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Reconsidering Two US Constitutional Doctrines

Fourth Amendment Standing and the State Agency Requirement in a World of Robots

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I Introduction

A wide array of robot technologies now inhabit our life worlds – and their population grows every day. The extent, degree, and diversity of our interactions with these technologies serve daily notice that we now live in an unprecedented age of surveillance. Many of us carry with us personal tracking devices in the shape of cellular phones allowing service providers and "apps" to monitor our locations and movements. The GPS chips embedded in smart devices provide detailed location data to a host of third parties, including apps, social media companies, and public health agencies. Wearable devices monitor streams of biological data. The IoT is populated by a dizzying array of connected devices such as doorbells, smart speakers, household appliances, thermostats, and even hairbrushes, which have access to the most intimate, if often quotidian, details of our daily lives. And then there is the dense network of surveillance technologies such as networked cameras, license plate readers, and radio frequency identification (RFID) sensors deployed on terrestrial and airborne platforms, including autonomous drones, that document our comings and goings, engagements and activities, any time we venture into public. Increasingly, these systems are backed by AI technologies that monitor, analyze, and evaluate the streams of data produced as we move through physical and online worlds, many of which also have the capacity and authority to take action. What once was the stuff of dystopian fiction is now a lived reality.

Privacy scholars have quite reasonably raised concerns about threats to fundamental rights posed by robots. For example, Frank Pasquale has advanced a trenchant critique of black-box algorithms, which have displaced human agents in a variety of contexts.[1] On the other hand,

[1] Frank Pasquale, *The Black Box Society: The Secret Algorithms that Control Money and Information* (Cambridge, MA: Harvard University Press, 2015).

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we readily invite robots into our lives to advance personal and social goals. Some play seemingly minor roles, such as autonomous vacuums and refrigerators capable of tracking their contents, determining when supplies are low, and submitting online orders. Others less so, such as fitness monitors that summon emergency medical personnel when they determine their human partners are in crisis, or mental wellness apps that utilize biometric data to recommend, guide, and monitor therapy.

Because they entail constant and intimate contact, these human–robot interactions challenge our conceptions of self, privacy, and society, stretching the capacities of our legal regimes to preserve autonomy, intimacy, and democratic governance. Prominent among these challenges are efforts to understand the role of constitutions as guarantors of rights and constraints on the exercise of power. In the United States, this is evident in conversations about the Fourth Amendment and technology.

The Fourth Amendment provides that: "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized." Since the Supreme Court's pivotal 1967 decision in *Katz* v. *United States*,[2] the Fourth Amendment has been cast as a guarantor of privacy, which suggests that it might have a role to play in normalizing, protecting, and regulating the relationships among us, our technologies, corporations, and government agencies. Specifically, we might imagine the Fourth Amendment protecting us from threats to privacy posed by robots or securing our relationships with robots against threats of interference or exploitation. Unfortunately, doctrinal rules developed by the US Supreme Court have dramatically reduced the capacity of the Fourth Amendment to serve either role. Some of these rules have earned considerable attention, including the public observation doctrine[3] and the third party doctrine.[4] Others have so far avoided close scrutiny.

[2] 389 U.S. 347 (1967) [*Katz* v. *United States*].

[3] Under the public observation doctrine, police may make observations from any place where they lawfully have a right to be without triggering Fourth Amendment regulations. See David Gray, *The Fourth Amendment in an Age of Surveillance* (Cambridge, UK: Cambridge University Press, 2017) [*Age of Surveillance*] at 78–84.

[4] Under the third party doctrine, government agents may acquire from third parties through lawful means information voluntarily shared with those parties without triggering Fourth Amendment protections. See ibid. at 84–89.

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This chapter examines two doctrinal rules in this more obscure category that are particularly salient to robot–human interactions. The first is that privacy is a personal good, limiting standing to bring Fourth Amendment challenges to those who have suffered violations of their personal expectations of privacy. The second is that the Fourth Amendment can only reach the actions of state agents. This chapter will show that neither is required by the text or history of the Fourth Amendment. To the contrary, the text, history, and philosophical lineage of the Fourth Amendment favor a broader understanding of privacy as a public good that "shall be" secure against threats of intrusive surveillance and arbitrary power by both government and private actors, whether human or robotic. This reading should lead us to alter our understanding of a variety of Fourth Amendment doctrines,[5] including rules governing standing and the state agency requirement, thereby enhancing the potential of the Fourth Amendment to play a salutary role in efforts to understand, regulate, and even protect human–robot interactions.

Before turning to that work, it is worth pausing for a moment to wonder whether we would be better off abandoning the Fourth Amendment to these doctrinal rules and focusing instead on legislation or administrative regulation as a means to govern robot–human interactions. There are good reasons to doubt that we would be better off. Legislatures generally, and the US Congress in particular, have failed to take proactive, comprehensive action as new technologies emerge.[6] Instead, this is an area where Congress has tended to follow the courts' lead. A good example is the Wire Tap Act,[7] passed in 1968 right after the Court's landmark decision in *Katz*. Most important, however, is that accepting the degradation of any constitutional right out of deference to the political branches turns constitutional democracy on its head. The whole point of constitutional rights is to guarantee basic protections regardless of legislative sanction or inaction. At any rate, defending constitutional rights does not exclude legislative action. For all of these reasons, we should question the doctrinal rules that seem to limit the scope of constitutional rights rather than accepting them in the hope that legislatures or executive agencies will ride to the rescue.

[5] *Age of Surveillance*, note 3 above, at 190–299.
[6] *United States* v. *Jones*, 565 U.S. 400 (2012) at 429–430 (Alito, J., concurring).
[7] 18 USC §§2510 et seq.

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II Fourth Amendment Standing

Established Fourth Amendment doctrine imagines that privacy is a personal good.[8] This received truth traces back to the Supreme Court's 1967 opinion in *Katz*.[9] Confronted with the unregulated deployment and use of emerging surveillance technologies, including wiretaps and electronic eavesdropping devices, the *Katz* Court adopted a novel definition of "search" as a violation of a subjectively manifested "expectation of privacy … that society is prepared to recognize as 'reasonable.'"[10] Applying this definition, the *Katz* Court held that eavesdropping on telephone conversations is a "search," and therefore subject to Fourth Amendment regulation.

Once hailed as progressive, *Katz*'s revolutionary potential has been dramatically limited by its assumption that privacy is a personal good.[11] This point is manifested most clearly in the Court's decisions governing Fourth Amendment "standing." "Standing" is a constitutional rule limiting the jurisdiction of US courts. To avail themselves of a court's jurisdiction, Article III, section 2, of the US Constitution requires litigants to show that they have suffered a legally cognizable injury caused by the opposing party, and that the court can provide relief. Fourth Amendment standing shares a conceptual kinship with Article III standing, but is neither jurisdictional nor compelled by the text. It is, instead, derivative of the assumption in *Katz* that privacy is a personal good. Thus, a litigant must establish that his "own Fourth Amendment rights [were] infringed by the search and seizure which he seeks to challenge."[12]

Fourth Amendment standing doctrine hamstrings efforts to challenge overreaching and even illegal conduct. Consider *United States* v. *Payner*.[13] There, Internal Revenue Service (IRS) agents suspected that taxpayers were using a Bahamian bank to hide income and avoid paying federal taxes. Unable to confirm those suspicions, agents decided to steal records from Michael Wolstencroft, a bank employee. To facilitate their plan, agents hired private investigators Norman Casper and

[8] *Alderman* v. *United States*, 394 U.S. 165 (1969) at 174 ("Fourth Amendment rights are personal rights").
[9] Ibid. (citing *Katz* v. *United States*).
[10] *Katz* v. *United States*, note 2 above, at 361 (Harlan, J., concurring).
[11] *Katz* v. *United States*, note 2 above, at 350 ("[The Fourth] Amendment protects individual privacy against certain kinds of governmental intrusion.…"). This assumption underwrites both the third-party and public observation doctrines.
[12] *Rakas* v. *Illinois*, 439 U.S. 128 (1978) at 133.
[13] 447 U.S. 727 (1980) [*United States* v. *Payner* (1980)].

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Sybol Kennedy. Kennedy established a relationship with Wolstencroft and arranged to go to dinner with him.[14] During their dinner date, Wolstencroft left his briefcase in Kennedy's apartment. Casper retrieved the briefcase and delivered it to IRS agent Richard Jaffe. Caspar and Jaffe broke into the briefcase and copied its contents, including hundreds of pages of bank documents. They then replaced the documents, relocked the briefcase, and returned it to Kennedy's apartment. This fantastic criminal conspiracy was carried out with the full knowledge and approval of supervisory agents at the IRS.

Among the stolen documents were records showing that Payner used Wolstencroft's bank to hide income. Based on this evidence, Payner was charged with filing a false tax return. At trial, he objected to the introduction of the stolen documents on the grounds that they were the fruits of a conspiracy to violate the Fourth Amendment. District Judge John Manos granted Payner's motion and condemned the government's actions as "outrageous."[15] In an effort to deter similar misconduct in the future, Judge Manos suppressed the stolen documents, concluding that "[i]t is imperative to signal all likeminded individuals that purposeful criminal acts on behalf of the Government will not be tolerated in this country and that such acts shall never be allowed to bear fruit."[16] The government appealed to the Supreme Court.

Writing for the Court in *Payner*, Justice Lewis Powell acknowledged that the government intentionally engaged in illegal activity and did so on the assumption that it would not be held accountable. He also agreed that: "No court should condone the unconstitutional and possibly criminal behavior of those who planned and executed this 'briefcase caper.'"[17] Nevertheless, Justice Powell held that Payner could not challenge the government's illegal conduct because Payner's personal "expectation of privacy" was not violated. The briefcase belonged to Wolstencroft. The documents belonged to the bank. Payner had no personal privacy interest in either. He therefore did not have "standing" to challenge the government's illegal actions.

Payner shows how treating privacy as a personal good prevents many criminal litigants from challenging illegal searches and seizures. That may seem defensible in the context of a criminal case, where demonstrably

[14] *United States* v. *Payner*, 434 F. Supp. 113 (1977) at 119–121.
[15] Ibid., at 130–131.
[16] Ibid.
[17] *United States* v. *Payner* (1980), note 13 above, at 733.

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guilty defendants seek to avoid responsibility by suppressing reliable evidence. But what about public-minded civil actions? Consistent with its English heritage, US law allows for civil actions seeking equitable relief in the form of declaratory judgments and injunctions. Given the different interests at stake in this context, and the decidedly public orientation of these actions, one might expect to see a more expansive approach to questions of standing when litigants bring Fourth Amendment suits designed to benefit "the people" by challenging the constitutionality of search and seizure practices and demanding reform. Unfortunately, doctrinal rules governing Fourth Amendment standing make it nearly impossible to pursue declaratory or injunctive relief in most circumstances.[18] The culprit, again, is the assumption that privacy is a personal good. *Los Angeles* v. *Lyons*[19] offers a vivid example.

Adolph Lyons sued the Los Angeles Police Department (LAPD) and the City of Los Angeles after officers put him in a chokehold during a traffic stop. The chokehold was applied with such intensity that Lyons lost consciousness and suffered damage to his larynx. Given that he was the person assaulted, Lyons clearly had standing to bring a civil action alleging violations of his Fourth Amendment rights. To his credit, however, Lyons was interested in more than personal compensation. He wanted to use his suit to compel the LAPD to modify its practices, policies, and training on the use of force. Those remedies would have benefited not just Lyons, but also the people of Los Angeles and the United States generally, enhancing the people's collective security against unreasonable seizures. Unfortunately, the Court dismissed these equitable claims on the grounds that Lyons did not have standing.

In order to demonstrate standing to pursue injunctive relief, the Court held, Lyons would need to "establish a real and immediate threat that he would again be stopped for [a] traffic violation, or for any other offense, by an officer or officers who would illegally choke him into unconsciousness without any provocation or resistance on his part."[20] That is a virtually insurmountable burden, but it is entirely consistent with the Court's assumption that privacy and Fourth Amendment rights are personal goods. No matter how public-minded he might be, or how important the legal questions presented, Lyons could not

[18] See Jennifer E. Laurin, "Trawling for Herring: Lessons in Doctrinal Borrowing and Convergence" (2011) 111:3 *Columbia Law Review* 670.
[19] 461 U.S. 95 (1983).
[20] Ibid. at 105.

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pursue judicial review of LAPD chokehold practices because he could not establish that his personal Fourth Amendment rights were in certain and immediate danger. It did not matter that the LAPD was still engaging in a pattern and practice of using dangerous, unjustified chokeholds, jeopardizing the Fourth Amendment rights of the people of Los Angeles as a whole. Those practices, and the threats they posed, did not violate Lyons' personal interests, so he was powerless to demand change.

Both the assumption that privacy is a personal good and the derivative rules governing Fourth Amendment standing have consequences for robot–human interactions. For example, they can be deployed to insulate from judicial review the kinds of electronic data-gathering that are essential for robotic actors and easily conducted by robots. A ready example is *Clapper* v. *Amnesty International*.[21] There, a group of attorneys, journalists, and activists challenged the constitutionality of a provision of the FISA Amendments Act, 50 USC §1881a, granting broad authority for government agents to surveil the communications of non-US persons located abroad. The plaintiffs argued that this authority imperiled their abilities to maintain the confidence of their sources and clients, compromising their important work. While admitting that plaintiffs' concerns were theoretically valid, the Supreme Court held that they did not have standing to challenge the law precisely because their fears were theoretical. In order to establish standing, the plaintiffs needed to demonstrate that their communications had actually been intercepted or were certain to be intercepted pursuant to authority granted by §1881a. As a result, the authority granted by §1881a remained in place, condemning "the people," individually and collectively, to a state of persistent insecurity in their electronic communications against both human and robot actors.

Courts have also wielded rules governing Fourth Amendment standing to limit the ability of service providers to protect their customers' privacy interests. For example, in *California Bankers Association* v. *Shultz*, the Supreme Court concluded that banks do not have standing to raise Fourth Amendment claims on their customers' behalf when contesting a subpoena for financial records.[22] In *Ellwest Stereo Theaters, Inc.* v. *Wenner*, the Ninth Circuit Court of Appeals held that an adult entertainment operator had "no standing to assert the fourth amendment

[21] 568 U.S. 398 (2013).
[22] 416 U.S. 21 (1974).

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rights of his customers."[23] In a 2012 case where investigators subpoenaed Twitter for messages posted by political protestors along with location data, a New York trial court decided that Twitter did not have standing to object on Fourth Amendment grounds.[24] In 2017, a federal court in Seattle found that Microsoft Corporation did not have Fourth Amendment standing to challenge the gag order provisions of 18 USC §2705(b), which the government routinely invoked when compelling providers of data, internet, and communication services to disclose information relating to their customers.[25]

We are likely to see more of these kinds of decisions in coming years as courts continue to wrestle with new and emerging technologies. Consider, as an example, Amazon's Ring.

Ring is an internet-connected doorbell equipped with cameras, microphones, and speakers that allows owners to monitor activity around their front doors through a smartphone, tablet, or computer, whether they are inside their homes or in another time zone. Ring is capable of coordinating with other smart devices to provide users with access and control over many aspects of their home environments. There is also a Ring device for automobiles. Although Ring does not make independent intelligent choices or perform tasks based on environmental stimuli, it represents the kinds of technologies that inhabit the IoT, which includes a rapidly rising population of robots. Some of these robots gather stimuli directly through their onboard sensors. Others draw on sensorial inputs from other devices, such as Ring. Either way, devices like Ring represent a critical point of engagement for robots and humans as we grant intimate access to our lives and the world outside our front doors in order to obtain the convenience and benefits of robotic collaborators. As recent experiences with Ring show, that access is ripe for exploitation.

In August 2019, journalists revealed that Amazon had coordinated with hundreds of law enforcement agencies to allow them access to

[23] 681 F.3d 1243 (1982) at 1248.

[24] *People* v. *Harris*, 945 N.Y.S.2d 505 (NY Crim. Ct. 2012); Megan Guess, "Twitter Hands over Sealed Occupy Wall Street Protestor's Tweets," *Ars Technica* (September 14, 2012), https://arstechnica.com/tech-policy/2012/09/twitter-hands-over-occupy-wall-street-protesters-tweets/.

[25] *Microsoft Corp*. v. *United States Dep't of Justice*, No. C16-0538JLR (W. Dist. Wash., Feb. 8, 2017), slip opinion at 39–45. Microsoft ultimately settled with the Department of Justice; US, Office of the Deputy Attorney General, Policy Regarding Applications for Protective Orders Pursuant to 18 USC §2705(b) (Washington, DC: US Department of Justice, October 19, 2017), www.documentcloud.org/documents/4116081-Policy-Regarding-Applications-for-Protective.html.

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video images and other information gathered by Ring without seeking or securing a court order or the explicit permission of owners.[26] It is hard to imagine a starker threat to the security of the people guaranteed by the Fourth Amendment than a program granting law enforcement access to our home environments. But who has standing to challenge this program? Criminals prosecuted using evidence from a Ring doorbell do not. That is the lesson from *Payner*. Owners of Ring doorbells do not, unless they can show that their personal devices have been exploited. That is the lesson from *Clapper*. But even a Ring owner who can show that her device was exploited cannot challenge the program writ large or demand programmatic reform. That is the lesson from *Lyons*. As a result, the Fourth Amendment appears to be functionally powerless, both to protect these sites of human–robot interaction,[27] and to protect the public from robotic exploitation via these kinds of devices and the data they generate. As an example of technologies in this latter category, consider facial recognition, which is capable of conducting the kinds of independent analysis once the sole province of carbon-based agents.[28]

Rules governing Fourth Amendment standing are not the only culprits in the apparent inability of the Fourth Amendment to regulate robot–human interactions. As the next section shows, the state agency requirement also limits the role of the Fourth Amendment in protecting and regulating many robot–human interactions.

III The State Agency Requirement

Conventional doctrine holds that the Fourth Amendment binds state agents, not private actors.[29] This state agency requirement limits the capacity of the Fourth Amendment to regulate and protect many human–robot interactions. Justice Samuel Alito recently explained why:

[26] Kim Lyons, "Amazon's Ring Now Reportedly Partners with More than 2,000 US Police and Fire Departments," *The Verge* (January 31, 2021), www.theverge.com/2021/1/31/22258856/amazon-ring-partners-police-fire-security-privacy-cameras.

[27] For an in-depth discussion of government access to information shared with robots, see Chapter 8 in this volume.

[28] See David Gray, "Bertillonage in an Age of Surveillance: Fourth Amendment Regulation of Facial Recognition Technologies" (2021) 24:1 *SMU Science and Technology Law Review* 3; for a considered discussion of evidentiary issues relating to robot-generated evidence, see Chapters 7, 9, and 10 in this volume.

[29] *Burdeau* v. *McDowell*, 256 U.S. 465 (1921) at 475.

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> The Fourth Amendment restricts the conduct of the Federal Government and the States; it does not apply to private actors. But today, some of the greatest threats to individual privacy may come from powerful private companies that collect and sometimes misuse vast quantities of data about the lives of ordinary Americans.[30]

Many, if not most, of the robot–human interactions that challenge our conceptions of privacy, fracture social norms, destabilize our institutions, and that will most likely play central roles in our lives, are produced, deployed, and controlled by private companies. Smart speakers and other IoT devices, wearable technologies, and the myriad software applications that animate phones, tablets, and televisions are all operated by private enterprises. Some of these corporations have more immediate effects on our lives than government entities, and pose greater threats to our privacy, autonomy, and democratic institutions than government entities, but they stand immune from constitutional constraint because they are not state agents. As a consequence, the Fourth Amendment appears unable "to protect [the public] from this looming threat to their privacy."[31]

Here again, Ring provides a good example. Ring is part of a larger ecosystem of connected devices designed, sold, and supported by Amazon. In addition to Ring, many folks have other Amazon products in their homes, including Alexa-enabled devices, which are equipped with microphones and voice recognition technologies. These devices allow users to play music, operate televisions, order goods and services, make phone calls, and even adjust the lighting using voice commands. This ecosystem is increasingly open to devices capable of making independent choices. These are all wonderful human–robot interactions, but they come with the cost of allowing Amazon and its affiliates access to our homes and lives. By virtue of the state agency requirement, that relationship stands outside of Fourth Amendment regulation. Amazon, directly or through its robot intermediaries, is at liberty to threaten the security of the people in their persons and homes without fear of constitutional constraint so long as they do not directly coordinate with government agencies.

Must it be this way? Or does the Fourth Amendment have more to say about robot–human interactions than is suggested by rules governing standing and the state agency requirement? As the next sections argue, the text and history of the Fourth Amendment suggest that it does.

[30] *Carpenter* v. *United States*, 138 S.Ct. 2206 (2018) [*Carpenter* v. *United States*] at 2261 (Alito, J., dissenting).
[31] Ibid. at 2261.

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IV Challenging Fourth Amendment Standing

The Fourth Amendment undeniably protects collective interests and recognizes that privacy is a public rather than an exclusively private good. That is evident in the text, which uses the phrase "the people" instead of "persons."[32] This choice was deliberate.[33] Those who drafted the Fourth Amendment had competing models to choose from, as represented in various state constitutions, some of which employed "persons"[34] and others "the people."[35] The drafters demonstrated awareness of these alternatives by guaranteeing Fifth Amendment protections to "persons"[36] and Sixth Amendment rights to "the accused."[37] By choosing "the people," the First Congress aligned the Fourth Amendment with political rights protected elsewhere in the Constitution,[38] such as the First Amendment right to assemble and petition the government[39] and the Article I right of the people to elect their representatives.[40] That makes sense in light of contemporaneous experiences with general warrants and writs of assistance, which showed how search and seizure powers could be weaponized to silence political speech. As we shall see, those cases contributed to founding-era concerns that general warrants and writs of assistance threatened the collective security of the people, not just those who were actually the subject of searches and seizures, because the very existence of broad, indiscriminate licenses to search and seize threatened the security of the people as a whole.[41]

[32] See David Gray, "Dangerous Dicta" (2015) 72 *Washington & Lee Law Review* 1181 (explaining why dicta in *District of Columbia* v. *Heller*, 554 U.S. 570 (2008) at 580, n. 6, suggesting that Fourth Amendment rights are individual rather than collective finds no support in the text or history of the Fourth Amendment).

[33] *Age of Surveillance*, note 3 above, at 149.

[34] Massachusetts Constitution, US, Declaration of Rights (1780), Art. XIV.

[35] Pennsylvania Constitution, US, Declaration of Rights (1776), Art. X.

[36] US Constitution, Fifth Amendment.

[37] US Constitution, Sixth Amendment.

[38] *Age of Surveillance*, note 3 above, at 150–154.

[39] US Constitution, First Amendment.

[40] US Constitution, Art. I.

[41] *Wilkes* v. *Wood*, 8 Eng. Rep. 489 (CP 1763) [*Wilkes* v. *Wood*] at 498 ("discretionary power … to search wherever their suspicions may chance to fall … certainly may affect the person and property of every man in this kingdom, and is totally subversive of the liberty of the subject"); *Entick* v. *Carrington*, 95 Eng. Rep. 807 (KB 1765) [*Entick* v. *Carrington*] at 817 ("[W]e can safely say there is no law in this country to justify the defendants in what they have done; if there was, it would destroy all the comforts of society …"). For an extended defense of this reading of the Fourth Amendment, see *Age of Surveillance*, note 3 above, at 134–172.

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The text of the Fourth Amendment reflects founding-era understandings that security against arbitrary searches and seizures was an essential feature of democratic society. The founders understood how searches and seizures could be used to oppress thought and speech. But they also understood the idea, well-established since the time of the ancients, that security in our persons, houses, papers, and effects is essential to processes of ethical, moral, and intellectual development, which in turn are essential to the formation and sustenance of citizens capable of performing the duties of democratic government.[42] This is privacy as a public good. The Fourth Amendment guarantees that public good by securing space for liberty, autonomy, civil society, and democracy against threats of oppressive scrutiny.

The Supreme Court is not completely blind to the collective interests at stake in the Fourth Amendment. Consider, as an example, its exclusionary rule jurisprudence. Most Fourth Amendment claims arise in the context of criminal trials where the remedy sought is exclusion of illegally seized evidence.[43] The idea that illegally seized evidence should be excluded at trial is not derived from the text or history of the Fourth Amendment.[44] In fact, nineteenth-century jurists rejected the idea.[45] The exclusionary rule is, instead, a prudential doctrine justified solely by its capacity to prevent Fourth Amendment violations[46] by deterring police officers from violating the Fourth Amendment in the future.[47] Although illegal evidence is excluded in the cases of particular defendants, there is no individual right to exclude evidence seized in violation of the Fourth Amendment.[48] To the contrary, the Court has made clear that admitting

[42] Elvin T. Lim, "The Federalist Provenance of the Principle of Privacy" (2015) 75:1 *Maryland Law Review* 415 at 419, 425–428.

[43] Richard Myers, "Fourth Amendment Small Claims Court" (2013) 10 *Ohio State Journal of Criminal Law* 567 at 584.

[44] *United States* v. *Leon*, 468 U.S. 897 (1984) [*United States* v. *Leon*] at 906.

[45] See e.g. *United States* v. *La Jeune Eugenie*, 26 F. Cas. 832 (CCD Mass. 1822) at 843–844 ("In the ordinary administration of municipal law the right of using evidence does not depend, nor, as far as I have any recollection, has ever been supposed to depend upon the lawfulness or unlawfulness of the mode, by which it is obtained"); *Commonwealth* v. *Dana*, 43 Mass. (2 Met.) 329 (1841) at 337 ("If the search warrant were illegal, or if the officer serving the warrant exceeded his authority … this is no good reason for excluding the papers seized as evidence …").

[46] *Elkins* v. *United States*, 364 U.S. 206 (1960) at 217; *Age of Surveillance*, note 3 above, at 219–221.

[47] *United States* v. *Calandra*, 414 U.S. 338 (1974) at 348.

[48] *Davis* v. *United States*, 564 U.S. 229 (2011) at 236–237; *Stone* v. *Powell*, 428 U.S. 465 (1976) at 486; *United States* v. *Janis*, 428 U.S. 433 (1976) at 454.

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evidence seized in violation of the Fourth Amendment "works no new Fourth Amendment wrong."[49] In making this prudential case for the exclusionary rule on general deterrence grounds, the Court recognizes that there is more at stake in a particular search or seizure than the personal privacy of a specific person.

The Court's awareness of the collective interests at stake in Fourth Amendment cases is not limited to its exclusionary rule jurisprudence. For example, in *Johnson* v. *United States*, decided in 1948, the Court noted that "[t]he right of officers to thrust themselves into a home is also a grave concern, not only to the individual, but to a society which chooses to dwell in reasonable security and freedom from surveillance."[50] Similarly, in *United States* v. *Di Re*, the Court concluded that "the 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."[51] Of course, these sentiments were issued before *Katz*, which shifted the focus to individual interests.

Importantly, however, *Katz* did not close the door, and there is some evidence that the Supreme Court may be ready to rethink rules governing Fourth Amendment standing in light of new challenges posed by emerging technologies. The strongest evidence comes from the Court's decision in *Carpenter* v. *United States*.[52] There, the Court was asked whether the Fourth Amendment regulates governmental access to cell site location information (CSLI). CSLI has been a boon to law enforcement. It can be used to track suspects' past movements and to establish their proximity to crimes. That is precisely what investigators did in *Carpenter*. Based on information from a co-conspirator, they knew that Carpenter was involved in a string of armed robberies. In order to corroborate that information, they obtained several months of CSLI for Carpenter's phone, establishing his proximity to several robberies. At trial, Carpenter objected to the admission of this evidence on Fourth Amendment grounds.

In light of the Court's views on standing and the state agency requirement, there was good reason to think that the government would prevail. After all, it was Carpenter's cell phone company who, of its own

[49] *United States* v. *Leon*, note 44 above, at 906.
[50] 33 U.S. 10 (1948) [*Johnson* v. *United States*] at 14.
[51] 332 U.S. 581 (1948) at 595.
[52] *Carpenter* v. *United States*, note 30 above.

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accord, tracked his phone and stored his location information. It certainly did not appear to be acting as a state agent. Moreover, the information was recorded in the company's business records. If Payner did not have standing to challenge the search of banking records, then why would Carpenter have standing to challenge the search of cellular service records? Despite these challenges, the Supreme Court held that the "location information obtained from Carpenter's wireless carriers was the product of a search."[53] In doing so, the Court seemed to return to the pre-*Katz* era:

> The "basic purpose of this Amendment," our cases have recognized, "is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials." The Founding generation crafted the Fourth Amendment as a "response to the reviled 'general warrants' and 'writs of assistance' of the colonial era, which allowed British officers to rummage through homes in an unrestrained search for evidence of criminal activity." In fact, as John Adams recalled, the patriot James Otis's 1761 speech condemning writs of assistance was "the first act of opposition to the arbitrary claims of Great Britain" and helped spark the Revolution itself …. [our] analysis is informed by historical understandings "of what was deemed an unreasonable search and seizure when [the Fourth Amendment] was adopted." On this score our cases have recognized some basic guideposts. First, that the Amendment seeks to secure "the privacies of life" against "arbitrary power." Second, and relatedly, that a central aim of the Framers was "to place obstacles in the way of a too permeating police surveillance."[54]

This reasoning marks a potential broadening of the Court's approach to Fourth Amendment questions. Along the way, the Court seemed to recognize the important collective dimensions of the Fourth Amendment.[55]

The majority opinion in *Carpenter* does not directly address the question of Fourth Amendment standing. Nevertheless, Justices Anthony Kennedy and Clarence Thomas make clear that something potentially revolutionary is afoot in their dissenting opinions. For his part, Justice Kennedy reminds us that the Court's precedents "placed necessary limits on the ability of individuals to assert Fourth Amendment interests in property to which they lack a requisite connection."[56] "Fourth Amendment

[53] Ibid. at 2217.
[54] Ibid. at 2213–2214, citations omitted.
[55] David Gray, "Collective Rights and the Fourth Amendment after *Carpenter*" (2019) 79:1 *Maryland Law Review* 66 at 67–85.
[56] *Carpenter* v. *United States*, note 30 above, at 2227 (Kennedy, J., dissenting), citations omitted.

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rights, after all, are personal," he continues, "[t]he Amendment protects '[t]he right of the people to be secure in their … persons, houses, papers, and effects' – not the persons, houses, papers, and effects of others." In the case of the business records at issue in *Carpenter*, Justice Kennedy concluded that they belonged to the cellular service provider "plain and simple." Consequently, Carpenter, like Payner, "could not assert a reasonable expectation of privacy in the records." Justice Thomas was even more pointed in his criticism, lambasting the majority for endorsing the idea that individuals can "have Fourth Amendment rights in someone else's property."[57]

The *Carpenter* majority offers no direct response to these charges, but there are hints consistent with the arguments sounding in the collective rights reading of the Fourth Amendment advanced in this chapter. For example, the Court recognizes that allowing government agents unfettered access to CSLI implicates general, collective interests rather than the specific interests of an individual. As Chief Justice John Roberts, writing for the majority, points out, cellular phones are ubiquitous, to the point that there are more cellular service accounts with US carriers than there are people. Furthermore, most people "compulsively carry cell phones with them all the time … beyond public thoroughfares and into private residences, doctor's offices, political headquarters, and other potentially revealing locales."[58] From these facts, the majority concludes that granting unfettered governmental access to CSLI would facilitate programs of "near perfect surveillance, as if [the Government] had attached an ankle monitor to the phone's user."[59] "Only the few without cell phones could escape this tireless and absolute surveillance."[60] This exhibits a keen awareness that the real party of interest in the case was "the people" as a whole. At stake was "the tracking of not only Carpenter's location but also everyone else's, not for a short period, but for years and years."[61] Denying customers' standing to challenge government access to those records would leave the people insecure against threats of broad and indiscriminate surveillance – exactly the kind of "permeating police surveillance" the Fourth Amendment was designed to prevent.[62]

[57] Ibid. at 2241–2242 (Thomas, J., dissenting).
[58] Ibid. at 2218, citations omitted.
[59] Ibid.
[60] Ibid.
[61] Ibid. at 2219.
[62] Ibid. at 2214.

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Recognizing the collective dimensions of the Fourth Amendment provides good grounds for reconsidering rules governing Fourth Amendment standing. As the founders saw it, any instance of unreasonable search and seizure in essence proposed a rule, and the Fourth Amendment prohibits its endorsement of any rule that threatens the security of the people as a whole.[63] It follows that anyone competent to do so ought to be able to challenge a proposed rule and the practice or policy it recommends. To be sure, a citizen challenging search and seizure practices should be limited in terms of the remedy she can seek. Actions at law seeking compensation should be limited to individuals who have suffered a direct, compensable harm. On the other hand, anyone competent to do so should have standing to bring actions seeking equitable relief in the form of declaratory judgments condemning search and seizure practices or injunctions regulating future conduct. Neither should we require the kind of surety of future personal impact reflected in the Court's decisions in *Lyons* and *Clapper*. The founding generation recognized that the very existence of licenses granting unfettered discretion to search and seize threaten the security of the people as a whole. Why, then, would we not permit a competent representative of "the people" to challenge a statute, policy, or practice that, by its very existence, leaves each of us and all of us to live in fear of unreasonable searches and seizures?

Expanding the scope of Fourth Amendment standing would enhance human–robot interactions by allowing competent persons and groups to challenge efforts to exploit those interactions. It would likewise enhance our security against robotic surveillants. It would allow the activist groups like those who brought suit in *Clapper* to challenge legislation granting broad access to electronic communications and other data sources likely to play a role on robot–human interactions. It would allow technology companies to challenge government demands for the fruits and artifacts of our engagements with technologies. It would also license competent individuals and organizations to seek declaratory and injunctive relief when companies and government agencies exploit our relationships with robots and other technologies or seek to deploy robotic monitors. There is no doubt that this expanded access to the courts would enhance the security, integrity, and value of our interactions with a wide range of technologies that inhabit our daily lives, both directly and indirectly, by increasing pressure on the political branches to act.

[63] David Gray, "The Fourth Amendment Categorical Imperative" (2017) 116 *Michigan Law Review Online* 14 at 31–34.

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V Reconsidering the State Agency Requirement

Contemporary doctrine holds that the Fourth Amendment applies only to state agents, and primarily the police. A closer look at the text and history of the Fourth Amendment suggests that it is not, and was not conceived to be, so narrow in scope.

To start, there is the simple fact that the police as we know them today did not exist in eighteenth-century America. That was not for lack of models or imagination. By the late eighteenth century, uniformed, paramilitary law enforcement agencies with general authority to investigate crimes were familiar in continental Europe. But England had rejected efforts to adopt that model, at least in part because members of the nobility feared privacy intrusions by civil servants. When Sir Robert Peel was able to pass the Metropolitan Police Act in 1829, establishing the Metropolitan Police Force, the "Peelers" (later "Bobbies") were limited to maintaining the peace and did not have authority to investigate crimes. America was a decade behind England, with police forces making their first appearances in Boston (1838) and New York (1845). It was not until the late nineteenth century that professionalized, paramilitary police forces with full authority to investigate crime became a familiar feature of American society. By then, the Fourth Amendment was a venerable centenarian.

By dint of this historical fact, we know that the Fourth Amendment was not drafted or adopted with police officers as its sole or even primary antagonists. The text reflects this, making no mention of government agents of any stripe. Who then, was its target? The historical record suggests that it was overstepping civil functionaries, including constables, administrative officials, tax collectors, and their agents, as well as private persons. This is evidenced by the complicated role of warrants in eighteenth-century common law.

Contemporary Fourth Amendment wisdom holds that the warrant requirement plays a critical prospective remedial role, guarding the security of citizens against threats of unreasonable search and seizure by interposing detached and neutral magistrates between citizens and law enforcement.[64] Among others, Laura Donohue has made a persuasive case that the "unreasonable searches" targeted by the Fourth Amendment were searches conducted in the absence of a warrant conforming to the probable cause, particularity, oath, and return

[64] *Johnson* v. *United States*, note 50, at 13–14.

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requirements described in the warrant clause.[65] But, as Akhil Amar has pointed out, the eighteenth-century history of warrants is somewhat more complicated.[66] Some of those complications highlight the role of private persons in conducting searches and seizures.

In a world before professional, paramilitary police forces, private individuals bore significant law enforcement responsibilities. In his commentaries, Blackstone recognized the right of private persons to effect arrests on their own initiative or in response to a hue and cry.[67] Searches and seizures in support of criminal investigations often were initiated by civilians who might go to a justice of the peace to swear-out a complaint against a suspected thief or assailant.[68] So, too, a plaintiff in a civil action could swear-out a warrant to detain a potential defendant.[69] A justice of the peace would, in turn, exercise his authority through functionaries, such as constables, who, as William Stuntz has noted, were "more like private citizens than like a modern-day police officer,"[70] or even civilian complainants themselves, by issuing a warrant authorizing those persons to conduct a search or seizure.[71] These private actors could conduct

[65] Laura K. Donohue, "Original Fourth Amendment" (2016) 83:3 *University of Chicago Law Review* 1181; Laura K. Donohue, "The Fourth Amendment in a Digital World" (2017) 71:4 *NYU Annual Survey of American Law* 553.

[66] Akhil Reed Amar, *The Constitution and Criminal Procedure: First Principles* (London, UK: Yale University Press, 1998) [*Constitution and Criminal Procedure*] at 3–20.

[67] William Blackstone, *Commentaries on the Laws of England: A Facsimile of the First Edition of 1765–1769*, vol. 4 (Chicago, IL: University of Chicago Press, 1979) at 286–290.

[68] *Constitution and Criminal Procedure*, note 66 above, at 12; William Stuntz, "The Substantive Origins of the Fourth Amendment" (1995) 105:2 *Yale Law Journal* 393 ["Substantive Origins"] at 401. See also James Otis, "In Opposition to Writs of Assistance" in William Jennings Bryan (ed.), *The World's Famous Orations* (New York, NY: Funk & Wagnalls, 1906) 27 ["In Opposition"] at 29 (describing common law cases "in which the complainant has before sworn that he suspects his goods are concealed" providing grounds for "warrants to search such and such houses, specially named").

[69] *Bell* v. *Clapp*, 10 Johns R. 263 (NY 1813) at 269; *Grumon* v. *Raymond*, 1 Conn. 40 (1814) [*Grumon* v. *Raymond*] at 44 (reporting on *Smith* v. *Bouchier*, 2 Stra. 993, in which "[t]he question arose upon a custom, that a plaintiff making oath that he has a personal action against any person with the precinct, and that he believes the defendant will not appear, but run away, the judge may award a warrant to arrest him, and detain him until the security is given for answering the complaint").

[70] "Substantive Origins", note 68 above, at 401, n 36.

[71] *Grumon* v. *Raymond*, note 69 above, at 45 (noting that in searches for stolen goods, "[t]here must be an oath by the applicant that he has had his goods stolen, and strongly suspects that they are concealed in such a place …"); *Entick* v. *Carrington*, note 41 above, at 817 (describing then-familiar cases of searches for stolen goods, in which "case the justice and the informer must proceed with great caution; there must be an oath that the party has had his good stolen, and his strong reason to believe they are concealed in such a place …").

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searches purely on their own authority as well, but in doing so would risk exposing themselves to claims in trespass.[72] Warrants provided immunity against these actions.

Searches and seizures performed by minor functionaries and civilians raised significant concerns in eighteenth-century England because they threatened established social hierarchies by licensing civil servants to invade the privacy of the nobility. Those same worries underwrote resistance to professional police forces and founding-era critiques of general warrants and writs of assistance.[73] Unlike the particularized warrants issued by judicial officers based on probable cause imagined in the warrant clause, general warrants and writs of assistance provided broad, unfettered authority for bearers to search wherever they wanted, for whatever reason, with complete immunity from civil liability. These instruments were reviled by our eighteenth-century forebears because they invited arbitrary abuses of power.[74] But those threats did not come exclusively from agents of the state or only in the context of criminal actions. To the contrary, one of the most pernicious qualities of general warrants and writs of assistance was that they allowed for the delegation of search and seizure authority to minor functionaries and private persons. This is evident in the signal eighteenth-century cases challenging general warrants and writs of assistance.

The philosophical lineage of the Fourth Amendment traces to three eighteenth-century cases involving general warrants and writs of assistance that "were not only well known to the men who wrote and ratified the Bill of Rights, but famous through the colonial population."[75]

[72] *Entick* v. *Carrington*, note 41 above, at 817 (the common law "holds the property of every man so sacred, that no man can set his foot upon his neighbor's close without his leave; if he does he is a trespasser, though he does no damage at all; if he will tread upon his neighbor's ground, he must justify it by law").

[73] *Wilkes* v. *Wood*, note 41 above, at 497 (noting that Wood, a secretary to Secretary of State Lord Halifax, was "the prime actor in the whole affair"); William Cuddihy, *The Fourth Amendment: Origins and Original Meaning* (Oxford, UK: Oxford University Press, 2009) [*Origins and Original Meaning*] at 439–440 and 446–452 (discussing the conditions that led to the General Warrant cases and the British rejection of general warrants).

[74] *Entick* v. *Carrington*, note 41 above, at 817 ("we can safely say there is no law in this country to justify the defendants in what they have done; if there was, it would destroy all the comforts of society").

[75] "Substantive Origins", note 68 above, at 396–397. See also *Origins and Original Meaning*, note 73 above, at 39–87; Telford Taylor, *Two Studies in Constitutional Interpretation* (Columbus, OH: Ohio State University Press, 1969) at 24–44; Nelson B. Lasson, *The History and Development of the Fourth Amendment to the United States Constitution*

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The first two, *Wilkes* v. *Wood*[76] and *Entick* v. *Carrington*,[77] dealt with efforts to persecute English pamphleteers responsible for writing and printing publications critical of King George III and his policies. In support of cynical efforts to silence these critics, one of the king's secretaries of state, Lord Halifax, issued general warrants licensing his "messengers" to search homes and businesses and to seize private papers. After their premises were searched and their papers seized, Wilkes and Entick sued Halifax and his agents in trespass, winning large jury awards. The defendants claimed immunity, citing the general warrants issued by Halifax. In several sweeping decisions written in soaring prose, Chief Judge Pratt – later Lord Camden – rejected those efforts, holding that general warrants were contrary to the common law.[78]

The third case providing historical grounding for the Fourth Amendment is *Paxton's Case*.[79] This was one among a group of suits brought by colonial merchants challenging the use of writs of assistance to enforce British customs laws in the American colonies. The colonists were ably represented by former Advocate General of the Admiralty James Otis, who left his post in protest when asked to defend writs of assistance. In an hours-long oration, Otis condemned writs of assistance as "the worst instrument of arbitrary power, the most destructive of English liberty and the fundamental principles of law that ever was found in an English law book."[80] He ultimately lost the case; but colonial fury over the abuse of search and seizure powers played a critical role in fomenting the American Revolution.[81]

(Baltimore, MD: Johns Hopkins University Press, 1937) at 13–78; Tracey Maclin, "The Central Meaning of the Fourth Amendment" (1993) 35:1 *William & Mary Law Review* 197 at 223–228. But see *Constitution and Criminal Procedure*, note 66 above, at 11 (allowing that the general warrants cases were "familiar to every schoolboy in America," but contending that the writs of assistance case was "almost unnoticed in debates over the federal Constitution and Bill of Rights").

[76] *Wilkes* v. *Wood*, note 41 above.

[77] *Entick* v. *Carrington*, note 41 above.

[78] *Wilkes* v. *Wood*, note 41 above, at 498; *Entick* v. *Carrington*, note 41 above, at 817.

[79] "In Opposition", note 68 above, at 27–37.

[80] Ibid. at 28.

[81] Mark Graber, "Seeing, Seizing, and Searching Like a State: Constitutional Developments from the Seventeenth Century to the End of the Nineteenth Century" in David Gray & Stephen Henderson (eds.), *The Cambridge Handbook of Surveillance Law* (Cambridge, UK: Cambridge University Press, 2017) 395 ["Seeing, Seizing, and Searching"] at 405–407.

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Outrage over general warrants and writs of assistance was evident during the American constitutional movement.[82] Courts condemned them;[83] state constitutions banned them,[84] and states cited the absence of a federal prohibition on general warrants as grounds for reservation during the ratification debates.[85] In order to quiet these concerns, proponents of the Constitution agreed that the First Congress would draft and pass an amendment guaranteeing security from threats posed by unfettered search and seizure powers. The Fourth Amendment fulfills that promise.

All of this goes to show that we can look to founding-era experiences with, and objections to, general warrants and writs of assistance to inform our understandings of the Fourth Amendment. That record shows that the Fourth Amendment should not be read as applying exclusively to government officials. In their critiques of general warrants and writs of assistance, founding-era courts and commentators often highlighted the fact that they provided for the delegation of search and seizure powers to civilian functionaries. For example, the court in *Wilkes* argued that: "If such a power [to issue general warrants] is truly invested in a secretary of state, and he can delegate this power, it certainly may affect the person and property of every main this kingdom, and is totally subversive of the liberty of the subject."[86] James Otis railed that "by this writ [of assistance], not only deputies, etc., but even their menial servants, are allowed to lord it over us."[87] "It is a power," he continued, "that places the liberty of every

[82] See "Seeing, Seizing, and Searching", note 81 above, at 405–407; Bernard Bailyn, *The Ideological Origins of the American Revolution* (Cambridge, MA: Harvard University Press, 1967) at 117.

[83] *Frisbie* v. *Butler*, 1 Kirby 213 (Conn. 1787); *Grumon* v. *Raymond*, note 69 above, at 42–44 ("a warrant to search all suspected places, stores, shops and barns in [town]" because the discretion granted the officers "would open a door for the gratification of the most malignant passions").

[84] Massachusetts Constitution, US, Declaration of Rights (1780), Art. XIV; Vermont Constitution, US, Declaration of Rights (1786), Art. XII; New Hampshire Constitution, US, Bill of Rights (1784), Art. XIX; North Carolina Constitution, US, Declaration of Rights (1776), Art. XI; Maryland Constitution, US, Declaration of Rights (1776), Art. XXIII; Pennsylvania Constitution, US, Declaration of Rights (1776), Art. X; Delaware Constitution, US, Declaration of Rights (1776), Art. XVII; Virginia Constitution, US, Declaration of Rights (1776), Art. X.

[85] Department of State, *Documentary History of the Constitution of the United States of America* (Washington, DC: Department of State, 1894) at 193, 268, and 379 (reproducing reservations filed by New York, North Carolina, and Virginia).

[86] *Wilkes* v. *Wood*, note 41 above, at 498.

[87] "In Opposition", note 68 above, at 30–32.

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man in the hands of every petty officer." "What is this," he lamented, "but to have the curse of Canaan with a witness on us; to be the servant of servants, the most despicable of God's creation?" The extent of that servitude, he explained, was virtually without limit, so that "Customhouse officers [and] [t]heir menial servants may enter, may break locks, bars, and everything in their way; and whether they break through malice or revenge, no man, no court, can inquire." Because a writ of assistance "is directed to every subject in the king's dominions," he concluded: "Everyone with this writ, may be a tyrant."

To be sure, many of the antagonists in these cases were state agents, if only of minor rank, or were acting at the direction of state agents. But the existence of general warrants and writs of assistance allowed both private citizens and government officials to threaten home and hearth. Otis explained why in his oration, quoting language common to writs of assistance that allowed "any person or persons authorized,"[88] including "all officers and Subjects," to conduct searches and seizures.[89] That inclusion of "persons" and "Subjects" reflected the fact that writs of assistance and general warrants were issued not just in cases of customs and tax enforcement, but also to assist private litigants in civil actions[90] or even to vindicate private animosities. Otis explained the consequences: "What a scene does this open! Every man prompted by revenge, ill humor, or wantonness, to inspect the inside of his neighbor's house, may get a writ of assistance. Others will ask it from self-defense; one arbitrary exertion will provoke another, until society be involved in tumult and blood."[91]

Anticipating a charge of dramatization, Otis offered this anecdote:[92]

> This wanton exercise of this power is not a chimerical suggestion of a heated brain. I will mention some facts. [Mr. Ware] had one of these writs … Mr. Justice Walley had called this same Mr. Ware before him, by a constable, to answer for a breach of the Sabbath-day Acts, or that of profane swearing. As soon as he had finished, Mr. Ware asked him if he had done. He replied, "Yes." "Well then," said Mr. Ware, "I will show you a

[88] Ibid. at 32.

[89] Philip B. Kurland & Ralph Lerner (eds.), *The Founders' Constitution*, 5th ed. (Chicago, IL: University of Chicago Press, 2000) at 226 (quoting from the text of the writ at issue in *Paxton*).

[90] Ibid. (noting "writs [of assistance] issued by King Edward I. to the Barons of the Exchequer, commanding them to aid a particular creditor to obtain a preference over other creditors …").

[91] "In Opposition", note 68 above, at 32.

[92] Ibid.

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> little of my power. I command you to permit me to search your house for uncustomed goods" – and went on to search the house from the garret to the cellar; and then served the constable in the same manner!

So, at the heart of this speech marking the birth of the American Revolution, we see Otis decrying general warrants and writs of assistance because they protected private lawlessness. That is hard to square with the contemporary state agency requirement.

The facts in *Wilkes* and *Entick* provide additional evidence of the potential for general warrants and writs of assistance to vindicate private interests and facilitate abuses of power. The searches in these cases aimed to discover evidence of libel against the king. In fact, the court in *Entick* characterized the effort as "the first instance of an attempt to prove a modern practice of a private office to make and execute warrants to enter a man's house, search for and take away all his books and paper in the first instance …."[93] The *Entick* Court went on to suggest that allowing for the issuance of general warrants in search of libels would pose a threat to the security of everyone in their homes because simple possession of potentially libelous publications was so common.[94]

So, neither the text nor history of the Fourth Amendment appear to support a state agency requirement, at least not in its current form. That is evidenced by the fact that a strict state agency requirement appears to exclude from Fourth Amendment regulation some of the searches and seizures cited as *bêtes noires* in the general warrants and writs of assistance cases. Certainly, nothing in the text suggests that state agents are the only ones capable of threatening the security of the people against unreasonable searches and seizures. Moreover, eighteenth-century criticisms of search and seizure powers indicate that the founding generation was concerned about arbitrary searches performed by a range of actors. Given that history, there is good reason to conclude that the Fourth Amendment governs the conduct of private entities to the extent they pose a threat to collective interests, including privacy as a public good. Fortunately, the Court appears to be developing some new sympathies that line up with these ancient truths.

[93] *Entick* v. *Carrington*, note 41 above, at 818.

[94] One might object to this historical analysis citing *Shelley* v. *Kraemer*, 334 U.S. 1 (1948), the landmark case prohibiting judicial enforcement of racially restrictive covenants, as grounds for concluding that private agents acting in the shadow of judicial sanction are state agents. Of course, that conclusion does not follow. As the Court noted in *Shelley* v. *Kraemer*, its holding bore on the "judicial enforcement of [racially restrictive covenants]," not the validity "of the private agreements as such."

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In addition to sparking a potential revolution in the rules governing Fourth Amendment standing, the *Carpenter* Court also appears to have introduced some complications to the state agency requirement. To start, the Court is never clear about when, exactly, the search occurred in *Carpenter* and who did it. At one point, the Court states that the "Government's acquisition of the cell-site records was a search within the meaning of the Fourth Amendment."[95] That would be in keeping with the state agency requirement. Elsewhere, the Court holds that the "location information obtained from Carpenter's wireless carriers was the product of a search,"[96] suggesting that his cellular service provider performed the search when it gathered, aggregated, and stored the CSLI. That is intriguing in the present context.

The *Carpenter* Court does not explain its suggestion that cellular service providers engage in a "search" for purposes of the Fourth Amendment when they create CSLI records. This is an omission that Justice Alito, writing in dissent, finds worrisome, pointing out that: "The Fourth Amendment … does not apply to private actors." Again, the Court offers no direct response, which may leave us to wonder whether its suggestion that gathering CSLI is a search was a slip of the pen. There are good reasons for thinking this is not the case. Foremost, *Carpenter* is a landmark decision, and Chief Justice Roberts has a well-deserved reputation for care and precision in his writing. Then there is the fact that what cellular service providers do when gathering CSLI can quite naturally be described as a "search." After all, they are looking for and trying to find an "effect" (the phone) and, by extension, a "person" (the user).[97] By contrast, it is hard to describe the simple act of acquiring records as a "search," although looking through or otherwise analyzing them certainly is. And then there is the fact that the acquisition was done by the familiar process of subpoena. As Justice Samuel Alito points out at length in his dissenting opinion, treating acquisition of documents by subpoena as a "search" would bring a whole host of familiar discovery processes within the compass of the Fourth Amendment.[98] By contrast, treating the aggregation of CSLI as the search would leave that doctrine untouched. For all these reasons, the best, most coherent, and least disruptive option

[95] *Carpenter* v. *United States*, note 30 above, at 2220.
[96] Ibid. at 2217.
[97] *Kyllo* v. *United States*, 533 U.S. 27 (2001) at 32, n. 1: "When the Fourth Amendment was adopted, as now, to 'search' meant '[t]o look over or through for the purpose of finding something; to explore; to examine by inspection …'"
[98] *Carpenter* v. *United States*, note 30 above, at 2246–2250.

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available to the Court may have been holding that the cellular service provider conducted the search at issue in *Carpenter*.

Expanding the scope of Fourth Amendment regulations to searches conducted by private actors would provide invaluable protections for human–robot interactions and protections from robot surveillants. As Justice Alito points out in his *Carpenter* dissent, many of the most significant contemporary threats to privacy come from technology companies and parties who have access to us and our lives through our robot collaborators or deploy and use robots as part of their businesses. This gives them extraordinary power. We have certainly seen the potential these companies hold to manipulate, influence, and disrupt civil society and democratic institutions – just consider the autonomous decisions made by social media algorithms when curating content. In many ways, these companies and their robots are more powerful than states and exercise greater degrees of control. There can be no doubt that holding them to the basic standards of reasonableness commanded by the Fourth Amendment would substantially enhance individual and collective security, both in our engagements with robots and against searches performed by robots.

VI Conclusion

This chapter has shown that the Fourth Amendment's capacity to fulfill its promise is limited by two established doctrines, individual standing and the state agency requirement. Together, these rules limit the ability of the Fourth Amendment to normalize, protect, and regulate human–robot interactions. Fortunately, the text and history of the Fourth Amendment provide grounds for a broader reading that recognizes collective interests, guarding privacy as a public good against threats posed by both state and private agents. More fortunately still, the modern Supreme Court has suggested that it may be willing to reconsider its views on standing and state action as it struggles to contend with new challenges posed by robot–human interactions. As they move forward, the Justices would be well-advised to look backward, drawing insight and wisdom from the text and animating history of the Fourth Amendment.

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