The Supreme Court begins the twenty-first century with increasing use of a cramped approach to Fourth Amendment interpretation. That approach, championed by Justice Scalia, gives determinative weight to outdated common law rules from the framing era in assessing the reasonableness of searches and seizures. In the annual James Madison Lecture, Judge Blane Michael urges a fundamentally different—yet still traditional—approach. He argues that Fourth Amendment interpretation should be guided by the basic lesson learned from the mischief that gave birth to the Amendment in 1791: Namely, there is a need for constitutional protection against intrusive searches of houses and private papers carried out under grants of open-ended discretion to searching officers. This need for Fourth Amendment protection remains compelling in today’s ever more interconnected world. Above all, the Court should not weaken the Fourth Amendment’s protection by exclusive use of antiquated common law rules from the framing era.

It is a special privilege for me, as a graduate of the New York University School of Law, to give this year’s James Madison Lecture. A chief purpose of this lecture series is “to enhance the appreciation of civil liberty.”1 Upon recalling this purpose, I thought immediately

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that the Fourth Amendment—the bulwark of our privacy protec-
tion—merits renewed attention and appreciation.

The Fourth Amendment consists of two connected clauses. The
first guarantees “[t]he right of the people to be secure in their persons,
houses, papers, and effects, against unreasonable searches and
seizures.” The second specifies that “no Warrants shall issue, but
upon probable cause, supported by Oath or affirmation, and particu-
larly describing the place to be searched, and the persons or things to
be seized.” These sound like powerful words, but their vitality is in
question today. The digital age is placing our privacy in jeopardy.
Technological advances in the way we communicate and store infor-
mation make us increasingly vulnerable to intrusive searches and
seizures. As Chief Judge Kozinski recently observed in an en banc
Ninth Circuit decision: “[P]eople now have personal data that are
stored [electronically] with that of innumerable strangers. [The gov-
ernment’s] [s]eizure of, for example, Google’s email servers to look
for a few incriminating messages could jeopardize the privacy of
millions.” So, my question is this: Can the Fourth Amendment—
designed in the musty age of paper—offer any meaningful privacy
protection today for personal electronic data?

Justice Brandeis, in his venerable dissent in Olmstead v. United
States, said that a constitutional provision such as the Fourth
Amendment must have the “capacity of adaptation to a changing
world.” Using borrowed language, Justice Brandeis emphasized that
for a constitutional “principle to be vital[,] [it] must be capable of
wider application than the mischief which gave it birth.”

The pre-revolutionary mischief that gave birth to the Fourth
Amendment can provide critical guidance in interpreting the
Amendment and ensuring its vitality in a digital world. The early mis-
chief—the British Crown’s unbridled power of search—is at the
center of the rich history that led to the adoption of the Fourth
Amendment. This formative history illustrates the broader purpose of
the Amendment: to circumscribe government discretion.

In recent years the Supreme Court has often used an interpretive
methodology, championed by Justice Scalia, that fails to take account
of the Fourth Amendment’s animating history. Under Justice Scalia’s
approach the specific common law rules of the founding era deter-

2 U.S. CONST. amend. IV.
3 Id.
4 United States v. Comprehensive Drug Testing, Inc., 579 F.3d 989, 1005 (9th Cir.
2009) (en banc).
5 277 U.S. 438, 472 (1928) (Brandeis, J., dissenting).
6 Id. at 473 (quoting Weems v. United States, 217 U.S. 349, 373 (1910)).
mine whether a search or seizure is unreasonable today. This approach as I will respectfully discuss, is both impractical and cramped, and should be abandoned. We should return to the use of formative history as one of the primary sources in interpreting the Fourth Amendment. This would mean a return to a more traditional analysis that highlights the Amendment’s enduring purpose. I will also discuss how history can guide us in applying the Amendment to novel questions arising in our ever more interconnected world.

I

I begin by reviewing some of the history behind the Fourth Amendment’s inclusion in the Bill of Rights. The Fourth Amendment owes its existence to furious opposition in the American colonies to British search and seizure practices, particularly in the area of customs enforcement. Under English law, customs officials had “almost unlimited authority to search for and seize goods [that were] imported” illegally.7 The Act of Frauds of 1662 empowered customs officers in England to enter “any house, shop, cellar, warehouse or room, or other place” and to “break open doors, chests, trunks and other package[s]” for the purpose of seizing any “prohibited and uncustomed” goods.8

The Act of Frauds of 1696 extended the broad enforcement powers in the 1662 Act to customs officers in the colonies, authorizing the officers to conduct warrantless searches at their discretion.9 The 1662 Act also authorized the use of writs of assistance in customs searches.10 These court-issued writs empowered customs officers to commandeer anyone—constables and ordinary citizens alike—to help in executing searches and seizures.11 A writ of assistance, though not technically a warrant, prominently repeated the language of both Acts of Frauds, which empowered a customs officer to search any place on

10 Act of Frauds of 1662, 12 Car. 2, c. 11 § V, reprinted in, PICKERING, supra note 8, at 80–81.
11 M.H. Smith, THE WRITS OF ASSISTANCE CASE 29 (1978); Stuntz, supra note 7, at 405.
nothing more than his own (subjective) suspicion.\textsuperscript{12} Writs of assistance were especially pernicious because they remained in effect for the life of the King or Queen.\textsuperscript{13}

In the early 1750s the growing threat of war with France\textsuperscript{14} “prompted stricter [customs] enforcement” in the colonies as the Crown sought to increase its revenues.\textsuperscript{15} To facilitate tougher enforcement, customs officers began obtaining writs of assistance from colonial courts.\textsuperscript{16} The use of these writs was controversial, particularly in Boston, where much of the economy depended on trade in smuggled goods.\textsuperscript{17} The controversy intensified when King George II died in late 1760, and colonial customs officers had to reapply for writs of assistance to be issued in the name of the new King, George III.\textsuperscript{18} In 1761 a group of Boston merchants and citizens represented by James Otis, a highly regarded Massachusetts lawyer, challenged writ applications filed by several customs collectors in the Massachusetts Superior Court.\textsuperscript{19} Otis’s advocacy in this case, later called \textit{The Writs of Assistance Case},\textsuperscript{20} galvanized support for what became the Fourth Amendment.

Otis argued passionately that the writ of assistance was illegal, calling it an “instrument[ ] of slavery on the one hand, and villainy on the other.”\textsuperscript{21} This writ, he declared, “place[d] the liberty of every man in the hands of every petty officer[;]”\textsuperscript{22} it was thus “the worst instrument of arbitrary power, the most destructive of English liberty . . . that ever was found in an English law-book.”\textsuperscript{23} Otis’s argument against the writ of assistance pressed two overarching themes that would become the bedrock of the movement against excessive search and seizure power: first, in his words, the “fundamental . . . Privilege of House”\textsuperscript{24}—the principle that a person’s home is especially private

\textsuperscript{12} See Stuntz, \textit{supra} note 7, at 405 (describing broad scope of authority under writs of assistance); see also Smith, \textit{supra} note 11, at 375, 559–61 (providing examples of Massachusetts writs of assistance from this period).
\textsuperscript{13} Stuntz, \textit{supra} note 7, at 405.
\textsuperscript{14} The Seven Years War began in 1756. \textit{The Columbia Encyclopedia} 2484 (5th ed. 1993).
\textsuperscript{15} Stuntz, \textit{supra} note 7, at 405.
\textsuperscript{16} Id.
\textsuperscript{17} See id. (noting that because actions to enforce “trade rules” were infrequent, “ram-pant and blatant [violations]” created economy “grounded on an illegal trade”).
\textsuperscript{18} See id. at 406; Smith, \textit{supra} note 11, at 130, 142–43.
\textsuperscript{19} See Smith, \textit{supra} note 11, at 131–32, 232, 316 (noting that Otis was first to challenge writ of assistance even though court had been issuing such writs for years).
\textsuperscript{20} See id. at 6.
\textsuperscript{21} Id. app. J at 552.
\textsuperscript{22} Id. app. J at 553.
\textsuperscript{23} Id. app. J at 552.
\textsuperscript{24} Id. app. 1 at 544.
and must be protected from arbitrary government intrusion; and second, the inevitability of abuse when government officials have the sort of unlimited discretion sanctioned by the writ of assistance.

Otis's vigorous argument did not persuade the five-member Superior Court, which voted unanimously to issue the challenged writs, but it nonetheless proved a powerful influence. Otis's presentation inspired future president John Adams, then a young lawyer of twenty-five, who attended the hearings and was moved to action. Years later, reflecting on the impact of the case, Adams wrote:

Otis was a flame of fire! . . . Every man of a crowded audience appeared to me to go away, as I did, ready to take up arms against writs of assistance. Then and there was the first scene of the first act of opposition to the arbitrary claims of Great Britain. Then and there the child Independence was born.

Further inspiration for the Fourth Amendment came later in the 1760s from a set of highly publicized English cases arising out of the King's use of general warrants against his political enemies. The general warrant, which authorized an officer to search unspecified places or to seize unspecified persons, was in common use in both England and the colonies. Typical examples permitted discretionary searches for stolen property or fugitives, but in England the Crown turned to the use of general warrants as a means of silencing its critics. Specifically, general warrants were used to gather evidence for seditious libel prosecutions against the King's detractors. This practice led to the other celebrated cases that helped spawn the Fourth Amendment.

The first cases, which I call The North Briton Cases, stemmed from the publication of The North Briton No. 45, an anonymous pam-
phlet satirizing the King and his policies. Lord Halifax, the Secretary of State, issued a general warrant authorizing government agents, called “messengers[,] to make strict and diligent search for the authors, printers and publishers” of The North Briton No. 45 and, when found, to seize them “together with their papers.” The messengers ransacked houses and printing shops in their searches, arrested forty-nine persons (including the pamphlet’s author, Parliament member John Wilkes), and seized incriminating papers—all under a single general warrant.

Wilkes and his associates fought back in the civil courts, filing trespass suits against Lord Halifax and the messengers who executed the warrant. Wilkes and the other plaintiffs argued that the general warrant—which was offered as a defense to the trespass claims—was invalid at common law because it failed to name suspects and because it gave “messengers [the discretionary power] to search wherever their [personal] suspicions may chance to fall.” The plaintiffs persuaded the courts to submit the trespass claims to juries, and one jury awarded damages to Wilkes of £4000 against Lord Halifax. This was a substantial sum; £4000 in 1763 is roughly equivalent to £500,000 today. Other targets of the searches received verdicts against the messengers in the range of £200 to £400.

More important than the damages awards, however, were the strong judicial pronouncements in The North Briton Cases against the validity of the general warrant, which echoed Otis’s denunciation of the writ of assistance. Chief Justice Charles Pratt (later Lord Camden) of the Court of Common Pleas declared: “To enter a man’s house by virtue of a nameless warrant, in order to procure evidence, is worse than the Spanish Inquisition; a law under which no Englishman would wish to live an hour; it was a most daring public attack made upon the liberty of the subject.” In a 1765 appeal in one North Briton case,

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31 Stuntz, supra note 7, at 398.
32 Cuddihy & Hardy, supra note 9, at 385.
34 Stuntz, supra note 7, at 399.
35 Today’s sum is calculated according to relative purchasing power. See Measuring Worth, Purchasing Power of British Pounds from 1264 to Present, http://www.measuringworth.com/ppoweruk/.
37 Huckle v. Money, (1763) 95 Eng. Rep. 768, 769 (K.B.); see also Davies, supra note 30, at 563 n.21 (providing summary of cases dealing with general warrants from this period).
Lord Mansfield emphasized that “[i]t is not fit, that the receiving or judging of the information should be left to the discretion of the officer. The magistrate ought to judge; and should give certain directions to the officer.”

In the remaining case the Crown targeted John Entick for his publication of *The Monitor*, a pamphlet alleged to contain seditious libel. Lord Halifax issued a warrant for Entick’s arrest, which gave messengers authority to make a general search of Entick’s house and to seize any and all papers at their discretion. Like Wilkes, Entick sued the messengers in trespass and won a jury verdict of £300. In upholding the verdict, Lord Camden held that the search was illegal because no law allowed “such a [general] search [as] a means of detecting offenders.” Otherwise, Camden warned, “the secret cabinets and bureaus of every subject in this kingdom [would] be thrown open to the search and inspection of a messenger, whenever the secretary of state shall think fit to charge, or even to suspect, a person . . . of a seditious libel.” In short, as Camden put it, “[p]apers are the owner’s goods and chattels: they are his dearest property; and are so far from enduring a seizure, that they will hardly bear an inspection.”

The value of the *North Briton* and Entick opinions in the colonies came from their articulation and support of the same privacy and liberty interests advanced by James Otis in *The Writs of Assistance Case*. The cases, however, did not end the use of general warrants or writs of assistance, either in England or in the colonies. Thus, a full-throated controversy about the customs writ of assistance, which was regarded as equivalent to a general warrant, persisted until the first shots of the Revolution. Indeed, the First Continental Congress in 1774 included customs searches under general writs of assistance in its list of grievances against Parliament.

This controversy left citizens of the new American states with a deep-dyed fear of discretionary searches permitted by general war-
rants and writs of assistance. By 1789, when James Madison submitted his proposed Bill of Rights to Congress, seven of the thirteen state constitutions already contained provisions with search and seizure protection bearing some resemblance to the Fourth Amendment. Among the most influential was the provision from Massachusetts, which was the first to use the full phrase “unreasonable searches and seizures,” the phrase that is the heart of the Fourth Amendment. The Massachusetts provision had been drafted by none other than John Adams, who remained indelibly impressed by James Otis’s argument against the writ of assistance. Thus, the principles that Otis expounded—the fundamental “Privilege of House” and private papers, and the right to be free from discretionary search at “the hands of every petty officer”—profoundly influenced how the Fourth Amendment was understood at the time of its adoption. As I will discuss in more detail, these same history-tested principles should inform our understanding of the Amendment today.

II

The immediate aim of the Fourth Amendment was to ban general warrants and writs of assistance. To this end, the Amendment’s Warrant Clause requires that a warrant “particularly describ[e] the place to be searched, and the persons or things to be seized.” The Supreme Court, however, has never read the Fourth Amendment as simply a prohibition on general warrants. Rather, the Court has consistently given substance to the Amendment’s first clause, which guarantees “[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.” In judging whether a search or seizure is unreasonable, the Supreme

49 Id. at 1465 & n.63.
50 Davies, supra note 30, at 684 (quoting Mass. Const. of 1780, pt. 1, art. XIV).
51 Id. at 685.
52 U.S. Const. amend. IV.
53 See e.g., Boyd v. United States, 116 U.S. 616, 633–35 (1886) (applying Fourth Amendment’s unreasonable search and seizure clause to invalidate court-ordered production of documents). Some scholars endorse a reading of the Fourth Amendment that would limit it to a ban on general warrants. See, e.g., Gerard V. Bradley, The Constitutional Theory of the Fourth Amendment, 38 DePaul L. Rev. 817, 833–55 (1989). Thomas Davies also concludes that the original understanding was limited to this narrow purpose, but he argues that changed circumstances make it infeasible and undesirable to apply this understanding to modern cases. See Davies, supra note 30, at 736–50.
54 U.S. Const. amend. IV (emphasis added).
Court has often looked to the formative history just discussed to inform its interpretation. This practice, I believe, is sound. In recent years, however, Justice Scalia has led the Court to use a more rigid historical methodology—a methodology that fails to take heed of the core principles underlying the Fourth Amendment.

Justice Scalia set forth his methodology most clearly in his 1999 majority opinion in *Wyoming v. Houghton*. As he explained, “[i]n determining whether a particular governmental action violates [the Fourth Amendment’s unreasonableness] provision, we inquire first whether the action was regarded as an unlawful search or seizure under the common law when the Amendment was framed.” Under this approach if the common law or statutes of the founding era permitted a particular search or seizure, then the analysis is complete; a court is required to hold that the action is reasonable under the Fourth Amendment today. Only when this historical inquiry “yields no answer” is a court permitted to consider what Justice Scalia refers to as “traditional standards of reasonableness.” That is, a court may balance the degree to which the search or seizure intrudes upon an individual’s privacy against the degree to which the intrusion is needed to promote legitimate governmental interests.

On its face the idea of looking to framing-era common law to determine the scope of Fourth Amendment protections might seem sensible. After all, the heralded search and seizure opinions in the *North Briton* and *Entick* cases were English common law decisions that reflected the principles underlying the Fourth Amendment. The problem with Justice Scalia’s approach is not its consideration of the common law. The problem is that it gives dispositive weight to the substantive rules that existed in 1791 instead of applying the underlying principles of the Fourth Amendment to modern circumstances. In essence, Justice Scalia freezes in place eighteenth-century rules without considering whether this method is practical or whether these

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55 See infra Part III.
57 *Houghton*, 526 U.S. at 299; see also Virginia v. Moore, 128 S. Ct. 1598, 1602 (2008) (opinion of Scalia, J.) (“We look to the statutes and common law of the founding era to determine the norms that the Fourth Amendment was meant to preserve.”).
58 *Houghton*, 526 U.S. at 299–300.
59 Id. In other cases Justice Scalia has said that the reasonableness balancing test applies “where there was no clear practice, either approving or disapproving the type of search at issue, at the time the constitutional provision was enacted.” Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646, 652–53 (1995) (opinion of Scalia, J.).
60 *Houghton*, 526 U.S. at 300.
old rules still make sense more than 200 years later.\textsuperscript{61} I will offer several reasons why we should reject Justice Scalia’s frozen-common-law approach.

To begin with, the Fourth Amendment, unlike the Seventh Amendment, makes no reference to the common law anywhere in its text. The Seventh Amendment expressly guarantees a right to civil jury trial “according to the rules of the common law.”\textsuperscript{62} The Fourth Amendment, by contrast, affords protection against “unreasonable searches and seizures,”\textsuperscript{63} a standard not inherently dictated by 1791 common law rules regarding unlawful searches and seizures.

Moreover, any interpretive approach that seeks to arrest the development of the common law and freeze it at a single point in time clashes with the fluid and evolutionary nature of common law.\textsuperscript{64} The presumption of continual adaptation and improvement is one of the common law’s defining features.\textsuperscript{65} As Justice Story, the early American jurist, observed in 1837, the common law is “a system of elementary principles and of general juridical truths, which are continually expanding with the progress of society, and adapting themselves to the gradual changes of trade, and commerce, and the mechanic arts, and the exigencies and usages of the country.”\textsuperscript{66} While “certain fundamental maxims . . . are never departed from,” he explained, “others . . . are . . . susceptible of modifications and exceptions, to prevent them from doing manifest wrong and injury.”\textsuperscript{67} Freezing the common law of search and seizure as it existed in 1791 in the face of dramati-

\textsuperscript{61} The “freezes in place” characterization is drawn from \textit{Payton v. New York}, 445 U.S. 573, 591 n.33 (1980) (“This Court has not simply frozen into constitutional law those law enforcement practices that existed at the time of the Fourth Amendment’s passage.”).

\textsuperscript{62} U.S. \textbf{Const.} amend. VII (emphasis added).

\textsuperscript{63} U.S. \textbf{Const.} amend. IV (emphasis added).

\textsuperscript{64} Joseph Story explained that “the common law is not in its nature and character an absolutely fixed, inflexible system, like the statute law, providing only for cases of a determinate form, which fall within the letter of the language, in which a particular doctrine or legal proposition is expressed.” \textit{Joseph Story, Codification of the Common Law}, in \textit{The Miscellaneous Writings of JosephStory} 698, 702 (Lawbook Exchange 2000) (1852) [hereinafter \textit{Story, Codification of the Common Law}].

\textsuperscript{65} \textit{Id.} at 702-04 (providing examples of common law judges revising historic rules to comport with “principles of natural justice”); \textit{Joseph Story, Progress of Jurisprudence, in The Miscellaneous Writings of Joseph Story, supra} note 64, at 198, 207 [hereinafter \textit{Story, Progress of Jurisprudence}] (“The common law had its origin in ignorant and barbarous ages; it abounded with artificial distinctions and crafty subtleties, partly from the scholastic habits of its early clerical professors, and partly from its subserviency to the narrow purposes of feudal polity”); \textit{see also Joseph Story, Commentaries on the Constitution of the United States} § 80, at 65-66 (Boston, Hilliard, Gray, & Co. 1833) (discussing introduction of common law into colonies and noting, among other features, that “it has expanded with our wants”).

\textsuperscript{66} \textit{Story, Codification of the Common Law, supra} note 64, at 702.

\textsuperscript{67} \textit{Id.}
cally changed conditions risks precisely this "manifest wrong and injury."

Further, the common law of 1791, which Justice Scalia casually refers to as though it were a single, clearly defined body of rules, was actually derived from a variety of authorities and differed from jurisdiction to jurisdiction. This variation in common law rules among jurisdictions could have a dramatic effect on the resulting search and seizure doctrine. To give just one example, in 1773 the King's Bench in England held an excise officer liable for trespass after he swore out a valid warrant to search a house but found no taxable goods there. Twelve years later the same court reversed course and limited an officer's liability to situations in which he obtained or executed the warrant "maliciously from corrupt motives." Although the later decision predated the Fourth Amendment by six years, the American legal system was slow to adopt the new rule, with treatises as late as 1824 citing the earlier decision as controlling precedent. Thus, as of 1791 there were two very different liability rules for warranted excise searches that yielded no goods. Justice Scalia's approach does not make clear which one should apply.

Even when common law rules from 1791 are uniform and readily ascertainable, Justice Scalia's approach has another limitation: It provides little guidance about when and how to analogize from these 1791 rules to searches involving later-developed technologies. While I recognize that drawing analogies is often a feature of interpretation, Justice Scalia's use of analogy is particularly troublesome because it sets the stakes so high. When he deems current and historical practices

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68 See Sklansky, supra note 56, at 1794–1795 (describing common law of eighteenth century as "an amalgam of cases, statutes, commentary, custom, and fundamental principles").
69 The degree of variation between the common law of the different states in 1791 was sufficient to lead Justice Story to conclude that the "common law" explicitly incorporated into the Seventh Amendment must be English common law and "not the common law of any individual state." United States v. Wonson, 28 F. Cas. 745, 750 (C.C.D. Mass. 1812) (No. 16,750) (Story, Circuit J.). In an 1821 address to the Suffolk Bar in Boston, Justice Story expressed consternation over the degree to which the common law of the various states had receded from a "common standard" of uniformity. Story, Progress of Jurisprudence, supra note 65, at 213.
72 E.g. 7 Nathaniel Dane, A General Abridgment and Digest of American Law § 2, at 244–46 (Boston, Cummings, Hilliard & Co. 1824); see also Fabio Arcila, Jr., In the Trenches: Searches and the Misunderstood Common-Law History of Suspicion and Probable Cause, 10 U. Pa. J. Const. L. 1, 46–48 & nn.165 & 176 (2007) (citing 5 Nathaniel Dane, A General Abridgment and Digest of American Law § 11, at 559 (Boston, Cummings, Hilliard & Co. 1824)). Davies points out that Cooper v. Boot was not actually published until at least 1801. See Davies, supra note 30, at 561 n.19.
sufficiently close, he imports the 1791 common law rule wholesale, and that alone determines the reasonableness of the search. Consider, for example, the practice of wiretapping. Justice Black in his dissent in *Katz v. United States* contended that “wiretapping is nothing more than eavesdropping by telephone.”73 But is Justice Black’s assessment self-evident? The common law imposed general nuisance liability for private individuals who engaged in eavesdropping,74 but appeared to have no rule when the government sanctioned the eavesdropping. If we view the common law’s silence as tacit approval for government-sanctioned *eavesdropping*, is this necessarily the appropriate rule to apply to government-sanctioned *wiretapping*?

Or consider the 1921 automobile search in *Carroll v. United States*.75 *Carroll* upheld a Prohibition-era warrantless search of a private automobile suspected of transporting bootlegged liquor. In resolving the case, Chief Justice Taft employed a historical approach closely akin to Justice Scalia’s. He observed that early Congresses distinguished between searches of “dwelling house[s] or similar place[s]” and searches for goods “concealed in a movable vessel” or ship.76 Congressional acts from the 1780s and 1790s afforded broader discretion to officers in the latter category, authorizing them to conduct warrantless searches of vessels “in which they [had] reason to suspect” goods “subject to duty” were hidden.77 Chief Justice Taft reasoned that because an automobile—like a seagoing vessel—permitted the ready movement of contraband, the two “vehicles” would have been treated the same for Fourth Amendment purposes in the founding era.78 While Justice Taft is surely correct that ships and cars present certain common concerns about the movability of evidence, is it necessarily true that the expectation of privacy is analogous in the two cases? I am not suggesting that *Carroll* should have come out differently. But *Carroll* highlights the difficulty in determining when to analogize 1791 search and seizure practices to modern-day ones, and Justice Scalia’s approach offers little guidance in this respect.

Not only is the frozen-common-law approach impractical, it is also imprudent. Common law search and seizure rules from the

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74 “Eaves-droppers, or such as listen under walls or windows, or the eaves of a house, to hearken after discourse, and thereupon to frame slanderous and mischievous tales, are a common nusance, and presentable at the court-leet: or are indictable at the sessions, and punishable by fine and finding sureties for the good behaviour.” 4 *WILLIAM BLACKSTONE, COMMENTARIES* *at* 169.
75 267 U.S. 132 (1925) (opinion of Taft, C.J.).
76 *Id.* at 151.
77 *Id.* at 150–51 (quoting Act of July 31, 1789, ch. 5, 1 Stat. 29, 43 (1789)).
78 *Id.* at 153.
founding era were designed to address a very different law enforce-
ment reality than we face today. Because these differences are suffi-
ciently stark, we should not apply founding era rules without
considering whether they still make sense. For example, during the
framing era there were no professional police forces, and the gov-
ernment’s involvement in policing was much more limited than it is
today. In the realm of criminal investigation, private parties or the
broader community assumed responsibility for the bulk of investi-
gation. Ordinarily, peace officers did not get involved until arrest was
imminent.\footnote{Stuntz, supra note 7, at 407–08 & n.59. Indeed, peace officers had few responsibilities apart from responding to private complaints. Davies, supra note 30, at 620. A limited number of what Davies calls “complainantless crimes” did exist, but Davies contends that these crimes were regarded as less serious than the drug offenses that constitute the bulk of today’s complainantless crimes. \textit{Id.}} The peace officers were mainly constables who served
part-time and frequently called upon private citizens to assist in
making arrests.\footnote{Davies, supra note 30, at 620–21.} In fact, at common law, private citizens had the same
powers of arrest as constables.\footnote{\textit{Id.} at 629. An eighteenth-century treatise confirmed that official authority was lim-
ited, stating that “it seems difficult to find any Case, wherein a Constable is impowered to
arrest a Man for a Felony committed or attempted, in which a private Person might not as
well be justified in doing it . . . .” \textit{Id.} (quoting 2 \textsc{William Hawkins}, \textsc{A Treatise of the Pleas of the Crown} 80 (Arno Press 1972) (1726)). Indeed, according to Davies, the
common law in 1791 recognized only three justifications for a warrantless arrest, and all
three could be invoked either by officers or by private persons making what we would now
call a “citizen’s arrest.” Davies, supra note 30, at 629. Notably, the warrantless arrest stan-
dard at common law differs from today’s arrest standard primarily in that today’s standard
requires only “probable cause” that a crime has been committed, whereas the common law
standard required a “felony in fact.” \textit{Id.} at 632–33. This “felony in fact” requirement was
also incorporated into the warrant standards at common law. Before an arrest warrant
could be issued, a complainant was required to make a sworn accusation that a crime had
“in fact” been committed. \textit{Id.} at 651–52.} Today, the organization and reach of
official law enforcement is vastly greater. Full-time professional police
forces at all levels of government now control criminal investigation
and engage in extensive efforts to prevent and reduce crime—activi-
ties that were basically unheard of at the time of the framing. More-
over, these highly professionalized forces are equipped with
technology that enables searches unimaginable in 1791.

Unsurprisingly, the dramatic differences in law enforcement prac-
tices during the framing era led to a fundamentally different set of
rules governing the relationship between citizens and law enforce-
ment. Our present concept of official immunity—that an officer is
protected from civil liability unless the officer violates a “clearly
established” constitutional right—bears little resemblance to framing-
era notions of official immunity. At the time of the framing, a court absolved an officer of liability only when he was fulfilling a ministerial duty such as executing a valid search warrant sworn out by someone else. A court could hold the officer liable in trespass if he acted pursuant to his own initiative, for example by swearing out a warrant himself and conducting a search that turned out to be fruitless. The substantial trespass damages assessed against the Crown's agents in the North Briton and Entick cases are clear examples of the risk faced by everyday peace officers in conducting discretionary searches.

The common law gradually evolved over time to address the significant changes that have occurred in law enforcement practices since the framing era. Remedies for abusive searches are no longer pressed under the law of trespass, but rather under a new body of constitutional tort law. Qualified immunity affords greater protection to officers when they conduct searches. And the exclusionary rule limits the ability of the prosecution to introduce evidence obtained during searches conducted in violation of the Fourth Amendment. Resetting the clock to 1791 and ignoring these changes, as the frozen-common-law approach requires, makes little sense. We should acknowledge that dramatic changes have occurred in the structure and purpose of law enforcement and in the structure and organization of society more broadly. In confronting Fourth Amendment challenges arising from these changes, we should return to an analysis that takes into account the Amendment's formative history and principles.

Before pressing this point further, I will briefly consider Justice Scalia's fallback position when the common law of 1791 "yields no answer." In that instance Justice Scalia requires courts to balance "the degree to which [a search or seizure] intrudes upon an individual's privacy" against "the degree to which it is needed for the pro-

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82 Davies notes that "because the common-law understanding was that an officer ceased to have any official status if he exceeded his lawful authority, the Framers conceived of unlawful acts by officers as personal trespasses, not as government illegality (which is why they never considered an exclusionary rule)." Thomas Y. Davies, The Fictional Character of Law-and-Order Originalism: A Case Study of the Distortions and Evasions of Framing-Era Arrest Doctrine in Atwater v. Lago Vista, 37 WAKE FOREST L. REV. 239, 403 (2002).

83 Id.

84 See Maciariello v. Sumner, 973 F.2d 295, 298 (4th Cir. 1992) ("Officials are not liable for bad guesses in gray areas; they are liable for transgressing bright lines.").

85 1 WAYNE R. LAFAYE, SEARCH AND SEIZURE § 1.6, at 186 (4th ed. 2004) ("In the typical case, the impact of the exclusionary rule is to bar from use at trial evidence obtained by an unreasonable search and seizure.").

motion of legitimate governmental interests.” My concern here is this: Unmoored from the formative history that led to the Fourth Amendment’s adoption, such analyses will give too much weight to the government’s legitimate interest in fighting crime or promoting national security and too little weight to the liberty and privacy interests protected by the Amendment. When the government stands before a court and argues—either explicitly or implicitly—that a particular search practice is necessary to guard against terrorist attack, the pressure builds to declare that practice consistent with the Fourth Amendment. To the extent that new threats compel courts to engage in difficult balancing acts, Justice Scalia’s approach fails to ensure that courts will give the Amendment’s animating principles due weight.

III

We should return to the tradition of using the Fourth Amendment’s formative history as a basic source in interpreting the Amendment. Supreme Court decisions dating back to Boyd v. United States in 1886 have looked to formative history as a guide. In Boyd Justice Bradley emphasized that to interpret the Fourth Amendment, it is “necessary to recall the contemporary or then-recent history of the controversies on the subject, both in this country and in England.” This rich history sheds a powerful light on the purposes that the Amendment was designed to serve.

Perhaps the most famous use of formative history to interpret the Amendment is Justice Brandeis’s dissent in the 1928 wiretapping case of Olmstead v. United States. In a 5–4 decision the Olmstead majority held that a wiretapping scheme undertaken by federal agents in violation of state law did not qualify as a search or seizure under the Fourth Amendment. In dissent Justice Brandeis drew heavily from the history of the Fourth Amendment’s adoption to determine its purpose. Quoting James Otis’s argument in The Writs of Assistance Case, Brandeis insisted that the unrestricted use of wiretaps, like writs of assistance of old, “places the liberty of every man in the hands of every petty officer.” Inspired by Otis, Brandeis added words with similar punch: “As a means of espionage,” Brandeis wrote, “writs of assistance and general warrants are but puny instruments of tyranny

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88 Id. at 300.
89 116 U.S. 616 (1886).
90 Id. at 624–25.
91 277 U.S. 438 (1928).
92 Id. at 466.
93 Id. at 474 (Brandeis, J., dissenting).
and oppression when compared with wire-tapping.”\footnote{Id. at 476.} Justice Brandeis thus looked to historical principles and examples to conclude that the Fourth Amendment required strict limitations on official discretion in the search and seizure arena. The 1967 decision in \textit{Katz v. United States}, which overruled \textit{Olmstead} and held that wiretapping is a search subject to Fourth Amendment regulation, vindicated Brandeis’s conclusion in his \textit{Olmstead} dissent.\footnote{389 U.S. 347, 359 (1967).} \textit{Katz} emphasized that the place or scope of a search cannot be left to the discretion of a government agent. Rather, it must be determined by a neutral and detached magistrate.\footnote{Id. at 356–57.}

In addition to Bradley and Brandeis, several other Justices have relied on the formative history of the Fourth Amendment in determining its meaning. One of the most prominent was Justice Frankfurter, who served on the Court from 1939 until 1962. Justice Frankfurter regularly recalled that “[t]he vivid memory by the newly independent Americans of the [Crown’s abusive discretionary searches] produced the Fourth Amendment.”\footnote{Frank v. Maryland, 359 U.S. 360, 363 (1959); see also United States v. Rabinowitz, 339 U.S. 56, 69–70 (1950) (Frankfurter, J., dissenting) (“[The Fourth Amendment is] not to be read as [it] might be read by a man who knows English but has no knowledge of the history that gave rise to the words. . . . One cannot wrench ‘unreasonable searches’ from the text and context and historic content of the Fourth Amendment.”); Davis v. United States, 328 U.S. 582, 605 (1946) (Frankfurter, J., dissenting) (“If the purpose of its framers is to be respected, the meaning of the Fourth Amendment must be distilled from contemporaneous history.”).} Other former Justices who have used the Amendment’s formative history as an interpretive guide include Justice Jackson,\footnote{Id. at 476.} Justice Stewart,\footnote{389 U.S. 347, 359 (1967).} and Chief Justice Burger.\footnote{Id. at 356–57.} Notably, these Justices do not fit into any particular ideological group.

\footnote{United States v. Di Re, 332 U.S. 581, 595 (1948) (“[T]he forefathers, after consulting the lessons of history, designed our Constitution to place obstacles in the way of a too permeating police surveillance, which they seemed to think was a greater danger to a free people than the escape of some criminals from punishment.”).}

\footnote{Chimel v. California, 395 U.S. 752, 760–61 (1969) (“[T]he Fourth Amendment’s proscription of ‘unreasonable searches and seizures’ must be read in light of ‘the history that gave rise to the words’?a history of ‘abuses so deeply felt by the Colonies as to be one of the potent causes of the Revolution . . . .’” (quoting \textit{Rabinowitz}, 339 U.S. at 69)); Stanford v. Texas, 379 U.S. 476, 480–85 (1965) (discussing at length history of Fourth Amendment and framers’ goal of eliminating “arbitrary power” granted by general warrants and “[t]he hated writs of assistance”).}

\footnote{United States v. Chadwick, 433 U.S. 1, 7–8 (1977) (“It cannot be doubted that the Fourth Amendment’s commands grew in large measure out of the colonists’ experience with the writs of assistance and their memories of the general warrants formerly in use in England.”).}
More recently, Justice Stevens appeared to be the most receptive to the use of formative history in interpreting the Fourth Amendment. In the 2008 term, Justice Stevens wrote the Court’s opinion in *Arizona v. Gant*,¹⁰¹ a 5–4 decision that restricts the authority of police to conduct a warrantless vehicle search incident to the arrest of the driver. Justice Stevens wrote:

A rule that gives police the power to conduct such a search whenever an individual is caught committing a traffic offense, when there is no basis for believing evidence of the offense might be found in the vehicle, creates a serious and recurring threat to the privacy of countless individuals.¹⁰²

Justice Stevens drew on formative history to explain why the Fourth Amendment protected against this threat to privacy. “[T]he character of the threat,” he said, “implicates the central concern underlying the Fourth Amendment: the concern about giving police officers unbridled discretion to rummage at will among a person’s private effects.”¹⁰³ Justice Stevens supported his reference to history by citing *Boyd*,¹⁰⁴ the landmark case for using the Amendment’s formative history as a guide.

Justice Scalia joined the *Gant* majority, but he wrote a separate concurrence, reiterating his frozen-common-law approach as the method for determining “what is an ‘unreasonable’ search within the meaning of the Fourth Amendment . . . .”¹⁰⁵ With Justice Scalia in *Gant*’s bare majority, the decision does not suggest that the Supreme Court is making a committed return to the use of the Fourth Amendment’s historical background as a source to elucidate its meaning. But *Gant* at least sends a signal that courts can use formative history in interpreting the amendment. I urge us to go further. We should return to the regular use of formative history as a guide.

As we have seen, the mischief that gave birth to the Fourth Amendment was the oppressive general search, executed through the use of writs of assistance and general warrants. The lesson from this mischief is that granting unlimited discretion to customs agents and constables inevitably leads to incursions on privacy and liberty—a lesson ably drawn by Otis in *The Writs of Assistance Case* and expressed by the English judges in the *North Briton* and *Entick* cases. The Fourth Amendment was thus adopted for the purpose of checking

¹⁰² Id. at 1720.
¹⁰³ Id.
¹⁰⁴ Id. at 1720 n.5 (citing *Boyd v. United States*, 116 U.S. 616 (1886)).
¹⁰⁵ Id. at 1724 (Scalia, J., concurring).
discretionary police authority, and that historical purpose should be kept in mind.

I do not suggest that this history should be the only guide in interpreting the Fourth Amendment. Rather, it should retake its place among other interpretive sources, including text, structure, purpose, and precedent. The Amendment’s vivid history can be particularly useful in applying the Amendment to today’s challenges and in measuring the consequences of a particular application. As Chief Justice Burger once wrote, the Framers “intended the Fourth Amendment to safeguard fundamental values which would far outlast the specific abuses which give it birth.”

IV

Next, I will discuss how history can guide us in analyzing a new generation of Fourth Amendment issues that arise in our increasingly interconnected world. I will consider questions about privacy expectations in personal files stored online, computer search warrants that pose the risk of being executed as general warrants, and potential threats to privacy presented by government data mining programs.

A.

Today we rely on electronic storage instead of “secret cabinets and bureaus” to file much of our private communications and information. Our digital files include correspondence (even love letters), diaries, and personal records of all sorts, from financial to medical. A growing trend is to store files online rather than on the hard drives of personal computers. For example, users of webmail programs, such as Gmail, Yahoo!, and Hotmail, store e-mail messages on their provider’s remote server without any permanent storage on a home computer. Online storage allows Internet users to access files from any computer connected to the Internet. But online storage also raises questions about whether we retain any Fourth Amendment privacy interest in files once we store them remotely because they are then technically accessible to the Internet service provider.

Whether the Fourth Amendment protects against a police search of a user’s online files depends on whether the search would invade

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109 Burney, supra note 107.
the user's reasonable expectation of privacy.\textsuperscript{110} If it would, a search warrant based on probable cause is required, subject to limited exceptions.\textsuperscript{111} It might seem indisputable that there is a reasonable expectation of privacy in personal files stored online. This assumption, however, runs up against what is sometimes called the third-party doctrine. The Supreme Court has said that “a person has no legitimate expectation of privacy in information he voluntarily turns over to third parties.”\textsuperscript{112} For example, bank customers have no reasonable expectation of privacy in deposit slips or financial statements provided to a bank, and telephone users have no expectation of privacy in the numbers dialed on a telephone.\textsuperscript{113} If strictly applied, the third-party doctrine would foreclose any expectation of privacy in files stored on a provider’s server. The doctrine, however, does not appear to be absolute. For example, the Supreme Court has declined to apply it to the results of nonconsensual drug tests performed by a hospital and handed over to the police.\textsuperscript{114} And, in \textit{United States v. Miller}, the case denying Fourth Amendment protection to bank records, the Court drew a distinction between those records and a person’s “private papers.”\textsuperscript{115} Thus, in evaluating whether there is a privacy interest in personal files stored online, the current framework leaves room for considering other sources of interpretation, including the Fourth Amendment’s formative history and contemporary norms and circumstances.\textsuperscript{116}

\textsuperscript{110} See Smith v. Maryland, 442 U.S. 735, 740 (1979) (“Consistently with \textit{Katz}, this Court uniformly has held that the application of the Fourth Amendment depends on whether the person invoking its protection can claim a ‘justifiable,’ a ‘reasonable,’ or a ‘legitimate expectation of privacy’ that has been invaded by government action.”).

\textsuperscript{111} See Arizona v. Gant, 129 S. Ct. 1710, 1716 (2009) (noting “basic rule” that warrantless searches “are \textit{per se} unreasonable under the Fourth Amendment—subject only to a few specifically established and well-delineated exceptions” (internal quotation marks omitted)).


\textsuperscript{113} See Ferguson v. City of Charleston, 532 U.S. 67, 78 (2001) (holding that Fourth Amendment was violated when state hospital ran drug test on pregnant patient without consent and gave results to law enforcement).

\textsuperscript{114} 425 U.S. at 440 (citing Boyd v. United States, 116 U.S. 616, 622 (1886)).

\textsuperscript{115} California v. Greenwood, 486 U.S. 35, 51 & n.3 (1988) (Brennan, J., dissenting) (noting that courts look at “understandings that are recognized and permitted by society” and “general social norms” (internal citations omitted)).
Courts have already begun to consider the Fourth Amendment’s application in the context of remotely stored e-mails. In *Warshak v. United States* a Sixth Circuit panel considered whether users who store their e-mails on a provider’s server have a reasonable expectation of privacy in the content of their messages.\(^ {117}\) Although the *Warshak* panel opinion was vacated by an en banc court that ultimately dismissed for want of ripeness, the case underscores the possible tension between the Fourth Amendment’s formative history and the third-party doctrine. *Warshak* was a civil action for injunctive relief arising out of a federal investigation of the plaintiff for mail fraud and related crimes. The government, without any showing of probable cause, obtained a court order directing the plaintiff’s Internet service provider to turn over certain of the plaintiff’s e-mails that were not protected by the warrant provision of the Electronic Communications Privacy Act.\(^ {118}\) In opposing a preliminary injunction prohibiting the disclosure, the government invoked the third-party doctrine.\(^ {119}\) It argued that because the provider maintaining the server had access to the content of the e-mails, the plaintiff no longer had a reasonable expectation of privacy.\(^ {120}\) Without this expectation of privacy, the government’s collection of the e-mails would not constitute a “seizure” within the meaning of the Fourth Amendment. The Sixth Circuit panel disagreed. It upheld a preliminary injunction prohibiting any compelled disclosure by the provider, concluding that the plaintiff retained a reasonable expectation of privacy in the content of his e-mails stored with his service provider.\(^ {121}\) In reaching that conclusion, the panel emphasized that the provider did not inspect or monitor e-mail content in the ordinary course of business.\(^ {122}\) The panel appeared to rest its holding on the analogy it drew between e-mails and tele-

\(^{117}\) 490 F.3d 455 (6th Cir. 2007), vacated, *Warshak v. United States*, 532 F.3d 521 (6th Cir. 2008) (en banc).

\(^{118}\) *Id.* at 460; *see also* Electronic Communications Privacy Act of 1986, Pub. L. No. 99-508, 100 Stat. 1848 (codified as amended in scattered sections of 18 U.S.C.) (extending government restrictions on wiretaps of telephone calls to include transmissions of electronic data by computer). 18 U.S.C. § 2703(a) provides some statutory protections to stored communications, including the requirement that the government obtain a warrant based upon probable cause to access communications stored for one hundred eighty days or less. The government can compel disclosure of e-mails stored for longer than one hundred eighty days by obtaining a court order supported by “specific and articulable facts showing that there are reasonable grounds to believe that the contents of a wire or electronic communication . . . are relevant and material to an ongoing criminal investigation.” § 2703(d).

\(^{119}\) *Id.* at 468–69.

\(^{120}\) *Id.*

\(^{121}\) *Id.* at 471.

\(^{122}\) *Id.* at 475.
phone conversations, noting that the latter have privacy protection under existing Fourth Amendment doctrine.  

Interestingly, the district court in Warshak had concluded that an e-mail was more like a letter sent through the U.S. Postal Service, which also has Fourth Amendment protection. This view is consistent with a major function of e-mail: It is a high-speed alternative to regular mail.

This analogy to traditional letters implicates the Fourth Amendment's formative history. A remote server holding private files arguably fulfills the same function as the "secret cabinets and bureaus" that Lord Camden protected from promiscuous search in the Entick case in 1765. The e-mails within these files can be equated with the private papers of Lord Camden's day. "Papers," as he said, "are the owner's . . . dearest property." And today's e-mails and electronic documents are no less dear because they are stored on electronic servers rather than in the secret cabinets and bureaus they have replaced. As these parallels illustrate, the history of the Fourth Amendment can assist in measuring privacy expectations in today's digital world.

B.

The Fourth Amendment's formative history is also relevant in evaluating the threat to individual privacy posed by some computer searches, even when executed under a warrant. As history reminds us, a central purpose of the Fourth Amendment is to ban general warrants—warrants that do not specify the place or sphere of a search, thereby granting unrestricted discretion to executing officers. One challenge is to find ways to limit the scope of computer searches under "warrants that are particular on their face" but that turn into "general warrants in practice." Computer searches can easily turn into "highly invasive search[es] that uncover[] a great deal of information

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123 Id. at 469–71.
125 See Brigid Schulte, So Long, Snail Shells; Mail Volume Expected To Decline; U.S. Postal Service Adapts by Pulling Collection Boxes, WASH. POST, July 25, 2009, at A1 ("Snail mail is a dying enterprise because Americans increasingly pay bills online, send Evites for parties [and otherwise communicate electronically]").
126 Entick v. Carrington, (1765) 19 How. St. Tr. 1029, 1066 (C.P.) (Eng.).
127 Police generally need a warrant to search a personal computer or, as often occurs, a mirror image of the computer's hard drive. See United States v. Payton, 573 F.3d 859, 861–62 (9th Cir. 2009) (holding that absent special circumstances, search of computer not expressly authorized by warrant is not reasonable search).
beyond the scope of the warrant.”

Two factors drive this threat to privacy. The first is the enormous capacity of electronic storage. Today the average hard drive in a personal computer has a storage capacity of about 150 gigabytes, which is roughly equivalent to 75,000,000 pages of text or 250,000 books averaging 300 pages. Second, the information stored on computers is increasingly personal and records detailed accounts of our activities and interests.

Courts are grappling with the permissible scope of computer searches. In the search for evidence specified in a warrant, is it reasonable to allow police to search everywhere on a computer, or are limitations required? Some courts have been reluctant to limit police discretion. These courts are concerned that suspects will “tamper [with], hid[e], or destr[oy]” damaging computer files. A clever suspect, for example, does not store child pornography in a file labeled “kiddyporn.” As one court noted, it is easy to rename a “sexyteenyboppersxxx.jpg” file as “sundayschoollesson.doc” and to otherwise change the names and extensions on computer files. Sensitive

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129 Id. at 566.
130 John Seal, Computers Need Maintenance To Avoid Problems, JUPITER COURIER (Jupiter, Fl.), Feb. 15, 2009, at A11. Another recent article reported that the average desktop computer has a storage capacity of 109 gigabytes. Derek Haynes, Comment, Search Protocols: Establishing the Protections Mandated by the Fourth Amendment Against Unreasonable Searches and Seizures in the World of Electronic Evidence, 40 McGEORGE L. REV. 757, 763 (2009). An earlier article represented that as of 2005, computer hard drives generally had storage capacities of about 80 gigabytes, which is roughly equivalent to 40,000,000 pages of text. Kerr, supra note 128, at 542.
131 See Kerr, supra note 128, at 542 (observing that 80 gigabytes can store approximately 40,000,000 pages of text).
132 See id. at 565; see also Payton, 573 F.3d at 861–62 (“There is no question that computers are capable of storing immense amounts of information and often contain a great deal of private information. Searches of computers therefore often involve a degree of intrusiveness much greater in quantity, if not different in kind, from searches of other containers.”).
133 See, e.g., United States v. Williams, 592 F.3d 511, 521–22 (4th Cir. 2010) (upholding seizure of child pornography during computer search for evidence of harassment because officer had lawful right to view each file momentarily to determine whether or not it was within warrant’s scope); United States v. Miranda, 325 F. App’x 858, 860 (11th Cir. 2009) (same when warrant was for evidence of counterfeiting); United States v. Hanna, No. 07-CR-20355, 2008 WL 2478330, at *6–7 (E.D. Mich. June 17, 2008) (rejecting argument that computer search should have been limited to particular search protocol because “[c]omputer files are easy to disguise or rename”); United States v. Maali, 346 F. Supp. 2d 1226, 1245–47 (M.D. Fla. 2004) (upholding blanket search of all computer files without search protocol because “the lack of a detailed computer ‘search strategy’ does not render the warrant deficient”); Wisconsin v. Schroeder, 2000 WI App 128, ¶¶ 12–14, 237 Wis. 2d 575, ¶¶ 12–14, 613 N.W.2d 911, ¶¶ 12–14 (concluding that police were free to open all user-created files systematically to look for evidence identified in warrant application since “it would [otherwise] be all too easy for defendants to hide computer evidence”).
to the potential for camouflage, some judges seem to throw up their hands and give police broad discretion to search computers so long as there is a warrant based on probable cause to search for a single category of evidence.136

In contrast, the Ninth Circuit, in a recent en banc decision, set forth rules to protect against what it found to be “a serious risk that every warrant for electronic information will become, in effect, a general warrant, rendering the Fourth Amendment irrelevant.”137 In that case, federal agents used a warrant authorizing the search of a laboratory’s computerized drug-testing records on ten professional baseball players to conduct an unlawful general search of the records of hundreds of players.138 The Ninth Circuit assumed that the ability of wrongdoers to hide, encrypt, or compress electronic data makes overly broad seizure “an inherent [and sometimes necessary] part of the electronic search process.”139 But instead of throwing up its hands, the court determined that the following privacy safeguards are required for issuing and administering search warrants for computer information. First, magistrate judges should insist that the government waive reliance on the plain view exception in electronic search cases.140 Second, a “warrant application should normally include” a search protocol “designed to uncover only the information for which [the government] has probable cause.”141 Finally, seized information that the government has no probable cause to collect must be segregated and quarantined by government personnel not involved in the investigation or by an independent third party.142

The Tenth Circuit has also attempted to prevent general searches of computers, apparently concluding that overly broad searches and seizures are not inevitable. Unlike the Ninth Circuit, the Tenth Circuit

136 See, e.g., Miranda, 325 F. App’x at 859–60 (denying suppression of child pornography files discovered pursuant to computer search for counterfeiting files); Hill, 322 F. Supp. 2d at 1090–91 (rejecting alternate search methodologies because possibility of camouflage would render them ineffective); Rosa v. Virginia, 628 S.E.2d 92, 94–97 (Va. Ct. App. 2006) (denying suppression of child pornography files discovered pursuant to computer search for files relating to distribution of controlled substances).

137 United States v. Comprehensive Drug Testing, Inc., 579 F.3d 989, 1004 (9th Cir. 2009) (en banc).

138 Id. at 993.

139 Id. at 1006.

140 Id. at 997–98, 1006. Orin Kerr would limit the plain view exception by having courts suppress any evidence discovered that is outside the scope of a warrant for the search of a computer unless such evidence is otherwise admissible. Kerr, supra note 128, at 571–84.

141 Comprehensive Drug Testing, 579 F.3d at 1000, 1006. The Tenth Circuit has indicated that in some circumstances the police must adopt a search protocol designed to limit their search to files likely to contain evidence specified in the warrant. See United States v. Brooks, 427 F.3d 1246, 1251–52 (10th Cir. 2005).

142 Comprehensive Drug Testing, 579 F.3d at 1000, 1006.
focuses on the Fourth Amendment’s particularity requirement, holding that a warrant must affirmatively limit the scope of a computer search by particularly describing either specific files or specific file formats that contain evidence of the federal crime suspected to have been committed. Should the police knowingly exceed the warrant's scope—for example, by searching for images when the warrant is for written information—any unspecified evidence found must be suppressed.

The Ninth and Tenth Circuit decisions, which protect against general searches of computers in different ways, are ultimately consistent with the Fourth Amendment's formative history. They illustrate that while history does not dictate any particular solution, it does suggest that there are constitutional limits on police discretion in the scope and execution of warrants for computer searches.

C.

Finally, I want to mention government data mining programs that create electronic databases of personal information about U.S. citizens—information that the government then analyzes to identify suspicious patterns of behavior. Data mining technologies threaten the privacy once afforded by “the inherent inefficiency of government agencies [that] analyze[d] widely dispersed paper, rather than aggregated, computer records.” The government has used agency data mining programs to help detect waste and for various law enforce-

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143 See United States v. Riccardi, 405 F.3d 852, 862 (10th Cir. 2005) (“Our case law therefore suggests that warrants for computer searches must affirmatively limit the search to evidence of specific federal crimes or specific types of material.”); United States v. Carey, 172 F.3d 1268, 1272–73 (10th Cir. 1999) (holding that officers exceeded warrant's scope when warrant specified search for “documentary evidence” and officers searched image files). Although United States v. Carey emphasizes the importance of specifying the format of the evidence sought, more recent case law in the Tenth Circuit indicates that format is simply one factor to be weighed when assessing particularity. See Brooks, 427 F.3d at 1252 (noting that courts, when assessing particularity for computer search warrants, should look to: “(1) the object of the search, (2) the types [or format] of files that may reasonably contain those objects, and (3) whether officers actually expand the scope of the search upon locating evidence of a different crime”).

144 Carey, 172 F.3d at 1273, 1276. In Carey the Tenth Circuit focused on the officer's subjective intent to exceed the warrant's scope. Kerr has criticized this “subjective approach,” arguing that an officer's subjective intent may be difficult to determine. Kerr, supra note 128, at 578–79.


146 DATA MINING, supra note 145, at 6.
ment purposes since at least the 1990s. Following the attacks of September 11, 2001, the government expanded efforts to acquire information and explored ways to combine all of the available information into "a single massive database." One notorious example is the never-implemented Total Information Awareness (TIA) program conceived at the Department of Defense. The program’s Orwellian implications were captured by its original logo: “an ‘all-seeing’ eye atop of a pyramid looking down over the globe, accompanied by the Latin phrase scientia est potentia (knowledge is power).”

TIA sought to compile and link vast amounts of electronic information, including credit card transactions, travel information, telephone records, and video feeds from airport surveillance cameras. This information would then have been filtered through software that constantly monitored for suspicious patterns. The program’s managers represented that the program would amass only transactional data that the government could access under existing law. But the government can claim lawful access to enormous quantities of information simply by invoking the third-party doctrine. We disclose “a vast amount of personal information to a vast array of [third-party] demanders.” And technology companies routinely “record the Web

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153 See LAFAVE, supra note 86, § 2.7(b) at 744 (noting that despite “‘enormous quantity of personal information’” collected and maintained by “‘banks, telephone companies, hospitals, doctors’ offices, [and] credit bureaus,’” courts “have not been receptive to the assertion that the subjects of this information are at all protected by the Fourth Amendment against [its search and seizure by government]” (quoting Note, Government Access to Bank Records, 83 Yale L.J. 1439, 1439 (1974))).

sites [we] visit, the ads [we] click on, [and] even the words [we] enter in search engines.\textsuperscript{155} Compiling this information into one huge database could provide government agents with access to a reasonably complete profile of any person who is singled out.\textsuperscript{156}

Congress withdrew funding for TIA because of concerns about the privacy of U.S. citizens.\textsuperscript{157} It is nevertheless instructive to consider the privacy implications of a TIA-type program. Suppose a government agency compiles and constantly updates a massive database of transactional information on U.S. citizens that includes records of consumer activity, subject headers on domestic e-mails, Web site visits, and real-time information about where cell phones are located. The program stipulates that assigned agents may use the data to investigate potential criminal- or terrorism-related activity. Suppose further that an agent, based purely on subjective suspicion, targets a particular individual and pores through all data relating to that individual for evidence of a crime or suspicious activity.

If there was a Fourth Amendment challenge to the breadth of agent discretion to access and use the data, the government could argue that there is no reasonable expectation of privacy in transactional information collected from third parties, and that it is free to use the database for any investigative or strategic purpose.\textsuperscript{158} But does the history of the Fourth Amendment offer any guidance here? I believe history suggests that we ought to ask whether the data mining program has the character of a general warrant because of the agent’s unbridled discretion to choose his or her target and to rummage through large quantities of personal information about that target. We should ask the question James Otis would ask if he were here today: Does the agent’s unchecked authority to scour the data place “the liberty [or privacy rights] of every [person] in the hands of every petty officer?”\textsuperscript{159}

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In concluding, I recognize that I have not provided ready answers to the challenging new questions that test the reach of the Fourth Amendment. But that was not my purpose. I have simply attempted


\textsuperscript{156} See Greeneuer, \textit{supra} note 148, at 26.

\textsuperscript{157} Seiffert, \textit{supra} note 150, at 6–7.

\textsuperscript{158} Susan W. Brenner, \textit{The Fourth Amendment in an Era of Ubiquitous Technology}, 75 Miss. L.J. 1, 59 (2005).

\textsuperscript{159} See Smith, \textit{supra} note 11, app. J at 553 (excerpting Otis’s argument that general warrants are illegal because of overbroad scope).
to make the case that the mischief—the threat to liberty and privacy—that led to the inclusion of the Fourth Amendment in the Bill of Rights has not disappeared; it has only changed in form. Thus, in confronting contemporary questions, it is more important than ever to use the Fourth Amendment’s formative history, which confirms the Amendment’s broader purpose of limiting government discretion. This is no time for outdated common law rules from the founding era to control and restrict the meaning of the Fourth Amendment. As Justice Black firmly declared in the first Madison Lecture nearly fifty years ago: “I cannot agree with those who think of the Bill of Rights as an 18th Century straightjacket, unsuited for this age. It is old but not all old things are bad.”