Court's holding, including pragmatic concerns with a reading of the CFAA that defines a user's scope of authorization through private terms of service or user agreements.³¹⁰ However, considering mischief would have allowed the Court to engage fully with technological and historical questions, bolstering its textual analysis.

B. COPYRIGHT ACT

Mischief may also weigh in favor of a different reading of the Copyright Act's first sale protections. First, it is worth noting that Congress occasionally modernizes tech laws, though it seems more likely to do so where statutes, such as the Copyright Act, draw the attention of diverse parties or influential groups.³¹¹

306. See *id.* at 30–34.

307. See *Van Buren*, 141 S. Ct. at 1664–66 (Thomas, J., dissenting).

308. See *supra* note 225 (discussing textualist concern that legislative history may be manipulated).

309. See H.R. REP. NO. 99-612, at 6 (1986).

310. Van Buren and many *amici* in support of his position stressed the "truly astonishing" scope of criminal liability that could arise under the CFAA if "terms of use" policies determined whether a user "exceeded authorized access." Brief of Professor Orin S. Kerr as Amicus Curiae in Support of Petitioner at 10–12, *Van Buren*, 141 S. Ct. 1648 (No. 19-783); see, e.g., Brief for Petitioner at 26, *Van Buren*, 141 S. Ct. 1648 (No. 19-783). In his *amicus* brief, Orin Kerr even admitted to what would be a criminal violation under this reading: changing the hometown on his Facebook profile. Brief of Professor Orin S. Kerr, *supra*, at 10–11. He noted that accessing a website in violation of its terms of use would be a federal crime, even for outrageous terms such as the ones he had set for his own blog in 2008: that the visitor's middle name is not Ralph, that they are "super nice," and that they "have never visited Alaska." *Id.* at 11.

311. See *supra* note 67. For example, in 1993, the Ninth Circuit held that a computer repair person infringed copyrighted software by "fixing" a copy of the software into another computer's memory for the purpose of diagnosing and repairing a personal computer. *MAI Sys. Corp. v. Peak Comput., Inc.*, 991 F.2d 511, 517, 519 (9th Cir. 1993). This opened any computer owner and repair person up to

However, as this Note has described, Congress more often declines, or cannot act, to update tech-related statutes. And while some parts of the Copyright Act draw quick updates, many do not. For those parts that lag behind innovation—including the first sale doctrine—the technology canon can help.

Consider *ReDigi* one last time, now with the benefit of mischief. The technology canon's new-technology requirement is met, because the program that ReDigi employed did not exist during a major copyright overhaul at the turn of the twenty-first century,³¹² let alone when first sale protections were codified in 1909.³¹³ Regarding the canon's second requirement, a fair reading of § 109(a), which gives first sale protections to the owner of a “particular” phonorecord copy, covers the owner of a digital file who loses access to the file the moment another user gains access. Or as ReDigi put it, because a “particular Eligible File purchased by a ReDigi user is migrated to the Cloud Locker,” “ReDigi's users are disposing of the particular phonorecord that they legally purchased from iTunes.”³¹⁴ Even if this argument is not the most convincing, whether a technology “fairly falls” within the scope of the text is a low bar, and ReDigi presents at least a colorable argument that the text can bear. With these requirements met, one can comfortably read § 109(a) in light of the mischief.

Without the benefit of mischief, the court rejected ReDigi's argument that “technological change has rendered [the Copyright Act's] literal terms ambiguous” and therefore the Act should be interpreted to advance its core purpose of promoting the availability of expressive works.³¹⁵ The court reasoned that the first sale statute was not ambiguous in referring to a “particular” phonorecord, offering only a general discussion of what it means for the owner of a “*particular*” copy to sell “*that*” copy.³¹⁶ The court concluded that ReDigi's proposal amounted to an amendment of § 109(a) that Congress must handle and called on Congress rather than the courts to “deem [§ 109(a)] outmoded,” observing that “the first sale doctrine was enacted in a world where the ease and speed of data transfer could not have been imagined.”³¹⁷

liability for fixing even the smallest computer issue. Faced with the scope of the problem, five years later, Congress amended the Copyright Act by adding § 117(c), which exempts copies made for computer maintenance or repair, in the 1998 Digital Millennium Copyright Act (DMCA). Digital Millennium Copyright Act, Pub. L. No. 105-304, sec. 302, § 117(c), 112 Stat. 2860, 2887 (1998).

312. ReDigi's platform worked similarly to “forward-and-delete” technology, and “[a]lthough ReDigi is not a ‘forward and delete[]’ technology, the end result is the same.” Memorandum of Law in Opposition to Capitol Record LLC's Motion for Partial Summary Judgment at 17, *Capitol Recs., LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013) (No. 12-cv-0095), 2016 WL 7838778. “Forward-and-delete” technology was not viable in 2001. See U.S. COPYRIGHT OFF., DMCA SECTION 104 REPORT 84 (2001), <https://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf> [<https://perma.cc/5T3N-ZCGJ>].

313. See *infra* notes 323–25 and accompanying text.

314. Memorandum of Law in Opposition to Capitol Record LLC's Motion for Partial Summary Judgment, *supra* note 312, at 16.

315. See *ReDigi*, 934 F. Supp. 2d at 655.

316. See *id.*

317. *Id.* at 655–56. A year after *ReDigi*, Justice Scalia, dissenting in *Aereo*, made a similar claim that only Congress could update the Copyright Act. *ABC, Inc. v. Aereo, Inc.*, 573 U.S. 431, 463 (2014)

Although the court stopped when it concluded that the statute was not ambiguous, the technology canon does not require ambiguity, and applying it would have allowed the court to consider the important context of the first sale doctrine. The Copyright Act has a rich history, and as a result, mischief can be gleaned from more sources for the Act than for some other tech statutes. Uniquely, the Act comes directly from the text of the Constitution and thus imports the constitutional policy priority of “promot[ing] the Progress of Science.”³¹⁸ Accordingly, Congress has crafted copyright legislation to promote creativity, innovation, and the spread of ideas.³¹⁹ Provisions such as the first sale doctrine help to expand the public’s access to creative expressions.³²⁰ Because copyright law incorporates a rich background of general legal and policy principles, mischief may be easier to identify because it exists in all those places, independently of legislators.³²¹

Beyond constitutional text, the mischief behind the first sale defense is tied to the common law.³²² In 1908, the Court imported the first sale doctrine from English common law in *Bobbs-Merrill Co. v. Straus*.³²³ The Court “read [the Copyright Act] in the light of its main purpose to secure the right of multiplying copies of the work,” explaining that once a copyright holder “exercised the right to vend” a copy of their protected work, the text and purpose behind the Copyright Act did not provide a right to control all subsequent sales of a particular copy.³²⁴ Congress quickly codified *Bobbs-Merrill* in the 1909 Copyright Act

(Scalia, J., dissenting) (“[T]he proper course is not to bend and twist the Act’s terms in an effort to produce a just outcome, but to apply the law as it stands and leave to Congress the task of deciding whether the Copyright Act needs an upgrade.”).

318. U.S. CONST. art. I, § 8, cl. 8.

319. See, e.g., Orrin G. Hatch & Thomas R. Lee, “To Promote the Progress of Science”: The Copyright Clause and Congress’s Power to Extend Copyrights, 16 HARV. J.L. & TECH. 1, 3 (2002) (“[V]iew[ing] ‘progress’ as encompassing not only an increase in quantity or quality of works, but also an improvement in the dissemination and preservation of works already in existence . . . finds support in founding-era usage of the constitutional language, in the structure of the Constitution, and in the historical exercise of the copyright power.”); JULIE E. COHEN, LYDIA PALLAS LOREN, RUTH L. OKEDIJI & MAUREEN A. O’ROURKE, COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 27 (5th ed. 2020) (“By the end of the nineteenth century, copyright protection was firmly established in U.S. law as a means of encouraging progress in knowledge and learning. The protection afforded by copyright law was subject to important limits, and those limits were also seen as necessary for encouraging the creation of new works.”).

320. See, e.g., B. Makoa Kawabata, Note, *Unresolved Textual Tension: Capitol Records v. ReDigi and a Digital First Sale Doctrine*, 21 UCLA ENT. L. REV. 33, 39 (2014) (“The goal of promoting progress is served by granting the public access to creative works, and the first sale doctrine serves this goal by doing just that – creating secondary markets that provide consumers access to creative works at affordable price points and freeing up wealth in those likely to re-invest it in new creative works.” (footnote omitted)).

321. A rich background of common law principles can help to reveal the mischief behind other tech statutes, such as Section 230. See *infra* Section IV.C.

322. Common law and background legal principles can be legitimate sources of mischief because they exist outside of the legislature and describe the state of the law prior to enactment of a statute. Common law might even be the original form of mischief. See Bray, *supra* note 81, at 980 (quoting 1 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND *87; Heydon’s Case (1584) 76 Eng. Rep. 637; 3 Co. Rep. 7a).

323. 210 U.S. 339 (1908); accord Kawabata, *supra* note 320, at 40.

324. *Bobbs-Merrill*, 210 U.S. at 350–51.

and retained its principles through subsequent amendments to the Act (which have nonetheless struggled to keep pace with technological advances).³²⁵ In doing so, Congress adopted the Court’s reasoning in *Bobbs-Merrill*, including its focus on whether a copyright owner had “exercised the right to vend” a copy of their protected work.³²⁶ Accordingly, the mischief behind the first sale doctrine appears to be that copyright owners should retain control over distribution of their copies, up until they sell a copy for the first time and lose their right to control it.

Before ReDigi launched, the Copyright Office expressed concern that the technology ReDigi ultimately deployed was inconsistent with first sale principles. Regarding “resold” digital copies, the Office noted that copyright owners would have trouble verifying that the copies were completely transferred “unless a ‘forward-and-delete’ technology is employed.”³²⁷ When the Office issued its DMCA report in 2001, “forward-and-delete” was not a “viable” technology.³²⁸ Setting aside technological feasibility, the Office’s criticisms of forward-and-delete technology at the time were mostly pragmatic—that the measures “can be hacked,” “are expensive,” and “often encounter resist[ance] in the marketplace.”³²⁹ But eventually, ReDigi successfully implemented a program that was functionally similar to forward-and-delete.³³⁰ With the practical issues of forward-and-delete resolved, the reluctance of the DMCA report to put digital and physical copies on the same footing no longer stood.

Nevertheless, Capitol Records cited the DMCA report as evidence that first sale protections did not extend to digital copies.³³¹ In response, ReDigi revisited the first sale doctrine’s roots in *Bobbs-Merrill*, asserting that Capitol exhausts “its right to control distribution” when a user first purchases a digital copy from Capitol.³³² ReDigi’s argument appears to align better with the mischief behind

325. See Kawabata, *supra* note 320, at 40–41 (“[The first sale] doctrine developed when the word ‘file’ was still predominantly a verb, and use of the phrase ‘digital distribution’ would get a person burned at the stake. Although the copyright content industry has moved to address consumers’ use of digital media and demand for digital distribution, the law has not kept pace.”).

326. See *Bobbs-Merrill*, 210 U.S. at 350–51; see also *id.* at 351 (“To add to the right of exclusive sale the authority to control all future retail sales, by a notice that such sales must be made at a fixed sum, would give a right not included in the terms of the statute, and, in our view, extend its operation, by construction, beyond its meaning, when interpreted with a view to ascertaining the legislative intent in its enactment.”).

327. U.S. COPYRIGHT OFF., *supra* note 312, at 83–84.

328. *Id.* at 84.

329. *Id.*

330. See *supra* note 312; Kawabata, *supra* note 320, at 45 (“Forward-and-delete technology is central to ReDigi’s business model, but the court was not persuaded that such technology meets the demands of the Copyright Act’s text . . .”).

331. See Memorandum of Law in Support of Plaintiff’s Motion for Partial Summary Judgment at 22, Capitol Recs., LLC v. ReDigi Inc., 934 F. Supp. 2d 640 (S.D.N.Y. 2013) (No. 12-cv-00095), 2012 WL 3966209 (“[T]he Copyright Office explored this very question of whether the first sale doctrine applied in the context of digital transmissions and unequivocally concluded that the defense was unavailable under the statute . . . [because] the very nature of digital transactions requires that a reproduction be made and thus precludes application of the first sale doctrine . . .”).

332. See Memorandum of Law in Support of ReDigi Inc.’s Motion for Summary Judgment at 24, *ReDigi*, 934 F. Supp. 2d 640 (No. 12-cv-00095).

§ 109(a), which *Bobbs-Merrill* suggests is to preserve the distribution right without creating a new “authority to control all future retail sales.”³³³ With this control-based mischief in mind, a different picture of ReDigi’s business forms: one in which a digital copyright owner has a “right to vend” but loses exclusive control of a copy once they exercise that right (that is, when an individual initially purchases a digital copy, regardless of whether the individual resells it later).

In addition to the practical concerns discussed above, the Copyright Office’s DMCA report focused on the market effects of digital resale. It discussed substitution effects as a key distinction between physical copies protected by the first sale doctrine and unprotected digital copies.³³⁴ Unlike digital copies, physical copies “degrade with time and use, making used copies less desirable than new ones.”³³⁵ However, the nature of physical copies—where physical degradation of used copies did not usurp the market for new copies—can be viewed as incident to the time in which first sale protections were established. Around the time of *Bobbs-Merrill* in the early 1900s, and even during the major Copyright Act amendments of 1976, digital files were not prevalent like they were in 2013 when *ReDigi* was decided. Additionally, it is unclear whether market substitution was a motivating mischief behind the first sale defense, let alone the primary mischief, as the DMCA report suggests. *Bobbs-Merrill* instead focused on a copyright owner’s “right to vend,” with distribution rights ending once the owner exercised this right and lost the ability to control the copy in the stream of commerce.³³⁶

Ultimately, the *ReDigi* court’s decision turned on the incidental copying of files to ReDigi’s servers being unlawful “reproductions,” meaning the copies were not “lawfully made” such that they could benefit from first sale protection. This reading reflects a more “formalistic textualism” focused on semantic context³³⁷ and prioritizes the *form* of ReDigi’s technology—including its intricate technological details—over its *function*.³³⁸ Without considering the functional similarities between a given technology and others (especially older ones), rulings like *ReDigi* will limit the ability of courts to provide more predictable, generalizable results when analyzing complex innovations.³³⁹ Fully considering the mischief behind first sale protections and their function at common law, while falling short of a “technology-blind” approach,³⁴⁰ could help to bring the text of the Copyright Act in line with the broader constitutional mandate

333. *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 351 (1908).

334. See U.S. COPYRIGHT OFF., *supra* note 312, at 84.

335. *Id.* at 82.

336. See *Bobbs-Merrill*, 210 U.S. at 350–51.

337. See *Grove*, *supra* note 105, at 281–86, 303–07; *supra* notes 121–22 and accompanying text.

338. Cf. COHEN ET AL., *supra* note 319, at 360–61 (asking whether the Second Circuit, which affirmed the *ReDigi* district court, should have “look[ed] beyond the technical details of how the transfer of the files occurred (i.e., at least two copies were made) and instead focused on the end result (i.e., only one copy remained at the end of the process)”).

339. See *supra* Section I.B; cf. Kerr, *supra* note 61, at 1300 (discussing the value of legal doctrines applied to “function rather than form” in a cyberspace context).

340. Liebesman, *supra* note 56, at 1383.

of “promot[ing] the Progress of Science.”³⁴¹ With the benefit of mischief, perhaps a court would entertain the idea of a future iteration of “ReDigi 3.0.”³⁴²

C. SECTION 230

Perhaps no law has been outpaced more by the technology it governs than Section 230. The statute provides immunity from suit to online platforms that host content generated by “another information content provider” by not treating the platform as a “publisher or speaker” of the information.³⁴³ This protection has allowed the Internet to flourish, with Section 230 arguably comprising the “twenty-six words that created the Internet.”³⁴⁴ When the Court took up *Gonzalez v. Google LLC* during its October 2022 Term, it faced the challenge of applying Section 230 to the sophisticated content recommendation algorithm of YouTube (owned by Google).³⁴⁵ The importance of Section 230 to the “online marketplace of ideas” meant the Court’s ruling had the potential to “shift the foundations of internet law.”³⁴⁶ The case drew significant public attention, including almost eighty amicus briefs.³⁴⁷ But after much anticipation, the Court resolved the case on other grounds and declined to reach the Section 230 issue.³⁴⁸ The scope of the statute remains important and will continue to be litigated. Assuming Congress does not clarify the statute in the near future, considering the mischief may help to inform the next bout between the Court and Section 230.

Gonzalez satisfies the requirements of the technology canon. First, YouTube’s algorithm is materially different from the Internet of 1996 in several ways. The mid-90s Internet was mostly bulletin boards with plain text messages and some audio and video;³⁴⁹ today, YouTube offers billions of video and audio recordings, plus constant livestreams.³⁵⁰ Though the Internet of the 1990s permitted keyword

341. See *supra* notes 318–19 and accompanying text (discussing constitutional priorities of copyright law).

342. Cf. Capitol Recs., LLC v. ReDigi, Inc., 934 F. Supp. 2d 640, 646 n.3 (S.D.N.Y. 2013) (describing “ReDigi 2.0” that was launched during Capitol’s lawsuit but too late to save the version at issue).

343. 47 U.S.C. § 230(c)(1) (“No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.”).

344. See generally KOSSEFF, *supra* note 38.

345. 598 U.S. 617, 620–21 (2023) (per curiam).

346. Robert Barnes, Gerrit De Vynck, Cristiano Lima-Strong, Will Oremus, Amy B Wang & Rachel Lerman, *Supreme Court Considers if Google Is Liable for Recommending ISIS Videos*, WASH. POST (Feb. 21, 2023, 3:06 PM), <https://www.washingtonpost.com/technology/2023/02/21/gonzalez-v-google-section-230-supreme-court/>.

347. See *No. 21-1333*, SUP. CT. U.S., <https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/21-1333.html> [<https://perma.cc/3MKU-TJTE>] (last visited Feb. 25, 2024).

348. See *Gonzalez*, 598 U.S. at 622.

349. The website Usenet, for example, was a popular “collection of more than 16,000 computer bulletin boards.” Peter H. Lewis, *An On-Line Service Halts Restriction on Sex Material*, N.Y. TIMES (Feb. 14, 1996), <https://www.nytimes.com/1996/02/14/us/an-on-line-service-halts-restriction-on-sex-material.html>.

350. See Timeworks, *How Many Videos Are On YouTube? (BILLIONS!)*, YOUTUBE (Mar. 15, 2022), <https://youtu.be/2sWFJQFpghw>; *Live*, YOUTUBE, <https://www.youtube.com/live> (last visited Feb. 25, 2024).

searches that recommended results,³⁵¹ engineers cannot precisely say how modern recommendation algorithms work on popular platforms.³⁵² Second, the algorithm fairly falls within Section 230's protection for "information provided by another information content provider."³⁵³ Both sides presented colorable arguments that YouTube, which hosts third-party content, may or may not itself be an "information content provider" when its algorithm provides content that its users do not.³⁵⁴

With the requirements of the technology canon met, the disconnect between the Internet of 1996 and the online ecosystem today creates a prime opportunity to consider mischief. In 1995—the year before Congress enacted Section 230—"there were only 16 million people online in the entire world. Mark Zuckerberg had only just started middle school and Google wouldn't exist for another three years."³⁵⁵ So when *Gonzalez* presented YouTube's sophisticated algorithm, the Court faced the daunting task of interpreting a "pre-algorithm statute . . . in a post-algorithm world."³⁵⁶

Section 230 was enacted to address a legal mischief: the difficulty of translating traditional defamation doctrine, shaped by print media, to an online ecosystem. Congress adopted the law "against specific background legal principles" of defamation law.³⁵⁷ Therefore, focusing on the specific ways that traditional defamation law did not translate to the Internet, thus necessitating Section 230, can shed light on the meaning of the statute's terms while providing a "stopping point" for the scope of the statute.

The disconnect between traditional defamation law and the Internet came to the fore in the early 1990s in the form of lawsuits. Two of the most important cases involved the Internet service providers CompuServe and Prodigy. Despite similar facts, courts reached different conclusions as to the liability of the providers for the defamatory content posted by users to the providers' online bulletin

351. See Brief of Internet Law Scholars as *Amici Curiae* in Support of Respondent at 8, *Gonzalez*, 598 U.S. 617 (No. 21-1333).

352. Cf. Chris Meserole, *How Do Recommender Systems Work on Digital Platforms?*, BROOKINGS (Sept. 21, 2022), <https://www.brookings.edu/articles/how-do-recommender-systems-work-on-digital-platforms-social-media-recommendation-algorithms/> [<https://perma.cc/5RSE-7SUG>] (discussing billions of parameters that refine large social media platforms' algorithms, and explaining that "it is effectively impossible to understand and reason about how the model behaves merely by examining the trained model itself").

353. 47 U.S.C. § 230(c)(1).

354. For the parties' arguments, compare Brief for Petitioners at 33–42, *Gonzalez*, 598 U.S. 617 (No. 21-1333) (arguing that "website-created recommendations" are "content provided by the defendant itself" and therefore § 230(c)(1) does not apply), with Brief for Respondent at 29–30, 38–39, *Gonzalez*, 598 U.S. 617 (No. 21-1333) (arguing that "YouTube undisputedly played no role whatsoever in 'creat[ing]' or 'develop[ing]' alleged ISIS videos" and therefore § 230(c)(1) applies (alterations in original)).

355. Matt Reynolds, *The Strange Story of Section 230, the Obscure Law that Created Our Flawed, Broken Internet*, WIRED (Mar. 24, 2019, 6:00 AM), <https://www.wired.co.uk/article/section-230-communications-decency-act> [<https://perma.cc/SZQ8-R5L2>].

356. Transcript of Oral Argument, *supra* note 23, at 9.

357. *Malwarebytes, Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13, 14 (2020) (Thomas, J., respecting the denial of certiorari).

boards. The question before the courts was whether an online platform is liable as a “publisher” of defamatory content posted on the platform by a user. In *Cubby, Inc. v. CompuServe Inc.*, the Southern District of New York held that CompuServe was not a “publisher” of the information that users posted and therefore was not liable for users’ defamatory posts.³⁵⁸ But a few years later, in *Stratton Oakmont, Inc. v. Prodigy Services Co.*, a New York state court held that because Prodigy had the ability to remove information—and thus exercised “sufficient editorial control” of the bulletin board—it was liable as a “publisher” of posts.³⁵⁹

This mischief, grounded in common law defamation principles, is succinctly captured by Justice Thomas (in a lone statement respecting a denial of certiorari, which is also the Court’s most thorough treatment of Section 230 to date):

Traditionally, laws governing illegal content distinguished between publishers or speakers (like newspapers) and distributors (like newsstands and libraries). Publishers or speakers were subjected to a higher standard because they exercised editorial control. They could be strictly liable for transmitting illegal content. But distributors were different. They acted as a mere conduit without exercising editorial control, and they often transmitted far more content than they could be expected to review. Distributors were thus liable only when they knew (or constructively knew) that content was illegal.

The year before Congress enacted § 230, [the *Stratton Oakmont*] court blurred this distinction.³⁶⁰

In other words, mischief arose when *Stratton Oakmont* departed from traditional defamation principles.

An interpreter of Section 230 today can embrace this mischief. The difficulty of courts applying defamation law to the Internet existed outside of the legislature and was not the product of a single legislator’s policy goals. These cases were logically prior to Section 230 and simply show “what problem[] concerned Congress and what was the general thrust of its response.”³⁶¹ Though the mischief existed outside of Congress, its relevance is only solidified in the legislative history. The co-sponsor of Section 230, for example, said he was inspired by a newspaper article about the *Stratton Oakmont* opinion, which he found to be “perfectly backwards.”³⁶²

358. 776 F. Supp. 135, 138–41 (S.D.N.Y. 1991).

359. No. 31063/94, 1995 WL 323710, at *3–5 (N.Y. Sup. Ct. May 24, 1995).

360. *Malwarebytes*, 141 S. Ct. at 14 (citations omitted).

361. Strauss, *supra* note 185, at 243 n.3; *see supra* notes 185–88 and accompanying text.

362. Reynolds, *supra* note 355; *accord* 141 CONG. REC. H8469–70 (daily ed. Aug. 4, 1995) (statement of Rep. Christopher Cox); S. REP. NO. 104-230, at 194 (1996) (“One of the specific purposes of this section is to overrule *Stratton-Oakmont v. Prodigy* and any other similar decisions which have treated such providers and users as publishers or speakers of content that is not their own because they have restricted access to objectionable material.”).

What constitutes “information provided by another information content provider” can thus be understood as extending to the Internet the common law principles that *Stratton Oakmont* muddled. By looking for mischief rather than purpose, the interpreter in a Section 230 case is also free to reach their own understanding of *Stratton Oakmont* and related cases. This involves letting terms such as “publisher” take on meaning from traditional defamation law, while “information provided by another information content provider”³⁶³ can be analogized as closely as possible to defamation cases involving a third-party publisher. The interpreter can turn to a wealth of defamation caselaw, dating back centuries, and consult the wisdom of the thousands of jurists and scholars who have contributed to the doctrine. The search for meaning is not confined to the intentions of those who supported the bill, most of whom did not even have Internet access.³⁶⁴

Considering mischief can also allow an interpreter to focus on the “function rather than form”³⁶⁵ of online services that may claim Section 230 immunity. And though the Internet has “evolved from static, text-based documents to multimedia experiences to interactive cloud software platforms,”³⁶⁶ its functions remain mostly the same: users primarily provide content, which platforms host and make available to other users. Going back to the traditional defamation context: publishers and speakers provide content, which distributors make available to customers.³⁶⁷

So how can the mischief and purpose of Section 230 be formally distinguished? Once again, Bray’s framework for mischief—“Because of *a*, *b*, so that *c*”³⁶⁸—is insightful. Putting these principles together, Section 230 could be formalized as follows: Because traditional defamation principles do not translate directly to the online ecosystem (“*a*”), Congress enacted Section 230 to clarify that online platforms are not “publishers or speakers” at common law (unless they create or develop the content “in part”) (“*b*”), so that the Internet can experience “continued development”³⁶⁹ (“*c*”).

But even with a common-law-based mischief in mind, sources of mischief may suggest different results. In some ways, mischief supports YouTube’s position. While YouTube’s recommendation algorithm is an engineering feat, it still depends on content posted by users. Amplifying primarily user-generated content seems analogous enough to being a “distributor” at common law such that YouTube can claim immunity. Additionally, prior to Section 230, there were already “systems to help ‘filter, sort, and prioritize’ messages users had already

363. 47 U.S.C. § 230(c)(1).

364. See Cannon, *supra* note 39, at 71 n.103.

365. Kerr, *supra* note 61, at 1300.

366. Gabriel R. Schlabach, Note, *Privacy in the Cloud: The Mosaic Theory and the Stored Communications Act*, 67 STAN. L. REV. 677, 698 (2015).

367. See *Malwarebytes, Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13, 14 (2020) (Thomas, J., respecting the denial of certiorari).

368. Bray, *supra* note 81, at 997.

369. 47 U.S.C. § 230(b)(1) (describing Section 230’s policy aim of “promot[ing] the continued development of the Internet”).

received, and also to help ‘find useful messages they would not otherwise have received’— i.e., to recommend useful content to them.”³⁷⁰ And though modern recommendation algorithms “may be more sophisticated than early systems,” some argue they “nonetheless build on prior efforts, and their fundamental structure has remained unchanged since well before the enactment of Section 230.”³⁷¹

On the other hand, perhaps Bray’s concept of mischief as a “stopping point”³⁷² narrows the scope of immunity available to YouTube. The meaning of Section 230’s terms—and the mischief behind them—was fixed in 1996, so applying the mischief should generally weigh in favor of a narrower reading of the terms.³⁷³ Because Section 230 is a grant of immunity, using mischief as a “stopping point” could limit immunity to cases in which one of the platform’s *users* could themselves be held liable. If traditional defamation law involves “hold[ing] the company liable for the same harm and to the same degree as the *user* that originally posted the harmful information,” then perhaps “Section 230 only blocks claims that could be brought directly against” a user.³⁷⁴ One could argue that YouTube’s complex recommendations do not constitute information that a user can create. And because a *user* cannot be held liable for such recommendations, perhaps YouTube cannot claim immunity as a mere common law “distributor.” Beyond YouTube’s algorithm, as artificial intelligence (AI) continues to advance, similar limits may arise where AI “generates” its own content.³⁷⁵

A related possibility is that platforms lose immunity if they are sufficiently involved in developing “information” such that the information is no longer provided by “*another* information content provider.” This is like the newspaper that

370. Brief of Information Science Scholars as *Amici Curiae* in Support of Respondent at 6, *Gonzalez v. Google LLC*, 598 U.S. 617 (2023) (No. 21-1333) (quoting Thomas W. Malone, Kenneth R. Grant, Franklyn A. Turbak, Stephen A. Brobst & Michael D. Cohen, *Intelligent Information-Sharing Systems*, 30 COMM’NS ACM 390, 390 (1987)).

371. *Id.* at 8.

372. Bray summarizes the narrowing function of mischief:

Over time, . . . the mischief rule will tend to suggest a narrower scope, a domain for the statute that does not broaden. The reason is that the evil is fixed at a moment in time, even while new circumstances constantly arise. The statute, when its words are read by an interpreter attentive to the mischief, will thus tend to be enmeshed in the circumstances existing when it was enacted. As new problems emerge, as new mischiefs multiply, the relative fixity of “the mischief” will mean that in some cases where the bare text might be taken to reach a new problem, the application of the mischief rule will keep the statute from “growing” to meet the new challenge.

Bray, *supra* note 81, at 1004.

373. *See id.*

374. Brief of *Amicus Curiae* Electronic Privacy Information Center in Support of Neither Party at 5, *Gonzalez*, 598 U.S. 617 (No. 21-1333) (emphasis added). In other words, maybe “[a]ll that means is that the [platform] should not be put in the same shoes as [a user] when assigning liability for harmful information the [user] posted.” *Id.* at 7.

375. *See, e.g., Generative AI Overview*, GOOGLE AI, <https://ai.google/discover/generativeai> [<https://perma.cc/QFX5-FG2X>] (last visited Feb. 25, 2024) (“Generative AI builds on existing technologies, like large language models . . . [and] can not only create new text, but also images, videos, or audio.”).

editorializes the content of its contributors, thus becoming liable.³⁷⁶ Section 230 defines an “information content provider” to include “any person . . . that is responsible, *in whole or in part*, for the creation or development of information.”³⁷⁷ In other words, if an online platform develops user content, even merely “in part,” the platform itself could be an “information content provider” and be unable to invoke immunity with respect to content provided by “*another*.”³⁷⁸ In that case, perhaps “Section 230 does not bar claims based on the interactive computer service’s own harmful conduct just because that conduct was somehow tied to a user’s harmful information.”³⁷⁹ Justice Thomas makes a similar observation, arguing that online platforms may be liable for content they help develop through editing, adding commentary, or prioritizing for display.³⁸⁰

By using mischief as a stopping point, the text of Section 230 could simply insulate platforms that choose to *remove* user-generated content in good faith³⁸¹ or *not* remove such content.³⁸² Or maybe immunity is only available where someone other than the platform could themselves be liable.³⁸³ So when Section 230 inevitably winds up back before the Court, the key questions could simply be whether YouTube’s algorithm (or the technology of another platform) does more than remove or not remove content, or whether another user could also be liable.

CONCLUSION

Technology has evolved faster than statutes and will continue to do so. Courts struggle to apply outdated statutes to new technology. Yet, the laws remain in force and must be interpreted. Modern obstacles to legislation will only compound this problem in future cases. Traditional textualist and purposive commitments do not adequately account for this reality, which has led to unpredictable results. Unpredictability stifles innovation, which remains the stated goal of many technology laws.

376. See, e.g., *Malwarebytes, Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13, 14 (2020) (Thomas, J., respecting the denial of certiorari) (“Publishers or speakers [like newspapers] were subjected to a higher standard because they exercised editorial control.”).

377. 47 U.S.C. § 230(f)(3) (emphasis added).

378. See, e.g., Brief for the United States as Amicus Curiae in Support of Vacatur at 21–24, *Gonzalez*, 598 U.S. 617 (No. 21-1333); *Universal Comm’n Sys., Inc. v. Lycos, Inc.*, 478 F.3d 413, 419 (1st Cir. 2007).

379. Brief of *Amicus Curiae* Electronic Privacy Information Center in Support of Neither Party, *supra* note 374, at 7.

380. See *Malwarebytes*, 141 S. Ct. at 16 (“To say that editing a statement and adding commentary in this context does not ‘creat[e] or develo[p]’ the final product, even in part, is dubious.” (alterations in original)).

381. Section 230 also provides “Good Samaritan” protection when providers do act to voluntarily take down inappropriate material in “good faith.” See 47 U.S.C. § 230(c)(2)(A).

382. See *Malwarebytes*, 141 S. Ct. at 17 (“Taken together, both provisions in § 230(c) most naturally read to protect companies when they unknowingly *decline* to exercise editorial functions to edit or remove third-party content, § 230(c)(1), and when they *decide* to exercise those editorial functions in good faith, § 230(c)(2)(A).”).

383. See *supra* notes 372–75 and accompanying text.

Courts and litigants can address these problems with the technology canon. In cases where a statute is applied to technology that did not exist at the time of the statute's enactment, looking to the mischief that motivated the statute can clarify the text. While the technology canon is already familiar enough to purposivists, textualists should also feel comfortable invoking the canon because it does not threaten their core values in the technology context.

The technology canon is not a silver bullet, nor can it stand alone as an interpretive tool. The canon may not clearly apply, and when it does, there may be dueling sources of mischief. Sometimes, mischief may run counter to existing judicial decisions, as may be the case with the CFAA. Mischief may weigh in favor of innovation, as it seems to do with digital resales under the Copyright Act. Or it could limit the scope of protection for online companies and be in tension with a statute's stated purposes, which may be the case with Section 230. Regardless of what the mischief actually is, the technology canon presents a more theoretically and practically sound device for applying old statutes to new technology.