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The Fourth Amendment Future of Public Surveillance: Remote Recording and Other Searches in Public Space

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The Fourth Amendment Future of Public Surveillance: Remote Recording and Other Searches in Public Space

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ARTICLES

THE FOURTH AMENDMENT FUTURE OF PUBLIC SURVEILLANCE: REMOTE RECORDING AND OTHER SEARCHES IN PUBLIC SPACE

MARC JONATHAN BLITZ*

Public video surveillance is changing the way police fight crime and terrorism. This was especially clear in the aftermath of the Boston Marathon bombing when law enforcement found images of the two suspects by analyzing surveillance images gathered by numerous public and private cameras. Such after-the-fact video surveillance was equally crucial to identifying the culprits behind the 2005 London subway bombing. But the rise of camera surveillance, as well as the emergence of drone-based video monitoring and GPS-tracking methods, not only provides an important boon for law enforcement, but also raises a challenge for constitutional law: As police gain the ability to technologically monitor individuals' public movements and activities, does the Fourth Amendment's protection against "unreasonable searches" place any hurdles in their way?

In the 2012 case, United States v. Jones, five justices, in two separate concurrences, signaled that it does—at least when the monitoring becomes too intense or prolonged. Their suggestion, however, raises two significant problems. First, it provides no principled basis for marking the point at which public surveillance morphs from a means by which police monitor public space

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into a Fourth Amendment “search.” Under the “mosaic theory” embraced by the D.C. Circuit, such surveillance becomes a search only when it captures enough data points from an individual’s public life to construct a detailed picture (or “mosaic”) of her movements and associations. But how detailed may such a picture be before it is too detailed? Do police engage in a search simply by watching someone continuously, even if they do so without drones, GPS units, or other advanced technology? Second, the concurring opinions do not explain why the Fourth Amendment, if it does cover public surveillance of this kind, does not also cover the information-collecting police do when they simply watch a pedestrian or a driver. As Justice Scalia wrote in Jones, “Th[e] Court has to date not deviated from the understanding that mere visual observation does not constitute a search.” But if police collect the same information from watching a driver as they do from tracking him with GPS technology, why would their watching not also be a search?

This Article proposes a solution to each of these challenges by offering a two-part definition of a Fourth Amendment “search” in a public space. Police engage in a search when they (1) not only observe, but also record, images or sounds of people or events outside police presence; or (2) magnify details on a person or documents or other items the person is carrying and thereby reveal information that would not otherwise be apparent without a pat-down or a stop-and-search of a person’s papers or effects.

This technology-based or design-based definition of what constitutes a “search” avoids the problems that arise when the Fourth Amendment analysis regarding what constitutes a “search” is based on an investigation’s duration or intensity. Under the technology-based or designed-based definition, police engage in a search as soon as they begin recording remote events or magnifying otherwise invisible details, whether they have done so for two minutes or two weeks. Additionally, under this approach, Fourth Amendment constraints only apply to surveillance that goes beyond unadorned visual surveillance. This test is more workable and more in accord with Fourth Amendment logic. Recording is a search because, more than any other element of public surveillance, it allows police to engage in dragnet-style investigation of all activities in a public space. By transforming ephemeral occurrences into permanent records, recording allows government officials to search public lives frame by frame, much like they might search documents file by file. Certain types of magnification could also constitute a search because, just as a telescope focused on a home may be functionally equivalent to a home entry and search, certain types of magnification may be functionally equivalent to a physical search of persons, papers, or effects.

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INTRODUCTION

Public surveillance technology is changing the way police fight crime and terrorism. This was clear in the aftermath of the Boston Marathon bombing when law enforcement quickly found images of the two suspects by “sift[ing] through a mountain of footage” gathered by public and private cameras.¹ It was also clear in the aftermath of the 2005 London subway bombings, when the suspects were quickly identified using video surveillance.² Touting these breakthroughs, cities have rushed to embrace camera systems, especially in the years after the 9/11 attacks.³ Police in Washington,

1. Heather Kelly, *After Boston: The Pros and Cons of Surveillance Cameras*, CNN (Apr. 26, 2013, 7:03 PM), <http://www.cnn.com/2013/04/26/tech/innovation/security-cameras-boston-bombings/index.html>.

2. ROY COLEMAN & MICHAEL MCCAILL, *SURVEILLANCE & CRIME: KEY APPROACHES TO CRIMINOLOGY* 99 (2011).

3. See Jeremy Brown, *Pan, Tilt, Zoom: Regulating the Use of Video Surveillance of Public Places*, 23 *BERKELEY TECH. L.J.* 755, 761–62 (2008) (explaining that “[p]olice

D.C.,⁴ Chicago,⁵ and New York⁶ can now use camera networks to track a person strolling down the street. They can magnify and video record her movements, actions, and the details of her vehicle's license plate, or the items she is carrying out of a store.⁷ In fact, government officials do not have to make do with cameras mounted on lampposts or buildings. They can watch and record citizens from drones that hover in the skies and glide at the command of a distant operator to a new and better vantage point.⁸

This revolution in surveillance techniques not only provides an important boon for law enforcement. It also raises an important challenge for constitutional law. As police gain the ability to monitor citizens' public movements and activities with increasingly powerful cameras, does the Fourth Amendment's protection against "unreasonable searches" place any hurdles in their way? Do police need to obtain a warrant based on probable cause or to satisfy some other constitutional test of reasonableness before they use a drone to track a person's movements or reconstruct those movements using video footage from public cameras?

have praised video surveillance as an effective tool" and have increasingly employed more sophisticated surveillance).

4. See Mary Beth Sheridan, *D.C. Forging Surveillance Network*, WASH. POST (May 1, 2008), http://articles.washingtonpost.com/2008-05-01/news/36809706_1_security-cameras-closed-circuit-cameras-council-member (discussing centralization of the D.C. surveillance camera system, which will integrate "4,500 cameras trained on schools, public housing, traffic and government buildings" and allow "round-the-clock monitoring of the closed-circuit video systems run by nine city agencies").

5. See William M. Bulkeley, *Chicago's Camera Network Is Everywhere*, WALL ST. J. (Nov. 17, 2009), <http://online.wsj.com/article/SB10001424052748704538404574539910412824756.html> ("A giant web of video-surveillance cameras has spread across Chicago, aiding police in the pursuit of criminals but raising fears that the City of Big Shoulders is becoming the City of Big Brother.").

6. See Greg Botelho, *New York's Times Square: Always a Target, Always Watched*, CNN (Apr. 25, 2013, 9:28 PM), <http://www.cnn.com/2013/04/25/us/new-york-boston-attack> (noting that a "host of cameras" watches Times Square and other areas in New York and that among them are cameras that "capture 360-degree images," "shoot from above," or provide "ground-level surveillance footage").

7. See, e.g., *Chicago's High-Tech Cameras Spark Privacy Fears*, PHYS.ORG (Feb. 8, 2011) <http://www.phys.org/news/2011-02-chicago-high-tech-cameras-privacy.htm> (At least 1,250 of [Chicago's cameras] are powerful enough to zoom in and read the text of a book. The [camera] system is also capable of automatically tracking people and vehicles out of the range of one camera and into another and searching for images of interest like an unattended package or a particular license plate.").

8. See Tom Reeve, *UAV Video Surveillance Drones Prepped for Take-Off*, SECURITY NEWS DESK (Feb. 2012), <http://www.securitynewsdesk.com/2012/02/03/uav-video-surveillance-drones-prepped-for-take-off> ("Drones . . . may soon be filling our skies, engaged in myriad video surveillance tasks.").

Only a few years ago, most courts and lawyers would have answered “no.”⁹ The Fourth Amendment protects people—and their “houses, papers, and effects”—from being subject to “unreasonable searches and seizures” by government officials.¹⁰ Supreme Court Justices as well as legal scholars have generally interpreted this provision as protecting individuals in the home, or some other space that is objectively and reasonably private or personal.¹¹ The Fourth Amendment bars the government, for example, from spying upon citizens in their living rooms and bedrooms; prying into their wallets, purses, or other closed “containers”; and opening sealed envelopes or closed drawers to read their private letters and diaries.¹² More generally, as Justice Harlan emphasized in *Katz v. United States*,¹³ the government generally does not need a warrant any time it watches us, but only when it observes us or examines our belongings after entry into places or circumstances in which we have a “reasonable expectation of privacy.”¹⁴

By contrast, the open and public space that we share with others—in streets, public squares, and parks—is not a private environment. We cannot exclude fellow citizens from this space nor command them to close their eyes and ears to what is going on around them. For example, when a person drives on a highway, she might be seen or even followed by other drivers, and some of these other drivers might be police officers. The Supreme Court held in *United States v.*

9. See, e.g., *United States v. Cuevas-Perez*, 640 F.3d 272, 274, 276 (7th Cir. 2011) (holding that GPS surveillance on public roads is not a search), *vacated*, 132 S. Ct. 1534 (2012) (mem.); *United States v. Marquez*, 605 F.3d 604, 609–10 (8th Cir. 2010) (same); *United States v. Pineda-Moreno*, 591 F.3d 1212, 1214, 1217 (9th Cir. 2010) (same), *vacated*, 132 S. Ct. 1533 (2012) (mem.); *United States v. Garcia*, 474 F.3d 994, 998 (7th Cir. 2007) (same); *United States v. Gonzalez*, 328 F.3d 543, 548 (9th Cir. 2003) (explaining that the Fourth Amendment does not protect “activities already visible to the public”).

10. U.S. CONST. amend. IV.

11. See, e.g., *Oliver v. United States*, 466 U.S. 170, 180–81 (1984) (finding that, while the Fourth Amendment limits police investigation of homes and the curtilage surrounding the home, it has no application to “open fields”); Orin S. Kerr, *Applying the Fourth Amendment to the Internet: A General Approach*, 62 STAN. L. REV. 1005, 1010 (2010) (explicating that the Fourth Amendment does not protect conduct that is out in the open, while entering an enclosed space is usually a search).

12. See, e.g., *California v. Acevedo*, 500 U.S. 565, 598 (1991) (White, J., dissenting) (“Every citizen clearly has an interest in the privacy of the contents of his or her luggage, briefcase, handbag or any other container that conceals private papers and effects from public scrutiny. That privacy interest has been recognized repeatedly in cases spanning more than a century.”). As explained below, individuals do receive Fourth Amendment protections from searches in the cars, purses, rented lockers, or other areas in public space from which they can exclude outside observers, but this does not give them protection from monitoring of their activities in the open. See *infra* text accompanying notes 93–100.

13. 389 U.S. 347 (1967).

14. See *id.* at 360–61 (Harlan, J., concurring).

*Knotts*¹⁵ that individuals have no reasonable expectation of privacy in their movements on public roadways.¹⁶ Thus, people cannot raise Fourth Amendment complaints when their actions are open to the public, including law enforcement officers, even if these officers use hidden location-tracking devices or other technology to do so.¹⁷ While people may create some measure of constitutionally protected privacy, even in public spaces, by closing their car doors or keeping documents and other items inside a briefcase, purse, or some other container,¹⁸ people cannot constitutionally shield the actions they leave visible or audible. As one judge said in a recent Global Positioning System (GPS) tracking case: “The practice of using . . . devices to monitor movements on public roads falls squarely within the Court’s consistent teaching that people do not have a legitimate expectation of privacy in that which they . . . leave open to view by others.”¹⁹

Or so the Supreme Court and other courts insisted—until a year ago. In the 2012 case of *United States v. Jones*,²⁰ five Justices, in two separate concurring opinions, indicated that it is time for a doctrinal change.²¹ These five justices suggested that an important constitutional line is crossed—and the constraints of the Fourth Amendment are triggered—when public surveillance becomes too intense or prolonged.²² Justice Alito, for example, argued that, while “relatively short-term monitoring of a person’s movements on public streets” is generally free from Fourth Amendment restriction, “use of longer term GPS monitoring in investigations of most offenses

15. 460 U.S. 276 (1983).

16. *Id.* at 281.

17. *See id.* at 282.

18. *See California v. Acevedo*, 500 U.S. 565, 598 (1991) (White, J., dissenting) (restating that all citizens have a clear privacy interest in the contents of personal articles).

19. *United States v. Cuevas-Perez*, 640 F.3d 272, 276 (7th Cir. 2011) (Flaum, J., concurring), *vacated*, 132 S. Ct. 1534 (2012) (mem.).

20. 132 S. Ct. 945 (2012). In the case, the Federal Bureau of Investigation and D.C. Metropolitan Police Department came to suspect a nightclub owner, Antoine Jones, of drug trafficking and used multiple surveillance measures—including visual surveillance and wiretapping—to gather more information. *Id.* at 948. The government also obtained a warrant to attach a GPS device, within ten days of the warrant’s issuance, to Jones’s vehicle while it was in the District of Columbia, but the government attached the GPS after these ten days had elapsed and when Jones’s vehicle was in Maryland rather than the District. *Id.*

21. *See id.* at 957 (Sotomayor, J., concurring) (positing that the Supreme Court should consider revisiting some of the fundamental premises of Fourth Amendment law in light of technological developments); *id.* at 958 (Alito, J., concurring in the judgment) (illustrating that the majority’s reasoning was based on eighteenth century tort law).

22. *Id.* at 955 (Sotomayor, J., concurring) (agreeing with Justice Alito that “longer term GPS monitoring” constitutes a search in most cases).

impinges on expectations of privacy” and should constitute a Fourth Amendment search.²³

The justices did not, however, clearly identify how long or how intense public surveillance must be to cross the constitutional dividing line.²⁴ They did not have to do so because the majority opinion relied on a different rationale to require a warrant. The majority emphasized that the installation of a GPS device on a car prior to tracking was a trespass.²⁵ Because the Supreme Court did not hold that the tracking of public movements alone violated the Fourth Amendment, it did not need to specify the point at which public tracking may violate the Fourth Amendment.²⁶ While this particular instance of public tracking began with a “trespassory” planting of a GPS device,²⁷ other kinds of public surveillance—including most forms of video surveillance—do not. The public street cameras that capture a car’s movements, or those that do so from a drone hovering overhead, do not require police to touch the car—let alone alter it—to surveil its movements.²⁸ When the Justices confront a case like this, they may have to clearly delineate the constitutional boundary line between a search and non-search.

This Article proposes a way to mark that line. It does not do so by asking how long, or how intently, police focus on a particular person or event, but rather by suggesting a different criterion. Whether public surveillance is a search should depend not on duration or the quantity of information gathered by a surveillance method, but rather on that method’s nature or design.²⁹ More specifically, public

23. *Id.* at 964 (Alito, J., concurring in the judgment).

24. *Id.* (noting that “[w]e need not identify with precision the point at which the tracking of this vehicle became a search,” and that while tracking Jones clearly qualified as a search, “[o]ther cases may present more difficult questions”).

25. *Id.* at 949 (majority opinion) (finding that by placing a GPS unit on Jones’s car, “[t]he Government physically occupied private property for the purpose of obtaining information,” which is a clear example of a Fourth Amendment search).

26. *Id.* at 954 (stating that while “[i]t may be that [tracking Jones’s movements] through electronic means, without an accompanying trespass, is an unconstitutional invasion of privacy, . . . the present case does not require us to answer that question,” and that there was no need to resolve the “vexing problems” regarding how long tracking must be to constitute a search).

27. *Id.* at 949, 952–53 (finding that the government’s planting of the GPS on Jones’s car was a physical intrusion amounting to a trespass and that the “the *Katz* reasonable-expectation-of-privacy test has been *added to*, not *substituted for*, the common-law trespassory test”).

28. *Id.* at 953–54 (highlighting that visual observation is constitutionally permissible).

29. I previously presented a somewhat different version of this proposal at the 2012 Privacy Law Scholars Conference forum, “From *Jones* to Drones.” See Marc Jonathan Blitz, *United States v. Jones—and the Forms of Surveillance that May Be Left Unregulated in a Free Society*, USVJONES BLOG (June 4, 2012), <http://usvjones.com>

surveillance should count as a search when it takes one of two forms. First, police engage in a Fourth Amendment search, even in public space, when they are not merely observing but also *recording* images or sounds of people. Additionally, the police must obtain these images and sounds from events and people outside the recording officer's presence. In other words, the government does not conduct a search whenever an officer simply turns on an iPhone camera or a camcorder and then records what is happening in front of him. Rather, a public search occurs when recording technology allows officials to record events that they would otherwise not be able to see or hear.³⁰ Second, a search can also occur in public when police magnify and observe details on a person, or the documents or other items she is carrying, so as to reveal information that would not otherwise have been apparent without a pat-down or some other stop-and-search of a person's papers or "effects."³¹

Such a technological form-based or design-based test,³² avoids the key difficulty that plagues an approach that tries, in Justice Alito's words, to exempt "relatively short-term monitoring of a person's movements" from Fourth Amendment restriction, but places constitutional limits on "longer term GPS monitoring" or other surveillance in public.³³ It spares the courts the task of seeking some elusive or arbitrary point in the duration or intensity of a search at which such monitoring morphs from being just another means by which police watch over public space into a possible violation of the Constitution.³⁴ After police begin recording events outside of their

/2012/06/04/united-states-v-jones-and-the-forms-of-surveillance-that-may-be-left-unregulated-in-a-free-society ("[W]hat is important is not the quantity or nature of information actually captured by surveillance, but rather the *nature or form of the surveillance technique itself*.").

30. See *infra* notes 116–123 and accompanying text.

31. See *infra* notes 124–129 and accompanying text.

32. Other scholars have also proposed their own distinct versions of such a technological form-based or design-based test for what might count as a search in public. See, e.g., David C. Gray & Danielle Keats Citron, *A Technology-Centered Approach to Quantitative Privacy*, 98 MINN. L. REV. (forthcoming 2013) (manuscript at 5, 25–41), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2129439; Susan Freiwald, *First Principles of Communications Privacy*, 2007 STAN. TECH. L. REV. 3, ¶¶ 50–70 (setting forth a four-factor test for determining whether new surveillance methods constitute a search) [hereinafter Freiwald, *First Principles*]; Susan Freiwald, *The Four Factor Test*, USVJONES BLOG (June 4, 2012), <http://usvjones.com/2012/06/04/the-four-factor-test> [hereinafter Freiwald, *Four Factor Test*] (questioning what the Fourth Amendment test for GPS tracking should be); see also *infra* Part III.B.2 (discussing these approaches in more detail).

33. *United States v. Jones*, 132 S. Ct. 945, 964 (2012) (Alito, J., concurring in the judgment).

34. See Orin S. Kerr, *The Mosaic Theory of the Fourth Amendment*, 111 MICH. L. REV. 311, 313, 325, 333–34 (2012) (analyzing the difficulties in applying the "mosaic

presence, it does not matter whether they do so for two minutes or two weeks. Police engage in a search simply by using technology with the capacity to create a record of people's movements and aiming it at certain individuals. Defining searches in public spaces in this manner parallels the way that courts typically define Fourth Amendment searches in private spaces. Police are immediately bound by the Fourth Amendment when they enter a person's house, open up and flip through the pages of a diary, or tap a phone line.³⁵ These investigations do not become a search only after they have lasted a certain length of time; rather, the search begins with an entry or intrusion, even if the stay or investigation lasts only seconds or minutes.³⁶ To be sure, the brevity of a search may, in some cases, make it more likely to count as a "reasonable" and permissible search.³⁷ Nevertheless, brevity alone cannot transform such a search into a non-search that is entirely free from Fourth Amendment restriction. The same should be true of public surveillance technologies that involve remote recording or magnification of details normally invisible without a physical search of a person, her documents, or the items she is carrying.

Courts obtain a second advantage by focusing on the nature or design of the investigatory method: The proposed test avoids transforming all police monitoring into a constitutional matter. As Justice Harlan wrote in a 1971 dissent, there is a constitutionally significant difference between monitoring and recording.³⁸ When the government audio records someone's words, it does something

theory," which is a Fourth Amendment approach under which investigatory actions that do not count as a search in isolation count as a search when aggregated).

35. See, e.g., *Kyllo v. United States*, 533 U.S. 27, 37 (2001) ("[T]here is certainly no exception to the warrant requirement for the officer who barely cracks open the front door and sees nothing but the non-intimate rug on the vestibule floor."); *Payton v. New York*, 445 U.S. 573, 590 (1980) (stating that, except in exigent circumstances, the Fourth Amendment requires police to obtain a warrant as soon as they cross the "line" that marks the entrance to the house).

36. See *United States v. Place*, 462 U.S. 696, 706 (1983) (stating that searches, no matter how brief, must be based on probable cause).

37. See, e.g., *Terry v. Ohio*, 392 U.S. 1, 24–25 (1968) (holding that police stop-and-frisk searches, while entailing a search and seizure, require only "reasonable suspicion" and not a warrant or probable cause partly because they, unlike arrests, constitute "a brief, though far from inconsiderable, intrusion").

38. See *United States v. White*, 401 U.S. 745, 785–86 (Harlan, J., dissenting) (asserting that the plurality ignored the differences between third-party monitoring and recording); see also Christopher Slobogin, *Public Privacy: Camera Surveillance of Public Places and the Right to Anonymity*, 72 *Miss. L.J.* 213, 270 (2002) (taking note, but expressing doubt, that the Supreme Court would accept the argument that although "we assume the risk that others will view our public conduct, we do not assume the risk that our public actions will be reduced to a photograph or film").

far more invasive than simply listening to them.³⁹ It creates a record that not only is “free of the possibility of error and oversight that inheres in human reporting,” but also allows officials to review a person’s life in far more detail than they could if they relied only on the fading memories of listeners.⁴⁰

The lesson of Harlan’s contrast is not that recording requires constitutional oversight simply because it reduces our privacy to a greater extent than mere listening or watching. Rather, it is that recording changes the nature of police surveillance in such a way that it threatens privacy as well as other Fourth Amendment interests more deeply. Consider video recording. Such recording does not necessarily reduce an individual’s privacy at the time it occurs: if no one watches the video footage, as it is recorded or afterwards, then the actions captured in the tape remain just as private as they would be had no one seen or captured them.⁴¹ If an officer does watch the scenes captured by the cameras, then an individual’s privacy is compromised to some extent—but the fact that recording is occurring does not make that officer’s live observation any more intrusive than it would otherwise be.

Even unmanned recording, however, raises a significant threat to Fourth Amendment purposes. It takes ephemeral occurrences in our lives and transforms them into permanent records. Through recording technology of this sort, the government can scan its collection of footage of any person’s minute-to-minute activities in hopes of finding something incriminating. Recording, in other words, potentially allows the government to trawl through digital images and audio records in search of evidence that justifies subjecting individuals to state power. Such probing is precisely the kind of dragnet-style investigation that the Fourth Amendment is supposed to restrict⁴²—and does restrict at roadblocks and airports.

39. Cf. *White*, 401 U.S. at 787 (Harlan, J., dissenting) (elaborating that third-party bugging “undermine[s] th[e] confidence and sense of security in dealing with one another that is characteristic of individual relationships between citizens in a free society”).

40. See *id.* at 787–89 (indicating that allowing government officials to monitor private conversations through a willing third-party assistant would compromise the unhindered discourse “that liberates daily life”).

41. See Daniel J. Solove, *Privacy and Power: Computer Databases and Metaphors for Information Privacy*, 53 STAN. L. REV. 1393 1418 (2001) (“Being observed by an insect on the wall is not invasive for privacy; rather, privacy is threatened by being subject to *human* observation, which involves judgments that can affect one’s life and reputation.”).

42. See *United States v. U.S. Dist. Court*, 407 U.S. 297, 327 (1972) (Douglas, J., concurring) (stating that “dragnet techniques” are at the heart of the Fourth Amendment’s prohibition on invasive searches).

At such checkpoints, police have limited authority to make suspicionless stops (and searches) to assure safety in these transportation channels. What they may not do under the Fourth Amendment is search for other evidence of crime that such a chokepoint is able to strain out.⁴³ But a dragnet that catches thousands of travelers or other citizens is not the only kind of sweeping investigatory technique that offends Fourth Amendment purposes. For example, dragnet investigations under which officers rummage through possessions or drawers of documents without justification also offend these purposes, even when the hunt for unknown contraband occurs within a single home and focuses on the property of a single homeowner.⁴⁴ A government “fishing expedition” should likewise be deemed to be subject to Fourth Amendment constraints when the data that officials sift through comes not from personal documents, but from the trail of data people leave behind in a world in which every action or movement is recorded for potential review at a later date.⁴⁵

To be sure, public surveillance can threaten Fourth Amendment purposes, even when police are not recording what they see. Police can use telescopes or extremely powerful zoom lenses to scrutinize details on a person’s clothing, or on items or documents removed from a wallet or briefcase, that would be invisible even to bystanders just a few yards away.⁴⁶ Certain courts have suggested that such telescopic magnification would constitute a Fourth Amendment search when pointed at the windows of a home,⁴⁷ and if that is true, it is certainly possible that telescope-aided scrutiny should also be a

43. See, e.g., *City of Indianapolis v. Edmond*, 531 U.S. 32, 40–42 (2000) (striking down as unconstitutional a road block program under which police investigated each car not only for drunk drivers but also for evidence of drug-related contraband); *United States v. Albarado*, 495 F.2d 799, 805 (2d Cir. 1974) (expressing concern about “the possibility that the purpose of the airport search [to prevent terrorism] may degenerate from the original search for weapons to a general search for contraband”); see also *infra* notes 162–167 and accompanying text.

44. See *Andresen v. Maryland*, 427 U.S. 463, 480 (1976) (recognizing that the Fourth Amendment forbids “general, exploratory rummaging in a person’s belongings” (quoting *Coolidge v. New Hampshire*, 403 U.S. 443, 467 (1971))).

45. See Marc Jonathan Blitz, *Video Surveillance and the Constitution of Public Space: Fitting the Fourth Amendment to a World that Tracks Image and Identity*, 82 TEX. L. REV. 1349, 1407 (2004) (analogizing “mass video surveillance of law-abiding citizens” to “unrestricted house-to-house searches” that the Fourth Amendment clearly prohibits).

46. See *id.* at 1377.

47. See, e.g., *United States v. Tabor*, 635 F.2d 131, 138–39 (2d Cir. 1980) (“The vice of telescopic viewing into the interior of a home is that it risks observation not only of what the householder should realize might be seen by unenhanced viewing, but also of intimate details of a person’s private life, which he legitimately expects will not be observed either by naked eye or enhanced vision.”).

search when it is aimed at the other subjects of Fourth Amendment protection—namely, an individual’s “person, . . . papers, and effects.”⁴⁸ High magnification of a detail on a person or her property may thus, like recording, bring police observation in public onto Fourth Amendment territory.

That such public surveillance is a Fourth Amendment search does not mean that it will always be a Fourth Amendment violation. A search of a house, person, paper, or effect is prohibited by the Fourth Amendment only when it is “unreasonable.”⁴⁹ Just as police, Federal Bureau of Investigation (FBI) agents, and other law enforcement officials frequently use wiretaps by obtaining a warrant or absent such a warrant when circumstances make a wiretap reasonable,⁵⁰ police should be able to capture and examine video records or to closely magnify details of public action when use of these methods count as reasonable.

Part I of this Article discusses why courts have found the Fourth Amendment analysis of public surveillance to be so challenging and describes how they have thus far met this challenge. Part II offers a new test for determining when public surveillance constitutes a search: the government’s actions require Fourth Amendment scrutiny when it records remote events or uses an analogous method of investigation, or, in certain instances, when it employs magnification or sound amplification in a public space. Other kinds of police surveillance in public generally are not searches, even if they employ sophisticated technology. Part III explains why this approach is preferable to various alternatives that scholars, and judges themselves, have considered as they have struggled with how Fourth Amendment law should apply in public. In the course of doing so, Part III describes why police officers will be able to use video surveillance technology, even without a warrant, so long as the police meet Fourth Amendment reasonableness standards that assure the technology is not used in a way that unnecessarily diminishes individuals’ freedom from state monitoring.

48. U.S. CONST. amend. IV.

49. *See id.*; *Maryland v. Buie*, 494 U.S. 325, 331 (1990).

50. *See, e.g., United States v. Williams*, No. 11-6493, 2013 WL 1759941, at *5–6 (6th Cir. Apr. 25, 2013) (affirming the district court’s ruling that a wiretap was permissible because the government proved it was necessary, and the affidavit in support of the intercept order was based on sufficiently reliable evidence).

I. THE NATURE OF THE PROBLEM AND THE SUPREME COURT'S INITIAL STEPS TOWARD A SOLUTION

A. *The Problem of Public Surveillance*

Whether public video surveillance is a search may seem deceptively simple. Since 1967, the Supreme Court has adopted the rule from Justice Harlan's concurrence in *Katz*, under which the government engages in a Fourth Amendment search any time it intrudes upon an "expectation of privacy . . . that society is prepared to recognize as 'reasonable.'"⁵¹ Members of a free society do not expect to be subject to continuous government surveillance, even as they walk or drive on public pathways. As a result, this kind of surveillance should be subject to constitutional limits. Not only do many Americans share this expectation,⁵² but they also likely view it as reasonable and justified, as was clear in the legislative reaction to law enforcement officials' increasing use of drones. The Florida legislature, for instance, recently enacted a law tightly restricting the use of drone surveillance within the State's borders: the Freedom from Unwanted Surveillance Act.⁵³ Additionally, some U.S. Senators and Congressmen have suggested that federal restrictions might also be justified because, as Senator Chuck Grassley explained, "[t]he thought of government drones buzzing overhead, monitoring the activity of law abiding citizens, runs contrary to the notion of what it means to live in a free society."⁵⁴

But the task of fitting public surveillance into Fourth Amendment jurisprudence is, for a number of reasons, more challenging than simply taking note of these intuitions. First, there is the line-drawing problem that confronted the concurrence-writers in *Jones*.⁵⁵ While it

51. *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

52. See Jim Gold, *Poll: Americans OK with Some Domestic Drones—But Not To Catch Speeders*, NBC NEWS (June 13, 2012, 4:15 PM), http://usnews.nbcnews.com/_news/2012/06/13/12205763-poll-americans-ok-with-some-domestic-drones-but-not-to-catch-speeders?lite (describing polls indicating that Americans support drone use for certain security operations, such as securing the border or for "search and rescue" operations, but that 67% oppose the use of drones to issue speeding tickets, and 64% describe themselves as "somewhat concerned" or "very concerned" about drones' effect on their privacy).

53. See Joe Sutton & Catherine E. Shoichot, *Florida Gov. Rick Scott Signs Law Restricting Drones*, CNN (Apr. 28, 2013, 1:42 PM), <http://www.cnn.com/2013/04/25/us/florida-drone-law/index.html> (describing Florida's Freedom from Unwanted Surveillance Act, which restricts the use of police drones within Florida's borders).

54. Brendan Sasso, *Senators Fear Drones "Buzzing Overhead,"* HILL (Mar. 20, 2013, 3:06 PM), <http://thehill.com/blogs/hillicon-valley/technology/289337-senators-worry-about-domestic-drone-surveillance>.

55. See *supra* notes 21–28 and accompanying text (detailing that the concurrences identified the problem but not a solution).

may seem clear that the continuous, suspicionless video recording by hidden government cameras is at odds with a free society, this is not necessarily true of all cases in which police officers watch a person they deem suspicious,⁵⁶ tail a car for a period of time,⁵⁷ or observe a person with low-powered binoculars.⁵⁸ How then, are we to distinguish between permissible, garden-variety watching, and intensive surveillance that offends constitutional principles?

Such problems in drawing Fourth Amendment boundary lines have recently haunted the efforts of courts to resolve the question of whether (and how) the Fourth Amendment applies to police use of GPS surveillance. As noted above, the Supreme Court concurrences in *Jones* found that location tracking is a search only if it lasts a sufficient amount of time, but did not specify how long is too long.⁵⁹ In the lower court opinion in *Jones*, when the case was known as *United States v. Maynard*,⁶⁰ the U.S. Court of Appeals for the D.C. Circuit tried to provide an answer to this question by comparing GPS tracking's incremental intrusions into a person's privacy to what happens when the government assembles pieces of a person's history as though it were piecing together a jigsaw puzzle or "mosaic."⁶¹ To demonstrate this point, the D.C. Circuit noted that while the fact that a person stops at a gynecologist office at one moment may itself tell an observer very little, when police piece this fact together with another GPS reading showing, for example, that she has also stopped at a baby supply store, they can construct a detailed picture of her daily routine and likely infer something about why she followed the path she did (she is pregnant).⁶² But this mosaic theory approach merely begs the questions it is intended to answer: how detailed a picture is too detailed, and how many data points may police collect before they enter constitutional territory?

56. See, e.g., *Christensen v. Cnty. of Boone*, 483 F.3d 454, 460 (7th Cir. 2007) (per curiam) (finding that a police officer did not conduct a search under the Fourth Amendment when he "followed [individuals] in his squad car as they drove on Boone County roads and sat outside businesses that [they] patronized").

57. See, e.g., *United States v. Garcia*, 474 F.3d 994, 997 (7th Cir. 2007) ("[I]f police follow a car around, or observe its route by means of cameras mounted on lampposts or of satellite imaging as in Google Earth, there is no search.").

58. See Ric Simmons, *Why 2007 is Not Like 1984: A Broader Perspective on Technology's Effect on Privacy and Fourth Amendment Jurisprudence*, 97 I. CRIM. L. & CRIMINOLOGY 531, 550 (2007) ("Presumably a law enforcement agent could use a flashlight or a set of binoculars without needing a warrant . . .").

59. See *supra* notes 22–23 and accompanying text.

60. 615 F.3d 544 (D.C. Cir. 2010), *aff'd in part sub nom.* *United States v. Jones*, 132 S. Ct. 945 (2012).

61. See *id.* at 562.

62. *Id.*

Judges are unlikely to provide consistent answers to these questions. This was evident in the case of *United States v. Cuevas-Perez*,⁶³ in which the U.S. Court of Appeals for the Seventh Circuit attempted to apply the D.C. Circuit's Fourth Amendment analysis without expressly endorsing it.⁶⁴ The majority concluded that *Maynard's* "mosaic" rule simply did not apply to the facts before it because the police had followed Cuevas-Perez for sixty hours, not for twenty-eight days as in *Maynard*, and had tracked his movements on a "single journey," rather than on multiple trips.⁶⁵ The dissent, by contrast, pointed out that monitoring of the defendant on a "60-hour odyssey across 1,650 miles" is far from the kind of brief trip that might be too insignificant to require Fourth Amendment constraints.⁶⁶

The problem is that no apparent principle explicates whether, or why, sixty hours is short enough to remain free from Fourth Amendment restraints. After all, if the danger raised by ongoing GPS surveillance is that it allows police to "connect the dots" of a person's movements and draw inferences about her private plans, a sixty-hour period is probably sufficient time to draw such a connection and make inferences based on the data gathered.⁶⁷ To take the D.C. Circuit's own example from *Maynard*, a woman's visit to a baby supply store may certainly come within sixty hours of her visit to a gynecologist; thus, observers will hardly need twenty-eight days, or even a week, to learn details about that woman's life that are unlikely to be apparent to others in public space. This uncertainty about how much police can learn in a day, or a week, also provides reason to question the Virginia Supreme Court's conclusion that *Maynard's* mosaic theory should not apply to GPS tracking that lasts less than a week.⁶⁸ It is not clear that a week-long monitoring period is short enough to avoid the dangers of aggregated information that concerned the D.C. Circuit.⁶⁹

The Fourth Amendment line-drawing challenge courts face in public spaces is, in many ways, analogous to the one that Professor Orin Kerr recently addressed in proposing a Fourth Amendment

63. 640 F.3d 272 (7th Cir. 2011), *vacated*, 132 S. Ct. 1534 (2012) (mem.).

64. *See id.* at 274.

65. *Id.*

66. *Id.* at 293 (Wood, J., dissenting).

67. *See id.* at 292–93.

68. *See Foltz v. Commonwealth*, 698 S.E.2d 281, 291 n.12 (Va. Ct. App. 2010) (holding that there was no search or seizure when the police installed a GPS device on the defendant's work van when it was parked in public and used the GPS to track the van while on public streets), *aff'd*, 732 S.E.2d 4 (Va. 2012).

69. *See id.*

regime for Internet communications.⁷⁰ As Kerr pointed out, the key problem in determining whether Internet surveillance constitutes a search is that the natural marker that generally delineates what constitutes a Fourth Amendment search in physical space—namely, the distinction between an enclosed, private space and an observable, public environment—does not exist on the Internet.⁷¹ “The distinction between government surveillance outside and government surveillance inside,” Kerr writes, “is probably the foundational distinction in Fourth Amendment law” because the government does not need any cause or order to conduct surveillance outside,” but “entering enclosed spaces ordinarily constitutes a search that triggers the Fourth Amendment.”⁷² However, the Internet does not fit nicely into this model because there is no outside/inside division to rely upon. Everything on the Internet is considered to be enclosed and inside.⁷³ Kerr therefore argued that Fourth Amendment law needs a new, functionally equivalent distinction to mark the boundary between searches and non-searches.⁷⁴ He proposed that courts should rely on the distinction between content and non-content in e-mails or other Internet communications.⁷⁵ When investigators intercept and read the contents of a person’s e-mail, for example, they are conducting a Fourth Amendment search and must first obtain a warrant or otherwise show their search is reasonable.⁷⁶ Conversely, when investigators merely want to look at the address information on the e-mail, they are doing the equivalent of looking at the outside of an envelope, not the letter inside, and this monitoring of non-content information is therefore not a Fourth Amendment search.⁷⁷

If Internet surveillance raises a Fourth Amendment problem because everything is “inside,” public surveillance raises a similar problem because everything is outside. Public surveillance is “public” because it focuses on the outside world and, more specifically, on visible behavior in it. Here too, then, Fourth Amendment law needs

70. See generally Kerr, *supra* note 11.

71. *Id.* at 1009–10.

72. *Id.* at 1010.

73. *Id.* at 1012.

74. See *id.* (“The inside/outside distinction no longer serves the basic function in the Internet setting that it serves in the physical world.”).

75. *Id.* at 1007–08.

76. *Id.* at 1020.

77. *Id.* at 1019; see also Matthew J. Tokson, *The Content/Envelope Distinction in Internet Law*, 50 WM. & MARY L. REV. 2105, 2115–16 (2009) (proposing, based on case law, the existence of a content/non-content distinction between searches and non-searches in Internet communications).

a replacement for the outside/inside distinction. It needs a new boundary line to demarcate parts of the outside world that deserve to be treated like inside spaces for Fourth Amendment purposes—parts of our life in public that, like our living rooms and bedrooms, deserve to be constitutionally insulated from government scrutiny.

The lack of a replacement for the outside-inside distinction in public space leaves judges without a key resource for determining what counts as a search in public space. Without such a line, it is difficult for courts to pronounce long-lasting public surveillance to be a search on the basis that certain forms of it seem disturbingly intrusive.⁷⁸ These intrusions do not, by themselves, tell us how to distinguish investigations that are invasive enough to require constitutional oversight from those that are not.

There is a second difficulty in treating public surveillance as a search: if courts subject police to significant constitutional limits in monitoring public space, they risk crippling law enforcement's efforts to do what it is charged with doing. Police are not only generally as free as other citizens to watch the streets they patrol, they are duty-bound to do so. So it seems counterintuitive to require police to obtain a warrant before showing the vigilance they are required to show as a condition of their work.

One might suggest that courts should impose Fourth Amendment requirements only on focused investigations of public space and not on casual observations that police make while on patrol. But even this approach arguably restricts police too tightly. Because law enforcement is generally barred from conducting warrantless investigations of homes and other private spaces, it needs to begin an investigation somewhere else—in the public space outside of the home. As the Supreme Court noted in *California v. Ciraolo*,⁷⁹ in order to obtain the probable cause required to obtain a warrant, police must begin investigating and collecting evidence before they have probable cause.⁸⁰ Thus, there needs to be *some* place to start.⁸¹ In short, if courts and scholars extend Fourth Amendment protection beyond homes, private drawers, and journals into the realm of public and visible activity, they have to recognize that they are extending it into a realm that is, in many ways, and to a far greater extent than the

78. See *California v. Ciraolo*, 476 U.S. 207, 226 (1986) (Powell, J., dissenting) (recognizing that rapidly advancing technology will continue to alter the method of Fourth Amendment analysis).

79. 476 U.S. 207 (1986).

80. *Id.* at 213.

81. *Id.* (postulating that the chance to make observations from the public space is “precisely what a judicial officer needs to provide a basis for a warrant”).

activity in a home or other private environment, very much the government's business.

Effective investigation, moreover, often requires police to take advantage of new surveillance technologies. As the Seventh Circuit noted in an earlier GPS case, the Fourth Amendment "cannot sensibly be read to mean that police shall be no more efficient in the twenty-first century than they were in the eighteenth."⁸²

B. A Simple, but Flawed, Position: Treating Open Areas as a Fourth Amendment Free Zone

One possible response to such concerns is to err, at least in public spaces, on the side of giving government all of the room it needs to conduct investigations. In short, we might simply adopt the rule that surveillance of what is visible and public never constitutes a search. In applying the Fourth Amendment to public space, in other words, we might conclude that we do not need a substitute for the outside/inside distinction because that dichotomy itself provides a simple and satisfactory answer: everything that is left visible and audible in the outside world is "outside" and therefore may be observed by the government free from constitutional restraint.⁸³

At least on the surface, this is the approach that the Supreme Court has taken to public investigations so far (or at least until its 2012 *Jones* decision).⁸⁴ The Court has allowed the government to track the movements of automobiles with radio transmitters, for example, so long as the tracking occurs "on public thoroughfares" and does not extend inside the home.⁸⁵ It has permitted officials to observe the property of a factory, and even the outskirts of private homes, from planes and helicopters in "public airspace" where the public has a right to be and observe what is around it.⁸⁶ In fact, decades before

82. *United States v. Garcia*, 474 F.3d 994, 998 (7th Cir. 2007).

83. For an argument largely favoring such a position, see Heidi Reamer Anderson, *The Mythical Right to Obscurity: A Pragmatic Defense of No Privacy in Public*, 7 I/S: J.L. & POL'Y FOR INFO. SOC'Y 543 (2012).

84. See, e.g., *Ciraolo*, 476 U.S. at 213 (restating that what an individual knowingly exposes to the public is not protected by the Fourth Amendment).

85. See, e.g., *United States v. Karo*, 468 U.S. 705, 721 (1984) (holding that investigatory actions do not constitute a search when they are observing that which can be seen by the public); *United States v. Knotts*, 460 U.S. 276, 281 (1983) (explaining that traveling over public streets voluntarily conveys information to anyone who might be watching with the naked eye or with the assistance of technology).

86. See *Ciraolo*, 476 U.S. at 212–13 (holding that investigators do not violate the Fourth Amendment when they observe property from public airspace and members of the general public flying overhead could make the same observation); *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986) (finding that the Environmental Protection Agency's fly-by assessment of an industrial complex to observe whether it

radio transmitters and chartered planes became a common feature of everyday life, the Supreme Court—in a 1924 decision written by Justice Holmes—made clear that “the special protection accorded by the Fourth Amendment to the people in their ‘persons, houses, papers and effects’ is not extended to the open fields.”⁸⁷ The “open fields” doctrine later seemed to some to be at odds with the Court’s holding in *Katz*, in which the majority held that electronic eavesdropping is a Fourth Amendment search even when it targets someone making a call from a public phone booth on a street.⁸⁸ The *Katz* majority had called into question the notion that everything we do in public may be monitored free of constitutional restraint, declaring that what a person “seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.”⁸⁹

But the Supreme Court later made clear that the open fields doctrine remains a central part of the Fourth Amendment law. In *Oliver v. United States*,⁹⁰ the Court squarely rejected a property owner’s claim that the police had violated the Fourth Amendment when they located a marijuana field on his land.⁹¹ Unlike a realm where individuals might reasonably expect privacy, said the Court, “open fields do not provide the setting for those intimate activities that the Amendment is intended to shelter from government interference or surveillance.”⁹² Courts have understood this “open fields” doctrine to mean that police are free to observe not only what is visible in a field, but also what they can see in public streets and roads.⁹³

Such an approach still leaves individuals with an opportunity to find sanctuaries for privacy in public space, but only when they find pockets of “inside” space somewhere in the public, visible world. People might, for example, hide items they bring onto a street within a purse or briefcase. They might keep confidential conversations secret by engaging in them only from a closed phone booth⁹⁴ or from

was in compliance with environmental regulations did not constitute a Fourth Amendment search).

87. *Hester v. United States*, 265 U.S. 57, 59 (1924).

88. *Katz v. United States*, 389 U.S. 347, 353 (1967); see also, Bruce G. Berner, *The Supreme Court and the Fall of the Fourth Amendment*, 25 VAL. U. L. REV. 383, 390 (1991) (recalling that many commentators predicted that *Hester*’s open-field doctrine would no longer be applicable after *Katz*).

89. *Katz*, 389 U.S. at 351.

90. 466 U.S. 170 (1984).

91. See *id.* at 173, 182–84.

92. *Id.* at 179.

93. See, e.g., *California v. Ciraolo*, 476 U.S. 207, 213–15 (1986).

94. See, e.g., *Katz*, 389 U.S. at 353 (finding the government engaged in a search when its eavesdropping invaded “the privacy upon which [the defendant] justifiably relied while using the telephone booth”).

behind the locked doors and closed windows of an automobile.⁹⁵ It was this kind of privacy in public that the Supreme Court endorsed and protected in *Delaware v. Prouse*⁹⁶ when it emphasized that “people are not shorn of all Fourth Amendment protection when they step from their homes onto the public sidewalks” or when “they step from the sidewalks into their automobiles.”⁹⁷ Even on public streets, drivers remain protected from having their cars arbitrarily stopped and searched,⁹⁸ and pedestrians are protected from being stopped and frisked for weapons unless an officer has “reasonable” suspicion that they are involved in criminal activity.⁹⁹ But these types of Fourth Amendment protections only shield what is inside of one’s car or inside of one’s pockets. They do not limit a police officer’s freedom to observe the outside of the car or its movements, or to scrutinize the outside of a person’s jacket.¹⁰⁰

There are a number of advantages to this bright-line rule that denies Fourth Amendment protections to observations that are visible to the public. One is that it keeps Fourth Amendment law consistent with the classic principle of search and seizure law, enunciated in the 1765 case of *Entick v. Carrington*,¹⁰¹ that “the eye cannot . . . be guilty of a trespass.”¹⁰² While this English case antedated the enactment of the U.S. Bill of Rights in 1791, it was familiar to the Framers and was an important inspiration, and source for, Fourth Amendment jurisprudence.¹⁰³ Its assumption that officials do not commit an unreasonable search simply by looking at what they can see has become a key principle in that jurisprudence.¹⁰⁴

95. See, e.g., *Delaware v. Prouse*, 440 U.S. 648, 658–59, 663 (1979) (holding that stopping an automobile and requesting the driver’s license and registration involves a search and is only permissible under the Fourth Amendment where there is reasonable, articulable suspicion to do so).

96. 440 U.S. 648 (1979).

97. *Id.* at 663.

98. See *id.* (requiring that officers may only stop and detain motorists if “there is at least articulable and reasonable suspicion” that the motorist has violated the law).

99. See *Terry v. Ohio*, 392 U.S. 1, 19, 24–25 (1968) (highlighting the need to grant officers a means of determining whether a person poses a threat of physical harm and a way to neutralize that risk).

100. See generally *United States v. Jones*, 132 S. Ct. 945, 953 (2012) (“This Court has to date not deviated from the understanding that mere visual observation does not constitute a search.”).

101. 19 Howell’s State Trials 1029 (C.P. 1765).

102. *Id.*, in 19 Howell’s State Trials 1029, 1066 (C.P. 1765).

103. See *Boyd v. United States*, 116 U.S. 616, 626–27 (1886) (explaining that, during the Revolutionary Period, American statesmen were familiar with *Entick*, the “monument of English freedom,” and its propositions were unquestionably in the minds of the Framers as they created the Fourth Amendment).

104. See, e.g., *California v. Ciraolo*, 476 U.S. 207, 213–15 (1986) (holding that police do not violate the Fourth Amendment when they observe what is visible to the public).

As Justice Scalia noted in *Jones*, “This Court has to date not deviated from the understanding that mere visual observation does not constitute a search.”¹⁰⁵

When police search inside of a home or another private environment, of course, they engage in more than mere observation. They first enter the space, thereby transforming their subsequent observations into a search requiring a warrant (or some other showing of constitutional reasonableness).¹⁰⁶ By contrast, in public spaces, police can often observe an individual’s movements and other activities without having to set foot on anyone else’s property.¹⁰⁷ To the extent they invade the privacy of the person they watch, they often do so simply through observing.

A second advantage of denying Fourth Amendment protections to observations of what is visible in public is its simplicity and clarity. It draws a clear line for police officers and citizens. What is inside a home or office is protected; what is outside in public space is not. To be sure, this kind of simple division does not line up perfectly with individuals’ expectations of privacy. Individuals may well be more eager to hide certain activities they conduct in public life, such as travelling to a psychotherapist’s office or visiting an X-rated movie theater, than they are to hide many mundane activities in their home life, such as their choice of what to have for breakfast. But perhaps it is not plausible to calibrate Fourth Amendment protections to the privacy that individuals expect in each discrete activity.

The Supreme Court has certainly not tried to adjust the degree of protection on an activity-by-activity basis in applying the Fourth Amendment to in-home activity. On the contrary, as the Court emphasized in *Kyllo v. United States*,¹⁰⁸ “[i]n the home, . . . all details are intimate details, because the entire area is held safe from prying government eyes.”¹⁰⁹ It therefore does not matter that the activities the government observes in gathering information from a home are not particularly embarrassing or sensitive.

The Fourth Amendment errs on the side of protecting the privacy of all in-home activity; perhaps it should err in the other direction outside the home. If the public needs some protected space where it can count on privacy without worrying about whether a particular activity is or is not sufficiently intimate to be shielded, government

105. *Jones*, 132 S. Ct. at 953.

106. *See id.* at 954–55 (Sotomayor, J., concurring).

107. *See id.* at 949–50 (majority opinion).

108. 533 U.S. 27 (2001).

109. *Id.* at 37 (holding that the use of thermal imagers to detect the heat emissions coming from a house is a search under the Fourth Amendment).

officials might also need some space where they can watch potentially illegal activities without worrying, during each observation, whether the activity they are watching is too private to look at (for too long) without a warrant.¹¹⁰ Such a bright-line rule arguably would not only provide certainty for police, but also reassure the population that relies on them that law enforcement will be able to act proactively and effectively to investigate and thwart criminal activity.

It is perhaps therefore not surprising that while the D.C. Circuit in *Maynard* ventured to extend Fourth Amendment limits to public surveillance,¹¹¹ the other circuits to address the issue have found that GPS tracking is a non-search by virtue of the fact that the information it collects comes solely from a driver's public and observable activity.¹¹² The Seventh Circuit, for example, noted in 2007 that while GPS surveillance may threaten our privacy, it does not do so in a way that makes it a Fourth Amendment search.¹¹³ Rather, it is a high-tech analogue for visual tracking of a kind police have long done free from constitutional restriction.¹¹⁴ "[I]f police follow a car around, or observe its route by means of cameras mounted on lampposts or of satellite imaging as in Google Earth, there is no search," and when police "follow" the same car with GPS tracking technology, they are "on the same side" of this constitutional "divide."¹¹⁵ The Seventh Circuit reaffirmed this position on GPS tracking after *Maynard* was decided, noting again that so long as GPS tracking is limited to public space, it reveals no more than what is already visible.¹¹⁶ The Eighth

110. Arguably, this clear division of inside "protected areas" and outside unprotected ones is at odds with the Court's oft-repeated language in *Katz* that "[t]he Fourth Amendment protects people not places," and the key question is therefore not about where a person is, but what that person reasonably expects will remain private from the government. *Katz v. United States*, 389 U.S. 347, 350, 351–52 (1967) (holding that "[w]hat a person knowingly exposes to the public, even in his own home or office," is unprotected, and "what he seeks to preserve as private, even in an area accessible to the public," is constitutionally shielded). But the inconsistency may be only superficial. If we preserve privacy in public by enclosing our property or action inside of a hidden space, and we expose our action in the home by leaving it visible to people on the street, then *Katz* still tracks the outside/inside distinction quite well. We lose our privacy inside the home when we leave an in-home action visible to those in the outside world, and we can gain a measure of privacy in public by finding a way to shroud it inside some kind of enclosed container or other space.

111. *Maynard v. United States*, 615 F.3d 544, 556 (D.C. Cir. 2010), *aff'd in part sub nom. Jones*, 132 S. Ct. 945.

112. *See, e.g., United States v. Marquez*, 605 F.3d 604, 609–10 (8th Cir. 2010); *United States v. Pineda-Moreno*, 591 F.3d 1212, 1216 (9th Cir. 2010), *vacated*, 132 S. Ct. 1533 (2012) (mem.); *United States v. Garcia*, 474 F.3d 994, 997 (7th Cir. 2007).

113. *Garcia*, 474 F.3d at 998.

114. *Id.*

115. *Id.* at 997.

116. *Id.* at 997–98.

and Ninth Circuits likewise applied Supreme Court precedent to conclude that police no more engage in a Fourth Amendment search when they track a car in public space using GPS technology than when they track a car by following it.¹¹⁷ Video surveillance would, for example, not only show that a particular car parked near a doctor's office, but also that a particular person emerged from the car, went inside the office, and perhaps came out carrying a worried look on her face. It would indicate not only that a person parked near a particular bookstore or DVD store, but also, perhaps, what book or movie she carried out of the store.¹¹⁸ These activities, of course, take place in public where a person might be seen by others nearby, including police officers. But in a world without ubiquitous public surveillance, others are unlikely to focus on, let alone remember, activities of strangers that have no significance to them. A video archive, by contrast, gives interested officials a way to scrutinize (and review) such acts after the fact, even if they have no probable cause or other reasonable basis to track them.¹¹⁹ In short, if public and visible space remains a Fourth Amendment-free zone, it provides room not only for police to vigilantly watch the streets (as we expect them to do), or perhaps notice and scrutinize activities that seem suspicious, it also provides them with unlimited space to record, track, and review the minute-by-minute activities of individuals they have no reason to suspect of a crime. This includes activities that, although occurring in public, deal with medical issues, reading preferences, or other traditionally private information.¹²⁰

117. See, e.g., *Marquez*, 605 F.3d at 609–10 (stating that no search occurs when the use of GPS technology does not infringe upon a person's privacy); *Pineda-Moreno*, 591 F.3d at 1216 (explaining that GPS technology serves as a substitute for physically following a car on public roads and therefore similarly does not constitute a Fourth Amendment search).

118. See generally Adam Schwartz, *Chicago's Video Surveillance Cameras: A Pervasive and Poorly Regulated Threat to Our Privacy*, 11 NW. J. TECH. & INTELL. PROP. 47, 23 (2013) ("Without proper regulation, each of us must wonder whether the government is watching and recording us when we walk into a book store, a political meeting, or a psychiatrist's office.").

119. See Blitz, *supra* note 45, at 1356 (describing how a video archive can allow the government to virtually "randomly stop and closely scrutinize numerous people," exactly the type of searches the Fourth Amendment prevents).

120. See *United States v. Jones*, 132 S. Ct. 945, 955 (2012) (listing examples of public movements that could reveal private details (citing *People v. Weaver*, 909 N.E.2d 1195, 1199 (N.Y. 2009))).

C. *The Supreme Court's Signals About Fourth Amendment Protection in Public Spaces*

Perhaps because it was aware that there is sometimes a need for privacy protection in public, the Supreme Court, even before its 2012 *Jones* decision, occasionally gave signals in dicta that it might carve out some exceptions to its bright-line rule that what is public and observable is not constitutionally protected from observation.¹²¹ It pointed specifically to two kinds of potential exceptions: (1) circumstances in which magnification of what is visible from public airspace may reveal, not merely the contents of a field or greenhouse or the design and operation of a factory, but internal “intimate activity”;¹²² and (2) circumstances in which public surveillance is not simply targeted at a particular person for a discrete time period, but rather constitutes “dragnet” or “round-the-clock” tracking of a person’s activities.¹²³

Consider first some of the worries that the Court has raised about magnification. In all three of the aerial surveillance cases that the Court has heard, it held that aerial surveillance of a home’s curtilage, or the property outside a factory, from a plane or helicopter did not count as a search subject to Fourth Amendment protection.¹²⁴ Instead, the Supreme Court stated that it *might have* been a protected search had high-powered magnification technology allowed government officials to observe not simply the property below, but intimate activity or perhaps personal property located on it that revealed elements of a person’s past or personality.¹²⁵ In *Dow Chemical Co. v. United States*,¹²⁶ the Court held that Environmental Protection Agency officials did not trigger Fourth Amendment limits when they photographed details of a factory they suspected of pollution with a powerful map-making camera.¹²⁷ But, as the Court emphasized in a footnote, this was not a case where the government’s

121. See, e.g., *Dow Chem. Co. v. United States*, 476 U.S. 227, 238 (1986) (noting that using satellite surveillance technology might require a warrant in order to be constitutional).

122. See *infra* notes 124–134 and accompanying text (reviewing the Court’s discussions of potential constitutional issues with magnification).

123. See *infra* notes 135–138 and accompanying text (reviewing the Court’s cases related to tracking devices).

124. *Florida v. Riley*, 488 U.S. 445, 449–50 (1989) (plurality opinion) (curtilage of a home); *Dow Chem. Co.*, 476 U.S. at 239 (industrial complex); *California v. Ciraolo*, 476 U.S. 207, 213 (1986) (curtilage of a home).

125. See *Dow Chem. Co.*, 476 U.S. at 238 (explaining that the magnification at issue in the case was not strong enough to expose “intimate details,” which would raise constitutional concerns).

126. 476 U.S. 227 (1986).

127. *Id.* at 239.

magnification revealed small items such as a “class ring” or “identifiable human faces or secret documents captured in such a fashion as to implicate more serious privacy concerns.”¹²⁸ Similarly, in *Ciraolo*, which was decided on the same day as *Dow Chemical Co.*, the Court hinted at the same “intimate details” protection against public surveillance.¹²⁹ It held that police did not violate reasonable expectations of privacy when they used a fly-over airplane to observe marijuana in the defendant’s backyard.¹³⁰ But it also stressed that the State itself had acknowledged that some fly-over observation might well be a search when it employs “modern technology” to reveal “those intimate associations, objects or activities otherwise imperceptible to police or fellow citizens.”¹³¹ And it included the same hint in *Florida v. Riley*,¹³² even as it refused to find the police engaged in a Fourth Amendment search when they hovered over the defendant’s greenhouse in a helicopter and peered through a crack in its roof to verify that it contained marijuana plants.¹³³ The Court made clear that there was no evidence that the state’s aerial observation revealed any “intimate details connected with the use of the home or curtilage.”¹³⁴ In short, where the state uses magnification to reveal intimate details in a home’s curtilage, it may well be engaged in a search—even if those details are visible from public airspace. The same might be true of magnification that is aimed, not at a home’s curtilage, as in *Ciraolo* and *Riley*, or a business’s property, as in *Dow Chemical Co.*, but at activities in streets, parks or open fields.

The Supreme Court also suggested, even before the concurrences in *Jones*, that ongoing location tracking may reveal hidden details and thus become a search. In its 1983 *Knotts* decision, the Court held that police do not engage in a search when they use a radio transmitter to track a driver’s movements on public roadways, while acknowledging that more invasive location tracking might be a protected search.¹³⁵ The Court noted the concern that finding the police conduct at issue

128. *Id.* at 238 n.5.

129. *See Ciraolo*, 476 U.S. at 215 & n.3 (noting that the use of technology to aid the naked eye might change Fourth Amendment analysis).

130. *Id.* at 215.

131. *Id.* at 215 n.3.

132. 488 U.S. 445 (1989).

133. *See id.* at 450–51 (plurality opinion) (explaining why an expectation of privacy from the air was unreasonable).

134. *Id.* at 452.

135. *See United States v. Knotts*, 460 U.S. 276, 284 (1983) (discussing the Eighth Circuit’s finding that “intrusive” surveillance could be prohibited by the Fourth Amendment but noting the limited invasiveness of the search used in this case).

in *Knotts* to be within constitutional limits would mean that police would likewise be free of all constitutional restraint if they conducted “twenty-four hour surveillance of any citizen” on a whim.¹³⁶ Such a “dragnet-type law enforcement practice[,]” suggested the Supreme Court, might be subject to Fourth Amendment limits, even if limited location tracking with a radio transmitter is not.¹³⁷ In *Maynard*, the D.C. Circuit seized upon this reasoning and held that a twenty-eight day period of continuous GPS surveillance was precisely the kind of ongoing surveillance that the Court in *Knotts* explained would be constitutionally problematic.¹³⁸

Taken by themselves, these dicta do not provide ready-to-apply Fourth Amendment rules for identifying searches in public spaces. First, they do not provide the kind of identifiable boundary line between searches and non-searches that law enforcement officers need in order to know whether a particular search technique requires a warrant. As noted earlier, there is no guiding principle for when location tracking or video surveillance has occurred for too long of a period—or collected too much information—to remain free of constitutional limits.¹³⁹ The same problem arises for a rule that constitutionally shields “intimate” activities from magnification technologies but leaves other types of activities, such as movements on a road, free-for-the-taking. While certain activities, such as those involving family interactions, romantic relationships, or medical appointments, may intuitively be inappropriate for a state official to spy upon, the fact is that people are different. What may be personal and private for one person may not be for another. People are idiosyncratic, and what is truly private is a matter of social context.¹⁴⁰ For example, if a person is seeking a new job, he may want to buy books on switching careers or visit a resume workshop without his employer discovering these actions. These kinds of activities may not be all that private for other people, such as a college student who, like many others about to graduate, has to prepare herself for the job market. But, those actions may be private for a long-time employee who wants to, and perhaps must, hide his plans for a career-change from a current boss. Courts are ill-equipped to make these distinctions. Unlike a line that divides all content-based information

136. See *id.* at 283–84 (deferring constitutional analysis of such practices).

137. *Id.* at 284.

138. *United States v. Maynard*, 615 F.3d 544, 556–57 (D.C. Cir. 2010), *aff'd in part sub nom. United States v. Jones*, 132 S. Ct. 945 (2012).

139. See *supra* text accompanying notes 22–24.

140. See Blitz, *supra* note 45, at 1412 (giving examples of situational and individual factors that can influence the level of privacy desired).

in an e-mail from non-content based information, such as an e-mail address, a line that divides some kinds of “intimate” content from other kinds of content is a hard line for courts to mark.

Still, the Supreme Court’s dicta about magnification and location provides a foundation to build upon. The suggestion in its aerial surveillance cases—that some types of magnification would count as a search—captures a widely shared intuition; namely, that even in public space, we may desire, and should still be able, to keep certain details of our lives from being seen by others with whom we share that space. Even in the outside world, certain details of our activity may be so difficult for others to notice that they are akin to details we have enclosed in a bag or a car. These activities are essentially invisible because of their small size, the distance, or the limits of natural human vision and human attention. These factors can hide them almost as effectively as the invisibility created by a wall or enclosure that blocks light. Details that cannot typically be seen without magnification, because of size, distance, or visual limitations, might constitute one category of outside information that should be treated as “inside” for Fourth Amendment purposes.

The same is arguably true of information about us that can be obtained only by aggregating numerous public observations of our activity taken from a wide swathe of public space. This is the argument at the heart of the mosaic theory that the D.C. Circuit used in *Maynard* to find that GPS surveillance was a search.¹⁴¹ The D.C. Circuit held:

[T]he information the police discovered in this case—the totality of Jones’s movements over the course of a month—was not exposed to the public: . . . unlike one’s movements during a single journey, the whole of one’s movements over the course of a month is not *actually* exposed to the public because the likelihood anyone will observe all those movements is effectively nil.¹⁴²

Just as magnification reveals information that is effectively invisible to observers in public space, so too did GPS surveillance in this case. This information therefore also might be deemed to be akin to “inside” information, which is generally not available to individuals who make only surface-level observations of the activity around them and do not deepen their observations with the aid of sophisticated technology or a large coordinated team of observers.

141. See *Maynard*, 615 F.3d at 562 (discussing the government’s use of the mosaic theory to justify collecting information for national security purposes).

142. *Id.* at 558.

Yet, while the Supreme Court has been right to express concerns about certain kinds of magnification and about location tracking and right not to make every instance of magnification and location tracking a Fourth Amendment concern, it may have created future challenges by suggesting that the way to distinguish worrisome from unproblematic uses of these technologies requires courts to look at the amount or type of information gleaned. As discussed in the next Part, courts can better build upon the Supreme Court's concerns by focusing on the type or design of technology that the government uses to magnify details or record a person's path through public space.

II. ANOTHER SOLUTION: RECORDING AND MAGNIFICATION SEARCHES

A. *Constitutionalizing Public Surveillance: The Proposed Test*

This Part proposes another way to mark the line between searches and non-searches in public space. The core element of this proposal is to treat all police recording of public movements and activities that occur outside the presence of the officer doing the recording as a Fourth Amendment search. In short, the government engages in a search not merely when it watches a person, but when it systematically collects information about her by recording what she does. In the absence of a recording, magnification of the items a person is carrying should likewise count as a "search" if the magnification reveals details about "persons, houses, papers, persons, [or] effects" that would only be discovered in a more traditional search. This would require courts to be able to clearly identify situations where magnification has the same effect as traditional searches, such as a home entry, a pat down, or the unauthorized interception and review of mailed or e-mailed documents.

This proposed test addresses the line-drawing problem because, under this approach, it does not matter how long police investigate a person's public activities, but rather what technology they use to investigate the individual. If the police use technology that can capture images or record video or locations of individuals outside the presence of the police officer doing the recording, then the investigation counts as a search from the moment the officer hits the "record" button. Even if the recording lasts only a minute, it is a search. After all, a wiretap or use of an electronic "bug" would count as a search from the moment it begins giving police access to the conversation on which they are eavesdropping. The same would be true of recording-free tracking and magnification-aided investigations

described above. Once courts assure themselves that police are using this advanced technology, any resulting investigation would be classified as a “search,” regardless of its duration or detail.

Nor would such searches involve “mere visual surveillance.” While the “eye cannot . . . be guilty of” Fourth Amendment violations,¹⁴³ electronic monitoring of otherwise inaccessible data can be unconstitutional. Such electronic monitoring, for example, often counts as a “search” when it is used to intercept conversations.¹⁴⁴ It should likewise count as a search when it is used to record individuals’ movements and activities in public space.

Another reason to focus on the recording of remote activities as a trigger for Fourth Amendment protection is based on the fact that courts and scholars alike often identify the central purpose of the Fourth Amendment as protecting privacy. For example, Professor Sherry Colb, a Fourth Amendment expert, made this claim in responding to the notion that the Fourth Amendment only protects privacy in a limited way—by protecting the privacy we receive from control we exercise over our homes, cars, or other property.¹⁴⁵ The Framers’ goal in the Fourth Amendment, she wrote, can be best understood as protecting “privacy in all of its incarnations.”¹⁴⁶ Such an emphasis on privacy is understandable given the Supreme Court’s interpretation of the Fourth Amendment since 1967. Under the definition of “search” the Court has used since *Katz*, Fourth Amendment protections are triggered only when government invades “a reasonable expectation of privacy.”¹⁴⁷ As a result, judges and commentators often have understandably assumed that it is precisely such an expectation of privacy, whether tightly linked to property or

143. *Kyllo v. United States*, 533 U.S. 27, 32 (2001) (quoting *Boyd v. United States*, 116 U.S. 616, 628 (1886)).

144. *See, e.g.*, *United States v. U.S. Dist. Court*, 407 U.S. 297, 313 (1972) (“[B]road and unsuspected governmental incursions into conversational privacy which electronic surveillance entails necessitate the application of Fourth Amendment safeguards.” (footnote omitted)).

145. *See generally* Sherry F. Colb, *A World Without Privacy: Why Property Does Not Define the Limits of the Right Against Unreasonable Searches and Seizures*, 102 MICH. L. REV. 889, 895–96 (2004) (discussing the privacy issues related to a hypothetical mindreading device).

146. *Id.*

147. *See Katz v. United States*, 389 U.S. 347, 360 (1967) (Harlan, I., concurring); *see, e.g.*, *United States v. Jones*, 132 S. Ct. 945, 950 (2012) (“Our later cases have applied the analysis of Justice Harlan’s concurrence in [*Katz*], which said that a violation occurs when government officers violate a person’s reasonable expectation of privacy” (internal quotation marks omitted)); *Kyllo*, 533 U.S. at 33 (describing multiple Supreme Court cases applying the test from “Justice Harlan’s oft-quoted concurrence,” under which “a Fourth Amendment search occurs when the government violates a subjective expectation of privacy that society recognizes as reasonable”).

not, that the Fourth Amendment is intended to protect.¹⁴⁸ Thus, Justice Alito's concurrence in *Jones* focused on understanding whether the GPS tracking in that case intrudes upon a "constitutionally protected sphere of privacy."¹⁴⁹ Even critics of the *Katz* test, such as Professor Anthony Amsterdam, have spoken in similar terms about Fourth Amendment purposes, arguing that its core function is to prevent government attacks on privacy and freedom that would be "inconsistent with the aims of a free and open society."¹⁵⁰

But as the *Katz* majority itself observed, "privacy" is too general a description of what the Fourth Amendment protects.¹⁵¹ "The Fourth Amendment," it observed, "cannot be translated into a general constitutional 'right to privacy.'"¹⁵² Rather, it protects privacy against "certain kinds of governmental intrusion."¹⁵³ The challenge facing courts then is to pinpoint which types of governmental invasions into privacy implicate Fourth Amendment purposes and which do not. This is an important question for courts to ask as they analyze public surveillance. After all, every time a police officer stares at a person who is standing on the street or driving on the road, that officer is, in some small measure, lessening that person's privacy vis-à-vis the state. He is watching activity that might otherwise go unnoticed by any representative of the state. The same is true if an officer at a police center watches a monitor displaying images from a remote street camera. These are invasions of privacy, but that alone does not make them violations of the Fourth Amendment. Rather, courts must also assess whether the state's reduction in our privacy in these cases is accomplished by the "kinds of governmental intrusion" that the Fourth Amendment prohibits.¹⁵⁴

Unfortunately, the test that courts rely on most heavily to address this challenge—the reasonable expectations of privacy test—sounds precisely like a test for implementing the general right of privacy that

148. See, e.g., *United States v. Maynard*, 615 F.3d 544, 555–65 (D.C. Cir. 2010) (exploring whether the use of a GPS device violated the defendant's "reasonable expectation of privacy"), *aff'd in part sub nom. Jones*, 132 S. Ct. 945.

149. *Jones*, 132 S. Ct. at 964 (Alito, J., concurring in the judgment).

150. Anthony G. Amsterdam, *Perspectives on the Fourth Amendment*, 58 MINN. L. REV. 349, 403 (1974).

151. See *Katz*, 389 U.S. at 350 (explaining that while the Fourth Amendment protects privacy, "its protections go further, and often have nothing to do with privacy").

152. *Id.*

153. See *id.* at 350 & n.4. (emphasis added) (discussing seizures of person and property as also being protected by the Fourth Amendment whether they occur in public or in private).

154. See *id.* at 350.

the *Katz* majority had sought to distinguish from the Fourth Amendment right against unreasonable searches. Rather than limit Fourth Amendment safeguards to certain government intrusions into privacy, that test subjects *all such* intrusions that interfere with the privacy that individuals reasonably rely upon to constitutional limits.

Judges have sometimes emphasized that the requirement for reasonable reliance is itself a limit.¹⁵⁵ Even if a person expects privacy on a public street (satisfying the first prong of the reasonable expectations test), such an expectation is not one society is prepared to recognize as reasonable (failing the second prong).¹⁵⁶ But this limit is not all that helpful. First, the privacy we reasonably rely upon can be easily diminished, as Professor Amsterdam has highlighted, and the Supreme Court soon after acknowledged, by government action itself.¹⁵⁷ By putting people on notice that they will be subject to GPS monitoring, for example, the government could make it unreasonable to expect freedom from such monitoring. Moreover, the test also seems to place Fourth Amendment law on quickly shifting sands. An expectation of privacy can change quite rapidly as technology advances, and social norms change from year to year.¹⁵⁸ Perhaps for this reason, the Supreme Court has often interpreted “reasonable expectation of privacy” in a way that seems at odds with common intuitions about when citizens can expect privacy and, as Professors Christopher Slobogin and Joseph Schumacher have shown, with empirical data about such expectations.¹⁵⁹

Still, there is reason to take seriously—and try to better elaborate upon—the Supreme Court’s statement in *Katz* that the Fourth Amendment protection against unreasonable searches is narrower than a general “right of privacy.” As the legal scholar William Stuntz

155. See, e.g., *Florida v. Riley*, 488 U.S. 445, 450–51 (1989) (plurality opinion) (focusing on the fact that the defendant had a reasonable expectation of privacy from ground-level observation, but not from aerial observation).

156. Cf. *id.* at 452, 454 (O’Connor, J., concurring) (arguing that the plurality erred by focusing on the helicopter being in legal airspace, when the real test was whether the helicopter was in airspace used “with sufficient regularity” that its presence would be reasonable to society).

157. See Amsterdam, *supra* note 150, at 384.

158. See Richard Sobel *et al.*, *The Fourth Amendment Beyond Katz, Kyllo and Jones: Reinstating Justifiable Reliance as a More Secure Constitutional Standard for Privacy*, 22 B.U. PUB. INT. L.J. 1, 23–24 (2013) (noting the difficulty for an expectation-based test raised by the fact that “[e]xpectations of privacy may differ from person to person and from day to day”).

159. See Christopher Slobogin & Joseph E. Schumacher, *Reasonable Expectations of Privacy and Autonomy in Fourth Amendment Cases: An Empirical Look at “Understandings Recognized and Permitted by Society,”* 42 DUKE L.J. 727, 737–42, 774 (1993) (reporting findings about expectations of privacy indicating that “the Supreme Court’s conclusions about the scope of the Fourth Amendment are often not in tune with commonly held attitudes about police investigative techniques”).

powerfully argued, it would be odd to see the Fourth Amendment as providing such a right against government collection of our information through surveillance, when the modern regulatory state permits (indeed, even requires) collection of much of the same information in so many other ways.¹⁶⁰ Stuntz noted that “much of what the modern state does *outside* of ordinary criminal investigation intrudes on privacy just as much as the kinds of police conduct that Fourth and Fifth Amendment law forbid.”¹⁶¹

While the focus of this Article is not on the purpose of the Fourth Amendment, it is useful to at least propose one alternative way of identifying the subset of privacy violations that also constitute possible Fourth Amendment violations. The best way to identify such governmental intrusion is to begin with the paradigmatic type of invasion that the Fourth Amendment protects us from: the police “fishing expedition.” This is a kind of investigation that sifts through our property with the aim of finding some contraband, evidence of crime, or other findings that would justify subjecting us to state coercion. We find this type of invasion, for example, in the home search where officials rummage through drawers and papers looking for evidence of crime. We find it also in certain airport or road-block search practices, found unconstitutional by the Supreme Court and other appellate courts,¹⁶² where police stop every traveler or car to see if they happen to find evidence of drug possession. As Judge Kozinski stated in a decision holding such a practice unconstitutional when used at an airport security gate, an airport checkpoint is a tempting place for officers to look for evidence of all contraband, even contraband unrelated to air travel.¹⁶³ Such a checkpoint is “a sieve through which pass the contents of billions of satchels, purses, briefcases and pockets [which] will naturally strain out much that is of interest to law enforcement.”¹⁶⁴ But, while tempting, use of such a checkpoint in this way is unconstitutional.¹⁶⁵ It imposes upon individuals the kind of dragnet search that the Fourth Amendment is

160. William J. Stuntz, *Privacy's Problem and the Law of Criminal Procedure*, 93 MICH. L. REV. 1016, 1017 (1995).

161. *Id.*

162. *See, e.g.*, *City of Indianapolis v. Edmond*, 531 U.S. 32, 41, 48 (2000) (stating that the Supreme Court has never found constitutional a roadblock whose primary purpose was finding evidence of criminal activity).

163. *See* *United States v. \$124,570 U.S. Currency*, 873 F.2d 1240, 1247–48 (9th Cir. 1989) (holding that a generalized search of passengers' baggage violated Fourth Amendment principles).

164. *Id.* at 1246.

165. *See id.* at 1247–48 (finding that the search was not constitutional under the concepts of an administrative search, a *Terry* stop, consent, exigent circumstances, inventory searches, or border searches).

designed to bar, allowing law enforcement to treat individuals they have no reason to suspect of a crime as potential criminals who, as such, must reveal all of their possessions and papers, as well as their persons, for thorough examination. Airport checkpoints can and are, of course, permissibly used to conduct certain kinds of suspicionless searches—namely, searches of every air traveler for weapons or items that might be used for terrorism.¹⁶⁶ However, such searches are subject to tight constitutional limits.¹⁶⁷

The constitutionality of types of observations by officials can be defined by this kind of paradigmatic analysis. After all, it is not the case that every state intrusion into an individual's privacy, even privacy that we reasonably rely upon, necessarily subjects us to the functional equivalent of the general search or dragnet investigation that was the focus of the Fourth Amendment's protections. Rather, what constitutes a general search is not only that it intrudes upon an individual's privacy, but that it does so in a way that alters an individual's relationship with the state. It converts that individual into a suspected criminal.

This is a concern that is, to some extent, at the core of the key alternatives to a privacy-based account of Fourth Amendment purpose. The Fourth Amendment's purpose is not simply to preserve a certain amount of privacy; it is rather to assure that individual citizens are ordinarily able to keep a certain amount of distance between themselves and the coercive machinery of state power—and live with a certain level of freedom from that power—and freedom from fear of being subjected to it on an official's whim. Professor William Stuntz, for example, argued that the central evil that Fourth Amendment law was designed to combat was not police observation, but police coercion.¹⁶⁸ “[P]rivacy protection,” Stuntz wrote, “has little to do with the worst aspects of police misconduct,” which are about violence towards, or intimidation of, suspects.¹⁶⁹ Using a vehicle search as an illustration, Stuntz argued that when police stop a driver and ask for consent to search the car for drugs, the most worrisome consequence of such a stop for an innocent person subject to the

166. See *United States v. Albarado*, 495 F.2d 799, 803 (2d Cir. 1974) (describing the purpose behind airport searches).

167. See *\$124,570 U.S. Currency*, 873 F.2d at 1247–48 (explaining that airport security searches cannot be used to search for contraband generally or things that “merely look suspicious”).

168. See Stuntz, *supra* note 160, at 1020 (arguing that criminal procedure law's focus on information gathering over police coercion comes at the expense of protecting values).

169. *Id.* at 1078.

search is not that the police will see or examine whatever happens to be in the car; it is “the indignity of being publicly singled out as a criminal suspect and the fear that flows from being targeted by uniformed, armed police officers.”¹⁷⁰ In a similar vein, Professor Jed Rubenfeld has reasoned, based in large part on the Fourth Amendment’s text, that the Amendment’s central purpose was not to assure privacy but security—to protect people from “stifling apprehension and oppression that people would justifiably experience if forced to live their personal lives in fear of appearing ‘suspicious’ in the eyes of the state.”¹⁷¹ Another scholar, Scott Sundby, likewise offered an alternative to the conventional privacy-based account. He stated that the purpose of the Fourth Amendment “is founded upon the idea that integral to the Constitution and our societal view of government is a reciprocal trust between the government and its citizens.”¹⁷² Police, he argued, should not be permitted in our constitutional system to act in ways that treat each citizen as a potential criminal.¹⁷³ For example, police should not be permitted to search for contraband in the trash cans of individuals they have no reason to suspect of criminal wrongdoing.¹⁷⁴

While the exact implications of these non-privacy-based approaches to the Fourth Amendment depend on how they are elaborated, it seems likely that each would justify putting some limits on when and how closely police can track or scrutinize individuals’ activities in a public space. A society where the state tracks a person’s every move, even when it has no good reason to believe he is a criminal, is arguably not showing the kind of trust in its citizenry that Sundby insisted the Fourth Amendment demands.¹⁷⁵ Nor is it likely to leave people feeling secure that, if they obey the law, the government will leave them free from its coercive grasp. A person who feels that the government is always watching for any hint of a legal misstep is likely to feel that a police interrogation and arrest is always a possibility. So Stuntz might find that unconstrained drone tracking carries some of the same harms as arbitrary car searches. And Rubenfeld might find that such ever present drone monitoring generates in its target an

170. *Id.* at 1064.

171. Jed Rubenfeld, *The End of Privacy*, 61 STAN. L. REV. 101, 127 (2008).

172. Scott E. Sundby, “Everyman”’s Fourth Amendment: *Privacy or Mutual Trust Between Government and Citizen?*, 94 COLUM. L. REV. 1751, 1777 (1994).

173. See generally *id.* at 1811–12 (summarizing the argument for an approach to Fourth Amendment analysis based on the concept of government-citizen trust).

174. See *id.* at 1788–93 (discussing the lengths the Supreme Court went to in order to justify finding that searches of garbage were outside the Fourth Amendment).

175. See *id.* at 1811–12 (explaining that the trust-based approach better aligns with democratic principles).

intense “fear of appearing ‘suspicious’ in the eyes of the state”—the precise fear the Fourth Amendment’s protections are designed to spare us.¹⁷⁶

Although these accounts often offer an emphasis on trust, security, or freedom from police abuse as an alternative to a privacy-based account of Fourth Amendment purposes, they are perhaps better understood as refinements of such a privacy-based account. State surveillance that threatens Fourth Amendment values, does so in large part because it wrestles privacy away from citizens, leaving the private details of their lives exposed to review and examination by an outside observer. Such a privacy violation is a necessary condition for a state measure to implicate Fourth Amendment interests, at least when the state avoids the kind of trespassory or other interference with property that itself counts as a Fourth Amendment search, but it is not a sufficient condition. Rather, a privacy intrusion generally violates the Fourth Amendment only when it treats an innocent individual as a suspected criminal and thereby makes her more vulnerable to the state’s power of coercion and punishment.

A police investigation that generates and stores records of our public movements and activities creates the effect of treating society as suspected criminals. It not only reduces the privacy of those it records. It also, as Justice Sotomayor explained, allows the government “more or less at will” to review innumerable details of an individual’s life for evidence of possible wrongdoing.¹⁷⁷ As a result, people may be subjected to “arbitrary exercises of police power.”¹⁷⁸

B. Recording as a Dividing Line Between Searches and Non-Searches

Recording should thus be central to Fourth Amendment law because, in the context of public surveillance, it allows authorities to sift through sensitive information about our movements and activities. A recording transforms an ephemeral event into a permanent record. It thus frees authorities from the burden (and cost) of having to observe the public’s movements and activities as they occur. It also removes the challenge of having to remember those movements well enough to compare or combine them with other observations in order to build a larger picture. For example,

176. Rubinfeld, *supra* note 171, at 127.

177. See *United States v. Jones*, 132 S. Ct. 945, 956 (2012) (Sotomayor, J., concurring) (discussing the importance of considering a GPS device’s ability to allow recording and aggregation of the details of a person’s movements in determining if there is a reasonable expectation of privacy).

178. *Id.*

the kind of “precise, comprehensive record of a person’s public movements” cannot be easily created unless a GPS unit not only transmits information to police about a person’s whereabouts, but also captures that information in electronic memory.¹⁷⁹ In fact, Sotomayor explained in her concurrence that the fact that the GPS device allows recording and aggregation is precisely what allows the government to discover the private details of public activities.¹⁸⁰

Recording is also usually indispensable to creating the kind of detailed “mosaic” of a person’s life, which the D.C. Circuit found so concerning and identified as a basis for subjecting GPS surveillance to Fourth Amendment limits. As the D.C. Circuit emphasized, with a record of a person’s movements over a several day long period, police can learn things about a person’s life that would be unknown to all other passersby who happen to see that person on roads or streets:

Repeated visits to a church, a gym, a bar, or a bookie tell a story not told by any single visit, as does one’s not visiting any of these places over the course of a month. The sequence of a person’s movements can reveal still more; a single trip to a gynecologist’s office tells little about a woman, but that trip followed a few weeks later by a visit to a baby supply store tells a different story. A person who knows all of another’s travels can deduce whether he is a weekly church goer, a heavy drinker, a regular at the gym, an unfaithful husband, an outpatient receiving medical treatment, an associate of particular individuals or political groups—and not just one such fact about a person, but all such facts.¹⁸¹

The D.C. Circuit did not emphasize the difference between recording and merely observing activities in its opinion. But the difference is important for its argument: it is far more laborious for police to aggregate these details of a person’s activities unless it records each movement or action for later comparison with others. If, in the above example, a particular official does not have a record of the first visit to a gynecologist’s office, it is far less likely he will be able to combine it with the subsequent visit to the baby supply store to infer that the woman is expecting a child. And it is unlikely that he will have access to the earlier detail, unless he is doing all of the tracking himself or working with a team of officers that are constantly sharing information that they have recorded. It is conceivable that even without any recording device, officials could draw an inference

179. *Id.* at 955.

180. *See id.* at 956 (arguing that this factor is important in determining society’s expectation of privacy).

181. *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010) (footnote omitted), *aff’d in part sub nom. Jones*, 132 S. Ct. 945.

from the woman's two visits. However, this becomes more implausible when an investigation aggregates not only two, but tens or hundreds of events.

The latter type of investigation, as Justice Alito stated in his *Jones* concurrence, could hardly have happened in a world before GPS surveillance without "a large team of agents, multiple vehicles, and perhaps aerial assistance."¹⁸² Even in a pre-GPS form of extended location tracking, officials would need to create records of their target's movements in order to share their observations with others on the team.¹⁸³ At least one recent state court decision has treated the fact that one can imagine a more primitive analogue of automated recording as evidence that it cannot be a search. In *Foltz v. Commonwealth*,¹⁸⁴ the Court of Appeals of Virginia held that because "a police officer could have followed and personally recorded the movements of the van" without conducting a search, the use of a GPS recording device to track the van was not a search.¹⁸⁵ But this is not the inevitable conclusion one might draw from such an analogy. It would be extraordinarily difficult for a single officer to follow a van as continuously as a GPS device: it would be an unusual officer, able to forego a significant amount of sleep, who could follow a van driver's every (unpredictable) movement over the course of an entire week. A team of policemen, as Justice Alito recognized, would likely be required, and the fact that one can imagine a much more expensive and complicated low-technology analogue for GPS recording does not mean that GPS recording is not a search.¹⁸⁶

Recording is even more of a game-changing technology for video surveillance than it is in location tracking. When police not only use video cameras on street lamps or drones for real time monitoring, but also to create video surveillance footage that may be subject to later review, they allow for a kind of investigation that is far more intrusive—and far more like a dragnet search—than real-time monitoring. Not only can police aggregate and compare different events or actions, as they can in the context of location tracking, but they can also pause on a particular frame, examine it closely, and

182. *Jones*, 132 S. Ct. at 963 (Alito, J., concurring in the judgment).

183. See *infra* Part II.C (describing the type of traditional police work necessary to record as much information as a GPS device).

184. 698 S.E.2d 281 (Va. Ct. App. 2010), *aff'd*, 732 S.E.2d 4 (Va. 2012).

185. See *id.* at 291–93 (reasoning that the use of GPS technology did not provide a substitute for police behavior that would have otherwise violated a right to privacy because the police could have followed and personally recorded the movements of the van).

186. *Jones*, 132 S. Ct. at 963–64 (2012) (Alito, J., concurring in the judgment).

notice small details of a person's appearance or action that they would be very unlikely to notice if they had only one chance to perceive and remember an event as it occurred.

At the extreme, a recording could create the kind of science fiction world Lewis Padgett depicted in the story, "Private Eye."¹⁸⁷ This is a world in which *every* action we take is recorded and stored in police-owned video footage and in which officials can therefore watch the day-to-day existence of any individual the way most people watch a DVD or downloaded movie—by watching it unfold on a screen and pausing to rewind and review sequences that they did not fully perceive or understand the first time through.¹⁸⁸ If officials subjected an individual who they have no reason to suspect of a crime to this kind of video review just to see if the video record happened to reveal anything suspicious, there is little question that they would be poring over personal details of that person's life in much the same way they do in a more traditional "dragnet" search.

Moreover, what is significant about video recording for Fourth Amendment purposes is not only the way it allows authorities to aggregate and compare many small details of our day-to-day lives, but also the power it gives them to pause on or review the same detail over and over again. We normally miss a good deal of what is happening in a scene in front of our eyes. Typically, people do not consciously perceive elements of a scene that they have no need to notice.¹⁸⁹ Video recording, by contrast, captures the information our perception misses. It replaces our flawed natural memory with an artificial replacement that lacks its imperfections and allows police to overcome its limits.¹⁹⁰ In large part, for this reason, Justice Harlan wrote that even a form of surveillance that is not normally a search,

187. See Blitz, *supra* note 45, at 1350–59 (citing Lewis Padgett, *Private Eye*, in *THE MIRROR OF INFINITY: A CRITICS' ANTHOLOGY OF SCIENCE FICTION* 99 (Robert Silverberg ed., 1970)) (proffering that science fiction has given us a view of the potential future of government surveillance and the need to reconsider the approach to the Fourth Amendment).

188. See Padgett, *supra* note 187, at 100 (describing a fictional "omniscience," which stored a fifty-year history of light and sound images and was "a device for looking into the past").

189. See CHRISTOPHER CHABRIS & DANIEL SIMONS, *THE INVISIBLE GORILLA: HOW OUR INTUITIONS DECEIVE US* 5–7 (2009) (recounting an experiment in which individuals tasked with counting ball passes in a game depicted in a video failed to notice an appearance by an actor in a gorilla suit in the middle of the game); Daniel L. Schacter, *The Seven Sins of Memory: Insights from Psychology and Cognitive Neuroscience*, 54 *AM. PSYCHOLOGIST* 182, 186 (1999) (explaining experiments in which people fail to perceive significant elements in their environment such as the substitution of a different person for a stranger asking them directions).

190. See Blitz, *supra* note 45, at 1356 (describing how video recordings can be as intrusive as stop-and-frisks).

such as government use of an informant to gather information about a suspected drug dealer or other criminal, should become a search when the informant does not simply listen and remember what he is told, but also electronically transmits and records it.¹⁹¹ There is a constitutionally significant difference, he stated, between “third-party monitoring and recording which insures full and accurate disclosure of all that is said, free of the possibility of error and oversight that inheres in human reporting.”¹⁹² In a world in which individuals gossip about or share what they have observed, our privacy is threatened, but in a way that is often tolerable:

Much off-hand exchange is easily forgotten and one may count on the obscurity of his remarks, protected by the very fact of a limited audience, and the likelihood that the listener will either overlook or forget what is said, as well as the listener’s inability to reformulate a conversation without having to contend with a documented record.¹⁹³

In a world of unrestrained recording, by contrast, there is no comfort in knowing that small and obscure aspects of our conversation will escape notice because recordings can be played over and over again to multiple listeners. We do not have the power to “reformulate a conversation” by offering our own account. The audio recording will provide an authoritative, and virtually indisputable, account. It is thus inevitable, said Justice Harlan, that in a world of unrestrained recording “words would be measured a good deal more carefully and communication inhibited.”¹⁹⁴

In discussing audio recording, Justice Harlan focused primarily on its threat to privacy and its possible chilling effect on communication.¹⁹⁵ For Fourth Amendment purposes, however, what is most worrisome about unconstrained video surveillance (or location tracking for that matter) is not simply that it substantially diminishes our privacy and leads us to refrain from taking spontaneous actions we worry may become part of a permanent record. Instead, it is how this specific kind of diminution of privacy affects each individual’s relationship with state power. While recording by anybody else (including other private individuals)

191. *See* United States v. White, 401 U.S. 745, 787–90 (1971) (Harlan, J., dissenting) (noting that transmitting or transcribing conversations is potentially more damaging to free society than the risk of an informant later reporting on a conversation).

192. *Id.* at 787.

193. *Id.* at 787–88.

194. *Id.* at 787.

195. *Id.* at 787–89.

reduces our privacy to some degree, systematic recording by the government diminishes it even more. It allows the government to systematically analyze aspects of our lives, which, in a liberal, individual rights-based society, are not the government's business. Furthermore, it permits the government to do so with the aim of finding, by chance, some basis for subjecting a person to the far greater degree of police power that has traditionally been reserved for those individuals who officials have reason to think are engaged in criminal activity.

Given these observations about the effects of recording, one might wonder why the test proposed in this Article does not make all government recording a search and instead requires that, to constitute a search, an officer's recording must be "remote," meaning outside the realm that the recording officer can perceive with his eyes, ears, and other senses. After all, Justice Harlan's grave worries about recording seem to apply not just to a drone's recording of events occurring far from the drone's operator, but also to recordings that a police officer makes of what is happening in front of him.¹⁹⁶ Even in a public space, the presence of a government-recording device may chill a citizen's speech or other expressive activity—even if a single police officer operates the device and it is not a part of a massive, surreptitious, surveillance system.

However, for Fourth Amendment purposes, there is an important difference between a police officer recording his own interactions, and that which the government gathers from pedestrians and drivers throughout public space. As suggested above, the point of the Fourth Amendment is not simply to protect privacy, but to prevent the state from engaging in the kind of privacy violation that occurs in a dragnet investigation or other "general search" where the state reaches out and subjects individual actions to extensive or penetrating analysis.¹⁹⁷ By contrast, where recording is not remote—where a camera mounted on a police car simply captures footage of a police officer's interactions at a traffic stop, or a police officer uses an iPhone (or a camera in his uniform) to capture events that occur on a street around him—then the recording is far less amenable to being used to create a searchable archive of an individual's detailed movements and activities. By contrast, "uniform cams," tiny cameras

196. See generally *id.* at 787 (failing to differentiate between transmitting and transcribing of conversations).

197. See *supra* notes 156–72 and accompanying text (explaining that the Fourth Amendment right to privacy is much narrower than the common understanding of the right to privacy and that the Fourth Amendment only seeks to protect unreasonable invasions of privacy, such as police fishing expeditions with no limits).

built into an officer's uniform to record each encounter a police officer has with a citizen, are designed and used to archive the police officer's own encounters with citizens.¹⁹⁸ They are not designed to gather data about innumerable citizen activities happening far from the officer that are unrelated to what the officer is doing.¹⁹⁹ They are intended, as one former police chief puts it, to "collect[] and preserv[e] the best evidence about every encounter between the police officer and the community."²⁰⁰

The larger concern about uniform or dashboard cams is not the privacy threat they raise in each encounter they record, but rather what police might do by technologically enhancing or aggregating such image-capture. If police combine—into a central, searchable data collection—the images that each of them captures on a uniform or dashboard-mounted camera, such action could begin to mimic the effects of a larger recording system. However, a definition of "search" broad enough include any action that could threaten privacy, in combination with other surveillance measures, would cover far too much ground: Virtually any kind of police observation could, in combination with other measures, threaten our privacy and perhaps even allow arbitrary fishing expeditions. A technological form-based or design-based test of the kind proposed in this Article would be of little import if it were this broad.

To be sure, one can imagine scenarios in which police uniform cams or dashboard cams are designed *not* to serve their current purpose of preserving records about each police officer's encounter with the community, but rather to sweep in, and preserve for later review, evidence about citizens' actions and movement. Imagine for example, that instead of mounting a camera that records merely what is in front of the car, police mount a camera like the rotating cameras mounted on top of Google's Street View vehicles,²⁰¹ that constantly captures footage from the 360-degree field surrounding the police car each minute and magnifies each part of this visual field to reveal

198. See Janice Morse, *Tiny Uniform Cams Next Big Thing in Policing*, USA TODAY (May 7, 2013, 6:36 AM), <http://www.usatoday.com/story/news/nation/2013/05/07/tiny-police-cameras/2140483> (noting that the uniform cameras cannot lie and are intended to provide an accurate account of what occurs in the course of police work).

199. See *id.* (discussing how cameras worn on uniforms are the next step beyond dashboard cameras).

200. *Id.*

201. See *Behind the Scenes: Street View*, GOOGLE, <http://www.google.com/maps/about/behind-the-scenes/streetview> (last visited Oct. 12, 2013) (describing how the Google Street View car is capable of taking 360-degree panoramic images to create three-dimensional models of the photographed environment).

details of every person and car passing by. Although such a police car camera technically only captures data from the realm that the officer can potentially see and hear, it might still collect a worrisome amount of data about individual citizens. In fact, such a video surveillance system threatens Fourth Amendment values in the same way as a city-wide system of video recording carried out from stationary cameras or aerial drones: The cameras simply happen to be mounted on police cars rather than on lamp-posts or drones. In such a circumstance, courts should find that police do engage in a search when they use the combined, programmatic use of police car cameras to create, and later review, ongoing records of citizens' movements.

C. Extensions: When Magnification—and Recording—Should Count as Searches and When They Should Not

This Article so far has argued that police conduct a Fourth Amendment search when they remotely record a person's actions or movements, whether they do so with a drone-based camera, a network of street cameras, or a GPS-tracking device. As noted earlier, such *recording enables government officials to search public lives frame-by-frame, much in the way it might search documents file-by-file*. But while remote recording is the clearest type of search in a public space, it is not necessarily the only type. Even in the absence of any recording, police might take advantage of other surveillance technologies to circumvent the traditional Fourth Amendment protection for our "persons, houses, papers, and effects." Using a high-powered telescope, for example, officials gather information from the inside of a person's home that they might otherwise obtain only by entering the house or the curtilage.

There is certainly precedent for the Supreme Court to classify a form of surveillance as a "search" when it is the functional equivalent of surveillance that would be a search. In *Kyllo*, the Court found that police engaged in a search of a home when they pointed a thermal imager at the home from the street outside to measure the heat emissions in order to determine if there likely was a marijuana-growing lamp within.²⁰² This was not, of course, a traditional home search: the officers never entered the house.²⁰³ They simply measured the heat leaking through its walls from a public street where they had every right to be without a warrant.²⁰⁴ The Supreme

202. *Kyllo v. United States*, 533 U.S. 27, 29, 34 (2001).

203. *See id.* at 30 (noting the search was performed from the passenger seat of the agent's car).

204. *See id.*

Court nonetheless held that these heat measurements from the outside were a search, largely because their intrusion into the home was functionally equivalent to a home entry.²⁰⁵

In fact, this concept of functional equivalence was built into the test that the Supreme Court proposed for how to apply the Fourth Amendment to the use of “sense enhancing” technologies to observe the home. The Court held that the use of such technology counts as a search when it is employed to obtain information that otherwise could have been obtained only through “physical ‘intrusion into a constitutionally protected area.’”²⁰⁶ The Court added the caveat that this applies only to technology that “is not in general public use.”²⁰⁷ So while police are subject to Fourth Amendment constraints when collecting heat measurements from the home with a thermal imager, they might be free of such limits if they instead look at the home’s walls with the same kind of binoculars available to bird watchers, sports fans, or amateur astronomers.²⁰⁸ Perhaps this is because unlike thermal imagers, which people do not expect to have pointed at their houses in the course of their normal day-to-day existence, binocular-viewers are a common part of life in modern society, and individuals who wish to safeguard their privacy cannot expect that their activities will always escape magnification by others in their neighborhood. Still, the Supreme Court made clear that it will not allow police to circumvent the Fourth Amendment command that searches of a home be reasonable.²⁰⁹ Invading the home technologically from outside its walls is as much a Fourth Amendment search as invading it physically.

Public surveillance might sometimes cross a Fourth Amendment line and trigger reasonableness requirements, not only when it involves magnification of in-home activities, but also when it is the functional equivalent of other categories of searches. For example, if

205. *See id.* at 33–34 (basing their finding on the fact that the sensors provided information that otherwise only would have been obtainable by physical intrusion).

206. *Id.* at 34 (quoting *Silverman v. United States*, 365 U.S. 505, 512 (1961)) (internal quotation marks omitted); *see also* *Florida v. Jardines*, 133 S. Ct. 1409, 1419 (2013) (Kagan, J., concurring) (finding that use of a drug detecting dog to alert to drugs inside the house uses a sense-enhancing “device” to invade the house in a way equivalent to a home entry).

207. *Kyllo*, 533 U.S. at 34.

208. It is not clear how the Supreme Court would rule on this. In *Kyllo*, the Court noted that use of technological enhancement had not been completely resolved. *Id.* at 33. In upholding the use of magnification in *Dow Chemical Co.*, the Court noted that an important factor was that the area photographed was not near a home. *Dow Chem. Co. v. United States*, 476 U.S. 227, 237 n.3 (1986).

209. *See Kyllo*, 533 U.S. at 34 (analyzing the search of a home using thermal images for reasonableness)

future police officers use a zoom camera to hone in on a person's pockets or wallet, or the book or letter he is holding in his hand, such public surveillance can reveal to police what they could otherwise learn only by physically rummaging through his pockets or wallet, or asking him to hand over the book or letter for official review. If so, then such magnification would arguably allow police with sense-enhancing technology to do what they could otherwise do only with a search of a person, his papers, or his effects. Under those circumstances, perhaps, the Supreme Court should react as it did in *Kyllo*. Just as the Court did not permit government officials there to collect, from afar, information about the home's interior life that it could otherwise have taken only by physical entry, it might similarly bar officials from collecting difficult-to-observe details about a person or what he is carrying that they could otherwise obtain only by stopping a person and searching his belongings.²¹⁰

In fact, such a stance on magnification could help explain the Supreme Court's otherwise puzzling statements in the aerial surveillance cases. As noted earlier, the Court in those cases suggested that observation of a home's curtilage from planes and helicopters normally raised no Fourth Amendment concerns but might well do so if they captured "intimate activities."²¹¹ This activity-based criterion for aerial searches seems at odds with the way the Court normally analyzes searches in or around a home. After all, when courts ask if police need a warrant to enter a home, they do not ask whether the home search is aimed at uncovering intimate details or more impersonal information.²¹² Rather, they assume, as Justice Scalia explained in *Kyllo*, that "[i]n the home, . . . all details are intimate details"²¹³ and, on that basis, require a warrant for any entry

210. One might object that such functional equivalence is a false one. High-powered magnification, for example, might be the high-tech equivalent not of what a police officer does when he seizes and reviews personal effects or documents (a search), but rather of what he does when he takes a furtive glance at someone's reading materials or possessions from a nearby seat in a restaurant or park. High-powered amplification likewise might be more akin to listening to the personal argument between a nearby couple than it is to intercepting a phone call between them. But where telescopic viewing or amplification gives an official a covert way to observe what they would otherwise have to do by being present, this technological shift in the challenge they face should make a constitutional difference.

211. See *supra* text accompanying notes 124–134; see also CHRISTOPHER SLOBOGIN, *PRIVACY AT RISK: THE NEW GOVERNMENT SURVEILLANCE AND THE FOURTH AMENDMENT* 59, 62 (2007) (mentioning factors that courts consider when determining whether surveillance of a home's curtilage is too invasive and observing that surveillance of a home's interior would entail different, heightened protections).

212. See, e.g., *Payton v. New York*, 445 U.S. 573, 590 (1980) ("[T]he Fourth Amendment has drawn a firm line at the entrance to the house. Absent exigent circumstances, that threshold may not reasonably be crossed without a warrant.").

213. *Kyllo*, 533 U.S. at 37.

into the home. If, as the Supreme Court has sometimes phrased it, a backyard or other curtilage surrounding the home receives Fourth Amendment protection because it is an “extension of [the] home,”²¹⁴ then why treat its protection as variable? Why understand the curtilage’s Fourth Amendment shield to protect some of the activity that police can observe from a public vantage point but not other kinds of activities that occur in the same location and are just as open to observation? One possible answer is that, if the Court protects intimate details in the curtilage from scrutiny by high-powered drone cameras, it is because they are the kinds of details that police could not traditionally and typically learn without searching a person, her house, her documents, or her effects. Such a rule might also make sense because just as people cannot prevent certain evidence of in-home activities from leaking out—for example, in the form of heat emissions—they also cannot completely and continuously conceal their private documents and personal items from exposure to the outside world. Individuals in the modern world will occasionally have to read an e-mail or mark-up a memo as they ride on a subway or sit in an airport. They will occasionally read a book as they rest in a park or a plaza or check the readings on a personal fitness monitor as they walk through a public space.

The fact that individuals have little choice but to bring these items into public space, where powerful cameras may magnify them and give officials a closer look, does not mean that they are fair game for untrammelled official scrutiny. The Supreme Court noted in *New Jersey v. T.L.O.*²¹⁵ that even when students enter the closely supervised and monitored environment of a school, they often have no choice but to bring with them numerous personal items, including “keys, money, and the necessities of personal hygiene and grooming,” as well as “photographs, letters, and diaries.”²¹⁶ The Court emphasized that these items remain protected from arbitrary searches, even in the tightly controlled confines of a school.²¹⁷ It is hard to see why

214. See *Florida v. Jardines*, 133 S. Ct. 1409, 1414–15 (2013) (“[T]he curtilage of the house . . . enjoys protection as part of the home itself.”); *United States v. Dunn*, 480 U.S. 294, 300 (1987) (outlining the historical origins of the idea of curtilage in common law); see also *id.* at 307 (Brennan, J., dissenting) (agreeing that “curtilage is the area which extends the intimate activity associated with . . . a man’s home and the privacies of life” (quoting *Oliver v. United States*, 466 U.S. 170, 180 (1984)) (internal quotation marks omitted).

215. 469 U.S. 325 (1985).

216. *Id.* at 339.

217. See *id.* at 339–43 (striking a balance in schools between permitting entirely arbitrary searches and requiring warrants for every search).

students (or other individuals) would lose such protection in a public space.

The same is true of cell phone conversations. Conversations that once took place entirely over phone lines between home phones, office phones, and pay phones now increasingly take place over cell phones, often as one or both speakers are walking down the street, waiting at an airport, or sitting in a coffee shop. It seems odd to think that a modern-day *Katz* could be constitutionally subjected to electronic eavesdropping by government officials armed with parabolic microphones or other sound amplification devices because the private conversation he had to conduct from a phone booth on the street in 1967 would today take place over a cell phone call from the same street. Thus, Professor Wayne LaFave's proposal that the Fourth Amendment be understood to protect against use of hidden microphones or recording devices, even in public space, seems justified.²¹⁸

To be sure, *Kyllo's* doctrine of functional equivalence should be applied with caution: Every police method that uncovers details about a suspect is, at a high level of generality, functionally similar to other methods of uncovering the same details. Police unable to obtain evidence of a drug conspiracy from a suspect's home will have to try to find evidence of the conspiracy elsewhere, such as in public space or in third-party records. The match between evidence sought outside the home, and that which is inside the home, does not—and should not—automatically transform the public, or third-party record, surveillance into a search.

One key advantage of the technological form-based or design-based test proposed in this Article is that it provides a clearer line between searches and non-searches in a public space—and this line would be easily blurred if the doctrine of functional equivalence were applied too freely. Consider, for example, the difficulties that might arise if courts not only accepted this Article's proposal to count remote recording as a search, but also classified as a search all techniques they found to have effects equivalent to remote recording. Consider, for example, the type of search that Justice Alito identified

218. See 1 WAYNE R. LAFAVE, *SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT* § 2.2(e), at 442–43 (3d ed. 1996) (suggesting that privacy expectations are more reasonable for private conversations that take place in a public place than for actions that take place in public space); see also Susan Freiwald, *Online Surveillance: Remembering the Lessons of the Wiretap Act*, 56 ALA. L. REV. 9, 36 (2004) (considering a “presence of electronic surveillance” test under which “any conversation a police officer could hear unaided would not be private, but those that required a wiretap or a bug would be constitutionally protected”).

as an earlier-era equivalent of GPS tracking: an operation that follows a suspect's movements with a team of officers, multiple vehicles, and aerial observation.²¹⁹ Even without a recording device, such tracking may threaten to impose a temporary dragnet on an individual. By following his movements and activities from place to place, police may make an observation that gives them justification to move in for a pat-down or an arrest. Or, consider a simpler version of such tracking: one officer tails a person's vehicle, observes what the suspect does when he exits the vehicle and whether he goes into any particular offices or homes. The officer then reports his observations by cell phone to another officer at the station house, who writes down any observations that either of the officers believes to be of interest. Such observation and dictation might produce, with less advanced technology, records equivalent to those captured with automated video recording or location tracking.²²⁰ Or, in a situation more akin to the GPS tracking in *Jones*, police could use a GPS-tracking device that transmits to the police station, but does not record, the location that a car is in at a particular moment.

In such circumstances, it is plausible that a court intent on safeguarding Fourth Amendment interests would classify the systematic tracking that takes place as a search, even in the absence of an automated recording. Doing so may seem necessary to block police from circumventing the limits that apply to recording. However, it is not clear, why, if police become subject to Fourth Amendment requirements when they follow a person with multiple vehicles for a day, they do not likewise engage in a Fourth Amendment search for twenty minutes. All such tracking potentially raises some of the same dangers raised by ongoing recording of a person's movements. But that does not mean all of it should count as a "search." And the same problems that make the mosaic theory problematic also confront a proposal to count police tracking as a search only when it goes on long enough or involves a certain number of vehicles or officers.

219. See *United States v. Jones*, 132 S. Ct. 945, 963–64 (2012) (Alito, J., concurring in the judgment) (describing what would have been needed to accomplish the search before the advent of GPS-tracking technology).

220. Indeed, when Justice Harlan insisted that there is a constitutionally significant difference between "third-party monitoring and recording," *United States v. White*, 401 U.S. 745, 787 (1971) (Harlan, J., dissenting), the "recording" that so disturbed him was this kind of primitive record creation. Instead of secretly audio recording his conversation with the target of the investigation, the informant wore a bug that transmitted the conversation to an officer outside who surreptitiously listened and then testified after the informant disappeared. *Id.* at 746–47 (plurality opinion).

III. OBJECTIONS, ALTERNATIVES, AND LIMITS: DIFFERENT WAYS OF DEFINING A “SEARCH” (AND A “REASONABLE SEARCH”) IN PUBLIC

There are two major objections one might offer against this definition of what kinds of investigatory methods count as a “search” in a public space. First, one might argue that it is too restrictive or that it would leave police unable to effectively investigate and deter crime. Second, one might argue that it is not restrictive enough; it places too much police work outside of the Constitution’s search and seizure limits, which presents a serious threat to privacy.

A. *The Objection that the Test Leaves Police Needing Greater Freedom To Investigate*

This objection requires a brief examination of how Fourth Amendment reasonableness standards apply to police investigative methods. Focusing on what kind of police activity the Fourth Amendment covers is only the first step in the two-step inquiry courts must undertake to decide if police activity violates the Constitution. The fact that the Constitution and its requirements cover a particular investigatory method does not mean that the search violates the Constitution. Rather, a search is constitutionally impermissible only when it is “unreasonable.”²²¹ So, even if GPS tracking or video surveillance in public counts as a search, courts will allow such surveillance when it is reasonable.²²² Traditional searches, such as home entries, are reasonable only if police first obtain a warrant based on probable cause.²²³ This was also what the Supreme Court assumed police would have to do if they wished to attach a GPS device to a car to track the driver’s movements, as they did in *Jones*.²²⁴ However, obtaining a warrant will not always be practical. In fact, it is implausible to require camera operators to obtain a warrant each time they record citizens’ activities in public streets. Some existing camera systems collect data continuously and such warrantless operation of video surveillance is often necessary to its effectiveness. Police cannot be expected to seek a warrant for video images the value of which is apparent only after a crime has occurred, as was the

221. *Maryland v. Buie*, 494 U.S. 325, 331 (1990) (“It goes without saying that the Fourth Amendment bars only unreasonable searches and seizures.”); *see* U.S. CONST. amend. IV.

222. *See Buie*, 494 U.S. at 331–32.

223. *See Payton v. New York*, 445 U.S. 573, 586 (1980) (“[S]earches and seizures inside a home without a warrant are presumptively unreasonable.”).

224. *See Jones*, 132 S. Ct. at 948–49 (finding that a valid warrant is necessary for a Fourth Amendment search to be reasonable).

case in the 2013 Boston Marathon bombing investigation and in the earlier July 2005 investigation of the London subway bombings.²²⁵

One possible response is to argue that this kind of video surveillance should not count as a search at all because, unlike the GPS surveillance in *Jones*, it does not target any particular person. Instead, it routinely collects information from the streets in the event that the camera's images reveal a crime, a threat to public safety or capture evidence later needed for a criminal investigation.²²⁶

The problem with this objection is that it ignores the ways in which general collection of evidence can bring the state one step away from a targeted investigation and undermine Fourth Amendment interests even before it reaches that targeting stage. Consider, for example, a hypothetical police program which uses a thermal imager to collect heat measurements from all houses in a particular region in the event that police, at a later time, decide to search the information for evidence of marijuana-growing heat lamps or other evidence of criminal activity that might be found in the heat measurements. If, as the Supreme Court ruled in *Kyllo*, police engage in a search when they point a thermal imaging device at a single house they suspect of housing marijuana, they must *also* engage in a search when they point that device at many houses and lack any particular suspicion about the residents of those houses. Even if they do not intend to examine the heat measurements they collect until some unspecified later date and are not sure what they will find, they will still have crossed the line that, according to *Kyllo*, makes their investigatory activity a search.²²⁷ Their general search has collected evidence from the interior of a home that they could not otherwise have obtained except by entry into the home. Likewise, if instead of attaching a GPS unit to a particular car as they did in *Jones*, police surreptitiously tacked such units onto hundreds of cars parked in a city sidewalk to see (at some unspecified later time) if any of them moved in patterns characteristic of a drug dealer or purchaser, it is hard to see why the

225. See Keith Proctor, *The Great Surveillance Boom*, CNNMONEY (Apr. 26, 2013, 4:56 PM), <http://management.fortune.cnn.com/2013/04/26/video-surveillance-boston-bombings> (documenting the challenges of using video surveillance to investigate and prevent incidents such as the Boston Marathon and London subway bombings).

226. See, e.g., Allison Linn, *Post 9/11, Surveillance Cameras Everywhere*, NBCNEWS (Aug. 23, 2011, 7:38 AM), http://www.nbcnews.com/id/44163852/ns/business-us_business/t/post-surveillance-cameras-everywhere (asserting that officials typically use security cameras not to catch terrorists, but to gather evidence of wrongdoing and apprehend common criminals); Proctor, *supra* note 225 (observing that cameras do little to prevent crime and instead aid in collecting evidence on criminals once a crime has already occurred).

227. See *Kyllo v. United States*, 533 U.S. 27, 40 (2001).

general version of such an investigation would be any less a search than the targeted variant that actually occurred in *Jones*. Indeed, some courts have argued that it was this type of general surveillance that the Supreme Court in *Knotts* suggested would be especially problematic.²²⁸ In *Knotts*, the Court stated that while it was not a search to track a driver on public roads with use of a single beeper, it might be a search if police used such technology to conduct “dragnet-type” surveillance involving “twenty-four hour surveillance of any citizen of this country.”²²⁹ Consequently, if video or other recording of remote activities is a search when it targets a particular individual, it should be just as much a Fourth Amendment search when police record many individuals’ activities and movement before (even long before) they decide upon whom to focus.

That does not mean, however, that police absolutely need a warrant or individualized suspicion to record activity in public space.²³⁰ As Christopher Slobogin argued, courts analyzing video surveillance could adapt certain aspects of their case law on roadblocks, where courts have relaxed warrant and individualized suspicion requirements; in these circumstances, they nevertheless insisted that officials incorporate privacy protections into their searches.²³¹ Likewise, as argued previously, if obtaining a warrant is impossible for police using ongoing video surveillance, they might instead have to satisfy the kind of “constitutionally adequate substitute for a warrant”²³² that the Supreme Court has sometimes demanded in certain school or workplace search cases, or other situations where officials are using searches to meet a need beyond ordinary law enforcement purposes.²³³ In these cases, instead of

228. See, e.g., *Jones*, 132 S. Ct. at 952 & n.6 (deciding the case on a trespassory standard but noting that under a reasonable expectation of privacy standard, *Knotts* indicates that “dragnet-type law enforcement practices,” like those involved in GPS tracking, might be problematic (quoting *United States v. Knotts*, 460 U.S. 276, 284 (1983))).

229. *Knotts*, 460 U.S. at 283–85.

230. See *Terry v. Ohio*, 392 U.S. 1, 20 (1968) (explaining that warrant and probable cause requirements may not apply to certain types of searches or police activities because such requirements are impractical under the circumstances); see also *New Jersey v. T.L.O.*, 469 U.S. 325, 338–41 (1985) (dispensing with the warrant and probable cause requirements in school settings, but refusing to lower the standard to that applicable in the prison setting).

231. Slobogin, *supra* note 38, at 288–90.

232. *Donovan v. Dewey*, 452 U.S. 594, 603 (1981).

233. See, e.g., *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 650, 664–65 (1995) (finding mandatory drug testing of student athletes constitutional); *Nat’l Treasury Emps. Union v. Von Raab*, 489 U.S. 656, 660–61, 664–68 (1989) (upholding drug testing for hiring and promoting employees for certain U.S. Customs Service positions); *Skinner v. Ry. Labor Execs.’ Ass’n*, 489 U.S. 602, 606, 620–21, 624 (1988) (“The Government’s interest in regulating the conduct of railroad employees to

requiring that police have individualized suspicion, the Supreme Court has required other, system-wide privacy protections. These protections often emphasize (1) standardization, (2) unintrusiveness, and (3) clear necessity given a serious security risk.²³⁴ This ensures that officers have minimal discretion in their searches and that the searches are brief, reveal little information, and can often be avoided easily; given the obvious necessity, determination by a neutral magistrate would be excessive under the circumstance.²³⁵ While this Article does not explore how such “warrant substitutes,” which have typically applied outside of the criminal context, would apply to police use of public surveillance to pursue law enforcement objectives, such an adaptation is possible. Classifying video surveillance as a search does not mean that it will be an option only when police already have the probable cause that they believe the video surveillance itself will give them.

B. The Objection that the Test Leaves Government with Too Much Opportunity for Unjustified Surveillance

1. Expanding the definition of a “search” to cover other privacy intrusions by government

While this Article argues for an extension of the Fourth Amendment to cover public surveillance, there is potentially a significant amount of public surveillance that the proposed test would not cover. Consider, for example, a situation in which a police officer decides to spend an hour following a person whom she notices traveling down the street. Imagine that, while doing so, the officer snaps a picture or takes some video footage with an iPhone or digital camera, but does not use an optical zoom lens to magnify the camera’s image. While such image capture would involve recording, the officer would not be recording *remote* activities; she would not be recording events outside of her presence. Nor would she be engaging in the functional equivalent of remote recording when she engages in close observation only of events within her field of view.

For some scholars, judges, or lawyers, this limit on Fourth Amendment coverage may well be unjustified. Indeed, Christopher

ensure safety, like its . . . operation of a government office, school, or prison, . . . may justify departures from the usual warrant and probable-cause requirements.”); *T.L.O.*, 469 U.S. at 340–41 (explaining that a warrant requirement and a “reasonable grounds” for suspicion standard would both be inappropriate to maintaining order in schools).

²³⁴ Blitz, *supra* note 45, at 1457–58.

²³⁵ *Id.*

Slobogin presented a thoughtful case for defining a Fourth Amendment search more broadly than presented in this Article.²³⁶ More specifically, he offered two types of arguments for a broader definition of “search”: one argument focused on interpreting the Fourth Amendment itself and the other in a suggested surveillance statute which, because it is a statute, may cover more territory than the Fourth Amendment itself.²³⁷

Slobogin’s argument about the Fourth Amendment’s coverage is largely based on the notion that the core purpose of the Amendment is to protect what the Supreme Court has said that it protects since *Katz*—namely, individuals’ actual and reasonable expectations of privacy.²³⁸ Understanding the scope of the Amendment’s protection therefore requires understanding what these expectations are. As Slobogin has argued in an article co-authored by Joel Schumacher, this is a task that demands not merely armchair reflection, but collection of evidence about how Americans actually think about their privacy.²³⁹ Based on this work, he wrote that individuals expect far more privacy than the Supreme Court has recognized in its Fourth Amendment cases, finding, for example, that video surveillance of the kind that appears to be outside the Supreme Court’s definition of a search is more intrusive than investigatory methods that the Court has labeled a search.²⁴⁰ In short, he argued that the Court has refused to categorize as searches “a vast array of investigative techniques” that clearly threaten individuals’ widely shared expectations of privacy, including public surveillance techniques people clearly view as invasive.²⁴¹

236. See Christopher Slobogin, *Making the Most of United States v. Jones in a Surveillance Society: A Statutory Implementation of Mosaic Theory*, 8 DUKE J. CONST. L. & PUB. POL’Y 1, 13–15 (2012) (suggesting that courts define a Fourth Amendment “search” as a layman would and that a proportionality principle should apply when determining the necessity of a warrant or other protective measures).

237. See generally *id.* at 5–32 (analyzing Fourth Amendment jurisprudence and tests, redefining “search,” laying out a statutory scheme, and commenting on the proposed provisions).

238. *Id.* at 5–6, 9–13 (rejecting property as the best foundation for privacy laws and advocating for a broader definition akin to *Katz*’s reasonable expectation of privacy standard); see also Slobogin, *supra* note 38, at 217 (framing the issue in terms of a right to anonymity).

239. See Slobogin & Schumacher, *supra* note 159, at 732 (explaining the need for empirical study and reflection on this issue); see also Slobogin, *supra* note 38, at 271–72, 275–80 (detailing a further study similar to that conducted by Slobogin and Schumacher).

240. See SLOBOGIN, *supra* note 211, at 33, 110–13 (noting that in many cases, “a wide chasm exists between the Court’s holdings and our subjects’ intrusiveness rankings”); see also Slobogin, *supra* note 38, at 271–72, 275–80 (detailing his more recent empirical study).

241. SLOBOGIN, *supra* note 211, at 31–32.

Slobogin's statutory proposal is even more extensive.²⁴² The definition of "search," in a well-drafted surveillance law, he argued, should cover any "effort by government to find or discern evidence of unlawful conduct."²⁴³ It does not matter whether a police officer looks for such evidence with the aid of technology or "with the naked eye."²⁴⁴ "The officer who watches an individual walking down the street to see what transpires is conducting a search under this definition whether she does so with her unaided vision, binoculars, closed-circuit television, or a drone."²⁴⁵ Slobogin emphasized that focusing on a statutory formulation freed him to "go[] beyond anything the Fourth Amendment requires, in either scope or detail."²⁴⁶ He suggested, however, that this model statute might also help guide and sharpen thinking about Fourth Amendment rules for public surveillance.²⁴⁷

Such a broad definition of a search certainly has some advantages. It is, as Slobogin and other scholars observed,²⁴⁸ closer in many respects to the way a layperson would define the word "search."²⁴⁹ In common usage, a person is typically described as "searching" for something when he is engaged in a focused attempt to find it, regardless of whether he is attempting to do so in a house or an open field or whether he has any sophisticated technology to aid him.²⁵⁰ A person can search for a coin dropped on the sidewalk, for example, simply by scanning his surroundings. Moreover, this broad definition of a search deprives unscrupulous—or heavily pressured—government officials of the temptation to circumvent Fourth Amendment requirements simply by shifting to technologies or strategies that are unfamiliar to the courts. Under Slobogin's all-

242. See Slobogin, *supra* note 236, at 16–34 (expounding on the definitions and substantive rules for various types of searches).

243. *Id.* at 17.

244. *Id.* at 18.

245. *Id.*

246. *Id.* at 5.

247. See *id.* at 4–5 (indicating that one purpose of his article was to resolve debates about which Fourth Amendment theories might serve as alternatives to the "mosaic theory").

248. See Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757, 768 (1994) (arguing that "scanning [a] crowd," even in public, counts as a "search," but that such a search is clearly constitutional); Stephen E. Henderson, *Nothing New Under the Sun? A Technologically Rational Doctrine of Fourth Amendment Search*, 56 MERCER L. REV. 507, 544 (2005) (arguing that search and seizure "are (and were, at the time of the founding) ordinary, commonplace words" and should "bear that ordinary meaning").

249. *Id.* at 13, 17.

250. See *Search Definition*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/search> (last visited Oct. 12, 2013) (defining "search" as "look[ing] into or over carefully or thoroughly in an effort to find or discover something").

methods-covered definition, officials cannot hope to free themselves from legal restraints by substituting far-away drone observation for trespassory GPS tracking or by foregoing advanced surveillance technology and instead using more old fashioned methods of tracking a driver. No matter what methods they use to track or watch a person over time, the Fourth Amendment will cover their investigatory observations.

The problem with such a broad definition of a “search,” however, is that if it were made the basis of a constitutional rule, it would likely impose Fourth Amendment constraints on virtually every observation that police make. Simply by noticing and watching an event that seems, to an officer, to merit closer attention, that officer would place himself on Fourth Amendment territory. This, however, is a counterintuitive way to think about how the Fourth Amendment operates. The Amendment’s language is not designed to constrain everything a police officer sees or focuses her attention on, however temporarily or casually. Instead, it is written to cover a particular subset of police activity—namely “searches” of particular targets: “persons, houses, papers, and effects.”²⁵¹ It makes sense, therefore, to treat as a search circumstances in which police enter, or otherwise physically explore, a person, her house, or her documents and property. It also makes sense to treat as a search circumstances in which police use technology to investigate an object without touching or entering it, for example, by magnifying it or creating a continuous record of its activity from a remote location.

One alternative is to limit the definition of search by focusing on a police officer’s motives rather than his methods. Christopher Slobogin’s definition of search, for instance, arguably includes a motive requirement because it technically applies not to every observation a government official makes, but only to those observations that are part of “[a]n effort . . . to find or discern unlawful conduct.”²⁵² But it is not clear how such a motive requirement would place any significant limitation on Fourth Amendment coverage. The central mission of the police is to watch for and respond to unlawful conduct, and when they attend to a person or event while they are on duty, it is likely that a court will presume they are doing so as part of their job description. In fact, without such a presumption, the line between searches and non-searches will rest on the outcome of a difficult inquiry into hidden

251. U.S. CONST. amend. IV.

252. Slobogin, *supra* note 236, at 17.

subjective motives—of precisely the sort that the Supreme Court has been intent on avoiding in the context of determining whether police have probable cause for a traffic stop and automobile search.²⁵³

A more modest expansion for the test described above would apply Fourth Amendment limitations to all recordings, or record creation in general, rather than covering only remote police recording. Even when an officer simply snaps an iPhone photo of what is directly in front of her, one might argue, she engages in a search. The Fourth Amendment might give her more leeway to conduct such a simple, relatively unintrusive search than it gives a team of officers operating a drone-based camera or collecting and reviewing footage from a city-wide surveillance system. But such leeway would still be limited by search and seizure protection that would, for example, forbid capturing iPhone pictures of people or events that she has no reason to suspect have any connection to criminal activity.

There is, however, a problem with a rule that makes any police observation a search as soon as it is accompanied by even the simplest kind of record creation. Police activity that precisely mirrors that which individuals engage in every day would be converted into a matter of constitutional law. Thanks to the miniaturization of cameras and their incorporation into the cell phones, individuals carry cameras with them almost everywhere, and there are few activities in public spaces that are off-limits to photo and video recording. In fact, police have often found themselves being video recorded by citizens wielding iPhone cameras or other recording devices, and a number of appellate courts have found that individuals have a First Amendment right to record police in this way.²⁵⁴ It is conceivable that the same individual who has a constitutional right to record police officers also has a constitutional right to *avoid* being video recorded by the same police officers they are video recording.

253. See *Whren v. United States*, 517 U.S. 806, 811–13 (1996) (asserting that the Court has never invalidated a Fourth Amendment search based on an officer's subjective motive and that the Fourteenth Amendment provides the appropriate protections for challenging discriminatory police behavior).

254. See, e.g., *ACLU of Ill. v. Alvarez*, 679 F.3d 583, 586–87 (7th Cir. 2012) (holding that an Illinois eavesdropping statute that would ban nonconsensual audio-recording of public officials likely fails intermediate scrutiny and infringes on First Amendment rights); *Glik v. Cunniffe*, 655 F.3d 78, 82 (1st Cir. 2011) (emphasizing that there is a constitutional right to record police in the course of their public duties because public recording of government officials can play an essential role in stimulating “the free discussion of governmental affairs” and protection of freedom (quoting *Mills v. Alabama* 384 U.S. 214, 217 (1966))); *Smith v. City of Cumming*, 212 F.3d 1332, 1333 (11th Cir. 2000) (explaining that “[t]he First Amendment protects the right to gather information about what public officials do on public property, and specifically, a right to record matters of public interest,” including a right “to photograph or videotape police conduct”).

But such a rule has problematic implications. Unlike remote recording with drone cameras or citywide video systems, using an iPhone to snap a photograph of one's surroundings is, in many respects, simply a modern form of note taking. As Professor Seth Kreimer wrote while arguing for extending First Amendment protections to image capture, "[r]ecorded images can serve the same function" as the "sense impressions or . . . sketches in [a] diary."²⁵⁵ It seems unlikely that the Fourth Amendment places police on constitutional territory every time they supplement their own perception or memory in the way that ordinary citizens do every day.

In fact, the desire to avoid such a result was likely what caused the Supreme Court to note in *Kyllo* that use of sense enhancement technology probably would not count as a search when that technology was "in general public use," unless it were aimed at a house or other private environment.²⁵⁶ The "general public use" test has been the target of scholarly criticism,²⁵⁷ and critics are right to argue that the Supreme Court would invite chaos and confusion if what counted as a search changed each year as new technologies and cultural practices transformed the way people interact with public space.²⁵⁸ But whatever its flaws as a black letter law test, the general public use requirement at least captures a powerful intuition about Fourth Amendment law: it should not subject *all* police observation and record-creation to heightened judicial scrutiny. The question rather, is what kind of police monitoring in public must be subject to Fourth Amendment limits and what kind of garden-variety police observation remains free of such limits. It is probably implausible to

255. Seth F. Kreimer, *Pervasive Image Capture and the First Amendment: Memory, Discourse, and the Right To Record*, 159 U. PA. L. REV. 335, 380 (2011).

256. See *Kyllo v. United States*, 533 U.S. 27, 40 (2001).

257. See, e.g., SLOBOGIN, *supra* note 211, at 57–58, 62–65 (positing that public use is a blurry line that could refer either to how easily the general public can acquire the technology or to how frequently the general public uses the technology); Douglas Adkins, *The Supreme Court Announces a Fourth Amendment "General Public Use" Standard for Emerging Technologies but Fails To Define It: Kyllo v. United States*, 27 U. DAYTON L. REV. 245, 262 (2002) (criticizing the *Kyllo* "general public use" doctrine as completely unworkable and asserting that "the Court must have intended something . . . other than *actual use* by the public").

258. See, e.g., David A. Harris, *Superman's X-Ray Vision and the Fourth Amendment: The New Gun Detection Technology*, 69 TEMP. L. REV. 1, 23 (1996) (noting that "[t]he type of technology the public can possess may change with surprising speed"); Tracey Maclin, Katz, *Kyllo*, and *Technology: Virtual Fourth Amendment Protection in the Twenty-First Century*, 72 MISS. L.J. 51, 105 (2002) ("[W]hether a particular device is in general public use should have no impact on Fourth Amendment analysis."); Christopher Slobogin, *Peeping Techno-Toms and the Fourth Amendment: Seeing Through *Kyllo's* Rules Governing Technological Surveillance*, 86 MINN. L. REV. 1393, 1412 (2002) (observing that courts will have "to deal with the rapid pace of technological development in deciding whether something is in general public use").

insist that police be free from Fourth Amendment limits any time they use a technology that is generally available to private citizens: That would mean that, even as enhancements to aerial drones and GPS units make these devices a greater threat to privacy, their use by police would paradoxically become subject to less Fourth Amendment oversight—as long as private citizens are able to purchase and use such surveillance technology for their own purposes.

Use of these remote recording technologies should count a Fourth Amendment search, but this is not because these technologies are—for the moment at least—less widely used, or available to private citizens, than SmartPhone cameras. Rather, it is because remote recording technologies allow police to do something they cannot easily do with a SmartPhone, which is to generate a “precise, comprehensive record of a person’s public movements”²⁵⁹—a digital archive they can later use to engage in a frame-by-frame search.

The government might conceivably subject U.S. citizens to such a dragnet investigation even without automated recording technology that can follow an individual far from where an officer is positioned. But doing so is likely to be costly and burdensome for police. As Justice Alito stated in *Jones*, tracking an individual over a period of days without GPS technology is likely to require significantly more man power and police resources and is likely to be a far more complex operation.²⁶⁰ As Justice Breyer explained in *Illinois v. Lidster*,²⁶¹ such an investigation may be in less need of constitutional restraint because its costs make it subject to heavy practical restraints.²⁶²

2. *More general technology-centered approaches*

Other scholars have explored ways of defining searches in public space that are less expansive but still arguably cover more ground than the proposed definition offered in this Article. Another set of recent and promising proposals, for example, come from scholars who argued for a technology-based approach to what counts as a search. In contrast, however, they analyze it at a higher-level of

259. See *United States v. Jones*, 132 S. Ct. 945, 955 (2012) (Sotomayor, J., concurring).

260. *Id.* at 963–64 (Alito, J., concurring in the judgment).

261. 540 U.S. 419 (2004).

262. See *id.* at 426 (explaining that there is little cause for concern that its approval of police information stops would lead to “unreasonable” worry about “proliferation of police checkpoints” because “[p]ractical considerations—namely, limited police resources and community hostility to related traffic tieups—seem likely to inhibit any such proliferation”).

generality than in this Article, which focuses on public recording (remote or otherwise) and certain types of magnification and amplification. Professors David Gray and Danielle Citron, for example, argued for a “technology-centered approach” to determine which investigations count as Fourth Amendment searches.²⁶³ Their test would classify *any* technology as a search if it “has the capacity to facilitate broad programs of indiscriminate surveillance that intrude upon reasonable expectations of quantitative privacy.”²⁶⁴ Among the technologies that enable such “pervasive surveillance” are “aerial drones, GPS-enabled tracking, [and] digital dossiers.”²⁶⁵ These technologies, Gray and Citron claim, raise the same specter of authoritarianism for modern citizens that “broad and indiscriminate use of physically invasive searches and seizures” did for our predecessors.²⁶⁶

Another similar approach that inspired Gray and Citron’s proposal is Susan Freiwald’s proposal. Freiwald stated that courts can mark a line between searches and non-searches with a four-factor test that the Supreme Court and other courts have developed over the last four decades in cases addressing wiretapping or video surveillance in homes, offices, or other private spaces.²⁶⁷ Under this test, a method of public surveillance would count as a search when it is characterized by each (or perhaps, most) of the following elements: it is (1) hidden, in that the target is unaware of it; (2) intrusive, in the sense that it “affords law enforcement agents access to things people consider private”; (3) continuous, in that it represents an ongoing “series of intrusions” rather than a single intrusion by the state; and (4) indiscriminate, in that it “gathers up more information than necessary to establish guilt.”²⁶⁸ GPS surveillance, she argued, will typically count as a search under these criteria because GPS units are typically hidden, record myriad details about a person’s movements and activities, do so over an extended period of time, and gather

263. Gray & Citron, *supra* note 32 (manuscript at 5).

264. *See id.* (manuscript at 5) (elaborating that technology that qualifies as a search under this test would then be subject to Fourth Amendment warrant and reasonableness requirements).

265. *Id.* (manuscript at 27).

266. *Id.*

267. *See* Freiwald, *First Principles*, *supra* note 32, ¶¶ 9–11 (outlining the details of the Four Factor Test, its derivation from case law, and how it promotes the goals of the Fourth Amendment); Freiwald, *Four Factor Test*, *supra* note 32 (summarizing how courts essentially apply a four-factor test when analyzing what Fourth Amendment protections should apply to a given investigatory method).

268. Freiwald, *Four Factor Test*, *supra* note 32; *see also* Freiwald, *First Principles*, *supra* note 32, ¶¶ 61–69 (adding that courts could apply lesser standards to those surveillance methods that do not share all four factors).

much information unrelated to criminal activity.²⁶⁹ Surveillance by an unseen drone would count as a search for the same reason. Video surveillance by street cameras is not hidden to the same extent, as pedestrians can often see the cameras on buildings or corners, but it otherwise shares the features that make GPS tracking and drone surveillance a search.

Interestingly, the earlier cases that Freiwald relies upon, which applied similar principles to cases of wiretapping and video surveillance, did not use these criteria to determine whether a certain investigatory technique was a search or a non-search. Rather, courts employed these factors to justify imposing certain “heightened procedural hurdles,” beyond a showing of probable cause, on certain types of unusually threatening electronic searches.²⁷⁰ Still, although these criteria were used to determine what hurdles the government had to overcome to make a search reasonable, they can be adapted to the task of determining what public monitoring should count as a search at all. Although police surveillance in public has traditionally been entirely outside the Fourth Amendment’s coverage, when it raises the same risks for privacy and autonomy as the most worrisome forms of inside surveillance, such as wiretapping or video recording from cameras hidden in homes or businesses, then it makes sense to bring such public surveillance into Fourth Amendment territory so that courts can guard against its possible abuses. Thus, when public surveillance is hidden, intrusive, continuous, and indiscriminate (under Freiwald’s test) or capable of broad and indiscriminate surveillance (under Gray and Citron’s), it is—just as wiretapping and bugging—subject to constitutional limits.

Such an approach has two advantages that might, to some, make it seem preferable to a test that focuses on recording capacity, magnification, or some other specific technological feature. First, it has the virtue of offering a single standard that courts can apply not only to surveillance in public spaces, but to all kinds of wide-scale government surveillance, from wiretapping, to thermal imaging and GPS tracking. Second, like Slobogin’s all-methods-covered approach above, Gray, Citron, and Freiwald’s approaches are broad enough

269. Freiwald, *Four Factor Test*, *supra* note 32.

270. Freiwald, *First Principles*, *supra* note 32, ¶ 10; *see, e.g.*, *Berger v. New York*, 388 U.S. 41, 60 (1967) (developing constitutional rules for electronic eavesdropping in part with a focus on that technology’s “inherent dangers”). As Judge Posner noted in applying such criteria to video surveillance, such surveillance was “inherently indiscriminate” and “could be grossly abused—to eliminate personal privacy as understood in modern Western societies.” *United States v. Torres*, 751 F.2d 875, 882 (7th Cir. 1984).

that they easily apply limits to alternative technologies (or low-tech analogues) that the government employs to circumvent Fourth Amendment limitations. For example, if police try to circumvent a Fourth Amendment restriction on remote recording by sending out officers to continuously record activities on dashboard cameras and then storing them for later analysis, Gray and Citron's test would likely still give courts all of the doctrine they need to classify such recording as a search based on its potential for broad and indiscriminate investigation of citizens' public movements or actions.²⁷¹ Freiwald's test would also likely classify such widespread recording as a search, because it is intrusive, continuous, indiscriminate (and, if people do not see the cameras in the police cars, also hidden).²⁷² Courts thus would not have to analogize this multi-officer use of individual recording devices to hidden surveillance from drones or street cameras.²⁷³

271. See Gray & Citron, *supra* note 32 (manuscript at 5, 12–13, 36) (noting that their technology-based approach to the Fourth Amendment should serve as a guide to prevent unfettered government recording of the public and limit “broad programs of indiscriminate surveillance”).

272. See Freiwald, *First Principles*, *supra* note 32, ¶¶ 9–11 (basing her test on video surveillance cases). Police could use video surveillance technology to continuously record the public in much the same way that drones might. See Freiwald, *Four Factor Test*, *supra* note 32 (applying the four-factor test and concluding that law enforcement officials should seek a warrant before engaging in GPS tracking).

273. Such general approaches offer yet another possible benefit: they may be broad enough to cover government collection and analysis of third-party images and videos. Third-party video records could conceivably provide officials with all the data they need to create detailed archives of individuals' activities. Much of the video used in the Boston Marathon investigation, for example, came from the video cameras of private businesses and individuals filming the Boston Marathon (or the aftermath of the bombing) with their own smart phone cameras. Kelly, *supra* note 1.

Third-party records could be of similar benefit in location tracking. As Stephen Henderson has written, location data has immense value to private businesses, since it allows them to discover customer habits and patterns. Stephen E. Henderson, *Learning From All Fifty States: How To Apply the Fourth Amendment and Its State Analogs To Protect Third Party Information from Unreasonable Search*, 55 CATH. U. L. REV. 373, 383–84 (2006). For example, “a business would probably like to know that customers spend an average of fifteen minutes in the store.” *Id.* at 383–84. Furthermore, a third party's natural interest in location-tracking, combined with the location-tracking capacities “inherent in [cell phone] technology,” make it likely that police will find all the information they need to track an individual in records already collected by private parties. *Id.* at 385. It is thus understandable that the concurring justices in *Jones* were worried not only about officials using public cameras or government-installed GPS devices, but also about government collection and analysis of third-party-generated data. Justice Alito, for example, noted that “[m]any motorists purchase cars that are equipped with devices that permit a central station to ascertain the car's location at any time” and that “cell phones and other wireless devices now permit wireless carriers to track and record the location of users.” *United States v. Jones*, 132 S. Ct. 945, 963 (2012) (Alito, J., concurring in the judgment). Justice Sotomayor explained that a coherent approach to privacy in public may require the Supreme Court “to reconsider the premise that an individual

There are, however, two disadvantages to the more abstract approach. One is the opposite of the advantage discussed above. The same generality that allows these approaches to more easily cover a wide range of investigatory techniques also makes it less predictable which techniques will be covered by the Fourth Amendment. Consider, for example, some of the questions courts would face in assessing whether certain video- or image-capture technology is capable of broad and indiscriminate use (under Gray and Citron's test) or "intrusive" (under Freiwald's). In defining how broad, indiscriminate or intrusive a technology is, should courts consider any technological or administrative safeguards (e.g., a rigorously enforced restriction on access) that a police department builds into its video surveillance system?²⁷⁴ Should they consider use of a surveillance technology to be a search if that technology is relatively unthreatening in its typical form but can be easily repurposed so as to let police engage in more intrusive searches? Do police engage in a search, for example, if they use recording systems that blur faces, but

has no reasonable expectation of privacy in information voluntarily disclosed to third parties." *Id.* at 957 (Sotomayor, J., concurring).

Conceivably, a government investigative method that draws on other parties' video footage rather than the government's might still count as a method that facilitates "broad programs of indiscriminate surveillance" under Gray and Citron's test. Gray & Citron, *supra* note 32 (manuscript at 5). Indeed, Gray and Citron suggested that their approach would at least cover situations where a private party was acting as a state agent, and "that in most cases where government leveraging of private data reservoirs would raise [Fourth Amendment] concerns, one or more of the[] tests of state agency" would very likely be met. *Id.* (manuscript at 45–46). Of course, such a state agency test would likely solve the same problem under the narrower approach suggested in this Article.

If it did not do so, and Justice Sotomayor thus remained correct that effective Fourth Amendment protection of privacy requires a reformulation of the third-party doctrine, then such a change to the third-party doctrine would not be sufficient, by itself, to subject government recording of public activities (or analysis of others' recordings) to Fourth Amendment rules. The Supreme Court would also need some rationale and guidance providing why and when video footage captured in open spaces could implicate Fourth Amendment privacy interests even when it occurs in public and observable space. After all, if we do not have any account of why it might be constitutionally problematic for the government to routinely videotape public activities by itself, it would not be clear why it is any more problematic for it to obtain the same information from others. We thus need some approach, like the one this Article offers, to explain when and why government recording of citizens' activities would cross a constitutional line; the approach would also have to explain when and why gathering the same information from third parties' recordings might be unconstitutional. Although a more general technology-centered approach can certainly serve this role, so too can a narrower test that subjects only remote recording and certain instances of magnification or amplification to Fourth Amendment scrutiny.

274. See Gray & Citron, *supra* note 32 (manuscript at 5) (describing its test as one that looks to the potential uses and abuses of the technology as a basis for incurring Fourth Amendment scrutiny); Freiwald, *Four Factor Test*, *supra* note 32 (considering potential limits on GPS tracking).

where police can easily remove the blurring? Or when they use a recording system that can work only if a particular police officer is operating it, but which can easily be reprogrammed to record continuously and automatically?

Gray, Citron, and Freiwald's abstract approaches are also problematic in that it is likely to over-expand Fourth Amendment coverage. Freiwald's proposal, for example, is likely to sweep in more police work than the test proposed by this Article because there are kinds of public surveillance that arguably satisfy all four elements of Freiwald's test but involve neither recording nor substantial magnification of otherwise invisible details on a person, paper, or effect. For example, imagine that an officer in an unmarked vehicle becomes suspicious of a car driving in front of him and decides to follow a few cars behind on the road for a period of ten or fifteen minutes. There is a good chance this counts as a "search" under Freiwald's test.²⁷⁵ While the officer's car is visible, he does not intend to alert the driver ahead that the government is watching her. So the officer's observations are hidden. The officer's activities are certainly also continuous. The officer is gathering at least some information about actions that are unlikely to reveal criminal activity. Whether this activity is sufficiently intrusive to be a search is unclear, but without additional guidance for answering this question, courts facing it might encounter the same difficulty that the Supreme Court encountered in *Jones*. Like the proposal in this Article, Freiwald's test avoids making intensity or duration the key determinants of whether an investigation is a search.²⁷⁶ Instead, Freiwald directed courts to apply these factors to each "method of surveillance."²⁷⁷ So courts will have to decide how to define—and judge—the method of surveillance being used in a situation in which the only surveillance technology an officer is using to watch someone is the car he is driving. It is possible that if courts conclude that such observation is typically non-intrusive, they will define it as a non-search even if one can imagine more intrusive variants of it. But courts certainly have more leeway under this test than they do under the test proposed in

275. See Freiwald, *Four Factor Test*, *supra* note 32 (viewing GPS tracking as a search and therefore potentially any attempt by police to track drivers as a search for the same reasons).

276. See Freiwald, *First Principles*, *supra* note 32, ¶ 69 (focusing instead on the continuous nature of a search, not on a specific length of time, and incorporating three additional factors into the test).

277. See *id.* ¶¶ 50, 60 (stating that the courts should also make clear decisions on what the Constitution demands before law enforcement begins using new technologies).

this Article to classify as a “search” visual observation by police officers that is unaided by cameras or other technology.

Still, the approaches offered by Gray, Citron, and Freiwald might well end up leading courts to define the Fourth Amendment territory that the proposal here covers. Remote recording is certainly capable of the broad and indiscriminate use that, for Gray and Citron, is the hallmark of a Fourth Amendment search. Remote recording is also, as a general matter, likely to be hidden from the view of the target; the police officer doing the recording is not present (and the device doing the recording is often not visible). It is certainly continuous, and it indiscriminately captures significant amounts of information unrelated to crime. So it also satisfies Freiwald’s test. High-level magnification of reading materials or other items we assume are private is also likely to occur without our knowledge and to be intrusive and indiscriminate.²⁷⁸

Thus, it is plausible to view the proposal set forth in this Article as a specific application of the approaches discussed by Gray, Citron, and Freiwald, which advocate that the Supreme Court count as a search all public surveillance that eliminates the possibility for “private or anonymous action” in public space.²⁷⁹ Recording remote events and close magnification of details are only two examples of surveillance technologies that raise such concerns.

Yet Courts might offer greater clarity—not just to law enforcement agents but to other courts—if they start with such abstract criteria, but rather with a test that marks remote recording and high-level magnification as searches. This more modest approach also adheres more closely to the Supreme Court’s own precedent on surveillance in public spaces.²⁸⁰ As noted above, the Supreme Court has already stated in its tracking cases that location-monitoring technology may count as a search when used in conjunction with dragnet information-gathering devices; this might include any device, like GPS, that records a person’s movements from one place to another. It has noted in its aerial surveillance cases that even when police observe a home’s curtilage or a business’s open premises from a place where the public has a right to be, their surveillance might still be a

278. Whether it is continuous is less clear. *See* Blitz, *supra* note 45, at 1383–84 (indicating that magnification of images caught on video surveillance implicates privacy concerns, even if the Supreme Court refuses to lend much credence to such concerns); *see also* Freiwald, *First Principles*, *supra* note 32, ¶¶ 69–70 (examining the continuousness requirement in relation to e-mails).

279. Blitz, *supra* note 45, at 1446.

280. *See e.g.*, *United States v. Knotts*, 460 U.S. 276, 281 (1983) (noting that people can reasonably expect reduced privacy on, for example, public roadways).

search when it reveals intimate details about a person's life.²⁸¹ Building on such precedent in future cases on public surveillance, the Supreme Court may eventually build the framework that marks particular investigatory techniques as searches or non-searches based upon their general level of intrusiveness or their capacity to indiscriminately and continuously capture information. If and when such a framework emerges, this might also allow a link between the Court's emerging Fourth Amendment jurisprudence on surveillance in public spaces and its jurisprudence on surveillance of Internet and phone communications. Nevertheless, even if the Supreme Court takes a more cautious and minimalist approach, there is a technological form- or design-based approach that allows it to proceed in extending Fourth Amendment protection to public surveillance.

CONCLUSION

In recent years, judges seeking to apply Fourth Amendment law to emerging surveillance technologies have faced a dilemma. On the one hand, if they continue to insist on the simple rule that public space is a Fourth Amendment-free zone, they seem to betray Fourth Amendment purposes.²⁸² While the Fourth Amendment does not, as the Supreme Court noted in *Katz*, establish a "general constitutional 'right to privacy,'"²⁸³ it does protect us from government fishing expeditions whereby police invade the private realms of our life in search of details that would justify subjecting us to an arrest or other seizure.²⁸⁴ Police cannot arbitrarily sift through the items in our house or the documents in our briefcase,²⁸⁵ so it is not clear why they should be able to create, and then sift through, video frames of people's day-to-day movements through public space, especially because even acts that occur in a public space may betray aspects of their lives that are deeply private and personal. In fact, roadside cameras or drones might capture evidence not only of citizens'

281. See *supra* notes 124–133, 207 and accompanying text.

282. See, e.g., *United States v. Jones*, 132 S. Ct. 945, 957 (2012) (Sotomayor, J., concurring) (emphasizing that the Court must retreat from an idea of privacy as complete secrecy); *id.* at 961 (Alito, J., concurring in the judgment) (observing that the majority's trespassory standard could lead to "incongruous results").

283. *Katz v. United States*, 389 U.S. 347, 350 (1967).

284. See *Camara v. Mun. Court*, 387 U.S. 523, 528–29 (1967) (explaining that the historical purpose of the Fourth Amendment was to preserve the privacy of the home and safeguard against arbitrary government invasions).

285. See U.S. CONST. amend. IV (stating that the government cannot arbitrarily search a person's "houses, papers, and effects" without probable cause); see also *Camara*, 387 U.S. at 528 (prohibiting "arbitrary invasions by the government").

movements, but of their private thoughts. They might give hints about personal internal demons individuals are struggling with when they visit a psychotherapist, twelve-step group, or library. This is especially true if the state not only has a record of its citizens' movements, but also video footage that captures facial expressions, demeanor, gait, and perhaps (with powerful magnification) the documents held in their hands.

On the other hand, if courts extend the Fourth Amendment into the realm of the public and visible, it is not at all clear how far this extension should go. It seems wrong to say that every glance by police or every event they observe in the street suddenly activates a constitutional force field protecting the subject of their attention; it also seems wrong to assume that if police look a bit closer—whether by staring for a longer time, donning a better pair of glasses, or using their binoculars or iPhone—Fourth Amendment protections immediately apply. The concurring opinions in *United States v. Jones* rightly did not let this difficulty deter them from concluding that the Fourth Amendment applies to public space, but they also did not find a way to resolve the issue.²⁸⁶ Rather, they assumed that there is a vague, yet-to-be-identified line between public surveillance that is sufficiently brief to avoid judicial scrutiny of any kind and longer surveillance that might count as a “search.”²⁸⁷

This Article has proposed a way out of the dilemma. First, whether public surveillance counts as a Fourth Amendment search depends not on its duration or intensity, but rather on whether it uses technology that attempts to do what the Fourth Amendment was meant to stop: dragnet surveillance that creates records of activities that police can then sift through for evidence that might justify subjecting us to the coercive powers of the state. In short, this means that the Fourth Amendment should first bar the government from recording with technologies that inescapably follow citizens through public space and record them remotely wherever they can be found—no matter how far they may be from the sight or hearing of a police officer. Whether that recording lasts only a few seconds or a month, it is still a search because, by turning it on, police are

286. *Jones*, 132 S. Ct. at 957 (Sotomayor, J., concurring) (“I would not assume that all information voluntarily disclosed to some member of the public for a limited purpose is, for that reason alone, disentitled to Fourth Amendment protection.”); *id.* at 960–61, 964 (Alito, J., concurring in the judgment) (arguing that the determining factors for Fourth Amendment protection should include the duration of the intrusion and reasonable expectations of privacy, not the presence of a physical trespass).

287. *Id.* at 964 (Alito, J., concurring in the judgment).

subjecting citizens to a technology that is *capable* of creating a digital archive of evidence about their lives. To be sure, its brevity may be relevant to the question of whether it is reasonable. Courts may decide that such brief recording is unlikely to threaten people and should thus be permitted even if police have a level of suspicion that is far lower than probable cause. When the video recording targets no one at all and instead simply sweeps in all people and events that occur in a given area, then courts might likewise give police more leeway to record, as long as it is clear that any attempt to use these recordings to trace the path of a particular person triggers the same warrant (or other) requirements that would limit targeted surveillance in the first instance.