



CASE LAW

Drones, LPRs, & Pole Cameras

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106 S.Ct. 1809
Supreme Court of the United States

CALIFORNIA, Petitioner

v.

CIRAOLO.

No. 84–1513.

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Argued Dec. 10, 1985.

|

Decided May 19, 1986.

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Rehearing Denied June 30, 1986.

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See 478 U.S. 1014, 106 S.Ct. 3320.

Synopsis

Defendant was convicted in the Superior Court, Santa Clara County, Marilyn Pestarino Zecher, J., of cultivation of marijuana, and he appealed. The Court of Appeal, Haning, J., 161 Cal.App.3d 1081, 208 Cal.Rptr. 93, reversed. Certiorari was granted. The Supreme Court, Chief Justice Burger, held that warrantless aerial observation of fenced-in backyard within curtilage of home was not unreasonable under the Fourth Amendment.

Reversed.

Justice Powell filed a dissenting opinion in which Justices Brennan, Marshall and Blackmun joined.

****1809 *207 Syllabus***

The Santa Clara, Cal., police received an anonymous telephone tip that marijuana was growing in respondent's backyard, which was enclosed by two fences and shielded from view at ground level. Officers who were trained in marijuana identification secured a private airplane, flew over respondent's house at an altitude of 1,000 feet, and readily identified marijuana plants growing in the yard. A search warrant was later obtained on the basis of one ****1810** of the officer's naked-eye observations; a photograph of the surrounding area taken from the airplane was attached as an exhibit. The warrant was executed, and marijuana plants were seized. After the California trial court denied respondent's

motion to suppress the evidence of the search, he pleaded guilty to a charge of cultivation of marijuana. The California Court of Appeal reversed on the ground that the warrantless aerial observation of respondent's yard violated the Fourth Amendment.

Held: The Fourth Amendment was not violated by the naked-eye aerial observation of respondent's backyard. Pp. 1811–1813.

(a) The touchstone of Fourth Amendment analysis is whether a person has a constitutionally protected reasonable expectation of privacy, which involves the two inquiries of whether the individual manifested a subjective expectation of privacy in the object of the challenged search, and whether society is willing to recognize that expectation as reasonable. *Katz v. United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576. In pursuing the second inquiry, the test of legitimacy is not whether the individual chooses to conceal assertedly “private activity,” but whether the government's intrusion infringes upon the personal and societal values protected by the Fourth Amendment. Pp. 1811–1812.

(b) On the record here, respondent's expectation of privacy from *all* observations of his backyard was unreasonable. That the backyard and its crop were within the “curtilage” of respondent's home did not itself bar all police observation. The mere fact that an individual has taken measures to restrict some views of his activities does not preclude an officer's observation from a public vantage point where he has a right to be and which renders the activities clearly visible. The police observations here took place within public navigable airspace, in a physically nonintrusive manner. The police were able to observe the plants ***208** readily discernible to the naked eye as marijuana, and it was irrelevant that the observation from the airplane was directed at identifying the plants and that the officers were trained to recognize marijuana. Any member of the public flying in this airspace who cared to glance down could have seen everything that the officers observed. The Fourth Amendment simply does not require police traveling in the public airways at 1,000 feet to obtain a warrant in order to observe what is visible to the naked eye. Pp. 1812–1813.

161 Cal.App.3d 1081, 208 Cal.Rptr. 93, reversed.

BURGER, C.J., delivered the opinion of the Court, in which WHITE, REHNQUIST, STEVENS, and O'CONNOR, JJ., joined. POWELL, J., filed a dissenting opinion, in which

BRENNAN, MARSHALL, and BLACKMUN, JJ., joined, *post*, p. —.

Attorneys and Law Firms

Laurence K. Sullivan, Deputy Attorney General of California, argued the cause for petitioner. With him on the briefs were *John K. Van de Kamp*, Attorney General, *Steve White*, Chief Assistant Attorney General, and *Eugene W. Kaster*, Deputy Attorney General.

Marshall Warren Krause, by appointment of the Court, 472 U.S. 1025, argued the cause for respondent. With him on the brief was *Pamela Holmes Duncan*.*

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Opinion

*209 Chief Justice BURGER delivered the opinion of the Court.

We granted certiorari to determine whether the Fourth Amendment is violated by aerial observation without a warrant from an altitude of 1,000 feet of a fenced-in backyard within the curtilage of a home.

I

On September 2, 1982, Santa Clara Police received an anonymous telephone tip that marijuana was growing in respondent's backyard. Police were unable to observe the contents of respondent's yard from ground level because of a 6-foot outer fence and a 10-foot inner fence completely enclosing the yard. Later that day, Officer Shutz, who was assigned to investigate, secured a private plane and flew over respondent's house at an altitude of 1,000 feet, within navigable airspace; he was accompanied by Officer Rodriguez. Both officers **1811 were trained in marijuana identification. From the overflight, the officers readily identified marijuana plants 8 feet to 10 feet in height growing in a 15- by 25-foot plot in respondent's yard; they photographed the area with a standard 35mm camera.

On September 8, 1982, Officer Shutz obtained a search warrant on the basis of an affidavit describing the anonymous tip and their observations; a photograph depicting respondent's house, the backyard, and neighboring homes was attached to the affidavit as an exhibit. The warrant was *210 executed the next day and 73 plants were seized; it is not disputed that these were marijuana.

After the trial court denied respondent's motion to suppress the evidence of the search, respondent pleaded guilty to a charge of cultivation of marijuana. The California Court of Appeal reversed, however, on the ground that the warrantless aerial *observation* of respondent's yard which led to the issuance of the warrant violated the Fourth Amendment. 161 Cal.App.3d 1081, 208 Cal.Rptr. 93 (1984). That court held first that respondent's backyard marijuana garden was within the "curtilage" of his home, under *Oliver v. United States*, 466 U.S. 170, 104 S.Ct. 1735, 80 L.Ed.2d 214 (1984). The court emphasized that the height and existence of the two fences constituted "objective criteria from which we may conclude

he manifested a reasonable expectation of privacy by any standard.” 161 Cal.App.3d, at 1089, 208 Cal.Rptr., at 97.

Examining the particular method of surveillance undertaken, the court then found it “significant” that the flyover “was not the result of a routine patrol conducted for any other legitimate law enforcement or public safety objective, but was undertaken for the specific purpose of observing this particular enclosure within [respondent’s] curtilage.” *Ibid.* It held this focused observation was “a direct and unauthorized intrusion into the sanctity of the home” which violated respondent’s reasonable expectation of privacy. *Id.*, at 1089–1090, 208 Cal.Rptr., at 98 (footnote omitted). The California Supreme Court denied the State’s petition for review.

We granted the State’s petition for certiorari, 471 U.S. 1134, 105 S.Ct. 2672, 86 L.Ed.2d 691 (1985). We reverse.

The State argues that respondent has “knowingly exposed” his backyard to aerial observation, because all that was seen was visible to the naked eye from any aircraft flying overhead. The State analogizes its mode of observation to a knothole or opening in a fence: if there is an opening, the police may look.

*211 The California Court of Appeal, as we noted earlier, accepted the analysis that unlike the casual observation of a private person flying overhead, this flight was focused specifically on a small suburban yard, and was not the result of any routine patrol overflight. Respondent contends he has done all that can reasonably be expected to tell the world he wishes to maintain the privacy of his garden within the curtilage without covering his yard. Such covering, he argues, would defeat its purpose as an outside living area; he asserts he has not “knowingly” exposed himself to aerial views.

II

The touchstone of Fourth Amendment analysis is whether a person has a “constitutionally protected reasonable expectation of privacy.” *Katz v. United States*, 389 U.S. 347, 360, 88 S.Ct. 507, 516, 19 L.Ed.2d 576 (1967) (Harlan, J., concurring). *Katz* posits a two-part inquiry: first, has the individual manifested a subjective expectation of privacy in the object of the challenged search? Second, is society willing to recognize that expectation as reasonable? See *Smith v. Maryland*, 442 U.S. 735, 740, 99 S.Ct. 2577, 2580, 61 L.Ed.2d 220 (1979).

Clearly—and understandably—respondent has met the test of manifesting his own subjective intent and desire to maintain **1812 privacy as to his unlawful agricultural pursuits. However, we need not address that issue, for the State has not challenged the finding of the California Court of Appeal that respondent had such an expectation. It can reasonably be assumed that the 10-foot fence was placed to conceal the marijuana crop from at least street-level views. So far as the normal sidewalk traffic was concerned, this fence served that purpose, because respondent “took normal precautions to maintain his privacy.” *Rawlings v. Kentucky*, 448 U.S. 98, 105, 100 S.Ct. 2556, 2561, 65 L.Ed.2d 633 (1980).

Yet a 10-foot fence might not shield these plants from the eyes of a citizen or a policeman perched on the top of a truck or a two-level bus. Whether respondent therefore manifested *212 a subjective expectation of privacy from *all* observations of his backyard, or whether instead he manifested merely a hope that no one would observe his unlawful gardening pursuits, is not entirely clear in these circumstances. Respondent appears to challenge the authority of government to observe his activity from any vantage point or place if the viewing is motivated by a law enforcement purpose, and not the result of a casual, accidental observation.

We turn, therefore, to the second inquiry under *Katz*, *i.e.*, whether that expectation is reasonable. In pursuing this inquiry, we must keep in mind that “[t]he test of legitimacy is not whether the individual chooses to conceal assertedly ‘private’ activity,” but instead “whether the government’s intrusion infringes upon the personal and societal values protected by the Fourth Amendment.” *Oliver, supra*, 466 U.S., at 181–183, 104 S.Ct., at 1742–1744.

Respondent argues that because his yard was in the curtilage of his home, no governmental aerial observation is permissible under the Fourth Amendment without a warrant.¹ The history and genesis of the curtilage doctrine are instructive. “At common law, the curtilage is the area to which extends the intimate activity associated with the ‘sanctity of a man’s home and the privacies of life.’” *Oliver, supra*, 466 U.S., at 180, 104 S.Ct., at 1742 (quoting *Boyd v. United States*, 116 U.S. 616, 630, 6 S.Ct. 524, 532, 29 L.Ed. 746 (1886)). See 4 Blackstone, Commentaries *225. The *213 protection afforded the curtilage is essentially a protection of families and personal privacy in an area intimately linked to the home, both physically and psychologically, where privacy expectations are most heightened. The claimed area here was immediately adjacent to a suburban home, surrounded by

high double fences. This close nexus to the home would appear to encompass this small area within the curtilage. Accepting, as the State does, that this yard and its crop fall within the curtilage, the question remains whether naked-eye observation of the curtilage by police from an aircraft lawfully operating at an altitude of 1,000 feet violates an expectation of privacy that is reasonable.

That the area is within the curtilage does not itself bar all police observation. The Fourth Amendment protection of the home has never been extended to require law enforcement officers to shield their eyes when passing by a home on public thoroughfares. Nor does the mere fact that an individual has taken measures to restrict some views of his activities preclude an officer's observations from a public vantage point where he has a right to be and which renders the activities clearly visible. *E.g.*, ****1813** *United States v. Knotts*, 460 U.S. 276, 282, 103 S.Ct. 1081, 1085–1086, 75 L.Ed.2d 55 (1983). “What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.” *Katz, supra*, 389 U.S., at 351, 88 S.Ct., at 511.

The observations by Officers Shutz and Rodriguez in this case took place within public navigable airspace, see 49 U.S.C.App. § 1304, in a physically nonintrusive manner; from this point they were able to observe plants readily discernible to the naked eye as marijuana. That the observation from aircraft was directed at identifying the plants and the officers were trained to recognize marijuana is irrelevant. Such observation is precisely what a judicial officer needs to provide a basis for a warrant. Any member of the public flying in this airspace who glanced down could have seen ***214** everything that these officers observed. On this record, we readily conclude that respondent's expectation that his garden was protected from such observation is unreasonable and is not an expectation that society is prepared to honor.²

The dissent contends that the Court ignores Justice Harlan's warning in his concurrence in *Katz v. United States*, 389 U.S., at 361–362, 88 S.Ct., at 516–517, that the Fourth Amendment should not be limited to proscribing only physical intrusions onto private property. *Post*, at —. But Justice Harlan's observations about future electronic developments and the potential for electronic interference with private communications, see *Katz, supra*, at 362, 88 S.Ct., at 517, were plainly not aimed at simple visual observations from a public place. Indeed, since *Katz* the Court has required warrants for electronic surveillance aimed

at intercepting private conversations. See *United States v. United States District Court*, 407 U.S. 297, 92 S.Ct. 2125, 32 L.Ed.2d 752 (1972).

Justice Harlan made it crystal clear that he was resting on the reality that one who enters a telephone booth is entitled to assume that his conversation is not being intercepted. This does not translate readily into a rule of constitutional dimensions that one who grows illicit drugs in his backyard is “entitled to assume” his unlawful conduct will not be observed ***215** by a passing aircraft—or by a power company repair mechanic on a pole overlooking the yard. As Justice Harlan emphasized,

“a man's home is, for most purposes, a place where he expects privacy, but objects, activities, or statements that he exposes to the ‘plain view’ of outsiders are not ‘protected’ because no intention to keep them to himself has been exhibited. On the other hand, conversations in the open would not be protected against being overheard, for the expectation of privacy under the circumstances would be unreasonable.” *Katz, supra*, 389 U.S., at 361, 88 S.Ct., at 516–517.

One can reasonably doubt that in 1967 Justice Harlan considered an aircraft within the category of future “electronic” developments that could stealthily intrude upon an individual's privacy. In an age where private and commercial flight in the public airways is routine, it is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet. The Fourth Amendment simply does not require the police traveling in the public airways at this altitude ****1814** to obtain a warrant in order to observe what is visible to the naked eye.³

Reversed.

Justice POWELL, with whom Justice BRENNAN, Justice MARSHALL, and Justice BLACKMUN join, dissenting. Concurring in *Katz v. United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967), Justice Harlan warned that any decision to construe the ***216** Fourth Amendment as proscribing only physical intrusions by police onto private property “is, in the present day, bad physics as well as bad law, for reasonable expectations of privacy may be defeated by electronic as well as physical invasion.” *Id.*, at 362, 88 S.Ct., at 516. Because the Court today ignores that warning in an

opinion that departs significantly from the standard developed in *Katz* for deciding when a Fourth Amendment violation has occurred, I dissent.

I

As the Court's opinion reflects, the facts of this case are not complicated. Officer Shutz investigated an anonymous report that marijuana was growing in the backyard of respondent's home. A tall fence prevented Shutz from looking into the yard from the street. The yard was directly behind the home so that the home itself furnished one border of the fence. Shutz proceeded, without obtaining a warrant, to charter a plane and fly over the home at an altitude of 1,000 feet. Observing marijuana plants growing in the fenced-in yard, Shutz photographed respondent's home and yard, as well as homes and yards of neighbors. The photograph clearly shows that the enclosed yard also contained a small swimming pool and patio. Shutz then filed an affidavit, to which he attached the photograph, describing the anonymous tip and his aerial observation of the marijuana. A warrant issued,¹ and a search of the yard confirmed Shutz' aerial observations. Respondent was arrested for cultivating marijuana, a felony under California law.

Respondent contends that the police intruded on his constitutionally protected expectation of privacy when they conducted aerial surveillance of his home and photographed his backyard without first obtaining a warrant. The Court *217 rejects that contention, holding that respondent's expectation of privacy in the curtilage of his home, although reasonable as to intrusions on the ground, was unreasonable as to surveillance from the navigable airspace. In my view, the Court's holding rests on only one obvious fact, namely, that the airspace generally is open to all persons for travel in airplanes. The Court does not explain why this single fact deprives citizens of their privacy interest in outdoor activities in an enclosed curtilage.

II

A

The Fourth Amendment protects “[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.” While the familiar

history of the Amendment need not be recounted here,² **1815 we should remember that it reflects a choice that our society should be one in which citizens “dwell in reasonable security and freedom from surveillance.” *Johnson v. United States*, 333 U.S. 10, 14, 68 S.Ct. 367, 369, 92 L.Ed. 436 (1948). Since that choice was made by the Framers of the Constitution, our cases construing the Fourth Amendment have relied in part on the common law for instruction on “what sorts of searches the Framers ... regarded as reasonable.” *Steagald v. United States*, 451 U.S. 204, 217, 101 S.Ct. 1642, 1650, 68 L.Ed.2d 38 (1981). But we have repeatedly refused to freeze “into constitutional law those enforcement practices that existed at the time of the Fourth Amendment's passage.” *Id.*, at 217, n. 10, 101 S.Ct., at 1650, n. 10, quoting *Payton v. New York*, 445 U.S. 573, 591, n. 33, 100 S.Ct. 1371, 1382–83, n. 33, 63 L.Ed.2d 639 (1980). See *United States v. United States District Court*, 407 U.S. 297, 313, 92 S.Ct. 2125, 2134–2135, 32 L.Ed.2d 752 (1972). Rather, we have construed the Amendment “‘in light of contemporary norms and conditions.’” *Steagald v. United States*, *supra*, 451 U.S., at 217, n. 10, 101 S.Ct., at 1650, n.10, quoting *Payton v. New York*, *supra*, 445 U.S., at 591, n. 33, 100 S.Ct., at 1382–1383, n. 33, in order to prevent “any stealthy encroachments” on our citizens' right to be free of arbitrary official intrusion, *218 *Boyd v. United States*, 116 U.S. 616, 635, 6 S.Ct. 524, 535, 29 L.Ed. 746 (1886). Since the landmark decision in *Katz v. United States*, the Court has fulfilled its duty to protect Fourth Amendment rights by asking if police surveillance has intruded on an individual's reasonable expectation of privacy.

As the decision in *Katz* held, and dissenting opinions written by Justices of this Court prior to *Katz* recognized, *e.g.*, *Goldman v. United States*, 316 U.S. 129, 139–141, 62 S.Ct. 993, 998–999, 86 L.Ed. 1322 (1942) (Murphy, J., dissenting); *Olmstead v. United States*, 277 U.S. 438, 474, 48 S.Ct. 564, 571, 72 L.Ed. 944 (1928) (Brandeis, J., dissenting), a standard that defines a Fourth Amendment “search” by reference to whether police have physically invaded a “constitutionally protected area” provides no real protection against surveillance techniques made possible through technology. Technological advances have enabled police to see people's activities and associations, and to hear their conversations, without being in physical proximity. Moreover, the capability now exists for police to conduct intrusive surveillance without any physical penetration of the walls of homes or other structures that citizens may believe shelters their privacy.³ Looking to the Fourth Amendment for protection against such “broad and unsuspected governmental

incursions” into the “cherished privacy of law-abiding citizens,” *219 *United States v. United States District Court, supra*, 407 U.S., at 312–313, 92 S.Ct., at 2135 (footnote omitted), the Court in *Katz* abandoned its inquiry into whether police had committed a physical trespass. *Katz* announced a standard under which the occurrence of a search turned not on the physical position of the police conducting the surveillance, but on whether the surveillance in question had invaded a constitutionally protected reasonable expectation of privacy.

Our decisions following the teaching of *Katz* illustrate that this inquiry “normally embraces two discrete questions.” *Smith **1816 v. Maryland*, 442 U.S. 735, 740, 99 S.Ct. 2577, 2580, 61 L.Ed.2d 220 (1979). “The first is whether the individual, by his conduct, has ‘exhibited an actual (subjective) expectation of privacy.’ ” 442 U.S., at 740, S.Ct., at 2580, quoting *Katz v. United States, supra*, 389 U.S., at 361, 88 S.Ct., at 516–517 (Harlan, J., concurring). The second is whether that subjective expectation “is ‘one that society is prepared to recognize as “reasonable.” ’ ” 442 U.S., at 740, — S.Ct., at 2580, quoting *Katz v. United States, supra*, 389 U.S., at 361, 88 S.Ct., at 516–517 (Harlan, J., concurring). While the Court today purports to reaffirm this analytical framework, its conclusory rejection of respondent's expectation of privacy in the yard of his residence as one that “is unreasonable,” *ante*, at 1813, represents a turning away from the principles that have guided our Fourth Amendment inquiry. The Court's rejection of respondent's Fourth Amendment claim is curiously at odds with its purported reaffirmation of the curtilage doctrine, both in this decision and its companion case, *Dow Chemical Co. v. United States*, 476 U.S. 227, 106 S.Ct. 1819, 90 L.Ed.2d 226 and particularly with its conclusion in *Dow* that society is prepared to recognize as reasonable expectations of privacy in the curtilage, at 235, 106 S.Ct. at —.

The second question under *Katz* has been described as asking whether an expectation of privacy is “legitimate in the sense required by the Fourth Amendment.”⁴ *220 *Oliver v. United States*, 466 U.S. 170, 182, 104 S.Ct. 1735, 1742, 80 L.Ed.2d 214 (1984). The answer turns on “whether the government's intrusion infringes upon the personal and societal values protected by the Fourth Amendment.” *Id.*, at 182–183, 104 S.Ct., at 1743–1744. While no single consideration has been regarded as dispositive, “the Court has given weight to such factors as the intention of the Framers of the Fourth Amendment, ... the uses to which the individual has put a location, ... and our societal understanding that certain areas

deserve the most scrupulous protection from government invasion.”⁵ *Id.*, at 178, 104 S.Ct., at 1741. Our decisions have made clear that this inquiry often must be decided by “reference to a ‘place,’ ” *Katz v. United States, supra*, 389 U.S., at 361, 88 S.Ct., at 516 (Harlan, J., concurring); see *Payton v. New York*, 445 U.S., at 589, 100 S.Ct., at 1381, and that a home is a place in which a subjective expectation of privacy virtually always will be legitimate, *ibid.*; see, e.g., *United States v. Karo*, 468 U.S. 705, 713–715, 104 S.Ct. 3296, 3302–3303, 82 L.Ed.2d 530 (1984); *Steagald v. United States*, 451 U.S., at 211–212, 101 S.Ct., at 1647–1648. “At the very core [of the Fourth Amendment] stands the right of a [person] to retreat into his own home and there be free from unreasonable governmental intrusion.” *Silverman v. United States*, 365 U.S. 505, 511, 81 S.Ct. 679, 683, 5 L.Ed.2d 734 (1961).

B

This case involves surveillance of a home, for as we stated in *Oliver v. United States*, the curtilage “has been considered part of the home itself for Fourth Amendment purposes.” 466 U.S., at 180, 104 S.Ct., at 1742. In *Dow Chemical Co. v. United States*, *221 decided today, the Court **1817 reaffirms that the “curtilage doctrine evolved to protect much the same kind of privacy as that covering the interior of a structure.” *Post*, at 1825. The Court in *Dow* emphasizes, moreover, that society accepts as reasonable citizens' expectations of privacy in the area immediately surrounding their homes. *Ibid.*

In deciding whether an area is within the curtilage, courts “have defined the curtilage, as did the common law, by reference to the factors that determine whether an individual reasonably may expect that an area immediately adjacent to the home will remain private. See, e.g., *United States v. Van Dyke*, 643 F.2d 992, 993–994 (CA4 1981); *United States v. Williams*, 581 F.2d 451, 453 (CA5 1978); *Care v. United States*, 231 F.2d 22, 25 (CA10), cert. denied, 351 U.S. 932, 76 S.Ct. 788, 100 L.Ed. 1461 (1956).” *Oliver v. United States, supra*, 466 U.S., at 180, 104 S.Ct., at 1742. The lower federal courts have agreed that the curtilage is “an area of domestic use immediately surrounding a dwelling and usually but not always fenced in with the dwelling.”⁶ *United States v. LaBerge*, 267 F.Supp. 686, 692 (Md.1967); see *United States v. Van Dyke*, 643 F.2d 992, 993, n. 1 (CA4 1984). Those courts also have held that whether an area is within the curtilage must be decided by looking at all of the facts. *Ibid.*, citing *Care*

v. United States, supra, at 25 (CA10 1956). Relevant facts include the proximity between the area claimed to be curtilage and the home, the nature of the uses to which the area is put, and the steps taken by the resident to protect the area from observation by people passing by. See *Care v. United States, supra*, at 25; see also *United States v. Van Dyke, supra*, at 993–994.

*222 III

A

The Court begins its analysis of the Fourth Amendment issue posed here by deciding that respondent had an expectation of privacy in his backyard. I agree with that conclusion because of the close proximity of the yard to the house, the nature of some of the activities respondent conducted there,⁷ and because he had taken steps to shield those activities from the view of passersby. The Court then implicitly acknowledges that society is prepared to recognize his expectation as reasonable with respect to ground-level surveillance, holding that the yard was within the curtilage, an area in which privacy interests have been afforded the “most heightened” protection. *Ante*, at 1812. As the foregoing discussion of the curtilage doctrine demonstrates, respondent’s yard unquestionably was within the curtilage. Since Officer Shutz could not see into this private family area from the street, the Court certainly would agree that he would have conducted an unreasonable search had he climbed over the fence, or used a ladder to peer into the yard without first securing a warrant. See *United States v. Van Dyke, supra*; see also *United States v. Williams, 581 F.2d 451 (CA 1978)*.

The Court concludes, nevertheless, that Shutz could use an airplane—a product of modern technology—to intrude visually into respondent’s yard. The Court argues that respondent had no reasonable expectation of privacy from aerial observation. It notes that Shutz was “within public navigable airspace,” *ante*, at 1813, when he looked into and photographed *223 respondent’s yard. It then relies on the fact that the surveillance was not accompanied by a **1818 physical invasion of the curtilage, *ibid*. Reliance on the *manner* of surveillance is directly contrary to the standard of *Katz*, which identifies a constitutionally protected privacy right by focusing on the interests of the individual and of a free society. Since *Katz*, we have consistently held that the presence or absence of physical trespass by

police is constitutionally irrelevant to the question whether society is prepared to recognize an asserted privacy interest as reasonable. *E.g.*, *United States v. United States District Court*, 407 U.S., at 313, 92 S.Ct., at 2134–2135.

The Court’s holding, therefore, must rest solely on the fact that members of the public fly in planes and may look down at homes as they fly over them. *Ante*, at 1813. The Court does not explain why it finds this fact to be significant. One may assume that the Court believes that citizens bear the risk that air travelers will observe activities occurring within backyards that are open to the sun and air. This risk, the Court appears to hold, nullifies expectations of privacy in those yards even as to purposeful police surveillance from the air. The Court finds support for this conclusion in *United States v. Knotts*, 460 U.S. 276, 103 S.Ct. 1081, 75 L.Ed.2d 55 (1983). *Ante*, at 1812.

This line of reasoning is flawed. First, the actual risk to privacy from commercial or pleasure aircraft is virtually nonexistent. Travelers on commercial flights, as well as private planes used for business or personal reasons, normally obtain at most a fleeting, anonymous, and nondiscriminating glimpse of the landscape and buildings over which they pass.⁸ The risk that a passenger on such a plane might observe *224 private activities, and might connect those activities with particular people, is simply too trivial to protect against. It is no accident that, as a matter of common experience, many people build fences around their residential areas, but few build roofs over their backyards. Therefore, contrary to the Court’s suggestion, *ante*, at 1812, people do not “ ‘knowingly expos[e]’ ” their residential yards “ ‘to the public’ ” merely by failing to build barriers that prevent aerial surveillance.

The Court’s reliance on *Knotts* reveals the second problem with its analysis. The activities under surveillance in *Knotts* took place on public streets, not in private homes. 460 U.S., at 281–282, 103 S.Ct., at 1085–1086. Comings and goings on public streets are public matters, and the Constitution does not disable police from observing what every member of the public can see. The activity in this case, by contrast, took place within the private area immediately adjacent to a home. Yet the Court approves purposeful police surveillance of that activity and area similar to that approved in *Knotts* with respect to public activities and areas. The only possible basis for this holding is a judgment that the risk to privacy posed by the remote possibility that a private airplane passenger will notice outdoor activities is equivalent to the risk of official aerial surveillance.⁹ But the Court fails to acknowledge the

qualitative difference between police surveillance and other uses made of the airspace. Members of the public use the airspace for travel, **1819 business, or pleasure, not for the purpose of observing activities taking place within residential yards. Here, police conducted an overflight at low altitude solely for *225 the purpose of discovering evidence of crime within a private enclave into which they were constitutionally forbidden to intrude at ground level without a warrant. It is not easy to believe that our society is prepared to force individuals to bear the risk of this type of warrantless police intrusion into their residential areas.¹⁰

B

Since respondent had a reasonable expectation of privacy in his yard, aerial surveillance undertaken by the police for the purpose of discovering evidence of crime constituted a “search” within the meaning of the Fourth Amendment. “Warrantless searches are presumptively unreasonable, though the Court has recognized a few limited exceptions to this general rule.” *United States v. Karo*, 468 U.S., at 717, 104 S.Ct., at 3304. This case presents no such exception. The indiscriminate nature of aerial surveillance, illustrated by Officer Shutz’ photograph of respondent’s home and enclosed yard as well as those of his neighbors, poses “far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight.” *Id.*, at 716, 104 S.Ct., at 3304 (footnote omitted). Therefore, I would affirm the judgment of the California Court of Appeal ordering suppression of the marijuana plants.

Footnotes

* The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Lumber Co.*, 200 U.S. 321, 337, 26 S.Ct. 282, 287, 50 L.Ed. 499.

1 Because the parties framed the issue in the California courts below and in this Court as concerning only the reasonableness of aerial observation generally, see Pet. for Cert. i, without raising any distinct issue as to the photograph attached as an exhibit to the affidavit in support of the search warrant, our analysis is similarly circumscribed. It was the officer’s observation, not the photograph, that supported the warrant. Officer Shutz testified that the photograph did not identify the marijuana as such because it failed to reveal a “true representation” of the color of the plants: “you have to see it with the naked eye.” App. 36.

2 The California Court of Appeal recognized that police have the right to use navigable airspace, but made a pointed distinction between police aircraft focusing on a particular home and police aircraft engaged in a “routine patrol.” It concluded that the officers’ “focused” observations violated respondent’s reasonable expectations of privacy. In short, that court concluded that a regular police patrol plane identifying respondent’s marijuana would lead to a different result. Whether this is a rational distinction is hardly relevant, although we find difficulty understanding exactly how respondent’s expectations of privacy from aerial observation might differ when two airplanes pass overhead at identical altitudes,

IV

Some may believe that this case, involving no physical intrusion on private property, presents “the obnoxious thing in its mildest and least repulsive form.” *226 *Boyd v. United States*, 116 U.S., at 635, 6 S.Ct., at 535. But this Court recognized long ago that the essence of a Fourth Amendment violation is “not the breaking of [a person’s] doors, and the rummaging of his drawers,” but rather is “the invasion of his infeasible right of personal security, personal liberty and private property.” *Id.*, at 630, 6 S.Ct., at 532. Rapidly advancing technology now permits police to conduct surveillance in the home itself, an area where privacy interests are most cherished in our society, without any physical trespass. While the rule in *Katz* was designed to prevent silent and unseen invasions of Fourth Amendment privacy rights in a variety of settings, we have consistently afforded heightened protection to a person’s right to be left alone in the privacy of his house. The Court fails to enforce that right or to give any weight to the longstanding presumption that warrantless intrusions into the home are unreasonable.¹¹ I dissent.

All Citations

476 U.S. 207, 106 S.Ct. 1809, 90 L.Ed.2d 210, 54 USLW 4471

simply for different purposes. We are cited to no authority for this novel analysis or the conclusion it begat. The fact that a ground-level observation by police “focused” on a particular place is not different from a “focused” aerial observation under the Fourth Amendment.

3 In *Dow Chemical Co. v. United States*, 476 U.S. 227, 106 S.Ct. 1819, 90 L.Ed.2d 226 (1986), decided today, we hold that the use of an aerial mapping camera to photograph an industrial manufacturing complex from navigable airspace similarly does not require a warrant under the Fourth Amendment. The State acknowledges that “[a]erial observation of curtilage may become invasive, either due to physical intrusiveness or through modern technology which discloses to the senses those intimate associations, objects or activities otherwise imperceptible to police or fellow citizens.” Brief for Petitioner 14–15.

1 The warrant authorized Shutz to search the home and its attached garage, as well as the yard, for marijuana, narcotics paraphernalia, records relating to marijuana sales, and documents identifying the occupant of the premises.

2 See, e.g., *Payton v. New York*, 445 U.S. 573, 583–585, n. 20, 100 S.Ct. 1371, 1378–1379, n. 20, 63 L.Ed.2d 639 (1980).

3 As was said more than four decades ago: “[T]he search of one’s home or office no longer requires physical entry for science has brought forth far more effective devices for the invasion of a person’s privacy than the direct and obvious methods of oppression which were detested by our forbears and which inspired the Fourth Amendment.... Whether the search of private quarters is accomplished by placing on the outer walls of the sanctum a detectaphone that transmits to the outside listener the intimate details of a private conversation, or by new methods of photography that penetrate walls or overcome distances, the privacy of the citizen is equally invaded by the Government and intimate personal matters are laid bare to view.” *Goldman v. United States*, 316 U.S. 129, 139, 62 S.Ct. 993, 998, 86 L.Ed. 1322 (1942) (Murphy, J., dissenting). Since 1942, science has developed even more sophisticated means of surveillance.

4 In Justice Harlan’s classic description, an actual expectation of privacy is entitled to Fourth Amendment protection if it is an expectation that society recognizes as “reasonable.” *Katz v. United States*, 389 U.S., at 361, 88 S.Ct., at 516 (Harlan, J., concurring). Since *Katz*, our decisions also have described constitutionally protected privacy interests as those that society regards as “legitimate,” using the words “reasonable” and “legitimate” interchangeably. E.g., *Oliver v. United States*, 466 U.S. 170, 104 S.Ct. 1735, 80 L.Ed.2d 214 (1984); *Rakas v. Illinois*, 439 U.S. 128, 143–144, n. 12, 99 S.Ct. 421, 430, n. 12, 58 L.Ed.2d 387 (1978).

5 “Legitimation of expectations of privacy by law must have a source outside of the Fourth Amendment, either by reference to concepts of real or personal property law or to understandings that are recognized and permitted by society.” *Ibid.* This inquiry necessarily focuses on personal interests in privacy and liberty recognized by a free society.

6 The Oxford English Dictionary defines curtilage as “a small court, yard, garth, or piece of ground attached to a dwelling-house, and forming one enclosure with it, or so regarded by the law; the area attached to and containing a dwelling-house and its out-buildings.” 2 Oxford English Dictionary 1278 (1933).

7 The Court omits any reference to the fact that respondent’s yard contained a swimming pool and a patio for sunbathing and other private activities. At the suppression hearing, respondent sought to introduce evidence showing that he did use his yard for domestic activities. The trial court refused to consider that evidence. Tr. on Appeal 5–8 (Aug. 15, 1983).

8 Of course, during takeoff and landing, planes briefly fly at low enough altitudes to afford fleeting opportunities to observe some types of activity in the curtilages of residents who live within the strictly regulated takeoff and landing zones. As all of us know from personal experience, at least in passenger aircrafts, there rarely—if ever—is an opportunity for a practical observation and photographing of unlawful activity similar to that obtained by Officer Shutz in this case. The Court’s analogy to commercial and private overflights, therefore, is wholly without merit.

9 Some of our precedents have held that an expectation of privacy was not reasonable in part because the individual had assumed the risk that certain kinds of private information would be turned over to the police. *United States v. Miller*, 425 U.S. 435, 443, 96 S.Ct. 1619, 1624, 48 L.Ed.2d 71 (1976). None of the prior decisions of this Court is a precedent for today’s decision. As Justice MARSHALL has observed, it is our duty to be sensitive to the risks that a citizen “should be

forced to assume in a free and open society.” *Smith v. Maryland*, 442 U.S. 735, 750, 99 S.Ct. 2577, 2585, 61 L.Ed.2d 220, (1979) (dissenting opinion).

- 10 The Court's decision has serious implications for outdoor family activities conducted in the curtilage of a home. The feature of such activities that makes them desirable to citizens living in a free society, namely, the fact that they occur in the open air and sunlight, is relied on by the Court as a justification for permitting police to conduct warrantless surveillance at will. Aerial surveillance is nearly as intrusive on family privacy as physical trespass into the curtilage. It would appear that, after today, families can expect to be free of official surveillance only when they retreat behind the walls of their homes.
- 11 Of course, the right of privacy in the home and its curtilage includes no right to engage in unlawful conduct there. But the Fourth Amendment requires police to secure a warrant before they may intrude on that privacy to search for evidence of suspected crime. *United States v. Karo*, 468 U.S. 705, 713–715, 104 S.Ct. 3296, 3302–3303, 82 L.Ed.2d 530 (1984).

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106 S.Ct. 1819

Supreme Court of the United States

DOW CHEMICAL COMPANY, Petitioner

v.

UNITED STATES etc.

No. 84–1259.

|

Argued Dec. 10, 1985.

|

Decided May 19, 1986.

Synopsis

Chemical company brought action for declaratory and injunctive relief against aerial surveillance and photography of its industrial complex by [Environmental Protection Agency](#). The United States District Court for the Eastern District of Michigan, James Harvey, J., 536 F.Supp. 1355, entered partial summary judgment in favor of chemical company, but the United States Court of Appeals for the Sixth Circuit, Merritt, Circuit Judge, 749 F.2d 307, reversed. On certiorari, the Supreme Court, Chief Justice Burger, held that: (1) EPA had statutory authority to use aerial photography to perform “site inspection” under Clean Air Act, and (2) aerial photography of chemical company's industrial complex was not a “search” for Fourth Amendment purposes.

Affirmed.

Justice Powell concurred in part, dissented in part, and filed opinion in which Justices Brennan, Marshall, and Blackmun joined.

****1820 *227 Syllabus***

Petitioner operates a 2,000-acre chemical plant consisting of numerous covered buildings, with outdoor manufacturing equipment and piping conduits located between the various buildings exposed to visual observation from the air. Petitioner maintains elaborate security around the perimeter of the complex, barring ground-level public views of the area. When petitioner denied a request by the Environmental Protection Agency (EPA) for an on-site inspection ****1821** of the plant, EPA did not seek an administrative search warrant, but instead employed a

commercial aerial photographer, using a standard precision aerial mapping camera, to take photographs of the facility from various altitudes, all of which were within lawful navigable airspace. Upon becoming aware of the aerial photography, petitioner brought suit in Federal District Court, alleging that EPA's action violated the Fourth Amendment and was beyond its statutory investigative authority. The District Court granted summary judgment for petitioner, but the Court of Appeals reversed, holding that EPA's aerial observation did not exceed its investigatory authority and that the aerial photography of petitioner's plant complex without a warrant was not a search prohibited by the Fourth Amendment.

Held:

1. The fact that aerial photography by petitioner's competitors might be barred by state trade secrets law is irrelevant to the questions presented in this case. Governments do not generally seek to appropriate trade secrets of the private sector, and the right to be free of appropriation of trade secrets is protected by law. Moreover, state tort law governing unfair competition does not define the limits of the Fourth Amendment. Pp. 1823–1824.

2. The use of aerial observation and photography is within EPA's statutory authority. When Congress invests an agency such as EPA with enforcement and investigatory authority, it is not necessary to identify explicitly every technique that may be used in the course of executing the statutory mission. Although § 114(a) of the Clean Air Act, which provides for EPA's right of entry to premises for inspection purposes, ***228** does not authorize aerial observation, that section appears to expand, not restrict, EPA's general investigatory powers, and there is no suggestion in the statute that the powers conferred by § 114(a) are intended to be exclusive. EPA needs no explicit statutory provision to employ methods of observation commonly available to the public at large. Pp. 1824.

3. EPA's taking, without a warrant, of aerial photographs of petitioner's plant complex from an aircraft lawfully in public navigable airspace was not a search prohibited by the Fourth Amendment. The open areas of an industrial plant complex such as petitioner's are not analogous to the “curtilage” of a dwelling, which is entitled to protection as a place where the occupants have a reasonable and legitimate expectation of privacy that society is prepared to accept. See *California v. Ciraolo*, 476 U.S. 207, 106 S.Ct. 1809, 90 L.Ed.2d 210.

The intimate activities associated with family privacy and the home and its curtilage simply do not reach the outdoor areas or spaces between structures and buildings of a manufacturing plant. For purposes of aerial surveillance, the open areas of an industrial complex are more comparable to an “open field” in which an individual may not legitimately demand privacy. *Oliver v. United States*, 466 U.S. 170, 104 S.Ct. 1735, 80 L.Ed.2d 214. Here, EPA was not employing some unique sensory device not available to the public, but rather was employing a conventional, albeit precise, commercial camera commonly used in mapmaking. The photographs were not so revealing of intimate details as to raise constitutional concerns. The mere fact that human vision is enhanced somewhat, at least to the degree here, does not give rise to constitutional problems. Pp. 1824–1827.

749 F.2d 307 (CA6 1984), affirmed.

BURGER, C.J., delivered the opinion of the Court, in which WHITE, REHNQUIST, STEVENS, and O'CONNOR, JJ., joined, and in Part III of which BRENNAN, MARSHALL, BLACKMUN, and POWELL, JJ., joined. POWELL, J., filed an opinion concurring in part and dissenting in part, in which BRENNAN, MARSHALL, and BLACKMUN, JJ., joined, *post*, p. —.

Attorneys and Law Firms

****1822** *Jane M. Gootee* argued the cause for petitioner. With her on the briefs were *James H. Hanes* and *Bernd W. Sandt*.

Alan I. Horowitz argued the cause for the United States. With him on the brief were *Acting Solicitor General Wallace*, *Assistant Attorney General Habicht*, *Deputy Solicitor General Frey*, *Dirk D. Snel*, and *Anne S. Almy*.*

* Briefs of *amici curiae* urging reversal were filed for the Chamber of Commerce of the United States of America et al. by *Robin S. Conrad* and *Constance E. Brooks*; and for the Michigan Manufacturers' Association et al. by *John M. Cannon*, *Susan W. Wanat*, and *Ann Plunkett Sheldon*.

Opinion

***229** Chief Justice BURGER delivered the opinion of the Court.

We granted certiorari to review the holding of the Court of Appeals (a) that the Environmental Protection Agency's aerial observation of petitioner's plant complex did not

exceed EPA's statutory investigatory authority, and (b) that EPA's aerial photography of petitioner's 2,000-acre plant complex without a warrant was not a search under the Fourth Amendment.

I

Petitioner Dow Chemical Co. operates a 2,000-acre facility manufacturing chemicals at Midland, Michigan. The facility consists of numerous covered buildings, with manufacturing equipment and piping conduits located between the various buildings exposed to visual observation from the air. At all times, Dow has maintained elaborate security around the perimeter of the complex barring ground-level public views of these areas. It also investigates any low-level flights by aircraft over the facility. Dow has not undertaken, however, to conceal all manufacturing equipment within the complex from aerial views. Dow maintains that the cost of covering its exposed equipment would be prohibitive.

In early 1978, enforcement officials of EPA, with Dow's consent, made an on-site inspection of two powerplants in this complex. A subsequent EPA request for a second inspection, however, was denied, and EPA did not thereafter seek an administrative search warrant. Instead, EPA employed a commercial aerial photographer, using a standard floor-mounted, precision aerial mapping camera, to take photographs of the facility from altitudes of 12,000, 3,000, and 1,200 feet. At all times the aircraft was lawfully within navigable airspace. See 49 U.S.C.App. § 1304; 14 CFR § 91.79 (1985).

***230** EPA did not inform Dow of this aerial photography, but when Dow became aware of it, Dow brought suit in the District Court alleging that EPA's action violated the Fourth Amendment and was beyond EPA's statutory investigative authority. The District Court granted Dow's motion for summary judgment on the ground that EPA had no authority to take aerial photographs and that doing so was a search violating the Fourth Amendment. EPA was permanently enjoined from taking aerial photographs of Dow's premises and from disseminating, releasing, or copying the photographs already taken. 536 F.Supp. 1355 (ED Mich.1982).

The District Court accepted the parties' concession that EPA's “ ‘quest for evidence’ ” was a “search,” *id.*, at 1358, and limited its analysis to whether the search was unreasonable

under *Katz v. United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967). Proceeding on the assumption that a search in Fourth Amendment terms had been conducted, the court found that Dow manifested an expectation of privacy in its exposed plant areas because it intentionally surrounded them with buildings and other enclosures. 536 F.Supp., at 1364–1366.

The District Court held that this expectation of privacy was reasonable, as reflected in part by trade secret protections restricting Dow's commercial competitors from aerial photography of these exposed areas. *Id.*, at 1366–1369. The court emphasized that use of “the finest precision aerial camera available” permitted EPA to capture on film “a great deal more than the human eye could ever see.” *Id.*, at 1367.

The Court of Appeals reversed. 749 F.2d 307 (CA6 1984). It recognized that Dow indeed had a subjective expectation of privacy in certain areas from *ground*-level **1823 intrusions, but the court was not persuaded that Dow had a subjective expectation of being free from *aerial* surveillance since Dow had taken no precautions against such observation, in contrast to its elaborate ground-level precautions. *Id.*, at 313. The court rejected the argument that it was not feasible to shield any of the critical parts of the exposed plant areas from aerial surveys. *Id.*, at 312–313. The Court of Appeals, *231 however, did not explicitly reject the District Court's factual finding as to Dow's subjective expectations.

Accepting the District Court finding of Dow's privacy expectation, the Court of Appeals held that it was not a reasonable expectation “[w]hen the entity observed is a multibuilding complex, and the area observed is the outside of these buildings and the spaces in between the buildings.” *Id.*, at 313. Viewing Dow's facility to be more like the “open field” in *Oliver v. United States*, 466 U.S. 170, 104 S.Ct. 1735, 80 L.Ed.2d 214 (1984), than a home or an office, it held that the common-law curtilage doctrine did not apply to a large industrial complex of closed buildings connected by pipes, conduits, and other exposed manufacturing equipment. 749 F.2d, at 313–314. The Court of Appeals looked to “the peculiarly strong concepts of intimacy, personal autonomy and privacy associated with the home” as the basis for the curtilage protection. *Id.*, at 314. The court did not view the use of sophisticated photographic equipment by EPA as controlling.

The Court of Appeals then held that EPA clearly acted within its statutory powers even absent express authorization for

aerial surveillance, concluding that the delegation of general investigative authority to EPA, similar to that of other law enforcement agencies, was sufficient to support the use of aerial photography. *Id.*, at 315.

II

The photographs at issue in this case are essentially like those commonly used in mapmaking. Any person with an airplane and an aerial camera could readily duplicate them. In common with much else, the technology of photography has changed in this century. These developments have enhanced industrial processes, and indeed all areas of life; they have also enhanced law enforcement techniques. Whether they may be employed by competitors to penetrate trade secrets is not a question presented in this case. Governments do not generally seek to appropriate trade secrets of the private sector, *232 and the right to be free of appropriation of trade secrets is protected by law.

Dow nevertheless relies heavily on its claim that trade secret laws protect it from any aerial photography of this industrial complex by its competitors, and that this protection is relevant to our analysis of such photography under the Fourth Amendment. That such photography might be barred by state law with regard to competitors, however, is irrelevant to the questions presented here. State tort law governing unfair competition does not define the limits of the Fourth Amendment. Cf. *Oliver v. United States*, *supra* (trespass law does not necessarily define limits of Fourth Amendment). The Government is seeking these photographs in order to regulate, not to compete with, Dow. If the Government were to use the photographs to compete with Dow, Dow might have a Fifth Amendment “taking” claim. Indeed, Dow alleged such a claim in its complaint, but the District Court dismissed it without prejudice. But even trade secret laws would not bar all forms of photography of this industrial complex; rather, only photography with an intent to use any trade secrets revealed by the photographs may be proscribed. Hence, there is no prohibition of photographs taken by a casual passenger on an airliner, or those taken by a company producing maps for its mapmaking purposes.

Dow claims first that EPA has no authority to use aerial photography to implement its statutory authority for “site inspection” under § 114(a) of the Clean Air **1824 Act, 42 U.S.C. § 7414(a);¹ second, Dow claims EPA's use of aerial photography *233 was a “search” of an area that,

notwithstanding the large size of the plant, was within an “industrial curtilage” rather than an “open field,” and that it had a reasonable expectation of privacy from such photography protected by the Fourth Amendment.

III

Congress has vested in EPA certain investigatory and enforcement authority, without spelling out precisely how this authority was to be exercised in all the myriad circumstances that might arise in monitoring matters relating to clean air and water standards. When Congress invests an agency with enforcement and investigatory authority, it is not necessary to identify explicitly each and every technique that may be used in the course of executing the statutory mission. Aerial observation authority, for example, is not usually expressly extended to police for traffic control, but it could hardly be thought necessary for a legislative body to tell police that aerial observation could be employed for traffic control of a metropolitan area, or to expressly authorize police to send messages to ground highway patrols that a particular over-the-road truck was traveling in excess of 55 miles per hour. Common sense and ordinary human experience teach that traffic violators are apprehended by observation.

Regulatory or enforcement authority generally carries with it all the modes of inquiry and investigation traditionally employed or useful to execute the authority granted. Environmental standards such as clean air and clean water cannot be enforced only in libraries and laboratories, helpful as those institutions may be.

Under § 114(a)(2), the Clean Air Act provides that “upon presentation of ... credentials,” EPA has a “right of entry to, upon, or through any premises.” 42 U.S.C. § 7414(a)(2)(A). Dow argues this limited grant of authority to enter does not *234 authorize any aerial observation. In particular, Dow argues that unannounced aerial observation deprives Dow of its right to be informed that an inspection will be made or has occurred, and its right to claim confidentiality of the information contained in the places to be photographed, as provided in § 114(a) and (c), 42 U.S.C. § 7414(a), (c). It is not claimed that EPA has disclosed any of the photographs outside the agency.

Section 114(a), however, appears to expand, not restrict, EPA's general powers to investigate. Nor is there any suggestion in the statute that the powers conferred by

this section are intended to be exclusive. There is no claim that EPA is prohibited from taking photographs from a ground-level location accessible to the general public. EPA, as a regulatory and enforcement agency, needs no explicit statutory provision to employ methods of observation commonly available to the public at large: we hold that the use of aerial observation and photography is within EPA's statutory authority.²

**1825 IV

We turn now to Dow's contention that taking aerial photographs constituted a search without a warrant, thereby violating Dow's rights under the Fourth Amendment. In making this contention, however, Dow concedes that a simple flyover with naked-eye observation, or the taking of a photograph from a nearby hillside overlooking such a facility, would give rise to no Fourth Amendment problem.

In *California v. Ciraolo*, 476 U.S. 207, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986), decided today, we hold that naked-eye aerial observation from an altitude of *235 1,000 feet of a backyard within the curtilage of a home does not constitute a search under the Fourth Amendment.

In the instant case, two additional Fourth Amendment claims are presented: whether the common-law “curtilage” doctrine encompasses a large industrial complex such as Dow's, and whether photography employing an aerial mapping camera is permissible in this context. Dow argues that an industrial plant, even one occupying 2,000 acres, does not fall within the “open fields” doctrine of *Oliver v. United States* but rather is an “industrial curtilage” having constitutional protection equivalent to that of the curtilage of a private home. Dow further contends that any aerial photography of this “industrial curtilage” intrudes upon its reasonable expectations of privacy. Plainly a business establishment or an industrial or commercial facility enjoys certain protections under the Fourth Amendment. See *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 98 S.Ct. 1816, 56 L.Ed.2d 305 (1978); See *v. City of Seattle*, 387 U.S. 541, 87 S.Ct. 1737, 18 L.Ed.2d 943 (1967).

Two lines of cases are relevant to the inquiry: the curtilage doctrine and the “open fields” doctrine. The curtilage area immediately surrounding a private house has long been given protection as a place where the occupants have a reasonable

and legitimate expectation of privacy that society is prepared to accept. See *Ciraolo*, *supra*.

As the curtilage doctrine evolved to protect much the same kind of privacy as that covering the interior of a structure, the contrasting “open fields” doctrine evolved as well. From *Hester v. United States*, 265 U.S. 57, 44 S.Ct. 445, 68 L.Ed. 898 (1924), to *Oliver v. United States*, 466 U.S. 170, 104 S.Ct. 1735, 80 L.Ed.2d 214 (1984), the Court has drawn a line as to what expectations are reasonable in the open areas beyond the curtilage of a dwelling: “open fields do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from governmental interference or surveillance.” *Oliver*, 466 U.S., at 179, 104 S.Ct., at 1741. In *Oliver*, we held that “an individual may not legitimately demand privacy for activities out of doors in fields, except in the area *236 immediately surrounding the home.” *Id.*, at 178, 104 S.Ct., at 1741. To fall within the “open fields” doctrine the area “need be neither ‘open’ nor a ‘field’ as those terms are used in common speech.” *Id.*, at 180, n. 11, 104 S.Ct., at 1742, n. 11.

Dow plainly has a reasonable, legitimate, and objective expectation of privacy within the interior of its covered buildings, and it is equally clear that expectation is one society is prepared to observe. *E.g.*, See *v. City of Seattle*, *supra*. Moreover, it could hardly be expected that Dow would erect a huge cover over a 2,000-acre tract. In contending that its entire enclosed plant complex is an “industrial curtilage,” Dow argues that its exposed manufacturing facilities are analogous to the curtilage surrounding a home because it has taken every possible step to bar access from ground level.

The Court of Appeals held that whatever the limits of an “industrial curtilage” barring *ground* -level intrusions into Dow's private areas, the open areas exposed here were more analogous to “open fields” than to a curtilage for purposes of aerial observation. 749 F.2d, at 312–314. In *Oliver*, the Court described the curtilage of a dwelling as “the area to which extends the **1826 intimate activity associated with the ‘sanctity of a man's home and the privacies of life.’” 466 U.S., at 180, 104 S.Ct., at 1742 (quoting *Boyd v. United States*, 116 U.S. 616, 630, 6 S.Ct. 524, 532, 29 L.Ed. 746 (1886)). See *California v. Ciraolo*, *supra*. The intimate activities associated with family privacy and the home and its curtilage simply do not reach the outdoor areas or spaces between structures and buildings of a manufacturing plant.

Admittedly, Dow's enclosed plant complex, like the area in *Oliver*, does not fall precisely within the “open fields” doctrine. The area at issue here can perhaps be seen as falling somewhere between “open fields” and curtilage, but lacking some of the critical characteristics of both.³ Dow's inner *237 manufacturing areas are elaborately secured to ensure they are not open or exposed to the public from the ground. Any actual physical entry by EPA into any enclosed area would raise significantly different questions, because “[t]he businessman, like the occupant of a residence, has a constitutional right to go about his business free from unreasonable official entries upon his private commercial property.” See *v. City of Seattle*, *supra*, 387 U.S., at 543, 87 S.Ct., at 1739. The narrow issue raised by Dow's claim of search and seizure, however, concerns aerial observation of a 2,000-acre outdoor manufacturing facility *without* physical entry.⁴

We pointed out in *Donovan v. Dewey*, 452 U.S. 594, 598–599, 101 S.Ct. 2534, 2537–2538, 69 L.Ed.2d 262 (1981), that the Government has “greater latitude to conduct warrantless inspections of commercial property” because “the expectation of privacy that the owner of commercial property enjoys in such property differs significantly *238 from the sanctity accorded an individual's home.” We emphasized that unlike a homeowner's interest in his dwelling, “[t]he interest of the owner of commercial property is not one in being free from any inspections.” *Id.*, at 599, 101 S.Ct., at 2538. And with regard to regulatory inspections, we have held that “[w]hat is observable by the public is observable without a warrant, by the Government inspector as well.” *Marshall v. Barlow's, Inc.*, 436 U.S., at 315, 98 S.Ct., at 1822 (footnote omitted).

Oliver recognized that in the open field context, “the public and police lawfully may survey lands from the air.” 466 U.S., at 179, 104 S.Ct., at 1741 (footnote omitted). Here, EPA was not employing some unique sensory device that, for example, could penetrate the walls of buildings and record conversations in Dow's plants, offices, or laboratories, but rather a conventional, albeit precise, commercial camera commonly **1827 used in mapmaking. The Government asserts it has not yet enlarged the photographs to any significant degree, but Dow points out that simple magnification permits identification of objects such as wires as small as ½-inch in diameter.

It may well be, as the Government concedes, that surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public, such as

satellite technology, might be constitutionally proscribed absent a warrant. But the photographs here are not so revealing of intimate details as to raise constitutional concerns. Although they undoubtedly give EPA more detailed information than naked-eye views, they remain limited to an outline of the facility's buildings and equipment. The mere fact that human vision is enhanced somewhat, at least to the degree here, does not give rise to constitutional problems.⁵

*239 An electronic device to penetrate walls or windows so as to hear and record confidential discussions of chemical formulae or other trade secrets would raise very different and far more serious questions; other protections such as trade secret laws are available to protect commercial activities from private surveillance by competitors.⁶

We conclude that the open areas of an industrial plant complex with numerous plant structures spread over an area of 2,000 acres are not analogous to the "curtilage" of a dwelling for purposes of aerial surveillance;⁷ such an industrial complex is more comparable to an open field and as such it is open to the view and observation of persons in aircraft lawfully in the public airspace immediately above or sufficiently near the area for the reach of cameras.

We hold that the taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment.

Affirmed.

*240 Justice POWELL, with whom Justice BRENNAN, Justice MARSHALL, and Justice BLACKMUN join, concurring in Part and dissenting in part.

The Fourth Amendment protects private citizens from arbitrary surveillance by their Government. For nearly 20 years, this Court has adhered to a standard that ensured that Fourth Amendment rights would retain their vitality as technology expanded the Government's capacity to commit unsuspected intrusions into private areas and activities. Today, in the context of administrative aerial photography of **1828 commercial premises, the Court retreats from that standard. It holds that the photography was not a Fourth Amendment "search" because it was not accompanied by a physical trespass and because the equipment used was not the most highly sophisticated form of technology available to the Government. Under this holding, the existence of an asserted privacy interest apparently will be decided solely by

reference to the manner of surveillance used to intrude on that interest. Such an inquiry will not protect Fourth Amendment rights, but rather will permit their gradual decay as technology advances.

I

Since the 1890's, petitioner Dow Chemical Company (Dow) has been manufacturing chemicals at a facility in Midland, Michigan. Its complex covers 2,000 acres and contains a number of chemical process plants. Many of these are "open-air" plants, with reactor equipment, loading and storage facilities, transfer lines, and motors located in the open areas between buildings. Dow claims that the technology used in these plants constitutes confidential business information, and that the design and configuration of the equipment located there reveal details of Dow's secret manufacturing processes.¹

*241 Short of erecting a roof over the Midland complex, Dow has, as the Court states, undertaken "elaborate" precautions to secure the facility from unwelcome intrusions. *Ante*, at 1822. In fact, Dow appears to have done everything commercially feasible to protect the confidential business information and property located within the borders of the facility. Security measures include an 8-foot-high chain link fence completely surrounding the facility that is guarded by security personnel and monitored by closed-circuit television, alarm systems that are triggered by unauthorized entry into the facility, motion detectors that indicate movement of persons within restricted areas, a prohibition on use of camera equipment by anyone other than authorized Dow personnel, and a strict policy under which no photographs of the facility may be taken or released without prior management review and approval.² In addition to these precautions, the open-air plants were placed within the internal portion of the 2,000-acre complex to conceal them from the view of members of the public outside the perimeter fence.

Dow's security program also includes procedures designed to protect the facility from aerial photography. Dow has instructed its employees that it is "concerned when other than commercial passenger flights pass over the plant property." App. 14. When "suspicious" overflights occur, such as where a plane makes several passes over the facility, employees try to obtain the plane's identification number and description.

*242 Working with personnel from the State Police and local airports, Dow employees then locate the pilot to determine if he has photographed the facility. If Dow learns that he

has done so, Dow takes steps to prevent dissemination of photographs that show details of its proprietary technology.³

****1829** The controversy underlying this litigation arose out of the efforts of the Environmental Protection Agency (EPA) to check emissions from the power houses located within Dow's Midland complex for violations of federal air quality standards. After making one ground-level inspection with Dow's consent, and obtaining schematic drawings of the power houses from Dow, EPA requested Dow's permission to conduct a second inspection during which EPA proposed to photograph the facility. Dow objected to EPA's decision to take photographs and denied the request. EPA then informed Dow that it was considering obtaining a search warrant to gain entry to the plant. Inexplicably, EPA did not follow that procedure, but instead hired a private firm to take aerial photographs of the facility.

Using a sophisticated aerial mapping camera,⁴ this firm took approximately 75 color photographs of various parts of ***243** the plant. The District Court found that "some of the photographs taken from directly above the plant at 1,200 feet are capable of enlargement to a scale of 1 inch equals 20 feet *or greater*, without significant loss of detail or resolution. When enlarged in this manner, and viewed under magnification, it is possible to discern equipment, pipes, and power lines as small as ½ inch in diameter." 536 F.Supp. 1355, 1357 (ED Mich.1982) (emphasis in original). Observation of these minute details is, as the District Court found, "a near physical impossibility" from anywhere "but *directly above*" the complex. *Ibid.* (emphasis in original). Because of the complicated details captured in the photographs, the District Court concluded, "the camera saw a great deal more than the human eye could ever see," even if the observer was located directly above the facility.⁵ *Id.*, at 1367.

Several weeks later, Dow learned about the EPA-authorized overflight from an independent source. Dow filed this lawsuit, alleging that the aerial photography was an unreasonable search under the Fourth Amendment and constituted an inspection technique outside the scope of EPA's authority under the Clean Air Act, 42 U.S.C. §§ 7413, 7414.⁶ The District Court upheld Dow's position on both issues and entered a permanent injunction restraining EPA from conducting future aerial surveillance and photography of the Midland facility. The Court of Appeals for the Sixth Circuit reversed. 749 F.2d 307 (1984). It concluded that, while Dow had a reasonable expectation of privacy with respect ***244**

to ground-level intrusion into the enclosed buildings within its facility, it did not have such an expectation with respect to aerial observation and photography.⁷ The court also held ****1830** that EPA's use of aerial photography did not exceed its authority under § 114 of the Clean Air Act, 42 U.S.C. § 7414. We granted certiorari to review both of these holdings. 472 U.S. 1007, 105 S.Ct. 2700, 86 L.Ed.2d 716 (1985).

The Court rejects Dow's constitutional claim on the ground that "the taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment." *Ante*, at 1827.⁸ The Court does not explicitly reject application of the reasonable expectation of privacy standard of *Katz v. United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967), in this context; nor does it explain how its result squares with *Katz* and its progeny. Instead, the Court relies on questionable assertions concerning the manner of the surveillance, and on its conclusion that the Midland facility more closely resembles an "open field" than it does the "curtilage" of a private home. The Court's decision marks a drastic reduction in the Fourth Amendment protections previously afforded to private commercial premises under our decisions. Along with *California v. Ciraolo*, 476 U.S. 207, 106 S.Ct. 1809, 90 L.Ed.2d 210, also decided today, the decision may signal a significant retreat from the rationale of prior Fourth Amendment decisions.

***245** II

Fourth Amendment protection of privacy interests in business premises "is ... based upon societal expectations that have deep roots in the history of the Amendment." *Oliver v. United States*, 466 U.S. 170, 178, n. 8, 104 S.Ct. 1735, 1741, n. 8, 80 L.Ed.2d 214 (1984). In *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 98 S.Ct. 1816, 56 L.Ed.2d 305 (1978), we observed that the "particular offensiveness" of the general warrant and writ of assistance, so despised by the Framers of the Constitution, "was acutely felt by the merchants and businessmen whose premises and products were inspected" under their authority. *Id.*, at 311, 98 S.Ct., at 1820. Against that history, "it is untenable that the ban on warrantless searches was not intended to shield places of business as well as of residence." *Id.*, at 312, 98 S.Ct., at 1820. Our precedents therefore leave no doubt that proprietors of commercial premises, including corporations, have the right to conduct their business free from unreasonable official intrusion. See *G.M. Leasing Corp. v. United States*, 429 U.S. 338, 353, 97 S.Ct. 619, 629, 50

L.Ed.2d 530 (1977); *See v. City of Seattle*, 387 U.S. 541, 543, 87 S.Ct. 1737, 1739, 18 L.Ed.2d 943 (1967).

In the context of administrative inspections of business premises, the Court has recognized an exception to the Fourth Amendment rule that warrantless searches of property not accessible to members of the public are presumptively unreasonable. Since the interest of the owner of commercial property is “in being free from *unreasonable* intrusions onto his property by agents of the government,” not in being free from any inspections whatsoever, the Court has held that “the assurance of regularity provided by a warrant may be unnecessary under certain inspection schemes.” *Donovan v. Dewey*, 452 U.S. 594, 599, 101 S.Ct. 2534, 2538, 69 L.Ed.2d 262 (1981) (emphasis in original). Thus, where Congress has made a reasonable determination that a system of warrantless inspections is necessary to enforce its regulatory purpose, and where “the federal regulatory presence is ****1831** sufficiently comprehensive and defined that the owner of commercial property cannot help but be aware that his property will be subject to periodic inspections,” ***246** warrantless inspections may be permitted. *Id.*, at 600, 101 S.Ct., at 2539. This exception does not apply here. The Government does not contend, nor does the Court hold, that the Clean Air Act authorizes a warrantless inspection program that adequately protects the privacy interests of those whose premises are subject to inspection.

Instead, the Court characterizes our decisions in this area simply as giving the Government “ ‘greater latitude to conduct warrantless inspections of commercial property’ ” because privacy interests in such property differ significantly from privacy interests in the home. *Ante*, at 1826 (citation omitted). This reasoning misunderstands the relevant precedents. The exception we have recognized for warrantless inspections, limited to pervasively regulated businesses, see *Donovan v. Dewey*, *supra*; *United States v. Biswell*, 406 U.S. 311, 92 S.Ct. 1593, 32 L.Ed.2d 87 (1972); *Colonnade Catering Corp. v. United States*, 397 U.S. 72, 90 S.Ct. 774, 25 L.Ed.2d 60 (1970), is not founded solely on the differences between the premises occupied by such businesses and homes, or on a conclusion that administrative inspections do not intrude on protected privacy interests and therefore do not implicate Fourth Amendment concerns. Rather, the exception is based on a determination that the reasonable expectation of privacy that the owner of a business does enjoy may be adequately protected by the regulatory scheme itself. *Donovan v. Dewey*, *supra*, 452 U.S., at 599, 101 S.Ct., at 2538. We have never held that warrantless intrusions

on commercial property generally are acceptable under the Fourth Amendment. On the contrary, absent a sufficiently defined and regular program of warrantless inspections, the Fourth Amendment's warrant requirement is fully applicable in the commercial context. *Marshall v. Barlow's, Inc.*, *supra*, 436 U.S., at 312–315, 324, 98 S.Ct., at 1820–1821, 1826; *G.M. Leasing Corp. v. United States*, *supra*, at 358, 97 S.Ct., at 631; *See v. City of Seattle*, *supra*, 387 U.S., at 543–546, 87 S.Ct., at 1739–1741.

III

Since our decision in *Katz v. United States*, the question whether particular governmental conduct constitutes a ***247** Fourth Amendment “search” has turned on whether that conduct intruded on a constitutionally protected expectation of privacy. *Smith v. Maryland*, 442 U.S. 735, 99 S.Ct. 2577, 61 L.Ed.2d 220 (1979); *United States v. United States District Court*, 407 U.S. 297, 92 S.Ct. 2125, 32 L.Ed.2d 752 (1972). In the context of governmental inspection of commercial property, the Court has relied on the standard of *Katz* to determine whether an inspection violated the Fourth Amendment rights of the owner of the property. See *Marshall v. Barlow's, Inc.*, *supra*, at 313, 315, 98 S.Ct., at 1820, 1822. Today, while purporting to consider the Fourth Amendment question raised here under the rubric of *Katz*, the Court's analysis of the issue ignores the heart of the *Katz* standard.

A

The Court correctly observes that Dow has an expectation of privacy in the buildings located on the Midland property and that society is prepared to recognize that expectation as reasonable. *Ante*, at 1825. Similarly, in view of the numerous security measures protecting the entire Dow complex from intrusion on the ground, the Court properly concludes that Dow has a reasonable expectation in being free from such intrusion. *Ante*, at 1826. Turning to the issue presented in this case, however, the Court erroneously states that the Fourth Amendment protects Dow only from “actual physical entry” by the Government “into any enclosed area.” *Ibid.*

This statement simply repudiates *Katz*. The reasonable expectation of privacy standard was designed to ensure that the ****1832** Fourth Amendment continues to protect privacy in an era when official surveillance can be accomplished without any physical penetration of or proximity to the area

under inspection. Writing for the Court in *Katz*, Justice Stewart explained that Fourth Amendment protections would mean little in our modern world if the reach of the Amendment “turn[ed] upon the presence or absence of a physical intrusion into any given enclosure.” 389 U.S., at 353, 88 S.Ct., at 512. Thus, the Court’s observation that the aerial photography was not accompanied by a physical trespass is irrelevant to the analysis *248 of the Fourth Amendment issue raised here, just as it was irrelevant in *Katz*. Since physical trespass no longer functions as a reliable proxy for intrusion on privacy, it is necessary to determine if the surveillance, whatever its form, intruded on a reasonable expectation that a certain activity or area would remain private.

B

An expectation of privacy is reasonable for Fourth Amendment purposes if it is rooted in a “source outside of the Fourth Amendment, either by reference to concepts of real or personal property law or to understandings that are recognized and permitted by society.”⁹ *Rakas v. Illinois*, 439 U.S. 128, 143–144, n. 12, 99 S.Ct. 421, 430–431, n. 12, 58 L.Ed.2d 387 (1978). Dow argues that, by enacting trade secret laws, society has recognized that it has a legitimate interest in preserving the privacy of the relevant portions of its open-air plants. As long as Dow takes reasonable steps to protect its secrets, the law should enforce its right against theft or disclosure of those secrets.¹⁰

As discussed above, our cases holding that Fourth Amendment protections extend to business property have expressly relied on our society’s historical understanding that owners *249 of such property have a legitimate interest in being free from unreasonable governmental inspection. *Marshall v. Barlow’s, Inc.*, 436 U.S., at 311–313, 98 S.Ct., at 1819–1820; see *Oliver v. United States*, 466 U.S., at 178, n. 8, 104 S.Ct., at 1741, n. 8. Moreover, despite the Court’s misconception of the nature of Dow’s argument concerning the laws protecting the trade secrets within its open-air plants,¹¹ Dow plainly is correct to argue that those laws constitute society’s express determination that commercial entities have a legitimate interest in the privacy of certain kinds of property. Dow has taken every feasible step to protect information claimed to constitute trade secrets from the public and particularly from its competitors. Accordingly, Dow has a reasonable expectation of privacy in its commercial facility in

the sense required by the Fourth Amendment. EPA’s conduct in this case intruded on that expectation because the aerial photography captured information **1833 that Dow had taken reasonable steps to preserve as private.

C

In this case, the Court does not claim that Dow’s expectation of privacy is unreasonable because members of the public fly in airplanes. Whatever the merits of this position in *California v. Ciraolo*, 476 U.S. 207, 106 S.Ct. 1809, 90 L.Ed.2d 210, it is inapplicable here, for it is not the case that “[a]ny member of the public flying in this airspace who cared to glance down” could have obtained the information captured by the aerial photography of Dow’s facility. *California v. Ciraolo*, 476 U.S., at 213, 106 S.Ct., at 1813. As the District Court expressly found, the camera used to photograph the facility “saw a great deal more than the human eye could *250 ever see.”¹² 536 F.Supp., at 1367. See *supra*, 1829, and n. 5. Thus, the possibility of casual observation by passengers on commercial or private aircraft provides no support for the Court’s rejection of Dow’s privacy interests.

The Court nevertheless asserts that Dow has no constitutionally protected privacy interests in its open-air facility because the facility more closely resembles an “open field” than a “curtilage.” Of course, the Dow facility resembles neither. The purpose of the curtilage doctrine is to identify the limited outdoor area closely associated with a home. See *Oliver v. United States*, *supra*, 466 U.S., at 180, 104 S.Ct., at 1742. The doctrine is irrelevant here since Dow makes no argument that its privacy interests are equivalent to those in the home. Moreover, the curtilage doctrine has never been held to constitute a limit on Fourth Amendment protection. Yet, the Court applies the doctrine, which affords heightened protection to homeowners, in a manner that eviscerates the protection traditionally given to the owner of commercial property. The Court offers no convincing explanation for this application.

Nor does the open field doctrine have a role to play in this case. Open fields, as we held in *Oliver*, are places in which people do not enjoy reasonable expectations of privacy and therefore are open to warrantless inspections from ground *251 and air alike. *Oliver v. United States*, *supra*, at 180–181, 104 S.Ct., at 1742–1743. Here, the Court concedes that Dow was constitutionally protected against warrantless intrusion by the Government on the ground. The complex

bears no resemblance to an open field either in fact or within the meaning of our cases.

The other basis for the Court's judgment—assorted observations concerning the technology used to photograph Dow's plant—is even less convincing. The Court notes that EPA did not use “some unique sensory device that, for example, could penetrate the walls of buildings and record conversations.” *Ante*, at 1826. Nor did EPA use “satellite technology” or another type of “equipment not generally available to the public.” *Ibid*. Instead, as the Court states, the surveillance was accomplished by using “a conventional, albeit precise, commercial camera commonly used in map-making.” *Ibid*. These observations shed no light on the antecedent question whether Dow had a reasonable expectation of privacy. *Katz* measures Fourth Amendment rights by reference to the privacy interests that a free society recognizes as reasonable, not by reference to the method of surveillance used in the particular case. If the Court's observations were to become the basis of a new Fourth Amendment standard that would replace the rule in *Katz*, privacy rights would be seriously at risk as technological advances become generally disseminated and available in our society.¹³

*252 IV

Footnotes

* The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Lumber Co.*, 200 U.S. 321, 337, 26 S.Ct. 282, 287, 50 L.Ed. 499.

1 Section 114(a)(2) provides:

“(2) the Administrator or his authorized representative, upon presentation of his credentials—

“(A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and

“(B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1), and sample any emissions which such person is required to sample under paragraph (1).”

2 Assuming the Clean Air Act's explicit provisions for protecting trade secrets obtained by EPA as the result of its investigative efforts is somehow deemed inapplicable to the information obtained here, see 42 U.S.C. § 7414(c), Dow's fear that EPA might disclose trade secrets revealed in these photographs appears adequately addressed by federal law prohibiting such disclosure generally under the Trade Secrets Act, 18 U.S.C. § 1905, and the Freedom of Information Act, 5 U.S.C. § 552(b)(4). See *Chrysler Corp. v. Brown*, 441 U.S. 281, 99 S.Ct. 1705, 60 L.Ed.2d 208 (1979).

3 In *Oliver*, we observed that “for most homes, the boundaries of the curtilage will be clearly marked; and the conception defining the curtilage—as the area around the home to which the activity of home life extends—is a familiar one easily

I would reverse the decision of the Court of Appeals. EPA's aerial photography penetrated into a private commercial enclave, an area in which society has recognized that privacy interests legitimately may be claimed. The photographs captured highly confidential information that Dow had taken reasonable and objective steps to preserve as private. Since the Clean Air Act does not establish a defined and regular program of warrantless inspections, see *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 98 S.Ct. 1816, 56 L.Ed.2d 305 (1978), EPA should have sought a warrant from a neutral judicial officer.¹⁴ The Court's holding that the warrantless photography does not constitute an unreasonable search within the meaning of the Fourth Amendment is based on the absence of any physical trespass—a theory disapproved in a line of cases beginning with the decision in *Katz v. United States*. *E.g.*, *United States v. United States District Court*, 407 U.S. 297, 92 S.Ct. 2125, 32 L.Ed.2d 752 (1972). These cases have provided a sensitive and reasonable means of preserving interests in privacy cherished by our society. The Court's decision today cannot be reconciled with our precedents or with the purpose of the Fourth Amendment.

All Citations

476 U.S. 227, 106 S.Ct. 1819, 90 L.Ed.2d 226, 24 ERC 1385, 54 USLW 4464, 16 Env'tl. L. Rep. 20,679

understood from our daily experience.” 466 U.S., at 182, n. 12, 104 S.Ct., at 1743, n. 12. While we did not attempt to definitively mark the boundaries of what constitutes an open field, we noted that “[i]t is clear ... that the term ‘open fields’ may include any unoccupied or undeveloped area outside of the curtilage.” *Id.*, at 180, n. 11, 104 S.Ct., at 1742, n. 11. As *Oliver* recognized, the curtilage surrounding a home is generally a well-defined, limited area. In stark contrast, the areas for which Dow claims enhanced protection covers the equivalent of a half dozen family farms.

- 4 We find it important that this is *not* an area immediately adjacent to a private home, where privacy expectations are most heightened. Nor is this an area where Dow has made any effort to protect against aerial surveillance. Contrary to the partial dissent’s understanding, *post*, at —, the Court of Appeals emphasized:

“Dow did not take *any* precautions against aerial intrusions, even though the plant was near an airport and within the pattern of planes landing and taking off. If elaborate and expensive measures for ground security show that Dow has an actual expectation of privacy in ground security, as Dow argues, then taking *no* measure for aerial security should say something about its actual privacy expectation in being free from aerial observation.” 749 F.2d 307, 312 (CA6 1984) (emphasis added).

Simply keeping track of the identification numbers of any planes flying overhead, with a later follow-up to see if photographs were taken, does not constitute a “procedur[e] designed to protect the facility from aerial photography.” *Post*, at 1828.

- 5 The partial dissent emphasizes Dow’s claim that under magnification power lines as small as ½-inch in diameter can be observed. *Post*, at —. But a glance at the photographs in issue shows that those power lines are observable only because of their stark contrast with the snow-white background. No objects as small as ½-inch in diameter such as a class ring, for example, are recognizable, nor are there any identifiable human faces or secret documents captured in such a fashion as to implicate more serious privacy concerns. Fourth Amendment cases must be decided on the facts of each case, not by extravagant generalizations. “[W]e have never held that potential, as opposed to actual, invasions of privacy constitute searches for purposes of the Fourth Amendment.” *United States v. Karo*, 468 U.S. 705, 712, 104 S.Ct. 3296, 3302, 82 L.Ed.2d 530 (1984). On these facts, nothing in these photographs suggests that any reasonable expectations of privacy have been infringed.
- 6 The partial dissent relies heavily on Dow’s claim that aerial photography of its facility is proscribed by trade secret laws. *Post*, at —. While such laws may protect against use of photography by competitors in the same trade to advance their commercial interests, in no manner do “those laws constitute society’s express determination” that *all* photography of Dow’s facility violates reasonable expectations of privacy. *Post*, at 1832. No trade secret law cited to us by Dow proscribes the use of aerial photography of Dow’s facilities for law enforcement purposes, let alone photography for private purposes unrelated to competition such as mapmaking or simple amateur snapshots. See *supra*, at —.
- 7 Our holding here does not reach the issues raised by the Court of Appeals for the Seventh Circuit’s holding regarding a “business curtilage” in *United States v. Swart*, 679 F.2d 698 (CA7 1982); that case involved actual physical entry onto the business premises.
- 1 The record establishes that Dow used the open-air design primarily for reasons of safety. Dow determined that, if an accident were to occur and hazardous chemicals were inadvertently released, the concentration of toxic and explosive fumes within enclosed plants would constitute an intolerable risk to employee health and safety. Moreover, as the Court correctly observes, Dow found that the cost of enclosing the facility would be prohibitive. *Ante*, at 1822, 1825. The record reflects that the cost of roofing just one of the open-air plants would have been approximately \$15 million in 1978. The record further shows that enclosing the plants would greatly increase the cost of routine maintenance. App. 74–75.
- 2 On these and other security measures protecting the Midland facility, the District Court found that Dow has “spent at least 3.25 million dollars in each of the last ten years” preceding this litigation. 536 F.Supp. 1355, 1365 (ED Mich. 1982).
- 3 When Dow discovers that aerial photographs have been taken, it requests the photographer to turn over the film. Dow then develops the film and reviews the photographs. If the photographs depict private business information, Dow retains

them and the negatives. In the event that the photographer refuses to cooperate, Dow commences litigation to protect its trade secrets.

- 4 The District Court believed it was “important to an understanding of this case to provide a description of the highly effective equipment used” in photographing Dow’s facility. *Id.*, at 1357, n. 2. “The aircraft used was a twin engine Beechcraft,” which is “able to ‘provide photographic stability, fast mobility and flight endurance required for precision photography.’” *Ibid.* (citation omitted). The camera used “cost in excess of \$22,000.00 and is described by the company as the ‘finest precision aerial camera available.’... The camera was mounted to the floor inside the aircraft and was capable of taking several photographs in precise and rapid succession.” *Ibid.* (citation omitted). This technique facilitates stereoscopic examination, a type of examination that permits depth perception.
- 5 As the District Court explained, when a person is “flying at 1,200 or 5,000 feet, [his] eye can discern only the basic sizes, shapes, outlines, and colors of the objects below.” *Id.*, at 1367. The aerial camera used in this case, on the other hand, “successfully captured vivid images of Dow’s plant which EPA could later analyze under enlarged and magnified conditions.” *Ibid.*
- 6 Dow also claimed that the aerial photography constituted a “taking” of its property without due process of law in violation of the Fifth Amendment. The District Court dismissed that claim without prejudice, and it is not before us.
- 7 The Court of Appeals’ holding rested in part on its erroneous observation that Dow had taken no steps to protect its privacy from aerial intrusions. See 749 F.2d, at 312–313. Moreover, the court apparently assumed that Dow would have to build some kind of barrier against aerial observation in order to have an actual expectation of privacy from aerial surveillance. *Ibid.* The court did not explain the basis for this assumption or discuss why it disagreed with the District Court’s conclusion that commercial overflights posed virtually no risk to Dow’s privacy interests.
- 8 I agree with the Court’s determination that the use of aerial photography as an inspection technique, absent Fourth Amendment constraints, does not exceed the scope of EPA’s authority under the Clean Air Act, 42 U.S.C. § 7414(a), and to this extent I join Part III of the Court’s opinion.
- 9 Our decisions often use the words “reasonable” and “legitimate” interchangeably to describe a privacy interest entitled to Fourth Amendment protection. See *California v. Ciraolo*, 476 U.S., at 219–220, n. 4, 106 S.Ct., at 1816, n. 4 (Powell, J., dissenting).
- 10 As the District Court observed: “Society has spoken in this area through Congress, the State Legislatures, and the courts. Federal law, under the Trade Secrets Act, 18 U.S.C. § 1905, makes it a crime for government employees to disclose trade secret information. The Clean Air Act itself, in Section 114(c), 42 U.S.C. § 7414(c), addresses this concern for [proprietary] information. Moreover, EPA has adopted regulations providing for protection of trade secrets. 40 CFR 2.201–2.309. Michigan law, in addition to recognizing a tort action, also makes it a crime to appropriate trade secrets, M.C.L.A. § 752.772, as well as to invade one’s privacy by means of surveillance. M.C.L.A. §§ 750.539a–539b. These legislative and judicial pronouncements are reflective of a societal acceptance of Dow’s privacy expectation as reasonable.” 536 F.Supp., at 1367.
- 11 Contrary to the Court’s assertion, Dow does not claim that Fourth Amendment protection of its facility is coextensive with the scope of trade secret statutes. *Ante*, at 1823. Rather, Dow argues that the existence of those statutes provides support for its claim that society recognizes commercial privacy interests as reasonable.
- 12 The Court disregards the fact that photographs taken by the sophisticated camera used in this case can be significantly enlarged without loss of acuity. As explained in n. 4, *supra*, the technique used in taking these pictures facilitates stereoscopic examination, which provides the viewer of the photographs with depth perception. Moreover, if the photographs were taken on transparent slides, they could be projected on a large screen. These possibilities illustrate the intrusive nature of aerial surveillance ignored by the Court today. The only Fourth Amendment limitation on such surveillance under today’s decision apparently is based on the *means* of surveillance. The Court holds that Dow had no reasonable expectation of privacy from surveillance accomplished by means of a \$22,000 mapping camera, but that

it does have a reasonable expectation of privacy from satellite surveillance and photography. This type of distinction is heretofore wholly unknown in Fourth Amendment jurisprudence.

- 13 With all respect, the Court's purported distinction—for purposes of Fourth Amendment analysis—between degrees of sophistication in surveillance equipment simply cannot be supported in fact or by the reasoning of any prior Fourth Amendment decision of this Court. The camera used by the firm hired by EPA is described by the Court as a “conventional” camera commonly used in mapmaking. *Ante*, at 1826. The Court suggests, if not holds, that its decision would have been different if EPA had used “satellite technology” or other equipment not “available to the public.” *Ibid*. But the camera used in this case was highly sophisticated in terms of its capability to reveal minute details of Dow's confidential technology and equipment. The District Court found that the photographs revealed details as “small as ½ inch in diameter.” See *supra*, at ——. Satellite photography hardly could have been more informative about Dow's technology. Nor are “members of the public” likely to purchase \$22,000 cameras.
- 14 Our cases have explained that an administrative agency need not demonstrate “[p]robable cause in the criminal law sense” to obtain a warrant to inspect property for compliance with a regulatory scheme. *Marshall v. Barlow's, Inc.*, 436 U.S., at 320, 98 S.Ct., at 1824. Rather, an administrative warrant may issue “not only on specific evidence of an existing violation but also on a showing that ‘reasonable legislative or administrative standards for conducting an ... inspection are satisfied with respect to a particular [establishment].’ ” *Ibid*. (footnote omitted; quoting *Camara v. Municipal Court*, 387 U.S. 523, 538, 87 S.Ct. 1727, 1735, 18 L.Ed.2d 930 (1967)).

2 F.4th 330

United States Court of Appeals, Fourth Circuit.

LEADERS OF A BEAUTIFUL
STRUGGLE; Erricka Bridgeford;

Kevin James, Plaintiffs – Appellants,

v.

BALTIMORE POLICE DEPARTMENT;

Michael S. Harrison, in his official
capacity as Baltimore Police

Commissioner, Defendants – Appellees.

NAACP Legal Defense & Education Fund,

Inc.; Casa De Maryland, Inc.; Rabbi Daniel

Cotzin Burg; Citizens Policing Project;

Equity Matters; Reverend Grey Maggiano;

Electronic Frontier Foundation; Brennan Center

for Justice; Electronic Privacy Information

Center; Freedomworks Foundation; National

Association Of Criminal Defense Lawyers;

Rutherford Institute; Policing Project; Center

on Privacy & Technology At Georgetown

Law, Amici Supporting Rehearing Petition.

No. 20-1495

|

Argued: March 8, 2021

|

Decided: June 24, 2021

Synopsis

Background: Community advocates filed § 1983 action against city police department and city's police commissioner, alleging that department's aerial surveillance program violated their Fourth Amendment protection against unreasonable searches. The United States District Court for the District of Maryland, [Richard D. Bennett, J.](#), [456 F.Supp.3d 699](#), denied plaintiffs' motion for preliminary injunction, and they appealed. The Court of Appeals, [979 F.3d 219](#), affirmed. Rehearing en banc was granted.

Holdings: The Court of Appeals, [Gregory](#), Chief Judge, held that:

action was not rendered moot by city's decision not to renew program's operation, and

plaintiffs were likely to succeed on merits of their Fourth Amendment claim.

Reversed and remanded.

[Gregory](#), Chief Judge, concurred and filed opinion in which [Wynn](#), [Thacker](#), and [Harris](#), Circuit Judges, joined.

[Wynn](#), Circuit Judge, concurred and filed opinion in which [Motz](#), [Thacker](#), and [Harris](#), Circuit Judges, joined.

[Wilkinson](#), Circuit Judge, dissented and filed opinion in which [Niemeyer](#), [Agee](#), and [Quattlebaum](#), Circuit Judges, joined, and in which [Diaz](#), [Richardson](#), and [Rushing](#), Circuit Judges, joined in part.

[Niemeyer](#), Circuit Judge, dissented and filed opinion.

[Diaz](#), Circuit Judge, dissented and filed opinion.

***332** Appeal from the United States District Court for the District of Maryland, at Baltimore. [Richard D. Bennett](#), District Judge. (1:20-cv-00929-RDB)

Reversed and remanded by published opinion. Chief Judge [Gregory](#) wrote the opinion, in which Judge [Motz](#), Judge [King](#), Judge [Keenan](#), Judge [Wynn](#), Judge [Floyd](#), Judge [Thacker](#), and Judge [Harris](#) joined. Chief Judge [Gregory](#) wrote a concurring opinion, in which Judge [Wynn](#), Judge [Thacker](#), and Judge [Harris](#) joined. Judge [Wynn](#) wrote a concurring opinion, in which Judge [Motz](#), Judge [Thacker](#) and Judge [Harris](#) joined. Judge [Wilkinson](#) wrote a dissenting opinion, in which Judge [Niemeyer](#), Judge [Agee](#), and Judge [Quattlebaum](#) joined, in which Judge [Diaz](#) joined Part I, Judge [Richardson](#) joined Parts I, II, and III, and Judge [Rushing](#) joined Parts I and II. Judge [Niemeyer](#) wrote a dissenting opinion. Judge [Diaz](#) wrote a dissenting opinion.

Attorneys and Law Firms

ARGUED: Brett Max Kaufman, AMERICAN CIVIL LIBERTIES UNION FOUNDATION, New York, New York, for Appellants. Andre M. Davis, Baltimore, Maryland, for Appellees. ON BRIEF: David R. Rocah, AMERICAN CIVIL LIBERTIES UNION FOUNDATION OF MARYLAND, Baltimore, Maryland; Ashley Gorski, Alexia Ramirez, Nathan Freed Wessler, Ben Wizner, AMERICAN CIVIL LIBERTIES UNION FOUNDATION, New York, New York, for Appellants. Dana M. Moore, Acting City Solicitor, Elisabeth S. Walden, Chief Legal Counsel, Kara K. Lynch, Chief Solicitor, Police Legal Affairs Practice Group, Rachel Simmons, Co-Director, Michael Redmond, Co-Director, Appellant Practice Group, BALTIMORE CITY DEPARTMENT OF LAW, Baltimore, Maryland, for Appellees. Sherrilyn A. Ifill, President and Director-Counsel, Samuel Spital, Kevin E. Jason, New York, New York, Christopher Kemmitt, Mahogane Reed, NAACP LEGAL DEFENSE & EDUCATIONAL FUND, INC., Washington, D.C., for Amicus NAACP Legal Defense & Educational Fund, Inc. Rachel Levinson-Waldman, Laura Hecht-Felella, BRENNAN CENTER FOR JUSTICE AT NYU SCHOOL OF LAW, Washington, D.C.; Elizabeth Franklin-Best, NATIONAL ASSOCIATION OF CRIMINAL DEFENSE LAWYERS, ELIZABETH FRANKLIN-BEST, P.C., Columbia, South Carolina; John W. Whitehead, Douglas R. McKusick, RUTHERFORD INSTITUTE, Charlottesville, Virginia; Sophia Cope, Mark Rumold, Adam Schwartz, Saira Hussain, Hannah Zhao, ELECTRONIC FRONTIER FOUNDATION, San Francisco, California, for Amici Electronic Frontier Foundation, Brennan Center for Justice, Electronic Privacy Information Center, Freedomworks Foundation, National Association of Criminal Defense Lawyers, and Rutherford Institute. Laura Moy, Michael Rosenbloom, Communications & Technology Law Clinic, GEORGETOWN LAW, Washington, D.C., for Amicus Center on Privacy & Technology at Georgetown Law. Barry Friedman, Farhang Heydari, Max Isaacs, POLICING PROJECT AT NEW YORK UNIVERSITY SCHOOL OF LAW, New York, New York, for Amicus The Policing Project.

Before GREGORY, Chief Judge, WILKINSON, NIEMEYER, MOTZ, KING, AGEE, KEENAN, WYNN, DIAZ, FLOYD, THACKER, HARRIS, RICHARDSON, QUATTLEBAUM, and RUSHING, Circuit Judges.

Reversed and remanded by published opinion. Chief Judge Gregory wrote the opinion, in which Judge Motz, Judge King, Judge Keenan, Judge Wynn, Judge Floyd, Judge Thacker, and Judge Harris joined. Chief Judge Gregory wrote a concurring opinion, in which Judge Wynn, Judge Thacker, and Judge Harris joined. Judge Wynn wrote a concurring opinion, in which Judge Motz, Judge Thacker and Judge Harris joined. Judge Wilkinson wrote a dissenting opinion, in which Judge Niemeyer, Judge Agee, and Judge Quattlebaum joined, in which Judge Diaz joined Part I, Judge Richardson joined Parts I, II, and III, and Judge Rushing joined Parts I and II. Judge Niemeyer wrote a dissenting opinion. Judge Diaz wrote a dissenting opinion.

ON REHEARING EN BANC

GREGORY, Chief Judge:

*333 The Plaintiffs—a group of grassroots community advocates in Baltimore—moved to enjoin implementation of the Aerial Investigation Research (“AIR”) program, a first-of-its-kind aerial surveillance program operated by the Defendants—the Baltimore Police Department (“BPD”) and Commissioner Michael Harrison.

While appeal was pending, the program completed its pilot run and Baltimore City leadership decided not to renew its operation. Defendants deleted the bulk of the AIR data, only retaining materials that relate to specific investigations. Defendants then moved to dismiss this appeal as moot. Because Plaintiffs also sought to enjoin Defendants’ access to any data collected by the AIR program, and Defendants retain the data that proved fruitful, we hold that the appeal is not moot.

On the merits, because the AIR program enables police to deduce from the whole of individuals’ movements, we hold that accessing its data is a search, and its warrantless operation violates the Fourth Amendment. Therefore, we reverse and remand.

I.

“Any Fourth Amendment analysis ... must be grounded on an accurate understanding of the facts.” *United States v. Curry*, 965 F.3d 313, 316 (4th Cir. 2020). In this case, reaching such

an understanding has been controversial. We present the facts in detail, given their high degree of relevance. *See generally Leaders of a Beautiful Struggle v. Balt. Police Dep't*, 456 F. Supp. 3d 699, 703–06 (D. Md. 2020).

A.

In August 2016, the public learned for the first time that the BPD was using new aerial technology—planes equipped with high-tech cameras—to surveil Baltimore City. News reports revealed that, several months earlier, BPD partnered with a private contractor based in Ohio, Persistent Surveillance Systems (“PSS”), to conduct aerial surveillance. In the face of public outcry, the program was discontinued.

In December 2019, BPD Commissioner Michael Harrison announced the AIR program, a renewed aerial surveillance partnership with PSS. This time, BPD planned a series of townhall-style community meetings to inform the public about the program ahead of a six-month pilot run. BPD held the first meeting on March 11, 2020. Two additional meetings were cancelled due to the COVID-19 pandemic; as a substitute, BPD streamed its presentation on its Facebook page on March 23 and again on March 30. The following day, April 1, 2020, the Baltimore City Board of Estimates voted to execute the contract between BPD and PSS—the Professional Services Agreement (“PSA”)—approving the AIR program. The funding for the *334 contract—an initial request of \$3,690,667—did not come from the City budget; a private philanthropic organization, Arnold Ventures, sponsored the program.

The AIR program uses aerial photography to track movements related to serious crimes. Multiple planes fly distinct orbits above Baltimore, equipped with PSS's camera technology known as the “Hawkeye Wide Area Imaging System.” The cameras capture roughly 32 square miles per image per second. The planes fly at least 40 hours a week, obtaining an estimated twelve hours of coverage of around 90% of the city each day, weather permitting. The PSA limits collection to daylight hours and limits the photographic resolution to one pixel per person or vehicle, though neither restriction is required by the technology. In other words, any single AIR image—captured once per second—includes around 32 square miles of Baltimore and can be magnified to a point where people and cars are individually visible, but only as blurred dots or blobs.

The planes transmit their photographs to PSS “ground stations” where contractors use the data to “track individuals and vehicles from a crime scene and extract information to assist BPD in the investigation of Target Crimes.” J.A. 70, 130. “Target Crimes” are homicides and attempted murder; shootings with injury; armed robbery; and carjacking. Between 15 and 25 PSS contractors analyze the data, working in two shifts per day, seven days per week. The AIR program is not designed to provide real-time analysis when a crime takes place, though.¹

Rather, the analysts prepare “reports” and “briefings” about a Target Crime as requested by the BPD officers on the case. PSS aims to provide an initial briefing within 18 hours and a more in-depth “Investigation Briefing Report” within 72 hours. The reports may include, from both before and after the crime: “observations of driving patterns and driving behaviors”; the “tracks” of vehicles and people present at the scene; the locations those vehicles and people visited; and, eventually, the tracks of the people whom those people met with and the locations they came from and went to. J.A. 72, 132. Further, PSS may “integrate ... BPD systems” into its proprietary software “to help make all of the systems work together to enhance their ability to help solve and deter crimes.” J.A. 71, 132. The PSA lists BPD's dispatch system, “CitiWatch” security cameras, “Shot Spotter” gunshot detection, and license plate readers as systems to be integrated. As a result, AIR reports may include ground-based images of the surveilled targets from “the cameras they pass on the way.” J.A. 70–72.

AIR data is stored on PSS's servers, and “[PSS] will retain the AIR imagery data for forty-five days.”² J.A. 73. PSS maintains the reports, and related images, indefinitely as necessary for legal proceedings and until relevant statutes of limitations expire. Finally, BPD and PSS enlisted independent institutions to evaluate the AIR program in its pilot period. For example, the RAND Corporation was awarded a grant to evaluate effectiveness in improving *335 policing outcomes; the University of Baltimore was assigned to study community perceptions and reactions; and the Policing Project at New York University School of Law (“Policing Project”) was enlisted to conduct a “civil rights and civil liberties audit.” J.A. 79–82, 132.

B.

Plaintiffs are grassroots community advocates in Baltimore. Their advocacy necessarily involves traveling through and being present outdoors in areas with high rates of violent crime. For example, Erricka Bridgeford leads Ceasefire Baltimore and, in that capacity, visits scenes of gun violence as soon as possible after a crime takes place. On April 9, 2020—about a week after the City executed the PSA and just before the pilot program commenced—Plaintiffs filed suit against the BPD and Commissioner Harrison in his official capacity. As relevant here, Plaintiffs challenged the constitutionality of the AIR program under the Fourth Amendment via 42 U.S.C. § 1983.

Among other relief, Plaintiffs requested that the district court enjoin the Defendants from operating the AIR program, “including collecting or accessing any images through the program.” J.A. 27. Plaintiffs moved for a temporary restraining order and preliminary injunction. Given that the program was set to launch, the district court acted quickly to conference with the parties and hold a preliminary injunction hearing. On April 24, 2020, the district court denied the motion for preliminary relief. The parties took flight a week later.

Plaintiffs filed notice of appeal the same day the district court denied their motion. As soon as their appeal was docketed, Plaintiffs moved to accelerate the proceedings, which Defendants opposed. We granted the motion on May 1, adopting an accelerated briefing schedule. By mid-June, Plaintiffs filed another motion to accelerate the proceedings, this time requesting accelerated scheduling of oral argument, which Defendants opposed. We denied that motion on July 20, and oral argument was eventually calendared for September 10.

The panel issued an opinion on November 5, 2020. The split decision affirmed the district court, agreeing that Plaintiffs’ Fourth Amendment claim was unlikely to succeed on the merits. Plaintiffs filed a petition for rehearing en banc two weeks later, which we granted on December 22, 2020.

C.

Meanwhile, the AIR program’s pilot period concluded. Although the planes stopped flying on October 31, 2020, BPD continued sending PSS requests for analysis of AIR data through December 8, 2020—the day that the new Mayor of

Baltimore City, who publicly opposed the program, began serving a four-year term.

Based on the pilot’s mixed results, the City ultimately decided not to continue the AIR program. BPD initially continued storing the data that it had retained to that point; 1,916.6 hours of coverage comprised of 6,683,312 images. Then, over two weeks in January 2021, BPD and PSS³ deleted most of the data.

They announced the deletion event on February 2, 2021. Defs.’ Mot. to Dismiss, Ex. B, ECF No. 79. Their decision was based on the “desire to minimize retained data, and in light of the [Policing Project] *336 report.”⁴ *Id.* at 1. Rather than store entire days’ worth of data, they elected to retain images from 15 minutes before and after the first and last “track point” for a case, and only within a quarter mile of any track point. *Id.* They believed this data was the “minimum amount” necessary to support PSS’s reports and “to support the prosecution and the defense teams” in the 200 cases aided by the AIR program, including 150 open investigations. *Id.* The deletion “result[ed] in a total retained imagery data of 14.2% of the captured imagery data.” *Id.* In raw numbers, that is 264.82 hours of coverage, comprised of 953,337 cropped images. *Id.* In addition, “[t]he 200 investigation briefings and other ground-based videos” generated by the AIR program “have already been uploaded to BPD’s Evidence.com.” *Id.*

The next day, on February 3, 2021, the Board of Estimates voted to terminate the PSA. In public statements before the vote, Acting City Solicitor Jim Shea stated that the termination would moot this appeal and that the City planned to promptly file a suggestion of mootness. The next day, Defendants filed a motion to dismiss on mootness grounds. The en banc hearing took place on March 8, 2021.

II.

We first address mootness, which goes to our jurisdiction under Article III. *See Chafin v. Chafin*, 568 U.S. 165, 171–72, 133 S.Ct. 1017, 185 L.Ed.2d 1 (2013). Defendants argue that Plaintiffs’ request for preliminary relief is now moot because the AIR program has already concluded on its own terms. They emphasize that data collection has stopped, no new tracking analysis is taking place, and the PSA has been terminated.

A case becomes moot when “the issues presented are no longer ‘live’ or the parties lack a legally cognizable interest in the outcome.” *Id.* at 172, 133 S.Ct. 1017 (quoting *Already, LLC v. Nike, Inc.*, 568 U.S. 85, 91, 133 S.Ct. 721, 184 L.Ed.2d 553 (2013)). For that to be the case, it must be “impossible for a court to grant any effectual relief whatever to the prevailing party.” *Id.* (quoting *Church of Scientology of Cal. v. United States*, 506 U.S. 9, 12, 113 S.Ct. 447, 121 L.Ed.2d 313 (1992)). “As long as the parties have a concrete interest, however small, in the outcome of the litigation, the case is not moot.” *Id.* (quoting *Knox v. Serv. Emps. Int’l Union, Local 1000*, 567 U.S. 298, 307, 132 S.Ct. 2277, 183 L.Ed.2d 281 (2012)).

Plaintiffs’ appeal presents a live controversy. Plaintiffs moved the district court to enjoin BPD “from operating the [AIR] program” and from “accessing any stored images created ... during the pendency of this lawsuit.” While the planes *337 have stopped flying, the fruits of the AIR program persist. BPD stores AIR program images and reports and is free to access them at any time.⁵ The information relates to around 200 criminal cases, roughly 150 of which remain open investigations. If Plaintiffs obtain the injunction they requested, BPD will be barred from accessing those materials as the litigation proceeds, effectively granting Plaintiffs the relief they seek. Therefore, Plaintiffs have a concrete interest in the outcome of this appeal, and it is possible for this Court to grant them effectual relief. *See Chafin*, 568 U.S. at 172, 133 S.Ct. 1017.

Defendants respond that “BPD has no intention of accessing the data to track and potentially identify individuals,” and the termination of the PSA means that BPD has no ability to do so on its own.⁶ But Plaintiffs sought to enjoin BPD from “accessing” AIR data, full stop. There are any number of reasons why BPD might access the tracked movements, and underlying images, that it already has. Dozens of cases involving AIR data remain open. BPD could access AIR program materials to confirm or discredit new information that comes to light. In so doing, BPD would access images collected by allegedly unconstitutional means in which Plaintiffs may be depicted. And, in accessing tracks that PSS already created, BPD would access past movements that were derived only by virtue of recording *all* public movements across Baltimore, including those of the Plaintiffs. The requisite personal interest that Plaintiffs had at the beginning of the case continues to exist now. *See Porter v. Clarke*, 852 F.3d 358, 363 (4th Cir. 2017).

Deletion of the unused AIR data does make it less likely that Plaintiffs appear in what remains. Still, as the district court found, Plaintiffs are more likely to be captured in AIR data than most because they work in high crime areas, sometimes soon after serious crimes take place. It remains at least *possible* that Plaintiffs appear in the remaining data, given that images were retained based on their connection to criminal incidents. As this Court recently explained, “improbability and impossibility are not the same thing.” *N.C. State Conference of the NAACP v. Raymond*, 981 F.3d 295, 302 (4th Cir. 2020).

Defendants also stress that BPD has deleted “all but 14.2 percent” of AIR images. Defs. Mot. to Dismiss 6. But 14.2 percent of all the data collected—millions of photographs documenting thousands of hours of public movements over six months—is a significant quantity of information. Indeed, the preserved 14.2 percent is the needle in the proverbial haystack that the AIR program was designed to discover. Only after recording movements across Baltimore for twelve hours per day could BPD zero in on specific dates and *338 locations related to its investigations and then delete the excess. And BPD still has the briefings and reports, which feature AIR images and tracked movements, information and images from other BPD systems, and insights from PSS’s analysis. Even after the bulk deletion, Plaintiffs have a concrete interest in an injunction barring BPD from accessing what remains, “however small” the interest may be. *See Chafin*, 568 U.S. at 172, 133 S.Ct. 1017.

Undoubtedly, the effect of any preliminary injunction would now be narrower than when Plaintiffs first requested relief in April 2020, before the AIR planes ever took flight. But all that matters to Article III is that a genuine controversy exists. *See Already, LLC*, 568 U.S. at 90–91, 133 S.Ct. 721. So long as its threshold requirements are satisfied, we are obliged to consider the appeal. *See, e.g., United States v. Concentrated Phosphate Export Ass’n*, 393 U.S. 199, 203–04, 89 S.Ct. 361, 21 L.Ed.2d 344 (1968) (“But this case is not technically moot, an appeal has been properly taken, and we have no choice but to decide it.”). Because an injunction would have some effect, this appeal presents a controversy with live issues and legally cognizable interests at stake. The questions presented “can[] affect the rights of litigants in the case before [us].” *See CVLR Performance Horses, Inc. v. Wynne*, 792 F.3d 469, 474 (4th Cir. 2015) (quoting *DeFunis v. Odegaard*, 416 U.S. 312, 316, 94 S.Ct. 1704, 40 L.Ed.2d 164 (1974)). We may not deprive Plaintiffs of their appeal rights, which they have litigated fastidiously, merely because the consequences of the appeal

have shrunk considerably or because we judge the value of the prospective relief to be insignificant. Cf. *Raymond*, 981 F.3d at 302 (holding that “the present appeal may well matter, and the case is not moot,” even though recent events “might [have made] relief ... impossible”).

These facts distinguish our recent decision in *Fleet Feet, Inc. v. NIKE, Inc.*, 986 F.3d 458 (4th Cir. 2021). In that case, the plaintiff obtained a preliminary injunction to bar the defendant from using a certain phrase in its advertising, interrupting an ongoing marketing campaign, and the defendant appealed. *Id.* at 462. In the meantime, the campaign ended, and the defendant represented that it did not plan to use the phrase again. *Id.* at 462–63. This Court held that the appeal was moot because the end of the campaign “foreclosed any possible relief to [the defendant] based on the preliminary injunction's interference.” *Id.* at 463. The defendant argued it continued to be restricted by the injunction, which also precluded any use of “confusingly similar” language. *Id.* That argument presented only a “potential controversy” at best: the defendant “hasn't engaged in speech barred by the order so far and doesn't claim that it intends to do so in the future.” *Id.* at 464 (“There simply isn't any injury for a court to redress.”).

Both that case and this one concern a preliminary injunction ruling, where the conduct at issue diminished while appeal was pending. The similarities end there. In *Fleet Feet*, the injunction was granted, and the appellant was the enjoined party. Yet even the defendant-appellant agreed that the enjoined conduct was finished and would not restart. The mootness question turned on whether the injunction continued to impose some injury, such that its reversal could grant relief. Here, Defendants are both the party responsible for winding down the challenged conduct and the party raising mootness. In the absence of an injunction, the mootness question turns on whether any aspect of that conduct continues.⁷ And, indeed, Defendants’ *339 access to AIR data continues, and Plaintiffs sought to enjoin any such access. There was no equivalent ongoing dimension in *Fleet Feet*.

Nor does BPD's access present only a “potential controversy.” BPD has access to the data right now. True, Plaintiffs’ constitutional claims turn on BPD's use of AIR data to track movements and identify individuals. But the controversy here does not require BPD potentially doing that again in the future. BPD has already tracked movements and identified individuals with AIR data and now has access to

the resulting intelligence. Just like when their Complaint was filed, Plaintiffs have a concrete, legally cognizable interest in freezing BPD's access to these images, which were obtained only by recording Plaintiffs’ movements and in which they may still appear. See *Chafin*, 568 U.S. at 172, 133 S.Ct. 1017.

Accordingly, we deny Defendants’ motion to dismiss the appeal. Since Article III is satisfied, we next consider the merits of Plaintiffs’ appeal from the district court's denial of their motion for a preliminary injunction.

III.

A preliminary injunction is an extraordinary remedy. *In re Search Warrant Issued June 13, 2019*, 942 F.3d 159, 170–71 (4th Cir. 2019). To justify its application, a plaintiff must establish that 1) they are likely to succeed on the merits; 2) they are likely to suffer irreparable harm absent preliminary relief; 3) the balance of the equities favors relief; and 4) the relief is in the public interest. *Id.*

We review a district court's denial of a preliminary injunction for abuse of discretion, reviewing factual findings for clear error and legal conclusions de novo. *Id.* at 171. “A court abuses its discretion in denying preliminary injunctive relief when it ‘rest[s] its decision on a clearly erroneous finding of a material fact, or misapprehend[s] the law with respect to underlying issues in litigation.’ ” *Id.* (quoting *Centro Tepeyac v. Montgomery County*, 722 F.3d 184, 188 (4th Cir. 2013)). Likewise, the court abuses its discretion when it makes an error of law or ignores un rebutted, significant evidence. *Id.*

A.

The Fourth Amendment safeguards “[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures,” providing that “no Warrants shall issue, but upon probable cause.” U.S. Const. amend. IV. In *Carpenter v. United States*, — U.S. —, 138 S. Ct. 2206, 201 L.Ed.2d 507 (2018), the Supreme Court repeated that “[t]he ‘basic purpose of this Amendment’ ... ‘is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials.’ ” *Id.* at 2213 (quoting *340 *Camara v. Mun. Ct. of City & Cnty. of S.F.*, 387 U.S. 523, 528, 87 S.Ct. 1727, 18 L.Ed.2d 930 (1967)). “The Founding generation crafted the Fourth Amendment as a ‘response to the reviled “general

warrants” and “writs of assistance” of the colonial era, which allowed British officers to rummage through homes in an unrestrained search for evidence of criminal activity.” *Id.* (quoting *Riley v. California*, 573 U.S. 373, 403, 134 S.Ct. 2473, 189 L.Ed.2d 430 (2014)); *see also Messerschmidt v. Millender*, 565 U.S. 535, 560, 132 S.Ct. 1235, 182 L.Ed.2d 47 (2012) (Sotomayor, J., dissenting) (“Early patriots railed against these practices as ‘the worst instrument of arbitrary power’ and John Adams later claimed that ‘the child Independence was born’ from colonists’ opposition to their use.”) (quoting *Boyd v. United States*, 116 U.S. 616, 625, 6 S.Ct. 524, 29 L.Ed. 746 (1886)).

In the time since, “technology has enhanced the Government’s capacity to encroach upon areas normally guarded from inquisitive eyes.” *Id.* *Carpenter* applied these founding principles to “a new phenomenon: the ability to chronicle a person’s past movements through the record of [their] cell phone signals.” *Id.* at 2213–23 (referring to cell-site location information (“CSLI”). The Court concluded that this ability invades reasonable expectations of privacy and, therefore, accessing CSLI was a Fourth Amendment “search.” *Id.* (applying *Katz v. United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967)).

Plaintiffs argued the AIR program violates *Carpenter*. The district court rejected the analogy, relying on precedents that approved warrantless pole cameras and flyover photography, and distinguishing CSLI as “a far more intrusive, efficient, and reliable method of tracking a person’s whereabouts.” *Beautiful Struggle*, 456 F. Supp. 3d at 712–16. The district court’s conclusion arose from its read of the facts: “the AIR pilot program has limited location-tracking abilities” because it “will only depict individuals as miniscule dots moving about a city landscape”; the planes “will not fly at night and cannot capture images in inclement weather”; and “gaps in the data will prohibit the tracking of individuals over the course of multiple days.” *Id.* at 714, 716. From that premise, it believed the AIR program could not expose the “privacies of life.” *See id.*

The district court misapprehended the AIR program’s capabilities. We conclude that Plaintiffs are likely to succeed on the merits of their Fourth Amendment claim and, because the remaining factors counsel in favor of preliminary relief, we reverse.

B.

The touchstone in *Carpenter* was the line of cases addressing “a person’s expectation of privacy in [their] physical location and movements.” 138 S. Ct. at 2214–16. In *United States v. Knotts*, 460 U.S. 276, 103 S.Ct. 1081, 75 L.Ed.2d 55 (1983), a tracking “beeper” on a suspect’s car—which, using radio technology, required police to follow along—was not a search. *See id.* at 281–84, 103 S.Ct. 1081. The Court concluded that people have no reasonable expectation of privacy in their “movements from one place to another,” given that they “voluntarily conveyed [them] to anyone who wanted to look.” *Id.* at 281–82, 103 S.Ct. 1081 (qualifying that if “dragnet type law enforcement practices ... should eventually occur,” then “different constitutional principles may be applicable”). The beeper only augmented, to a permissible degree, warrantless capabilities the police had even before the technology. *See id.*; *see also Kyllo v. United States*, 533 U.S. 27, 33–35, 121 S.Ct. 2038, 150 L.Ed.2d 94 (2001) (asking “how much technological enhancement of ordinary perception ... is too much,” and concluding that thermal *341 imaging of a home was a search because officers used “sense-enhancing technology,” beyond “naked-eye surveillance,” to obtain information “that could not otherwise have been obtained”).

Decades later, in *United States v. Jones*, 565 U.S. 400, 132 S.Ct. 945, 181 L.Ed.2d 911 (2012), location-tracking technology crossed the line from merely augmenting to impermissibly enhancing. There, police used a GPS-tracking device to remotely monitor and record a vehicle’s movements over 28 days. *Id.* at 402–04, 132 S.Ct. 945. Although the case was ultimately decided on trespass principles, five Justices agreed that “longer term GPS monitoring ... impinges on expectations of privacy.” *See id.* at 430, 132 S.Ct. 945 (Alito, J., concurring); *id.* at 415, 132 S.Ct. 945 (Sotomayor, J., concurring). Based on “[t]raditional surveillance” capacity “[i]n the precomputer age,” the Justices reasoned that “society’s expectation” was that police would not “secretly monitor and catalogue every single movement of an individual’s car for a very long period.” *See id.* at 430, 132 S.Ct. 945 (Alito, J., concurring); *see also id.* at 415, 132 S.Ct. 945 (Sotomayor, J., concurring) (agreeing).

Applying *Jones*, *Carpenter* identified “a reasonable expectation of privacy in the whole of [a person’s] physical movements,” and held that “government access to [CSLI] contravenes that expectation.” *Carpenter*, 138 S. Ct. at

2217 (“A person does not surrender all Fourth Amendment protection by venturing into the public sphere.”). A cell phone’s location over time “provides an all-encompassing record of the holder’s whereabouts,” and such a “deep repository of historical location information” opens “an intimate window into a person’s life.” *Id.* at 2217–18 (“[R]evealing not only [their] particular movements, but through them [their] ‘familial, political, professional, religious, and sexual associations.’”) (quoting *Jones*, 565 U.S. at 415, 132 S.Ct. 945 (Sotomayor, J., concurring)). Unlike the radio beeper in *Knotts*, the “retrospective quality” of CSLI enables the government to “travel back in time to retrace a person’s whereabouts,” granting access “to a category of information otherwise unknowable.” *Id.* at 2218. And, “[c]ritically,” because all cell phone locations are logged, not just those “who might happen to come under investigation,” that “newfound tracking capacity runs against everyone.” *Id.*

Thus, *Carpenter* solidified the line between short-term tracking of public movements—akin to what law enforcement could do “[p]rior to the digital age”—and prolonged tracking that can reveal intimate details through habits and patterns. *See id.* The latter form of surveillance invades the reasonable expectation of privacy that individuals have in the whole of their movements and therefore requires a warrant. *See id.*

C.

Carpenter applies squarely to this case. *See id.* at 2215–19. More like the CSLI in *Carpenter* and GPS-data in *Jones* than the radio-beeper in *Knotts*, the AIR program “tracks every movement” of every person outside in Baltimore. *See id.* at 2215–19. Because the data is retained for 45 days—at least—it is a “detailed, encyclopedic,” record of where everyone came and went within the city during daylight hours over the prior month-and-a-half. *See id.* Law enforcement can “travel back in time” to observe a target’s movements, forwards and backwards. *See id.* at 2218. Without technology, police can attempt to tail suspects, but AIR data is more like “attach[ing] an ankle monitor” to every person in the city. *See id.* “Whoever the suspect turns out to be,” they have “effectively been tailed” for the prior six weeks. *342. *See id.* (“[P]olice need not even know in advance whether they want to follow a particular individual, or when.”). Thus, the “retrospective quality of the data” enables police to “retrace a person’s whereabouts,” granting access to otherwise “unknowable” information. *See id.*

We do not suggest that the AIR program allows perfect tracking of all individuals it captures across all the time it covers. Though data is collected in 12-hour increments, the tracks are often shorter snippets of several hours or less. Still, the program enables photographic, retrospective location tracking in multi-hour blocks, often over consecutive days, with a month and a half of daytimes for analysts to work with. That is enough to yield “a wealth of detail,” greater than the sum of the individual trips. *See Jones*, 565 U.S. at 415–17, 132 S.Ct. 945 (Sotomayor, J., concurring) (suggesting people do not expect “that their movements will be recorded and aggregated in a manner that enables the government to ascertain” details of their private lives). It enables deductions about “what a person does repeatedly, what he does not do, and what he does ensemble,” which “reveal[s] more about a person than does any individual trip viewed in isolation.” *United States v. Maynard*, 615 F.3d 544, 562–63 (D.C. Cir. 2010).⁸ *Carpenter* held those deductions go to the privacies of life, the epitome of information expected to be beyond the warrantless reach of the government. 138 S. Ct. at 2214, 2218. And here, as there, the government can deduce such information only because it recorded *everyone’s* movements. *See id.* at 2218.

Therefore, because the AIR program opens “an intimate window” into a person’s associations and activities, it violates the reasonable expectation of privacy individuals have in the whole of their movements. *See id.* at 2218–19. The district court reached the opposite conclusion because it believed, as Defendants argue on appeal, that the AIR program is capable of only short-term tracking. It emphasized that AIR images show people only as “a series of anonymous dots traversing a map of Baltimore,” and the planes do not fly over night, so “gaps in the data will prohibit the tracking of individuals over the course of multiple days.” *See, e.g., Beautiful Struggle*, 456 F. Supp. 3d at 714, 716.

But those facts don’t support the district court’s conclusion. The datasets in *Jones* and *Carpenter* had gaps in their coverage, too. The GPS data in *Jones* only tracked driving, in a specific car, precise to “within 50 to 100 feet.” *See* 565 U.S. at 404, 132 S.Ct. 945. The raw CSLI in *Carpenter* was a log of thousands of estimated location points from which a cell phone pinged a cell tower. 138 S. Ct. at 2211–12, 2218 (“[The CSLI] placed [the suspect] within a *343 wedge-shaped sector ranging from one-eighth to four square miles.”). Yet, in both cases, the surveillance still surpassed ordinary expectations of law enforcement’s capacity and provided

enough information to deduce details from the whole of individuals' movements. *See id.* at 2217–18 (“[Police] might have pursued a suspect for a brief stretch, but doing so ‘for any extended period of time was difficult and costly and therefore rarely undertaken’ [and] attempts to reconstruct a person's movements were limited by a dearth of records and the frailties of recollection.”) (quoting *Jones*, 565 U.S. at 429, 132 S.Ct. 945).

The same is true here. That Defendants chose to limit data collection to daylight hours and a certain resolution does not make the AIR program equivalent to traditional, short-term surveillance. AIR data is a photographic record of movements, surpassing the precision even of GPS data and CSLI, which record variable location points from which movements can be reconstructed. And while the coverage is not 24/7, most people do most of their moving during the daytime, not overnight. Likewise, many people start and end most days at home, following a relatively habitual pattern in between. These habits, analyzed with other available information, will often be enough for law enforcement to deduce the people behind the pixels. And if a track is interrupted by sunset, police will at least sometimes be able to re-identify the same target over consecutive days. For example, law enforcement could use AIR data to track a person's movements from a crime scene to, eventually, a residential location where the person remains. They could then look through time and track movements from that residence. They could use any number of context clues to distinguish individuals and deduce identity. After all, the AIR program's express goal is to identify suspects and witnesses to help BPD solve crimes.⁹

The record supports these intuitive conclusions. Plaintiffs submitted research showing that, because people's movements are so unique and habitual, it is almost always possible to identify people by observing even just a few points of their location history. The district court disregarded Plaintiffs' study because it was based on CSLI.¹⁰ But the source of the *344 underlying location data is entirely irrelevant: the study shows that identity is easy to deduce from just a few random points of an individual's movements. Whether those points are obtained from a cell phone pinging a cell tower or an airplane photographing a city makes no difference. Beyond Plaintiffs' study, common sense and ample authority over the last decade corroborates this conclusion.¹¹

Further, the AIR program does not deduce identity from randomly selected location points, like in a research study. Rather, the context of specific investigations narrows the pool of possible identities. Police can cross-reference against publicly available information and, even more valuably, their own data systems. PSS can enhance the process by integrating BPD systems—like its CitiWatch camera network, license plate readers, and gunshot detectors—into its “iView software,” “mak[ing] all the systems work together.” J.A. 71, 132. For example, if the tracking of a car is interrupted, license plate readers could help relocate it in the AIR data over the following days. Yet the district court disregarded these capabilities, reasoning that Plaintiffs were “lump[ing] together discrete surveillance activities as one Fourth Amendment ‘search.’ ” *Beautiful Struggle*, 456 F. Supp. 3d at 716. “The addition of one more investigative tool—in this case, aerial surveillance—does not render the total investigatory effort a Fourth Amendment ‘search.’ ” *Id.*

But Plaintiffs never identified “the total investigatory effort” as the “search” here. *Carpenter* was clear on that issue: a search took place “when the Government accessed CSLI from the wireless carriers.” 138 S. Ct. at 2219–20 (“The Government's acquisition of the cell-site records was a search within the meaning of the Fourth Amendment.”) (emphases added). But to identify a “search,” we identify an invasion of a reasonable privacy expectation. To do that, we consider not only the raw data, but what that data can reveal. *See id.* at 2218. BPD can deduce an individual's identity from AIR data, other available information, and some deductive reasoning. The integration of police information systems supports that conclusion. When coupled with a highly precise map of movements across at least 45 days, these abilities enable police to glean insights from the whole of individuals' movements. Therefore, when BPD “accesses” AIR data, it invades the recorded individuals' reasonable expectation of privacy, conducting a search. *See id.*

Carpenter applied the same rationale: “From the 127 days of location data it received” (the search) “the Government could, in combination with other information, deduce a detailed log of Carpenter's *345 movements” (the reason a privacy violation occurred). *See id.* (emphasis added). The government needed to use additional information, beyond the CSLI, to deduce the suspect's movements. Yet *Carpenter* was not “lump[ing] together discrete surveillance activities” to form a single, hodgepodge search. Instead, because it was the CSLI that enabled the deductions, the search took place when the government accessed the CSLI alone. Regarding

AIR data as just “one more investigative tool” does exactly what the Supreme Court has admonished against; it allows inference to insulate a search. *See Carpenter*, 138 S. Ct. at 2218; *Kyllo*, 533 U.S. at 36 & n.4, 121 S.Ct. 2038. The “analysis (*i.e.*, the making of inferences)” involved in the AIR program may be more labor intensive than deducing location history from CSLI, or details about the inside of a home from its thermal image, or the fact of a beeper's presence inside a home from its activation. *See Kyllo*, 533 U.S. at 36 & n.4, 121 S.Ct. 2038 (citing *United States v. Karo*, 468 U.S. 705, 104 S.Ct. 3296, 82 L.Ed.2d 530 (1984)). Nevertheless, because AIR data is what enables deductions from the whole of individuals’ movements, the Fourth Amendment bars BPD from warrantless access to engage in that labor-intensive process.

For all these reasons, the AIR program's surveillance is not “short-term” and transcends mere augmentation of ordinary police capabilities. People understand that they may be filmed by security cameras on city streets, or a police officer could stake out their house and tail them for a time. *See Maynard*, 615 F.3d at 560 (“It is one thing for a passerby to observe or even to follow someone during a single journey as he goes to the market or returns home from work.”). But capturing everyone's movements outside during the daytime for 45 days goes beyond that ordinary capacity. *See id.* (“It is another thing entirely for that stranger to pick up the scent again the next day and the day after that, week in and week out, dogging his prey until he has identified all the places, people, amusements, and chores that make up that person's hitherto private routine.”).

With this proper factual perspective, a comparison to other “aerial surveillance methods” is misplaced. The district court concluded that warrantless pole cameras and flyovers by planes and helicopters, which “the Supreme Court and the Fourth Circuit have generally upheld,” are “far more intrusive means of aerial surveillance” than the AIR program. *Beautiful Struggle*, 456 F. Supp. 3d at 712–14 (“[AIR data] cannot capture a suspect's bodily movements, observe facial expressions, record in real-time, zoom-in on suspicious activities,”). But those cases all involve some discrete operation surveilling individual targets. And pole cameras are fixed in place, meaning they generally only capture individual trips. Here, Plaintiffs do not object to what any one AIR image reveals or claim a privacy invasion related solely to being photographed. *See Carpenter*, 138 S. Ct. at 2220 (“[T]his case is not about ... a person's movement at a particular time.”). Rather, they challenge the creation of a

retrospective database of everyone's movements across the city. *See id.* (“It is about a detailed chronicle of a person's physical presence compiled every day, every moment, [and] [s]uch a chronicle implicates privacy concerns.”). Once police identify a tracked “dot,” its blurred image does little to shield against an invasion into its movements.

Thus, the AIR program's “aerial” nature is only incidental to Plaintiffs’ claim, just as cell phone technology is ultimately incidental to the outcome in *Carpenter*. It is precedents concerning privacy in “physical location and movements” that control. *See id.* at 2215. And even though flyovers and *346 pole cameras can sometimes reveal intimate information like the AIR program does, that does not mean the AIR program's citywide prolonged surveillance campaign must be permissible as well. *See Kyllo*, 533 U.S. at 35 n.2, 121 S.Ct. 2038 (“The fact that equivalent information could sometimes be obtained by other means does not make lawful the use of means that violate the Fourth Amendment.”); *Maynard*, 615 F.3d at 565–66 (“[W]hen it comes to the Fourth Amendment, means do matter.”).

The AIR program records the movements of a city. With analysis, it can reveal where individuals come and go over an extended period. Because the AIR program enables police to deduce from the whole of individuals’ movements, we hold that accessing its data is a search, and its warrantless operation violates the Fourth Amendment. Accordingly, we hold that Plaintiffs’ Fourth Amendment challenge is likely to succeed on the merits.

D.

The remaining *Winter* factors counsel in favor of preliminary relief. Because there is a likely constitutional violation, the irreparable harm factor is satisfied. *See Mills v. District of Columbia*, 571 F.3d 1304, 1312 (D.C. Cir. 2009) (“It has long been established that the loss of constitutional freedoms, ‘for even minimal periods of time, unquestionably constitutes irreparable injury.’”) (quoting *Elrod v. Burns*, 427 U.S. 347, 373, 96 S.Ct. 2673, 49 L.Ed.2d 547 (1976)). Likewise, the balance of the equities favors preliminary relief because “[our] precedent counsels that ‘a state is in no way harmed by issuance of a preliminary injunction which prevents the state from enforcing restrictions likely to be found unconstitutional. If anything, the system is improved by such an injunction.’” *See Centro Tepeyac*, 722 F.3d at 191 (quoting *Giovani Carandola, Ltd. v. Bason*, 303 F.3d 507, 521

(4th Cir. 2002)).¹² Finally, it is well-established that the public interest favors protecting constitutional rights. *See id.* (“It also teaches that ‘upholding constitutional rights surely serves the public interest.’”) (quoting *Giovani Carandola*, 303 F.3d at 521). Therefore, we hold that the district court abused its discretion in denying Plaintiffs’ motion for a preliminary injunction, and we reverse.

IV.

Defendants told us that “this case is about as far from *Carpenter* as you’re ever going to get.” Oral Arg. at 1:46:40. They distinguished *Carpenter* as concerning “targeted investigative activity of individuals,” where investigators “already had the phone number and they already had the [suspect’s] identity” and then requested specific CSLI. *Id.* This does highlight an important distinction, but it cuts in the other direction. In *Carpenter*, service providers collected comprehensive location data from their subscribers. As Defendants point out, the government’s only role *347 was to request that data as to specific investigations. Under the AIR program, the government does both. The government continuously records public movements. Then, the government—once officers know where (and when) to look—tracks movements related to specific investigations. Only by harvesting location data from the entire population could BPD ultimately separate the wheat from the chaff, retaining the 14.2 percent that was useful.

Allowing the police to wield this power unchecked is anathema to the values enshrined in our Fourth Amendment. *Cf. Jones*, 565 U.S. at 416–17, 132 S.Ct. 945 (Sotomayor, J., concurring) (questioning “the appropriateness of entrusting to the Executive, in the absence of any oversight from a coordinate branch, a tool so amenable to misuse, especially in light of the Fourth Amendment’s goal to curb arbitrary exercises of police power”). By protecting the people against unreasonable searches, the Constitution “protects *all*, those suspected or known to be offenders as well as the innocent.” *Go-Bart Importing Co. v. United States*, 282 U.S. 344, 356–57, 51 S.Ct. 153, 75 L.Ed. 374 (1931) (emphasis added). By rejecting the general warrant, the Constitution rejects searches based on “loose, vague or doubtful bases of fact,” which even “before the creation of our government,” we “deemed obnoxious to fundamental principles of liberty.” *Id.*

Protection against such harms remains a vital constitutional function. Baltimore is a thoroughly surveilled city.

See generally J. Cavanaugh Simpson & Ron Cassie, *Under Watch*, Balt. Mag., Mar. 2021, at 96 (discussing cell site simulators, helicopters, security cameras, police access to residential cameras, police body cameras, and facial recognition software). “[Mass surveillance] touches everyone, but its hand is heaviest in communities already disadvantaged by their poverty, race, religion, ethnicity, and immigration status.” Barton Gellman & Sam Adler-Bell, Century Found., *The Disparate Impact of Surveillance 2* (2017). While technology “allow[s] government watchers to remain unobtrusive,” the impact of surveillance “[is] conspicuous in the lives of those least empowered to object.” *Id.* Because those communities are over-surveilled, they tend to be over-policed, resulting in inflated arrest rates and increased exposure to incidents of police violence. *See generally* Devon W. Carbado, *From Stopping Black People to Killing Black People: The Fourth Amendment Pathways to Police Violence*, 105 Calif. L. Rev. 125 (2017) (explaining the “circuits of violence” caused by Black people’s disproportionate exposure to “ongoing police surveillance and contact”); *see also* Osagie K. Obasogie & Zachary Newman, *Police Violence, Use of Force Policies, and Public Health*, 43 Am. J. of L. & Med. 279 (2017) (finding that “the hyper- and over-policing of urban areas results in increased surveillance,” such that “race and class ... determine who is exposed to the risks of policing”).

That is not to express our opposition to innovation in policing or the use of technology to advance public safety. It is only to emphasize that the role of the warrant requirement remains unchanged as new search capabilities arise. *See Riley*, 573 U.S. at 401, 134 S.Ct. 2473 (“Our cases have historically recognized the warrant requirement is ‘an important working part of our machinery of government,’ not merely ‘an inconvenience to be somehow ‘weighed’ against the claims of police efficiency.’”) (quoting *Coolidge v. New Hampshire*, 403 U.S. 443, 481, 91 S.Ct. 2022, 29 L.Ed.2d 564 (1971)); *Curry*, 965 F.3d at 336–37 (Wynn, J., concurring) (“[O]ur analysis must stay rooted in constitutional principles, rather than turn on naked policy judgments derived from our perception *348 of the beneficial effects of novel police techniques.”); *see, e.g., Riley*, 573 U.S. at 403, 134 S.Ct. 2473 (“Our answer to the question of what police must do before searching a cell phone seized incident to an arrest is accordingly simple—get a warrant.”). The Fourth Amendment must remain a bastion of liberty in a digitizing world. Too often today, liberty from governmental intrusion can be taken for granted in some neighborhoods, while others “experience the Fourth Amendment as a system

of surveillance, social control, and violence, not as a constitutional boundary that protects them from unreasonable searches and seizures.” Carbado, *Pathways to Violence*, *supra*, at 130. The AIR program is like a 21st century general search, enabling the police to collect all movements, both innocent and suspected, without any burden to “articulate an adequate reason to search for specific items related to specific crimes.” See *Messerschmidt*, 565 U.S. at 560, 132 S.Ct. 1235 (Sotomayor, J., dissenting). Because that collection enables Defendants to deduce information from the whole of individuals’ movements, this case is not “far from *Carpenter*”; indeed, it is controlled by it.

We reverse the denial of Plaintiffs’ motion for a preliminary injunction and remand for further proceedings consistent with this opinion.

REVERSED AND REMANDED

GREGORY, Chief Judge, with whom Judges WYNN, THACKER and HARRIS join, concurring:

The dissent faults the majority for making “[n]o mention whatsoever” of Baltimore’s high murder rate. Diss. Op., *infra*, at 351-54, 361-67, 368-69. Because the dissent would not enjoin a police surveillance system, it purports to champion “our dispossessed communities” and “the most vulnerable among us.” See Diss. Op. at 351-52, 353, 365, 368-69. It suggests the majority, by contrast, “contribute[s] to the continuation” of violence and “leaves only hopelessness” for “the good people of Baltimore.” Diss. Op. at 353-54, 368-69.

This critique depends upon a certain premise: Policing ameliorates violence, and restraining police authority exacerbates it. As surely as water is wet, as where there is smoke there is fire, the dissent takes for granted that policing is the antidote to killing. Thus, the dissent repeatedly evokes the grief and trauma of gun deaths only in the name of a familiar cause: police and prisons. Of course, “it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.” Abraham Maslow, *The Psychology of Science: A Reconnaissance*, 15–16 (1966). But many Baltimoreans know these institutions all too well as the only response to violence. See generally Elizabeth Hinton, *From the War on Poverty to the War on Crime* (2016); James Forman Jr., *Locking Up Our Own* (2017); *Policing the Black Man* (Angela J. Davis ed., 2017).

I am skeptical that this logic genuinely respects and represents the humanity, dignity, and lived experience of

those the dissent ventures to speak for. Despite passing references to “systemic inequality,” “interrelationships,” and “foundational ill[s],” Diss. Op. at 352, 368-69, the dissent entirely disregards the systems, relationships, and foundational problems that have perpetuated Baltimore’s epidemic of violence. Most notably, Baltimore was the first city to implement formal racial segregation in 1910; subsequently, the federal government further “redlined” the city—assigning racial categories to city blocks and restricting homebuying accordingly. Garrett Power, *Apartheid Baltimore Style: The Residential Segregation Ordinances of 1910–1913*, 42 Md. L. Rev. 289, 298–303 (1983); Antero Pietila, *Not in My Neighborhood*, *349 5–31, 47–74 (2012). These policies divided the city largely along the lines of color.

Many measures of resource distribution and public well-being now track the same geographic pattern: investment in construction; urban blight; real estate sales; household loans; small business lending; public school quality; access to transportation; access to banking; access to fresh food; life expectancy; asthma rates; lead paint exposure rates; diabetes rates; heart disease rates; and the list goes on. See Urb. Inst., *The Black Butterfly* (Feb. 5, 2019), <https://apps.urban.org/features/baltimore-investment-flows> (saved as ECF opinion attachment); Marceline White, Nat’l Cmty. Reinvestment Coal., *Baltimore: The Black Butterfly* (Oct. 8, 2020), <https://nrcr.org/the-black-butterfly> (saved as ECF opinion attachment). Segregation effectively plundered Baltimore’s Black neighborhoods—transferring wealth, public resources, and investment to their white counterparts—and the consequences persist today. Cf. Samuel Dubois Cook Ctr. On Soc. Equity, *The Plunder of Black Wealth in Chicago* (May 2019); see generally Richard Rothstein, *The Color of Law* (2017). So it is no coincidence that gun violence mostly occurs in the portions of the city that never recovered from state-sanctioned expropriation. Absent reinvestment, cycles of poverty and crime have proliferated.

To suggest that the AIR program is so obviously a lifeline for these “islands without hope” is ahistorical at best. Diss. Op. at 351-52. Baltimore spends more on policing, per capita, than virtually any other comparable city in America. See Vera Inst. for Just., *What Policing Costs* (2020) (comparing 2020 police spending across 62 cities). In 2017, for example, a greater proportion of its general operating fund spending was allocated to policing than to education, transportation, and housing combined. Ctr. for Popular Democracy et al., *Freedom to Thrive 2*, 16–17 (2017). And Black neighborhoods in Baltimore are already

disproportionately policed. See Judge Wynn Concurring Op., *infra*, at 350-51 n.***.

Ultimately, while the dissent has much to say about self-determination, that is exactly what motivates the Plaintiffs' work. The Leaders of a Beautiful Struggle have explained that, in their view, opposition to increased police surveillance "is not about being anti-police," nor "about ignoring the impact of violent crime." Rather:

It is about challenging the racial imbued ideology of police-ism: the belief that all urban problems must be addressed primarily or exclusively through the lens of policing. ... [We] believe that safety is not simply the absence of violence, but the creation of conditions for human flourishing. Thus, we refuse the false ... choice between community instability created by violent crime, [and] the community instability caused by mass incarceration [and] unaccountable policing

Lawrence Grandpre, *Who Speaks for Community? Rejecting a False Choice Between Liberty and Security*, Leaders of a Beautiful Struggle Blog (June 5, 2020), <https://www.lbsbaltimore.com/who-speaks-for-community-rejecting-a-false-choice-between-liberty-and-security> (saved as ECF opinion attachment). To this end, the Leaders of a Beautiful Struggle have organized projects like the renovation of a vacant building as a "safe house" "to serve as a hub for food drives, mentoring, community cookouts and art classes." Catherine Rentz, *Activists Focus Efforts on West Baltimore Neighborhood Where Freddie Gray was Arrested*, *Balt. Sun*, Apr. 22, 2016, A16. They have partnered with Baltimore Ceasefire, Plaintiff Erricka Bridgeford's *350 organization, to hold a "resource fair where residents can receive help getting their records expunged, mental health support, child support information, ... good food, and fun." *Dispatches from Baltimore Ceasefire*, *Balt. City Paper*, Aug. 09, 2017.

For the Plaintiffs, these efforts are the very essence of community-driven self-determination and self-governance. The dissent highlights other voices in the community, those who endorse the AIR program, to support its contrary view. These opposing perspectives are no surprise, as Black communities in Baltimore are far from monolithic. But this Court is not the arbiter of who speaks for "the community." In this case, it is only the arbiter of Article III mootness and the application of the standard of review for a preliminary injunction to the police program at issue. I accept that we disagree on these issues, even vehemently so.

I do not accept, however, that some neighborhoods in Baltimore are hopeless absent this aerial surveillance. See Grandpre, *Who Speaks for Community?*, *supra* ("The community," which some portray as "clamoring for more police presence, is not a monolithic mass of helpless victims"). Wherever they call home—from East Baltimore to West Baltimore, from Sandtown to Roland Park, from Cherry Hill to Locust Point—Baltimoreans need not sacrifice their constitutional rights to obtain equal governmental protection. And even amidst strife and struggle, hope and talent still flourish. Cf. Ta-Nehisi Coates, *The Beautiful Struggle* 180 (2008) ("No matter what the professional talkers tell you, I never met a black boy who wanted to fail.").

WYNN, Circuit Judge, with whom Judges MOTZ, THACKER, and HARRIS join, concurring:

My good colleague Judge Wilkinson is admirably consistent in his belief that states and our coequal branches of government, not the courts, should take the lead in policymaking matters. See, e.g., *Kolbe v. Hogan*, 849 F.3d 114, 149–51 (4th Cir. 2017) (en banc) (Wilkinson, J., concurring) (arguing that because "[n]o one really knows what the right answer is with respect to the regulation of firearms," we federal judges ought not "[d]isfranchis[e] the American people on this life and death subject" by arrogating to ourselves "decisions that have been historically assigned to other, more democratic actors"). On that point, he and I can agree. But his dissent goes too far in its claim that the majority opinion is tripping over itself in a desperate rush to dismantle a democratically enacted solution, blind to the consequences for the lives and wellbeing of Baltimoreans. We all know Baltimore—like any other large city, and many smaller ones—has a serious policing problem, and that the solutions to that problem are likely to be every bit as complex as the problem itself.* We all agree those solutions *351 are beyond the ken of the Fourth Circuit or any other court. As a court, we are charged with adhering to the law, not determining what is best for Baltimore. The majority takes this duty seriously and has correctly resolved the legal issue before us. I therefore regret his dissent's dire rhetoric, much of which insinuates that the dissent alone has Baltimore's best interests at heart.

WILKINSON, Circuit Judge, with whom Judges NIEMEYER, AGEE, and QUATTLEBAUM join, and with whom Judge DIAZ joins with respect to Part I, Judge RICHARDSON joins with respect to Parts I, II, and III, and

Judge RUSHING joins with respect to Parts I and II, all dissenting:

This case should have been handled in a brief order dismissing the appeal as moot. Straightforward resolution; single paragraph. But the majority is determined to puff this appeal way up, to keep it going at all costs, and I cannot let its many errors pass unchallenged.

The majority inflicts damage on many fronts. First to the case or controversy requirement. Second to the law governing the issuance of preliminary injunctions. Third to the place of trial courts within our judicial system. Fourth to the place of states and localities within our federalist structure. Fifth to the ability of our nation's cities to combat the surge of criminal violence in their midst.

All these errors build to a singular consequence—the further distancing of our country's most disadvantaged citizens from the opportunities so many other Americans enjoy. America is at its best when it draws contributions from all quarters, yet my friends in the majority are pushing law in a direction that will leave our dispossessed communities islands without hope.

* * *

“Reasonableness” lies at the heart of the Fourth Amendment. Reasonableness in [*352](#) turn requires balance. Balance in turn requires recognition of both public needs and privacy concerns. The majority has taken a one-dimensional swipe at what is by any reckoning a multi-dimensional problem.

One would think from reading the majority's opinion that all is well in Baltimore. No mention whatsoever is made of the three hundred and thirty-five people that were murdered there in 2020. Associated Press, *Baltimore Had 335 Homicides in 2020*, U.S. News & World Rep., Jan. 1, 2021. Nor the three hundred and forty-eight who were killed in 2019. *Baltimore's Plague of Gun Violence Continues*, Balt. Sun, Sept. 15, 2020, at A10. In 2017, Baltimore experienced a higher absolute number of murders than New York City, a city with fourteen times Baltimore's population. See Alec MacGillis, *The Tragedy of Baltimore*, N.Y. Times Mag., Mar. 17, 2019, at 32. These numbers make Baltimore one of the most dangerous cities in America. Yet somehow the majority sees oversurveillance as Baltimore's big problem, see Maj. Op., ante at 347-48, and it ventures on a crusade to eradicate it.

It would be unfair to suggest that the spread of the most serious crimes is confined to Baltimore. See Holly Bailey & Kim Craig, *Nationwide Rise in Violent Crimes Leaves Officials Tense*, Wash. Post, May 31, 2021, at A3. We “know that recent data suggests that homicides spiked in the United States’ largest cities last year by an average of 30 percent.” Megan McArdle, *More Policing Can Help Disadvantaged Communities*, Wash. Post, May 24, 2021, at A19. But this problem is one the majority chooses inexplicably to ignore. Crime statistics are not some disembodied metric, but indicia of a foundational ill whose presence prevents other civic virtues and other social institutions from taking proper hold. These interrelationships quite elude the majority as Baltimoreans are left to pay a lasting price.

Many Baltimoreans recognized that something needed to be done about the scourge of violence afflicting their beloved city. Inaction was not solving anything. In that spirit, the Baltimore Police Department (BPD) adopted a new aerial surveillance program, Aerial Investigation Research (AIR). BPD explicitly recognized this was just an experiment, establishing a six-month test run to see how effective it would be, and whether its law enforcement benefits would outweigh burdens on civil liberties. To protect those liberties, BPD enunciated important limitations on how the program would be used. The department enlisted community support for the program and retained experts to study any potential civil liberties problems.

I do not contend that the Baltimore AIR program was the one and only answer, or indeed the best answer, to what ails the city. The question before the court is only whether it deserved a try. Today the majority says “No.” Worse still, it announces its veto with unseemly haste. The majority races forward needlessly, killing a program that is no longer in effect and where there exists no realistic prospect of it being reactivated. Rejecting appellees’ modest request to dismiss this appeal and to remand for further proceedings before the district court, if necessary, the majority leaps over mootness barriers it finds inconvenient.

Surging onward, the majority eviscerates the traditional rules governing the issuance of preliminary injunctions. By enjoining a program that no longer exists and cannot injure anyone, the majority ignores the indispensable requirements that plaintiffs demonstrate an irreparable injury and that the balance of equities favors them. See [*353](#) *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20, 129 S.Ct. 365, 172 L.Ed.2d 249 (2008). In reversing the *denial* of a preliminary

injunction, the majority strips the district court of its right and responsibility to develop an evidentiary record that would elucidate how this program actually worked. Relying on a record of less than one hundred pages assembled in just a few weeks, the majority voids this program at its inception. It is not content to wait, to let normal legal processes take their course. In reversing the denial of a preliminary injunction, it ignores essential remedial principles designed to limit judicial interferences like that occurring today.

This unseemly haste does great harm to the people of Baltimore and our federalist constitutional system. Federalism means, as most famously expressed, that “a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.” *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311, 52 S.Ct. 371, 76 L.Ed. 747 (1932) (Brandeis, J., dissenting). In its indecorous rush to quash any experimentation on Baltimore's part, the majority has signaled to American cities that future initiatives and attempts at solving the rapid rise of violent crime will likely meet with disfavor from the courts. I fear cities like Baltimore will be unwilling to put forth the effort in the future, so predetermined has become this judicial “No.” The takeaway is clear: why even try? Given the fact that this program is discarded with so little attention to even the rudiments of orderly judicial process, cities will be led to believe that any initiative will be answered with resounding judicial disapprobation. Dwelling in the eternal negative, the majority offers no solutions and can only reject answers that others have tried industriously to provide. Its decision strikes a heavy blow against democratic experimentation and innovation that is essential if our nation is to make headway in protecting those most vulnerable to the ravages of crime.

This decision is not justified by law. It nullifies decades of Supreme Court precedent making clear that limited aerial surveillance like that in this case does not violate a reasonable expectation of privacy under the Fourth Amendment. It dramatically transforms *Carpenter v. United States*, — U.S. —, 138 S. Ct. 2206, 201 L.Ed.2d 507 (2018), into an effective ban on all short-term warrantless tracking of public movements. It ignores a long line of cases giving representative governments the power to adopt reasonable and non-discriminatory programs in response to serious law enforcement needs.

No one claims that police departments are without their blemishes, or that history is without its stains, or that reforms

themselves are without their problems and complexities. I have nothing but respect for my fine colleagues’ points of view, and I value their perspectives. *See* Chief Judge Gregory Concurring Op., *supra*; Judge Wynn Concurring Op., *supra*. But the question before us is, again, whether the people shall be left a proper latitude to address those problems or whether courts will presume to decide what is best for them. Embracing the latter choice, the majority’s rush to judgment leaves only hopelessness in the face of rising violent crime. In short time, the good people of Baltimore may realize that “[s]omeone had blundered.” Alfred, Lord Tennyson, *The Charge of the Light Brigade* (1854). Because the majority’s own rash charge is contrary to law, antithetical to self-governance, and devoid of any forward illumination, I respectfully dissent.

I.

In its haste to deny Baltimore any room for community initiatives, the majority *354 opines at length on an appeal that is now moot. “If an event occurs during the pendency of an appeal that makes it impossible for a court to grant effective relief to a prevailing party, then the appeal must be dismissed as moot.” *Fleet Feet, Inc. v. NIKE, Inc.*, 986 F.3d 458, 463 (4th Cir. 2021) (internal quotation marks and citation omitted). The intervening event here is obvious. The program which plaintiffs sought to preliminarily enjoin no longer exists. After the newly elected Mayor of Baltimore opposed the program, the Board of Estimates cancelled its contract with the program vendor. *See* Emily Opilo, *City Board Votes to Cancel Surveillance Plane Contract*, Balt. Sun, Feb. 4, 2021, at A12. The BPD announced that it would no longer collect and analyze data, and the vendor has deleted all but 14.2 percent of the previously collected data, which it must retain to comply with disclosure obligations in criminal prosecutions. Appellees’ Mot. to Dismiss at 5–6 (citing Letter from Ross McNutt, President of Community Support Program, to BPD Commissioner Michael Harrison (Feb. 2, 2021), at 1).

In light of those developments, we should grant the BPD's request to dismiss this appeal as moot. The BPD's elimination of the AIR program is not some maneuver to avoid judicial review that would justify application of the voluntary cessation exception to mootness. *See Porter v. Clarke*, 852 F.3d 358, 364 (4th Cir. 2017) (“[T]he [voluntary cessation] exception seeks to prevent a manipulative litigant immunizing itself from suit indefinitely, altering its behavior long enough

to secure a dismissal and then reinstating it immediately after.” (internal quotation marks and citation omitted)). The factual circumstances are different now because Baltimore's leaders responded to democratic pressures (the proper pressures to suspend such a program), rather than to a federal court about to rule in an adversary's favor. Due to these new democratic hurdles, it is exceedingly unlikely that the AIR program as challenged by plaintiffs—with a particular vendor, with particular constraints, and with particular aims—will be revived at any point. And if the democratic winds do start blowing in favor of surveillance again, it would take a considerable amount of time to reestablish an aerial surveillance program of any type, and any program would likely be different in material ways from AIR.

It is similarly clear that the capable of repetition, yet evading review exception to mootness is inapposite. Simply put, the AIR program is not in danger of evading review. Even if the majority had found that the *appeal* was moot, the *case* would continue to be litigated below, making this exception to mootness wholly inapplicable. See *Indep. Party of Richmond Cty. v. Graham*, 413 F.3d 252, 256 (2d Cir. 2005).

All that appellees request here is a dismissal of the appeal, since we can award no relief on that which no longer exists. Again, this is an interlocutory appeal from the denial of a preliminary injunction—not the dismissal of an entire case in which plaintiffs seek nominal damages. See *Uzuegbunam v. Preczewski*, — U.S. —, 141 S. Ct. 792, 801–02, 209 L.Ed.2d 94 (2021). There is potentially still work to be done, but that work, if it is found necessary, appropriately lies with the district court. For example, the court could determine the content of the remaining 14.2 percent of data not already deleted; how, when, and why that data is used; and who can access it. Those determinations are intricately fact-bound. A remand would also allow the litigants the possibility of reaching a compromise as to the data and as to the issuance of a properly tailored protective order with regard to it. During oral argument, the two sides indicated a measure of agreement. But the majority insists *355 on pushing ahead, determined to adjudicate a moot appeal, and oblivious to the prospect of any future concord between the parties.

Finally, the majority is not providing any relief beyond the status quo. The only alleged injury is the BPD's and vendor's possession of 14.2 percent of the data collected by AIR and the related investigative reports. But even the majority professes that enjoining the program “would not require BPD to destroy the remaining AIR data.” Maj. Op., *ante* at 346

n.12. It agrees that BPD may “possess[]” materials so that prosecutors, defense counsel, and the court may access files “in an individual prosecution.” *Id.* The BPD has made clear that it has no intention to access the material outside these necessary uses. Appellees’ Mot. to Dismiss at 5–6. Although we have no reason to doubt this representation, the district court would remain free to act if it found the promise was not kept. Simply put, “the specific relief sought here no longer has sufficient utility to justify decision of this case on the merits.” *S-1 v. Spangler*, 832 F.2d 294, 297 (4th Cir. 1987). The fact that the majority is opining on the law without the prospect of a tangible remedy to the plaintiffs strongly indicates that this appeal is moot.

To repeat: we can award no relief as to that which no longer exists. As discussed below, multiple considerations counsel the inadvisability of continuing to wade through factual matters during the appeal of a denial of a preliminary injunction. The one issue before us has disappeared. What, if anything, remains of the case is within the purview of the district court.

II.

A.

Even were we to assume this appeal is not moot, the majority engages in an indefensible exercise of judicial overreach. Let us be clear about what it is doing. The majority is not merely ordering Baltimore to change the way it protects its citizens and solves crime. It is telling a district court that it was so patently unreasonable *not* to issue that order that the court must be reversed for, even preliminarily, staying its judicial hand.

This is remarkable. Plaintiffs sought a preliminary injunction. The district court was right to deny it. This is a remedy that should “be granted only sparingly and in limited circumstances.” *MicroStrategy Inc. v. Motorola, Inc.*, 245 F.3d 335, 339 (4th Cir. 2001) (internal quotation marks and citation omitted). As the Supreme Court explained in *Winter v. Natural Resources Defense Council, Inc.*, “[a] preliminary injunction is an extraordinary remedy never awarded as of right.” 555 U.S. 7, 24, 129 S.Ct. 365, 172 L.Ed.2d 249 (2008). Therefore plaintiffs must make a “clear showing” that they are likely to succeed on the merits of their legal claims, are likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities favors the grant of preliminary

relief, and that “an injunction is in the public interest.” *Id.* at 20–22, 129 S.Ct. 365. These requirements make clear that preliminary injunctions should not be casually awarded and reflect a long history and a traditional understanding about the limited power of the courts. The majority undermines that tradition today.

The district court's refusal to grant preliminary injunctive relief was proper for many reasons. First, our legal system generally eschews the casual issuance of injunctions because they often thrust courts into a posture of institutional governance and they can impose onerous burdens on the enjoined party not presented by other remedies. *See* Samuel L. Bray, *356 *The System of Equitable Remedies*, 63 *UCLA L. Rev.* 530, 572 (2016) (arguing that “equitable remedies and managerial devices can be costly, both to courts and litigants”). At the time of the Founding, equitable remedies like injunctions were controversial. Whether [Article III of the Constitution](#) granted federal courts the authority to issue injunctions was a contentious subject during the ratification debates. *See Trump v. Hawaii*, — U.S. —, 138 S. Ct. 2392, 2426, 201 L.Ed.2d 775 (2018) (Thomas, J., concurring). These concerns about judicial power were assuaged by assurances from the Federalists that equitable remedies like injunctions, “which are exceptions to general rules,” would only be given in “extraordinary cases” according to well-established rules. *See* The Federalist No. 83, at 505 (Alexander Hamilton) (Clinton Rossiter ed., 1961); *see also Boyle v. Zacharie*, 31 U.S. (6 Pet.) 648, 658, 8 L.Ed. 532 (1832) (explaining that “remedies in equity,” which include injunctions, “are to be administered ... according to the practice of courts of equity in [England]”).

The history is one thing. The district court was also right to deny the preliminary injunction for other more practical reasons. Our law disfavors *preliminary* injunctions even more than final, permanent injunctions. The difference between these categories is that preliminary injunctions, as their name implies, are issued before a full evidentiary record is assembled and a final adjudication on the merits is given. Courts are more likely to make accurate decisions after the development of a complete factual record during the litigation. *See* Douglas Laycock & Richard L. Hasen, *Modern American Remedies* 453 (5th ed. 2019). In contrast, when a court issues a preliminary injunction, it is in greater danger of shooting from the hip. It can assemble only limited factual information and must make haphazard guesses about who will ultimately win the case. *See id.* (explaining that a court is “more likely to err when it acts on partial information

after a preliminary hearing”). It should be unsurprising that the casebooks are replete with examples of lawsuits where preliminary injunctions were initially given, only to be taken back later when the initial beneficiary ended up losing. *See id.* at 457–58 (asserting that a higher bar exists for obtaining a preliminary injunction than a permanent injunction). But the damage inflicted upon the defendant in the meantime can be irreparable. *See, e.g., Coyne-Delany Co. v. Capital Dev. Bd.*, 717 F.2d 385, 393 (7th Cir. 1983) (explaining how a wrongfully issued preliminary injunction can “easily” halt work on major projects for “two or three years” and impose great costs on the defendant).

This case demonstrates why our law prefers that courts wait until the end of the case to issue any injunctive relief. The district court had only a few weeks to consider the plaintiffs’ motion for a preliminary injunction and relied on an evidentiary record of less than one hundred pages. If Judge Bennett had issued a preliminary injunction, held a trial, and reversed the initial injunction years later, the disruption to Baltimore would have been significant. Due to the preliminary injunction, a substantial amount of financing would have been tied up. The employees hired to run the AIR program might have lost their jobs or been reassigned. And of course, the will of the people of Baltimore—expressed through the representative branches of government—would have been wrongly stymied by an improvident exercise of judicial power.

To his credit, Judge Bennett did not put Baltimore in that situation. He was faithful to the law of remedies and the traditional principles of judicial restraint. He declined to issue a preliminary injunction—a dramatic and consequential remedy—preferring *357 instead to let the parties submit evidence, develop their arguments, and perhaps even hold a trial. He proceeded cautiously and prudently, as a good district judge generally should.

That decision is entitled to deference by the court of appeals. We review a district court's denial of a preliminary injunction for abuse of discretion. *See Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal*, 546 U.S. 418, 428, 126 S.Ct. 1211, 163 L.Ed.2d 1017 (2006). This deference recognizes the traditional power district courts have had to craft remedies appropriate “to the necessities of the particular case,” *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312, 102 S.Ct. 1798, 72 L.Ed.2d 91 (1982), and it reflects a commitment by appellate courts not to second-guess a district court's remedial discretion absent special circumstances. This

makes eminent sense because the “district court is better positioned than we are to weigh the costs and benefits of injunctive relief.” *Lord & Taylor, LLC v. White Flint, L.P.*, 780 F.3d 211, 217 (4th Cir. 2015). Further, because the law places a thumb on the scale against the issuance of preliminary injunctions, our deference should be even greater when the district court *denies* a preliminary injunction. *See id.* (discussing the traditional power of the district court to deny injunctive and other equitable relief).

Yet tossing deference to the winds is exactly what the majority does today in finding the trial court abused its discretion in failing to preliminarily enjoin the Baltimore AIR program. Although I do not believe the plaintiffs can satisfy *any* of the prerequisites for a preliminary injunction, *see infra* Part III (discussing their remote chance of success on the merits), intervening events have revealed a major additional problem with plaintiffs’ case. To reverse the district court’s order, plaintiffs must show that they are “likely to suffer irreparable harm in the absence of preliminary relief.” *Winter*, 555 U.S. at 20, 129 S.Ct. 365. Plaintiffs cannot by definition suffer irreparable harm from a failure to enjoin a program that no longer exists. And even if—somehow—there is irreparable injury inflicted by a non-existent program, I fail to see how the balance of equities favors the plaintiffs where any remedy provides such minimal relief while tying Baltimore’s hands in dealing with a serious public safety crisis. Hastily deploying equitable powers in these circumstances just makes no sense.

Moreover, the majority charges forward on shifting ground. As this appeal has progressed, the facts of the case have dramatically changed. The AIR program is suspended. The new Mayor of Baltimore largely agrees with the plaintiffs on the propriety of the program. The status quo is dramatically different from that considered by the district court. Instead of asking us to reverse the district court’s earlier denial of a preliminary injunction, the plaintiffs should be before the district court seeking relief based on the changed circumstances.

Zeal consumes patience. Neither plaintiffs nor the majority want to go through any of the normal processes of litigation. The apparent reason for this was provided by the plaintiffs during oral argument. They urged us just to assume that the district court would decide future questions—including the propriety of a preliminary injunction under new circumstances—by simply “reenter[ing] its order” from before. And because plaintiffs asserted they “would be right back before” us, that (somehow) justified the majority’s

insistence on an instantaneous preliminary injunction. This invitation to ignore and circumvent the district court’s role in gathering evidence and considering the propriety of equitable relief undermines the division *358 of responsibilities within the judiciary. *See, e.g., Brown v. Plata*, 563 U.S. 493, 517, 131 S.Ct. 1910, 179 L.Ed.2d 969 (2011) (cautioning appellate courts not “to ‘duplicate the role’ of the trial court” (quoting *Anderson v. Bessemer City*, 470 U.S. 564, 573, 105 S.Ct. 1504, 84 L.Ed.2d 518 (1985))). But the majority aggressively and preemptively invades the district court’s domain, striking at the “heartland of that court’s discretion to manage its own affairs.” *Lord & Taylor, LLC*, 780 F.3d at 219. What a strange and inverted judicial world this court creates, one where district courts are directed to strike down democratic initiatives in our nation’s great cities based on such scant consideration and so little evidence.

B.

The consequences of the majority’s aggression are evident. Because we did not let the district court do its job and put together a full evidentiary record, we are confronted with all kinds of factual uncertainties, forcing us to make speculative assumptions and assertions and creatively bend analysis to avoid contested factual issues. Of course, had we just remanded and allowed the district court to do its job of gathering more evidence, we would not be stuck in this quandary. *See Salve Regina College v. Russell*, 499 U.S. 225, 232, 111 S.Ct. 1217, 113 L.Ed.2d 190 (1991) (“With the record having been constructed below and settled for purposes of the appeal, appellate judges are able to devote their primary attention to legal issues.”).

And it is indeed a quandary. For example, it is unclear what precisely AIR surveillance was actually used for. The BPD tells us that AIR was used only to track limited public movements to and from the scenes of violent crimes. Yet an *amicus* invited by the BPD to assist in evaluating the program tries to persuade us that this is not what is happening. It tells us that the BPD has used the surveillance in other, improper ways. *See* Br. of the Policing Project as *Amicus Curiae* in Support of Neither Party and in Support of Rehearing or Rehearing *En Banc* at 6–8, 10–11. It also alleges inaccuracies in the limited record we do have. *See id.* at 6. Even beyond *amicus*’s unusual attempt to supplement a factual record on appeal, the parties have spent much energy disputing the facts on the ground and assertively trying to frame our very limited factual record. The parties, for example, vigorously dispute

whether the limitations on the AIR program allowed day-to-day tracking. Compare Appellee Br. at 35–36 (stating that AIR will allow “police to track an individual only for the few hours, or even minutes, it takes the person to travel from one place to another” (internal quotation marks and citation omitted)), with Reply Br. at 6–7 (“[I]t will be straightforward for the BPD to repeatedly track the same individual day after day.”). Now the parties disagree on what the BPD may do with the remaining data retained following Baltimore's decision to halt the program.

The factual uncertainties have only multiplied throughout this appeal. Amidst the gathering factual confusion, the majority stunningly accuses the district court of having “misapprehended” the facts of the case. Maj. Op., ante at 340. It apparently views itself as more qualified to make factual findings based on its own “common sense” than the designated factfinder in our judicial system. Maj. Op., ante at 344. It is just wrong for an appellate court to rebuke a trial court for “misapprehending” facts it never gave the court a proper chance to find.

Moreover, the factual quandaries that surround us now could have been avoided. Instead of relying on a report studying cell-site location information (“CSLI”)—like *359 the majority does, Maj. Op., ante at 343–44—we could have benefitted from data based on an examination of *this program*. If we had waited for the district court to conduct orderly proceedings, it would have compiled a full evidentiary record. It would have made factual findings on exactly how the AIR program worked in practice. It would have addressed what the AIR surveillance information is used for. It would have made factual findings on whether the BPD was sticking to the limitations on the use of AIR surveillance it publicly and contractually committed to. It would have applied the law to these factual findings with a sensitivity born of a detailed and carefully assembled factual record. Our Fourth Amendment law has developed in a common-law style in which facts are essential. See, e.g., *Tennessee v. Garner*, 471 U.S. 1, 13, 105 S.Ct. 1694, 85 L.Ed.2d 1 (1985). Facts in our profession are rocks, and the majority rules on sand.

C.

The majority's disregard for the rudiments of restraint is especially problematic in light of Supreme Court guidance that local officials should have leeway to experiment when designing surveillance programs that employ new technology.

In *United States v. Jones*, four Justices stated that elected officials should play a leading role in crafting policies that balance the need for public safety and the need for personal privacy. 565 U.S. 400, 429–30, 132 S.Ct. 945, 181 L.Ed.2d 911 (2012) (Alito, J., joined by Ginsburg, Breyer, & Kagan, JJ., concurring in the judgment) (“A legislative body is well situated to gauge changing public attitudes, to draw detailed lines, and to balance privacy and public safety in a comprehensive way.”); see also *United States v. Graham*, 796 F.3d 332, 388 (4th Cir. 2015) (Thacker, J., concurring) (“Congress and state legislatures are far better positioned to respond to changes in technology than are the courts.”).

Deference to elected officials in this area makes good sense. As the Justices in *Jones* recognized, there will sometimes be tradeoffs between public safety and privacy. Striking the proper balance is even more challenging when dealing with rapidly changing technologies, like aerial surveillance, that courts may struggle to understand. If we do not proceed with care, there is a risk we will “embarrass the future.” *Nw. Airlines, Inc. v. Minnesota*, 322 U.S. 292, 300, 64 S.Ct. 950, 88 L.Ed. 1283 (1944). Indeed, “[i]t would be very unfortunate if privacy protection in the 21st century were left primarily to the federal courts using the blunt instrument of the Fourth Amendment.” *Riley v. California*, 573 U.S. 373, 408, 134 S.Ct. 2473, 189 L.Ed.2d 430 (2014) (Alito, J., concurring in part and in the judgment). Those “elected by the people” are “in a better position than we are to assess and respond to the changes that have already occurred and those that almost certainly will take place in the future.” *Id.* This area poses sensitive and difficult decisions, ones that four Justices have already recognized that local officials should make in close consultation with the needs and wishes of their constituents. That is exactly what Baltimore's government officials were doing in this case. But apparently not liking Baltimore's efforts, the majority rejects them. I have no problem if the AIR program is discontinued. I have a big problem, however, if this court and not the citizens of Baltimore are the ones to terminate it.

III.

There can be only one logical reason for the majority's decision to dash past traditional remedial rules and force a decision before the assemblage of a full evidentiary record. It must think that Baltimore's AIR *360 program is so obviously unconstitutional that normal judicial and ordinary

democratic processes are irrelevant. But the law is not on the majority's side.

A.

The majority concludes that the AIR program violates a reasonable expectation of privacy, asserting a broad expectation of privacy in an individual's public movement. See Maj. Op., *ante* at 341–42, 345 (hinting that even “shorter snippets” of tracked public movements might violate the Fourth Amendment). This assertion defies precedent. The Supreme Court has made clear that an individual has a limited expectation of privacy in his or her public movements. “What a person knowingly exposes to the public ... is not a subject of Fourth Amendment protection.” *Katz v. United States*, 389 U.S. 347, 351, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967). Thus, “[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another.” *United States v. Knotts*, 460 U.S. 276, 281, 103 S.Ct. 1081, 75 L.Ed.2d 55 (1983). The Court did qualify this rule in *United States v. Jones*, 565 U.S. 400, 132 S.Ct. 945, 181 L.Ed.2d 911 (2012), where five Justices concluded that *long-term* surveillance using GPS tracking violated a reasonable expectation of privacy. *Id.* at 414–15, 132 S.Ct. 945 (Sotomayor, J., concurring); *id.* at 430–31, 132 S.Ct. 945 (Alito, J., joined by Ginsburg, Breyer, & Kagan, JJ., concurring in the judgment) (distinguishing between a long-term surveillance using GPS for twenty-eight days, which he thought was impermissible, and a shorter-term surveillance of public movements).

The lesson from *Jones* is that *short-term* surveillance of an individual's public movements is less likely to violate a reasonable expectation of privacy. Under that rule, AIR checks out, at least under the factual findings the district court made on our limited record. Judge Bennett reasonably concluded that AIR's built-in limitations meant it could only effectively track short-term public movements. *Leaders of a Beautiful Struggle v. Balt. Police Dep't*, 456 F. Supp. 3d 699, 704 (D. Md. Apr. 24, 2020). The program's cameras were only able to track outdoor movements. *Id.* at 714. They could not track an individual who enters a building, and analysts could not tell if the person leaving the building was the same person who entered it. And because AIR's surveillance planes could fly only during the daylight hours, AIR surveillance could not be used to track individuals from day-to-day. *Id.* at 704.

The majority also effectively nullifies the Supreme Court's repeated decisions sanctioning aerial surveillance. If a plane can fly just one thousand feet over a home with cameras able to photograph individual items within the home's curtilage, *California v. Ciraolo*, 476 U.S. 207, 209, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986), I fail to see how AIR photographs representing daytime movements on public streets violate a reasonable expectation of privacy. If planes can photograph individual objects on a property as small as one half inch in diameter, *Dow Chemical Co. v. United States*, 476 U.S. 227, 238, 106 S.Ct. 1819, 90 L.Ed.2d 226 (1986), I cannot grasp how AIR photos representing individuals on public streets as mere pixelated dots with no distinguishing features flunks the Fourth Amendment test. Unlike *Florida v. Riley*, 488 U.S. 445, 109 S.Ct. 693, 102 L.Ed.2d 835 (1989), where the Court upheld surveillance by government agents circling four hundred feet above a home in a helicopter to look into a greenhouse partially within the home's curtilage, *id.* at 450, 109 S.Ct. 693, AIR does not involve the invasion of anyone's home or curtilage. If those precedents do not control this *361 case, the majority should frankly state that it no longer deems them palatable or binding.

The majority believes that the decision in *Carpenter v. United States*, — U.S. —, 138 S. Ct. 2206, 201 L.Ed.2d 507 (2018), requires a different result. But it overreads *Carpenter*. The technology at issue in *Carpenter*, CSLI, was far more invasive of privacy than the limited aerial surveillance in this case. CSLI gave the government 101 location data points for each of the seven days it obtained CSLI data. Because “a phone goes wherever its owner goes,” CSLI provides a “comprehensive record of the person's movements.” *Id.* at 2217. CSLI “is detailed, encyclopedic, and effortlessly compiled.” *Id.* at 2216. And, as discussed further below, CSLI is used by the government to target individuals of interest, whereas AIR was used only to track the public movements of non-identified individuals—those who happen to be present at the scene of a violent crime.

The majority asserts that AIR is at least as intrusive as CSLI. But the majority can only reach this conclusion by tossing out the district court's factual findings and replacing them with “facts” more convenient to its preferred conclusion. It dramatically declares that AIR was used to track every Baltimorean's movements over a forty-five-day period, just as if the city had attached ankle bracelets to everyone in the city. Maj. Op., *ante* at 345. It also claims that all Baltimoreans were effectively “tailed” for six weeks because of AIR. *Id.*

But these alternative “facts” trample upon reality and the record. The district court's actual factual findings reveal substantial differences between AIR and CSLI. *See Leaders of a Beautiful Struggle*, 456 F. Supp. 3d at 715–16 (“*Carpenter* simply does not reach this case because CSLI offers a far more intrusive, efficient, and reliable method of tracking a person's whereabouts than the AIR pilot program.”). Whereas CSLI could be used to reliably track an individual's movement from day to day, the district court found that AIR could only be used to track someone's outdoor movements for twelve hours at most. The majority in fact agrees that the “tracks are often shorter snippets of several hours or less.” Maj. Op., *ante* at 342. This is not, like CSLI, a “detailed chronicle of a person's physical presence compiled every day, every moment, over several years.” *Carpenter*, 138 S. Ct. at 2220. The technologies are also used quite differently. Whereas CSLI is used by law enforcement to learn detailed information about someone it is already targeting, *id.* at 2218 (explaining that CSLI tracking reveals an extensive amount of private information to law enforcement), the district court found that AIR was used to identify suspects and witnesses to crimes and takes no deep dive into an individual's life. And while CSLI surveillance was “remarkably easy” and “cheap,” *id.* at 2217–18, the district court found that AIR surveillance was not, requiring hours of work by an analyst to tag a person of interest and reconstruct a couple of hours of that person's public movements. Even the majority agrees with this finding. *See* Maj. Op., *ante* at 345.

Hedging on its exaggerations about the program's capabilities, the majority then tips its hand by hinting that even “shorter snippets” of surveillance might cross the line. Maj. Op., *ante* at 341–42, 345. Candidly, the majority confesses that it opposes all warrantless surveillance. Maj. Op., *ante* at 347–48. *Carpenter* did not come close to holding this. Make no mistake. The majority is not applying *Carpenter*'s “narrow” holding. *Carpenter*, 138 S. Ct. at 2220. It is extending it beyond recognition to bar all warrantless tracking of public movements. *362 This is a breathtaking transformation of the law. Uncorrected, it comes very close to invalidating aerial surveillance and short-term tracking technologies altogether.

B.

The majority also ignores caselaw suggesting that AIR represents a reasonable program of surveillance that meets a serious law enforcement need. In such programmatic contexts, the Court assesses searches and seizures by

balancing the asserted burdens on constitutional rights against the claim of law enforcement and public safety needs. *See, e.g., Grady v. North Carolina*, 575 U.S. 306, 310, 135 S.Ct. 1368, 191 L.Ed.2d 459 (2015) (per curiam). “Whether a search is reasonable ‘is determined by assessing, on the one hand, the degree to which it intrudes upon an individual's privacy and, on the other, the degree to which it is needed for the promotion of legitimate governmental interests.’ ” *Samson v. California*, 547 U.S. 843, 848, 126 S.Ct. 2193, 165 L.Ed.2d 250 (2006) (quoting *United States v. Knights*, 534 U.S. 112, 118–19, 122 S.Ct. 587, 151 L.Ed.2d 497 (2001)).

In *Michigan Department of State Police v. Sitz*, 496 U.S. 444, 110 S.Ct. 2481, 110 L.Ed.2d 412 (1990), for example, the Supreme Court upheld a program of drunk-driving checkpoints at which police officers randomly stopped motorists without individualized suspicion. *Id.* at 447, 110 S.Ct. 2481. The Court there emphasized the “magnitude” of the threat posed by drunk drivers to public safety. *Id.* at 451, 110 S.Ct. 2481 (“No one can seriously dispute the magnitude of the drunken driving problem or the States’ interest in eradicating it.”).

This case has clear parallels to *Sitz*. Like the drunk-driving checkpoints, AIR surveillance was not used to target particular, preidentified individuals. Instead, it was used to track non-identified individuals who happen to be present at the scene of a violent crime. Those tracked will either be culpably or innocently there by random chance, precisely like those at a *Sitz* checkpoint. The AIR program could not be used to target them *as individuals*; they do not even appear in the AIR photographs as individuals, but, as noted, as featureless pixelated dots. In short, AIR was not used to isolate and target someone the government was already pursuing.

Further, like drunk-driving checkpoints, the AIR program was designed to assist in solving critical societal problems. *Sitz*, 496 U.S. at 451, 110 S.Ct. 2481. To suggest Baltimore's wave of violent crime is somehow less worthy of government attention than drunk driving is to minimize the hundreds of lives lost every year. If government can use programmatic surveillance to combat drunk driving, it surely can use it to reduce widespread and tragic carnage.

In sum, there is ample precedent to justify the legality of the AIR program. Yet somehow the majority thinks the law is so obviously one-sided as to justify the abrupt and dramatic step of reversing the district court's denial of a preliminary injunction. Proceeding in the face of serious mootness

problems and preemptively dismantling community reforms may seem to some perfectly justified. But ten years hence, others may survey the tragic landscape left by violent crime and wonder why nothing has changed.

IV.

A.

The majority does irreparable damage to our federal system with its precipitous strike against the Baltimore AIR program. If federalism is as natural to American citizens as self-governance, it is surely important *363 that both remain a civic blessing. Today, they are compromised, and I make no apology for rehearsing principles, so indigenous for so many years, that we have lately come to take too much for granted. Back then to those basics the majority disregards.

The unique genius of our Founding Fathers was that they “split the atom of sovereignty,” dividing power between the States and Federal government. *U.S. Term Limits, Inc. v. Thornton*, 514 U.S. 779, 838, 115 S.Ct. 1842, 131 L.Ed.2d 881 (1995) (Kennedy, J., concurring). States in turn divide themselves into local government units, like counties and cities, in order that the people might remain close to their representatives. This is important because our country is diverse. As “Federal Farmer” wrote in a 1787 pamphlet, “[O]ne government and general legislation alone never can extend equal benefits to all parts of the United States: Different laws, customs, and opinions exist in the different states, which by a uniform system of laws would be unreasonably invaded.” Letters from the Federal Farmer, Letter I (Oct. 8, 1787), in 2 *The Complete Anti-Federalist* 223, 230 (Herbert J. Storing ed., 1981). That diversity has only grown with time. The Montana rancher has quite different needs from the factory worker in Allentown or the single mother in West Baltimore. Federalism meets this need by “assur[ing] a decentralized government that will be more sensitive to the diverse needs of a heterogenous society.” *Gregory v. Ashcroft*, 501 U.S. 452, 458, 111 S.Ct. 2395, 115 L.Ed.2d 410 (1991).

Of course, the exercise of state and local power is limited by the commands of the Constitution which was, after all, adopted by the whole people of the United States. For a long time, very few constitutional provisions applied against state and local governments. The Bill of Rights did not. See *Barron v. Baltimore*, 32 U.S. (7 Pet.) 243, 8 L.Ed. 672 (1833).

State constitutions and representative institutions were to be the people's primary protection. But sadly, this protection often did not extend to large parts of the population. A Civil War was fought. And the Fourteenth Amendment altered profoundly the relationship between the federal government and the States. See *Timbs v. Indiana*, — U.S. —, 139 S. Ct. 682, 687, 203 L.Ed.2d 11 (2019). The courts subsequently recognized that the Fourteenth Amendment incorporated the protections of the Bill of Rights—including the Fourth Amendment—against the States, thus ensuring that the federal government would play an increased role in ensuring the protection of individual rights.

But this alteration did not effect a complete transformation. The fundamental balance between the federal, state, and local governments remains intact. State and local governments remain the source of most laws and institutions that affect our daily lives. Property law, family law, and criminal law are just a few examples. See, e.g., *Elk Grove Unified Sch. Dist. v. Newdow*, 542 U.S. 1, 12–13, 124 S.Ct. 2301, 159 L.Ed.2d 98 (2004) (explaining how federal courts generally abstain from hearing cases related to family law and domestic relations because that is a traditional area of state-law regulation). And the Supreme Court has made clear that it will act to prevent invasions of the domains of state and local governments, thus preserving our Constitution's guarantee of divided sovereignty. See, e.g., *Murphy v. Nat'l Collegiate Athletic Ass'n*, — U.S. —, 138 S. Ct. 1461, 1478, 200 L.Ed.2d 854 (2018) (striking down federal law due to unlawful interference with state sovereignty under the anti-commandeering doctrine).

B.

One area that remains a core part of state and local responsibility is criminal *364 law. *Patterson v. New York*, 432 U.S. 197, 201, 97 S.Ct. 2319, 53 L.Ed.2d 281 (1977) (“[P]reventing and dealing with crime is much more the business of the States than it is of the Federal Government”). The power to define crime is primarily a responsibility of state governments, and the power to prevent it belongs substantially to local governments, like the City of Baltimore. It may be tempting for federal judges to think we can do a better job protecting rights and fighting crime than states and localities. We may think it should be done only in particular ways and that we hold the exclusive franchise on enlightenment. And we have a ready source of constitutional authority to compel our will: the provisions of the Bill

of Rights dealing with crime, especially the Fourth, Fifth, Sixth, and Eighth Amendments. These provisions contain broad and open-ended phrases, like provisions prohibiting “unreasonable searches and seizures.” *U.S. Const. amend. IV.*

But the Supreme Court has instructed us to be respectful of federalism in enforcing these precious constitutional guarantees. Because the task of criminal justice belongs in significant part to state and local governments, the Court has said we “should not lightly construe the Constitution so as to intrude upon the administration of justice by the individual States.” *Patterson*, 432 U.S. at 201, 97 S.Ct. 2319. Thus, the Court has interpreted these provisions so as to avoid imposing its own preferred criminal justice regimes on diverse states and localities. For example, in *Scott v. Illinois*, 440 U.S. 367, 99 S.Ct. 1158, 59 L.Ed.2d 383 (1979), the Court considered whether the Sixth Amendment required the appointment of counsel in criminal cases where only fines were issued, *i.e.*, a large percentage of the nation's misdemeanor cases. *Id.* at 372, 99 S.Ct. 1158. Federalism considerations dominated the Court's holding that it did not. The Court noted the “special difficulties” arising from the incorporation of the Sixth Amendment against the States because the “range of human conduct regulated by state criminal laws is much broader than that of the federal criminal laws, particularly on the ‘petty’ offense part of the spectrum.” *Id.* It then reasoned that “any extension would create confusion and impose unpredictable, but necessarily substantial, costs on 50 quite diverse States.” *Id.* at 373, 99 S.Ct. 1158. After all, holding otherwise would have required the Court to impose its own vision of misdemeanor justice on the entire country, governing cases from the prairies of Kansas to the cityscapes of the Bronx.

Why must a similar sensitivity elude us here? “As the text of the Fourth Amendment indicates, the ultimate measure of the constitutionality of a governmental search is ‘reasonableness.’ ” *Maryland v. King*, 569 U.S. 435, 447, 133 S.Ct. 1958, 186 L.Ed.2d 1 (2013) (quoting *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 652, 115 S.Ct. 2386, 132 L.Ed.2d 564 (1995)). Reasonableness is not a word of exclusive federal content. It must account for local conditions and circumstances, mindful that public officials in different parts of the country face very different challenges. What is reasonable in Baltimore may differ from what is reasonable in New York or in rural jurisdictions.

By interfering with Baltimore's federalist experimentation, the majority may think it is striking a great blow in the

name of privacy. *See* Maj. Op., *ante* at 348 (claiming it is preserving the Fourth Amendment as a “bastion of liberty”). But this intervention may have unintended consequences. The majority apparently believes its decision will result in less surveillance, an outcome it favors because it claims that cities are bedeviled above all by too much policing. *See* Maj. Op., *ante* at 347 *365 (complaining that Baltimore is a “thoroughly surveilled city” without AIR).

But cities cannot be expected to do nothing in response to rising violent crime rates. In 2020, the United States “experienced the largest single one-year increase in homicides since the country started keeping such records in the 20th century, according to crime data and criminologists.” Devlin Barrett, *An Unprecedented One-Year Spike in U.S. Homicides*, Wash. Post, Dec. 31, 2020, at A3. This rise in violent crime disproportionately strikes the most vulnerable among us, intensifying the breadth and depth of the tragedy. “Much of this violence has most significantly impacted poor Black and brown communities, exacerbating disparities already apparent in historical patterns.” Josiah Bates, *2020 Ends as One of America's Most Violent Years in Decades*, Time (Dec. 30, 2020). Simply hoping for police departments to work harder and better is not enough. Cities like Baltimore may feel a need to adopt innovative surveillance systems to combat this pandemic of violence.

By slamming the door shut on AIR, the majority may force cities to embrace surveillance systems posing a greater threat to privacy than that the majority invalidates today. For example, Chicago relies on a startlingly powerful surveillance system. The police department employs a network of at least 35,000 on-the-ground surveillance cameras. *See* Elizabeth Matthews, *Vast Network of Surveillance Cameras Help Chicago Police Track Subjects*, Fox 32 Chicago (Nov. 12, 2019), <https://www.fox32chicago.com/news/vast-network-of-surveillance-cameras-help-chicago-police-track-suspects>. The Department monitors this system in real-time, twenty-hours a day, rain, snow, or shine. *See* Chicago Police Department, *Police Observation Device (POD) Cameras*, <https://home.chicagopolice.org/information/police-observation-device-pod-cameras/> (last visited May 26, 2021). Officers can even monitor the system in their squad cars while on patrol. *See* Dahleen Glanton, *Being Watched Could be a Good Thing, Even if Done Unequally*, Chicago Tribune, Feb. 26, 2019, at C2. In addition to monitoring, officers can remotely pan cameras 360 degrees and “zoom in ... to clearly see small objects from great distances.” Adam Schwartz, *Chicago's Video Surveillance Cameras: A*

Pervasive and Poorly Regulated Threat to Our Privacy, 11 Nw. J. Tech. & Intell. Prop. 47, 57 (2013); Chicago Police Department, *supra*. And officers can automatically track a vehicle across the city by simply inputting a license plate number. See Matthews, *supra*. If Chicago wants to find a specific person, it probably can.

Newark, New Jersey, has taken a different but similarly proactive approach to surveillance. Like many cities, Newark's police department has a system of street-level cameras, but it relies on additional enforcers beyond its patrol officers. Its "Citizen Virtual Patrol" program provides anyone the ability to monitor the city's CCTV camera system in real time. Rick Rojas, *Where Police Cameras and Web Users See You*, N.Y. Times, June 10, 2018, at A1. "Anyone with a fast internet connection and a desire to watch" can surveil the network. *Id.*

These programs may well pose a more pervasive threat to privacy than AIR. I do not highlight this reality to cast doubt on their legality. Indeed, the Supreme Court stated explicitly in *Carpenter* that it was not calling into question systems of surveillance cameras. 138 S. Ct. at 2220. But by slamming the door shut on Baltimore's attempt to find a better path, the majority is doing nothing more than forcing cities to choose between a smaller number of potentially more intrusive surveillance systems. *366 This sort of dictation cannot be superior to federalist experimentation and giving Baltimoreans some leeway to chart their future course. Our Constitution requires balance between national and local authority, while in the case at bar a federal hand now lies heavy on the land.

V.

This imposition of a straitjacket on Baltimore's officials is most unfortunate. The people most affected by a problem are denied by this court a say in ameliorating it. Our direction to them is simply to endure their disenfranchisement. Baltimoreans face grave challenges that are difficult enough without our interference. The briefest repetition is required here. Three hundred and forty-eight people were murdered in Baltimore in 2019. See *Baltimore's Plague of Gun Violence Continues*, Balt. Sun, Sept. 15, 2020, at A10. In 2020, three hundred and thirty-five were killed. See Associated Press, *Baltimore Had 335 Homicides in 2020*, U.S. News & World Rep., Jan. 1, 2021. Baltimore shares with other localities an alarming incidence of homicides. It is a city where criminals

have little concern for law enforcement because the police cleared homicides at a rate of just 32.1% in 2019. See Jessica Anderson, *Baltimore Ending the Year with 32% Homicide Clearance Rate, One of the Lowest in Three Decades*, Balt. Sun, Dec. 30, 2019; see also Daniel S. Nagin, *Deterrence in the Twenty-First Century*, in 42 Crime and Justice in America: 1975–2025, at 199 (Michael Tonry ed., 2013) ("[C]ertainty of apprehension ... is the more effective deterrent.").

Numbers and statistics speak only in gross terms. Homicide strikes individuals. Statistics, cold as they are, give every sacred being short shrift. It is essential to appreciate in human terms the tragedy that has befallen the Baltimore community. Human life is being cut short at a terribly early stage; young people are not given a chance to develop their innate gifts. Nineteen-year-old Diamante Howard was the first in his family accepted to college when he was murdered by a Baltimore gang in 2018. See Justin Fenton, *'Violent and Relentless' Baltimore Gang Charged with Dozens of Shootings, Including 18 Murders and 28 Attempted Murders*, Balt. Sun, Jun. 3, 2021. Jaheem Atkins was only sixteen years old when he was the fifth teenager to be killed during a two-week span in October 2020. See Phil Davis & Phillip Jackson, *City Nears Deadly Mark as Baltimore Closes in on 300 Homicides, Fresh Ideas Get a Look*, Balt. Sun, Nov. 21, 2020, at A1. Cincere Johnson, a champion youth football quarterback who graduated from high school in January, was one of nine people killed in Baltimore over Memorial Day Weekend. See Colin Campbell, *Former Champion Youth QB Killed, 7 Months After Coach*, Balt. Sun, Jun. 4, 2021, at A2. More women and girls were killed in Baltimore in 2020 than in any previous year. See Associated Press, *supra*. The list goes on and on. This is a tragedy of immense proportions and a challenge whose magnitude cannot be masked by the hum of daily life and governance. If this court blocks initiative at every turn, cutting off reasonable experimentation before the results are even in, this sad situation will in time give way to social indifference and neglect as a preoccupied society turns to other priorities.

Baltimore was not willing to adopt a new normal of indifference. It tried to change this bleak reality and pursued a solution that was at once measured, and proportional to the enormity of the challenge. It saw in the AIR program an opportunity for public policy to evolve organically and empirically, relying on what works for the people instead of the fixed visions of bureaucrats, *367 central planners, or judges. Gathering hard data on the efficacy of the system was one of the program's explicit aims. As put by Police

Commissioner Harrison, it was at least worth a try. See Eddie Kadhim, *Baltimore Police Met with the Community to Give Insight on Pilot Program*, WMAR2 Baltimore (Mar. 11, 2020), <https://www.wmar2news.com/spyplane>.

The city's decision to test the program arose with a strong showing of community support. A secret rollout of a program under the prior police commissioner suffered from legitimate privacy concerns. It was halted in 2016, but the Baltimore community picked up the pieces and tried again. In early 2018, the vendor's CEO and two community members began "visiting community associations, churches, businesses and government agencies trying to build support for," as they put it, "a much-needed crime-fighting tool in one of America's most violent cities." Luke Broadwater, *Surveillance Airplane Gains a New Sales Pitch*, Balt. Sun, Feb. 25, 2018, at A1.

As the message spread, enthusiasm grew; the group gained "pledges of support from the Baltimore City Chamber of Commerce and community leaders in East and West Baltimore." *Id.* This included George Mitchell, a Park Heights community leader who runs Neighborhoods United. As he explained: "We have to do something. The murders are doing a lot of disruption to our city, especially in the black population." *Id.* Former City Councilwoman Rochelle Rikki Spector noted the program would be paid for by an outside foundation and Baltimoreans would have the opportunity to work as analysts. *Id.* And another concerned citizen voiced her appreciation for *testing* the technology: "People are going to be worried about privacy. People are going to be worried about Big Brother. But our crime has escalated. How can we abate the situation if we can't determine what they're doing and why they're doing it?" *Id.* This growing support was accompanied by a City Council community forum in the fall of 2018 and other community meetings that sought to demystify the program. See Ross McNutt, *Plane Would Cut Crime: The Head of the Company that Flew a Surveillance Plane over Baltimore Promises He Can Prevent and Solve Crimes if We Give Him the Chance*, Balt. Sun, Oct. 13, 2018, at A13.

Next came the Governor's endorsement. Letter from Larry Hogan, Governor of Maryland, to Bernard C. "Jack" Young, Mayor of Baltimore, & Michael Harrison, Baltimore Police Department Commissioner (Sept. 10, 2019), at 2–3. And then the business community jumped in—in particular, the Greater Baltimore Committee (GBC), which is "the region's premier organization of business and civic leaders" with board membership including the presidents of Johns

Hopkins University, the University of Baltimore, and Morgan State University, the Senior Pastor of the Union Baptist Church, and the Archbishop of Baltimore. Greater Baltimore Committee, *About Us*, <https://gbc.org/about-us/> (last visited May 26, 2021). The GBC recognized the *preliminary* nature of the pilot program and urged the BPD to live up to Baltimore's "history of innovation" as a "City of Firsts." Greater Baltimore Committee, *Position Statement on Public Safety in Baltimore and Support of the Use of Aerial Surveillance in Baltimore* (Oct. 15, 2019), <https://gbc.org/statement-on-public-safety-in-baltimore-and-support-for-the-use-of-aerial-surveillance/>. It hoped the pilot program would demonstrate that AIR surveillance was "an additional investigative tool that could be used by the police department to bring perpetrators of crime to justice." *Id.*

*368 As an exclamation point to this list of supporters, the United Baptist Missionary Convention—which "is comprised of more than 100 churches across the state"—voiced its support for "research[ing] the efficacy of aerial surveillance." J.A. 126. It pushed for action because the "communities surrounding many of [its] churches are impacted by violent crime that impedes the quality of life of [its] members and its residents." *Id.* All the while, BPD continued to hold public meetings. See Kadhim, *supra*.

The pilot program as challenged by plaintiffs was not hatched in the dark or behind closed doors. It did not spring up over night without a thought. It was carefully considered over multiple years and by many stakeholders. This is not to say that support for the program was universal; as with most policies in the criminal justice arena, there were both supporters and detractors. At first, the police commissioner himself was skeptical and withheld his support until the department "came up with a plan to address people's privacy concerns." *Id.* As those conversations took shape, he found the benefit of "treat[ing] it like a scientific experiment," with a focus on creating "safeguards, measures of accountability, and transparency and bringing in external researchers and auditing to make sure the research will guide us to whether it works or not." *Id.*

The ACLU itself voiced its concerns early on. See Broadwater, *supra*. But the city heard and considered privacy objections, and limitations designed to protect personal privacy were rightly folded into the program's structure. See J.A. 47 (BPD Community Education Presentation slide outlining privacy protections). But the idea of scrapping the

program in its entirety did not win the day in this first round of the democratic process. That the opponents of AIR eventually succeeded in halting it is no cause for dismay. The fact remains that Baltimore tried. And that stark contrast between the unceremonious haste with which the majority has dispatched this program and the seriousness with which the city debated its pros and cons could not be more apparent. Was AIR the answer? I hardly know. That was for the city, not the majority or this dissent, to decide. Baltimore's effort was a constructive example of democracy at work. This court's decision is a blow to self-determination everywhere.

VI.

Today's precipitous and gratuitous ruling will contribute to the continuation of a great human tragedy. There is forever the temptation in the face of the horrific facts of human suffering to turn the eyes and avert the gaze. But no. Homicides in Baltimore and elsewhere rob children of their parents and parents of their children. Homicides envelop communities in greater fear and rising suspicion. Homicides leave too many empty chairs at too many kitchen tables. Homicides break the Declaration of Independence's promise that Baltimoreans shall have "certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness." The Declaration of Independence para. 2 (U.S. 1776). Homicides deny our least fortunate citizens the opportunities that the more fortunate enjoy, perpetuating systemic inequality and suffering. Homicides make it more difficult for businesses and jobs to locate in Baltimore, for educational opportunities to take hold, for family and civic bonds to form and endure. How many youngsters are denied the chance to marry and raise children, and to give their talents to their country. There is no one answer to these problems, but surely Fourth Amendment reasonableness does not conscript us in an *369 effort to deny cities the right to find answers, to discover what works for them.

Footnotes

- 1 The district court found that "PSS cannot provide real-time surveillance," J.A. 130, but real-time analysis is indeed feasible and authorized by the PSA, albeit in limited circumstances. See J.A. 72 ("[PSS] will not provide BPD real time support except in exigent circumstances and only at the written request of the BPD Police Commissioner.").
- 2 Commissioner Harrison's letter to the Board of Estimates states that "[u]nanalyzed imagery data" will be retained for 45 days "after which point it will be deleted." J.A. 51. The PSA does not specify an obligation or process for data deletion. See J.A. 73.

Baltimore tried. Our Constitution does and did not prevent it from doing so.

NIEMEYER, Circuit Judge, dissenting:

Our court's majority opinion in this case is the most stunning example of judicial overreach that I have ever witnessed on this court. It is nothing short of an advisory opinion that also oversteps an appellate court's role. This is well-detailed in Judge Wilkinson's most persuasive redress, in which I am pleased to concur. Were it ever fitting for the Supreme Court to oversee such inappropriate exercises of authority, this is undoubtedly a supreme example.

DIAZ, Circuit Judge, dissenting:

When this case first came before us, it presented a close constitutional question, namely, whether the warrantless operation of Baltimore's AIR Program violated the Fourth Amendment. And indeed, my colleagues have eloquently made the case for the competing views.

But while this appeal was pending, the Baltimore Police Department terminated the AIR Program, cancelled its contract with Persistent Surveillance Systems, and deleted almost all of the data collected during the AIR Program's operation. In these circumstances, the justification for granting a preliminary injunction—that the Department was using the images to track and identify individuals and produce detailed reports about their movements—has effectively evaporated. That, in turn, renders this appeal moot.

I therefore join Part I of Judge Wilkinson's dissent, which ably explains why this is so.

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- 3 In the intervening period, PSS rebranded as “Community Support Program.” For consistency’s sake, the entity will be referred to as PSS here, as in the district court.
- 4 The Policing Project published the findings of its civil liberties audit. See Br. of the Policing Project as *Amicus Curiae* in Supp. of Neither Party and in Supp. of Reh’g or Reh’g En Banc, ECF No. 59 (“Policing Project Brief”). The audit found that, during the first three months of the program, due to “technical issues” and BPD officers’ “unfamiliarity with the program,” all AIR data was retained indefinitely—not for 45 days only, as the PSA provided, as Commissioner Harrison represented to the Board of Estimates, and as Defendants represented to the district court and this Court. Policing Project Br. App. at 17 & n.18. Further, even after the first three months, BPD continued to retain “a substantial majority of the aerial imagery generated during the AIR pilot” beyond 45 days because, “on any day in which there was a request from BPD, and AIR has (Continued) captured relevant imagery,” PSS would retain the entire day’s data indefinitely. *Id.* “Given the volume of cases BPD initiates, these policies mean all the imagery is kept for most days.” *Id.* at 18. And, “once imagery has been retained for use in one investigation, nothing prevents BPD from requesting that PSS use the imagery in another case.” *Id.*
- 5 BPD already has the AIR reports. And though PSS is custodian of the underlying data, the district court found that PSS was a state actor, making its actions attributable to Defendants. That finding was based on the now-terminated PSA, but BPD and PSS expressly preserved its data retention provisions: PSS “will maintain the retained imagery data in accordance with the [PSA] ... until told the retention program is no longer needed to support trials, appeals, and other legal actions.” Defs.’ Mot. to Dismiss, Ex. B.
- 6 For purposes of the mootness analysis, we take for granted BPD’s representation that, now that it terminated the PSA with PSS, it can produce no further tracking information from the retained data. We note, however, that PSS’s memo regarding the deletion of AIR data states, “The retained data allows for additional analysis by prosecution and defense teams should the need arise in specific cases” and is enough to meet “the requirement and desire to support future prosecution and defense team analysis requests.” Defs.’ Mot. to Dismiss, Ex. B, at 1.
- 7 Further, Defendants here could restart the challenged conduct, unlike appellants from a granted injunction. Defendants emphasize that the PSA has been terminated and, when asked whether the program could restart, replied: “Not under this Mayor.” See Oral Arg. at 1:05:51. But that is a statement about the perceived policy preferences of the current occupant of the Mayor’s office. However clear an official’s intentions may appear, office holders are fungible and policy positions change. For example, as recently as two months before announcing the return of the AIR program, Commissioner Harrison publicly stated he was “skeptical” of the idea. J.A. 129 n.3 So, while we agree there are practical barriers to restarting the AIR program, our analysis is informed by the fact that there are no *legal* barriers to doing so. If the leaders involved change their minds, or new leaders take their seats, Defendants could choose to restart the challenged conduct that they chose to stop.
- 8 As the D.C. Circuit aptly explained:

The difference is not one of degree but of kind, for no single journey reveals the habits and patterns that mark the distinction between a day in the life and a way of life, nor the departure from a routine that, like the dog that did not bark in the Sherlock Holmes story, may reveal even more. ... 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.

United States v. Maynard, 615 F.3d 544, 562 (D.C. Cir. 2010).

- 9 Indeed, the AIR program used these capabilities during its pilot run. The Policing Project reported that one AIR investigation “monitor[ed] the home of a suspect’s mother over the course of two days and track[ed] the individuals who came and went.” Policing Project Br. App. at 16. And an AIR report “detail[ed] a vehicle’s movements over the course of three days, listing eleven locations at which the vehicle stopped, and noting the interactions the driver had with other individuals.” *Id.* Defendants respond that their past representations—that the AIR program could not “track[] over the

course of several days” and is not used to “reveal ... the movements of an identified person”—were accurate because they understood “tracking over the course of several days ... to mean a continuous, uninterrupted track for that period of time.” Resp. to Pet'n for Reh'g En Banc at 20–21, ECF No. 61. We do not impugn counsel's candor. And we emphasize that the Policing Project's audit report is not in the record, and we do not rely on it. But the record alone supports—and requires—this understanding of the program's capabilities. The evidence before the district court showed that the AIR program was capable of surveillance it apparently did, in fact, carry out. The district court's contrary conclusions amount to error.

10 See Yves-Alexandre de Montjoye et al., *Unique in the Crowd: The Privacy Bounds of Human Mobility*, 3 Sci. Rep. 1376 (2013). The researchers analyzed 15 months of anonymized CSLI data from roughly 1.5 million people, which recorded hourly location points with precision ranging from .15 kilometers in urban areas to up to 15 kilometers in rural areas. They found that 95% of the cell phone owners could be identified from just four randomly chosen location history points.

11 See, e.g., Laura K. Donohue, *The Fourth Amendment in a Digital World*, 71 N.Y.U. Ann. Surv. Am. L. 553, 626–27 & n.444 (2017) (explaining that “the insight provided by [locational] data into individuals' private lives is profound,” citing three empirical studies, in addition to the study Plaintiffs cited, to support that “[i]t can reveal an individual's identity”); Dániel Kondor et al., *Towards Matching User Mobility Traces in Large-Scale Datasets*, 6 IEEE Trans. on Big Data 714, 715–26 (2018) (explaining that because “mobility traces are highly unique,” a “small number of records uniquely identifies an individual,” and “reidentification can be achieved based on a relatively small amount of information, e.g. by following someone for only a short amount of time, ... ”); Herbert B. Dixon Jr., *Your Cell Phone is a Spy!*, Judges' J., Summer 2020, at 34 (discussing instances of private companies sharing locational data to track users' movements and noting, “[a]lthough user data are anonymized, users' identities can nonetheless be determined by following their movements back to their homes and other places”).

12 At oral argument, Defendants posited that an injunction “order[ing] the City and Police Department not to access the data,” would effectively mean “that when a criminal defendant moves to suppress three months from now, the City would be bound not to produce the relevant data.” Oral Arg. at 1:07:50. We do not think so. An order barring the Defendants in this case—the BPD and its Commissioner—from “accessing” any file containing AIR data would not seem to prohibit transferring such files to prosecutors, defense counsel, or the court in an individual prosecution. In other words, an order barring “access” does not bar possession; the injunction Plaintiffs requested would not require BPD to destroy the remaining AIR data. Regardless, we are confident that the parties and the district court can reach agreement on any definitional questions, craft any necessary exceptions, and ensure procedures for complying with all constitutional obligations.

* Baltimore is over-policed: police surveillance is ubiquitous, and pointless, humiliating interactions between its citizens and law enforcement are quotidian. See, e.g., W. Balt. Comm'n on Police Misconduct & the No Boundaries Coal., *Over-Policed, Yet Underserved: The People's Findings Regarding Police Misconduct in West Baltimore*, 1, 25–29 (Mar. 8, 2016), <http://www.noboundariescoalition.com/wpcontent/uploads/2016/03/No-Boundaries-Layout-Web-1.pdf> (collecting 57 examples of such interactions). Of course, not every neighborhood in Baltimore is policed the same way. See, e.g., Joanne Cavanaugh Simpson & Ron Cassie, *Under Watch*, Balt. Mag. (Mar. 25, 2021), <https://pulitzercenter.org/stories/under-watch-police-spy-plane-experiment-over-growing-surveillance-baltimore-continues> (reporting that “more than a fifth of city police cameras [in Baltimore] surveil [the] 0.02 percent of [the city's residents that live in (Continued) public-housing complexes], almost all of whom are Black or Brown”); *id.* (documenting that approximately 99 percent of the AIR program's flights centered on the predominantly Black neighborhoods of East and West Baltimore).

Baltimore is also under-policed, suffering from tragic homicide and homicide-clearance rates. See Kevin Rector & Phillip Jackson, *Dysfunction in Baltimore Police Homicide Unit Went Unaddressed as Killings Hit Historic Levels*, Balt. Sun (Apr. 16, 2020, 7:00 AM), <https://www.baltimoresun.com/news/crime/bs-md-ci-cr-homicide-unit20200416-gbqpcplpazd4jkjobiotrdxga-story.html> (documenting that Baltimore's homicide clearance rate is “roughly half the national average for cities of [its] size”).

Baltimore is also arguably just plain *poorly* policed. Though you would not know it from reading Judge Wilkinson's dissent, in 2016, the Department of Justice found “reasonable cause to believe that [the Baltimore Police Department] engage[d] in a pattern or practice of conduct that violate[d] the Constitution or federal law” by “(1) making unconstitutional stops, searches, and arrests; (2) using enforcement strategies that produce[d] severe and unjustified disparities in the rates of

stops, searches and arrests of African Americans; (3) using excessive force; and (4) retaliating against people engaging in constitutionally-protected expression.” U.S. Dep’t of Just., C.R. Div., *Investigation of the Baltimore City Police Department*, 1, 3 (Aug. 10, 2016), <https://www.justice.gov/crt/file/883296/download>.

Matters do not appear to have improved substantially in the intervening years. For example, between 2015 and 2019, “there were 22,884 use of force incidents in Baltimore” and “13,392 complaints of misconduct were filed against 1,826 Baltimore City officers.” Joe Spielberger, *Chasing Justice: Addressing Police Violence and Corruption in Maryland*, ACLU of Md. 1, 15, 17 (Jan. 2021), https://www.aclumd.org/sites/default/files/field_documents/chasing_justice_report_2021_final.pdf. During this time, “469 individual [Baltimore Police Department] officers were the subject of at least one complaint of physical violence against a member of the public.” *Id.* at 18.

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32 Cal.App.3d 535

Court of Appeal, Fifth District, California.

The PEOPLE, Plaintiff and Respondent,

v.

Gregory Arthur SNEED,

Defendant and Appellant.

5 Cr. 1301.

|

May 21, 1973.

|

Hearing Denied Aug. 16, 1973.

Synopsis

Defendant was convicted in Superior Court of Merced County, Donald R. Fretz, J., of unlawful cultivation of marijuana and he appealed. The Court of Appeal, Geo. A. Brown, P.J., held that officers' flight in helicopter hovering 20 to 25 feet above backyard of house rented by defendant, in search for marijuana plants which were not visible from road, constituted an unreasonable governmental intrusion into serenity and privacy of defendant's backyard and amounted to search without warrant that did not fall within limited classes of searches for which warrant is not required.

Reversed.

Attorneys and Law Firms

****148 *538** Martin & Cole, Modesto, Dennis R. Watt, Berkeley, and William A. Martin, Modesto, for defendant and appellant.

Evelle J. Younger, Atty. Gen., Sacramento, Edward A. Hinz, Jr., Chief Asst. Atty. Gen., William E. James, Asst. Atty. Gen., and Edward W. Bergtholdt, and Garrick W. Chock, Deputy Attys. Gen., for plaintiff and respondent.

OPINION

GEO. A. BROWN, Presiding Justice.

Gregory Arthur Sneed appeals from a judgment of conviction of unlawful cultivation of marijuana in violation of [Health & Safety Code section 11530.1](#). Appellant's purported appeal

from the denial of his motion to suppress made pursuant to [Penal Code section 1538.5](#) is dismissed. Review thereof is afforded upon appeal from the judgment of conviction. ([Pen.Code, s 1538.5](#), subd. (m).)

He asserts two grounds for reversal: (1) That the officers' observations of the growing marijuana plants constituted an illegal search and their testimony and other evidence flowing from the search should have ***539** been suppressed pursuant to his pretrial motion under [Penal Code section 1538.5](#), and (2) the evidence was insufficient to support his conviction.

Appellant and several youthful companions rented and lived in a house in a rural area at 19685 Fowler, near Hilmar, Merced County, California. The 20-acre ranch upon which the house was located was known as the Fowler property.

In back of the house, in a corral and approximately 125 feet from the house, there were two watered and cared for marijuana plants. Between the house and the corral was a barn which was 18 to 20 feet high. One of the marijuana plants was approximately 10 to 20 feet to the rear of the barn and about 8 feet all, and the other was about 40 to 50 feet from the barn and about 10 feet tall. On the other three sides of the corral there was a growing corn crop which stood some 10 to 12 feet high. While it appears the marijuana plants could have been viewed from the edge of the corn crop next to the corral, the corral area was well shielded from public view from any public way or vantage point.

The entire premises, including the house, the barn, the corral and the cornfield, were owned by a third party. The corn was being grown by Hilmer Nyman, a neighboring farmer, on the premises pursuant to a lease with the third party.

Aside from the above factual information, there is a total absence of evidence as to whether or not Mr. Nyman, the appellant and his friends or another were actual lessees of the corral area where the marijuana plants were growing. Since the searches of the corral area involved herein were without a warrant, the burden was upon the People to show that the search did not violate appellant's constitutional rights, including the burden of showing that appellant did not have the right to ****149** possess and use the corral area. It has failed to carry that burden. ([Horack v. Superior Court \(1970\)](#), 3 Cal.3d 720, 725, 91 Cal.Rptr. 569, 478 P.2d 1; [People v. Johnson \(1968\)](#), 68 Cal.2d 629, 632, 68 Cal.Rptr. 441, 440 P.2d 921; [Badillo v. Superior Court \(1956\)](#), 46 Cal.2d 269, 272, 294 P.2d 23.) Inasmuch as appellant was utilizing the area, we presume he had the right to possess that area, at least by sufferance, and was clothed with whatever reasonable

expectation of privacy from illegal searches a legal possessor of real property would normally have.

Moreover, wholly aside from appellant's legal right to possession of the corral area, he has the standing to challenge the legality of the *540 searches as to a third party—whether that may have been the owner, Mr. Nyman or another. (*People v. Martin* (1955), 45 Cal.2d 755, 759—761, 290 P.2d 855.)

THE HELICOPTER OBSERVATIONS

The sheriff's office received a telephone tip that there was marijuana being grown somewhere on the 20-acre Fowler Street ranch. Upon driving to the premises, the officers readily determined that they could not see anything from the public roadway and that the only feasible method they could use to survey the entire 20-acre ranch was by air. The deputy sheriff arranged for a helicopter and caused it to be flown back and forth across the entire 20-acre ranch while he looked for marijuana plants. He finally spotted what he believed to be two marijuana plants growing in the corral. The helicopter hovered as low as 20 to 25 feet above the corral as the deputy made his observations.

Respondent contends that since the marijuana plants were growing in the corral in plain view of the neighbor, the neighbor's employees, crop dusting airplanes and mosquito abatement helicopters, appellant could not have entertained a reasonable expectation of privacy and that therefore the observation from the helicopter was not an illegal search. (*Dillon v. Superior Court* (1972), 7 Cal.3d 305, 309—311, 102 Cal.Rptr. 161, 497 P.2d 505; *People v. Bradley* (1969), 1 Cal.3d 80, 85, 81 Cal.Rptr. 457, 460 P.2d 129.) We first note that there was no evidence presented that any crop dusting planes or mosquito abatement helicopters had actually flown over the area nor that anyone had viewed the plants from the neighbor's cornfield.

The basic test as to whether there has been an unconstitutional invasion of privacy is whether the person has exhibited a subjective expectation of privacy which is objectively reasonable and, if so, whether that expectation has been violated by unreasonable governmental intrusion. (*People v. Bradley* (1969), 1 Cal.3d 80, 84—86, 81 Cal.Rptr. 457, 460 P.2d 129; *People v. Edwards* (1969), 71 Cal.2d 1096, 1100, 80 Cal.Rptr. 633, 458 P.2d 713; *People v. Berutko* (1969), 71 Cal.2d 84, 93—94, 77 Cal.Rptr. 217, 453 P.2d 721.)

This test of reasonableness is dependent upon the totality of facts and circumstances involved in the context of each case. (*North v. Superior Court* (1972), 8 Cal.3d 301, 308—312, 104 Cal.Rptr. 833, 502 P.2d 1305; *People v. Berutko*, *Supra*, 71 Cal.2d 84, 93, 77 Cal.Rptr. 217, 453 P.2d 721; *Cohen v. Superior Court* (1970), 5 Cal.App.3d 429, 434—435, 85 Cal.Rptr. 354.)

*541 A review of the numerous cases in this area of judicial confusion indicates that solutions in many instances have been sought and found in the application of certain rather fixed mechanical rules conveniently labeled; these include, among others, the so-called 'open fields' doctrine, the 'constitutionally protected area' doctrine, the doctrine of 'looking through an open window,' 'common passageway' doctrine, and 'minor trespass doctrine.' We do not believe, however, that since the advent of the 'reasonableness' test set forth in *Edwards*, *Berutko* and *Bradley*, *supra*, and other cases, answers can be found in a Procrustean application of these doctrinaire pronouncements. (See *Katz v. United States* (1967), 389 U.S. 347, 350—352, 88 S.Ct. 507, 510—512, 19 L.Ed.2d 576.)

**150 Certainly, it cannot be said that one who has a backyard concealed from the view of the public from the public roadway has shown in all events a reasonable expectation of privacy for that area, no matter what other facts and circumstances may exist. There are countless thousands of permutations of factual situations, each presenting its own problems. Any effort to generalize is fraught with danger. However, it is readily apparent a number of factors must be considered, among which are the location of the premises, that is, whether in an urban or isolated area, the existence or nonexistence and height of natural or artificial structures adjacent to the premises, the height and sight-proof character of the fencing, the location of public or common private walkways adjacent to the premises, the type and character of invasion by the governmental authority, and other unforeseeable factors which will undoubtedly arise on a case by case basis.

In the case at bench, if the observation of the marijuana plants had been made from the neighbor's property by an officer with the neighbor's consent, there would have been no search. (*Dillon v. Superior Court* (1972), 7 Cal.3d 305, 309—311, 102 Cal.Rptr. 161, 497 P.2d 505.) There would have been no search if the viewing had been made from a position where tradesmen, deliverymen and members of the public had a right to be. (*People v. Bradley* (1969), 1 Cal.3d 80, 81 Cal.Rptr. 457, 460 P.2d 129.)

However, recent Supreme Court cases make clear that though a person may have consented to observations from some sources and by some persons and therefore cannot have a reasonable expectation of privacy as to those sources or persons, he does not thereby forego his Fourth Amendment protection as to intrusions from all sources and by all persons, and particularly has not waived his right to privacy as to government agents. In **542 People v. Triggs* (1973), 8 Cal.3d 884, 106 Cal.Rptr. 408, 506 P.2d 232, the court held that a person in an open-stalled public rest room has a reasonable expectation of privacy from clandestine observations by police from a concealed position, though he could have no such expectation of privacy from observations through the open door, whether made by members of the public or the police. In *People v. Krivda* (1971), 5 Cal.3d 357, at page 367, 96 Cal.Rptr. 62, at page 69, 486 P.2d 1262, at page 1268, the court stated:

‘... we hold that defendants had a reasonable expectation that their trash would not be rummaged through and picked over by police officers acting without a search warrant.

‘Of course, one must reasonably anticipate that under certain circumstances third persons may invade his privacy to some extent. It is certainly not unforeseen that trash collectors or even vagrants or children may rummage through one's trash barrels and remove some of its contents.’

In *People v. McGrew* (1969), 1 Cal.3d 404, 82 Cal.Rptr. 473, 462 P.2d 1 (overruled on other grounds in *People v. McKinnon*, 7 Cal.3d 899, 902, 907, 103 Cal.Rptr. 897, 500 P.2d 1097), at page 412 of 1 Cal.3d, 82 Cal.Rptr. at page 478, 462 P.2d at page 6, the court said:

‘The hotel guest may reasonably expect a maid to enter his room to clean up, but absent unusual circumstances he should not be held to expect that a hotel clerk will lead the police on a search of his room.’

(Accord: *Krauss v. Superior Court* (1971), 5 Cal.3d 418, 422, 96 Cal.Rptr. 455, 487 P.2d 1023.)

In the case at bench, the officers were at the Fowler ranch for the purpose of exploring the premises for the marijuana plants. They had no other legitimate purpose for flying over the property. The marijuana plants were not discovered by happenstance as an incident to other lawful activity. (*Romero v. Superior Court* (1968), 266 Cal.App.2d 714, 72 Cal.Rptr. 430; ***151 People v. Kampmann* (1968), 258 Cal.App.2d

529, 533, 65 Cal.Rptr. 798.) The helicopter activity was a seeking out, manifestly exploratory in nature. (*People v. Superior Court (Kiefer)* (1970), 3 Cal.3d 807, 831, 91 Cal.Rptr. 729, 478 P.2d 449.)

It is settled that before the plain view doctrine can be invoked the officer must have a right to be in the position from which he makes the plain view observation. (*Harris v. United States* (1968), 390 U.S. 234, 236, 88 S.Ct. 992, 993, 19 L.Ed.2d 1067; *De Conti v. Superior Court* (1971), 18 Cal.App.3d 907, 909, 96 Cal.Rptr. 287.) The positioning of the helicopter 20 to 25 feet above appellant's backyard, in addition to being an obtrusive invasion of privacy, was probably illegal.¹ While **543* appellant certainly had no reasonable expectation of privacy from his neighbor and his neighbor's permittees and none from airplanes and helicopters flying at legal and reasonable heights, we have concluded that he did have a reasonable expectation of privacy to be free from noisy police observation by helicopter from the air at 20 to 25 feet and that such an invasion was an unreasonable governmental intrusion into the serenity and privacy of his backyard.

Having concluded that the helicopter observation amounted to a search without a warrant and that it does not fall within the limited classes of searches for which a warrant is not required, the information acquired therefrom and all its fruits must be suppressed. (*Wong Sun v. United States* (1963), 371 U.S. 471, 484, 83 S.Ct. 407, 415—416, 9 L.Ed.2d 441; *People v. Edwards*, *Supra*, 71 Cal.2d 1096, 1105, 80 Cal.Rptr. 633, 458 P.2d 713; *People v. Sesslin* (1968), 68 Cal.2d 418, 428, 67 Cal.Rptr. 409, 439 P.2d 321.)

THE GROUND OBSERVATIONS

After the helicopter flight, the deputy sheriff contacted Mr. Nyman to determine who owned the premises where he had located the growing marijuana plants. As we have indicated, the record is not clear whether or not Mr. Nyman was leasing the corral area. He merely said that he was farming ‘the place’ and ‘the corn.’ The deputy testified he asked Mr. **544* Nyman if ***152* ‘he had any objections to me driving in to look at it.’ The record does not reflect whether or not the question was answered. The record does not affirmatively show that Mr. Nyman gave permission to the deputy to go onto the premises and visit the corral area. Nevertheless, the deputy drove onto the premises, went to the corral, and closely examined the two marijuana plants from both outside and inside of the corral proper.

Shortly thereafter the deputy was joined by other officers and they all went to the house. Appellant answered their knock on the door. The deputies identified themselves as officers, and appellant told them he was the man of the house. The officers told appellant that they had reasonable grounds to believe that marijuana was being grown on the premises and that they were going to look in the barnyard. When asked if he would accompany the officers, appellant asked if he had to. One of the officers replied no, but that he would like him to do so. Appellant went along with the officers to the barnyard. The officers did not ask for nor receive permission from appellant to go to the barnyard, and the respondent herein makes no contention that this search was made with the consent of the appellant. When they arrived at the barnyard area, one of the deputies recognized the two marijuana plants and noted that they were freshly watered. The appellant was then placed under arrest and advised of his Miranda rights.

Appellant thereupon admitted that he had germinated the marijuana plants from seeds and planted them behind the barn.

Respondent contends that the ground search was with the consent of Mr. Nyman. As we have said, the record, which we have closely perused, contains no substantial evidence supporting consent. Neither the trial court nor this court can imply consent in view of the prosecution's burden to affirmatively demonstrate its existence. (*Horack v. Superior Court*, *Supra*, 3 Cal.3d 720, 725, 91 Cal.Rptr. 569, 478 P.2d 1; *People v. Johnson*, *Supra*, 68 Cal.2d 629, 632, 68 Cal.Rptr. 441, 440 P.2d 921; *Badillo v. Superior Court*, *Supra*, 46 Cal.2d 269, 272, 294 P.2d 23.)

Assuming, however, that Mr. Nyman had the authority to and did expressly consent to the officers' going to the corral² those conversations took place after the alleged helicopter search. The record reveals, without contradiction, that prior to the helicopter observations the officers had no idea where the marijuana was located within the 20-acre Fowler ranch and, absent the helicopter search by which the plants were precisely located, would not have undertaken a search by foot of the ranch to find the plants. By reason of these facts the conclusion is inescapable that the entire activity *545 of the officers in consulting Mr. Nyman, in going to the corral area, and thereafter causing the appellant to accompany them there, where he made certain admissions, was caused by, intimately connected with, and would not have occurred absent the helicopter search. As was said in *People v. Edwards*, *Supra*,

71 Cal.2d 1096, at page 1105, 80 Cal.Rptr. 633, at page 638, 458 P.2d 713, at page 718:

'The exclusionary prohibition, of course, extends to the indirect as well as the direct products of an illegal search. (*Wong Sun v. United States*, 371 U.S. 471, 484, 83 S.Ct. 407, 9 L.Ed.2d 441, 453; *Silverthorne Lbr. Co. v. United States*, 251 U.S. 385, 40 S.Ct. 182, 64 L.Ed. 319, 24 A.L.R. 1426.) The test for determining the reach of the 'fruits' doctrine is that set forth in *Wong Sun v. United States*, *Supra*, at pages 487—488 of 371 U.S., 83 S.Ct. 407, at page 417, 9 L.Ed.2d at p. 455, wherein the court stated, 'We need not hold that all evidence is 'fruit **153 of the poisonous tree' simply because it would not have come to light but for the illegal actions of the police. Rather, the more apt question in such a case is 'whether, granting establishment of the primary illegality, the evidence to which instant objection is made has been come at by exploitation of that illegality or instead by means sufficiently distinguishable to be purged of the primary taint.' Maguire, *Evidence of Guilt*, 221. . . .' (See also *United States v. Wade*, 388 U.S. 218, 241, 87 S.Ct. 1926, 18 L.Ed.2d 1149, 1165; *People v. Terry*, 70 Cal.2d 410, 427—428, 75 Cal.Rptr. 199, 450 P.2d 591; *People v. Kanos*, *Supra*, 70 Cal.2d 381, 385—386, 74 Cal.Rptr. 902, 450 P.2d 278; *People v. Bilderbach*, 62 Cal.2d 757, 766, 44 Cal.Rptr. 313, 401 P.2d 921; *Robert Pitner*, *Fruit of the Poisonous Tree*, 56 Cal.L.Rev. 579, 588 et seq.)'

The burden was upon the prosecution to show that the evidence come at after the illegal helicopter search was not by reason of exploitation of that search and that there were attenuating facts which would purge the evidence of the primary taint of that illegal search. (*People v. Edwards*, *Supra*, 71 Cal.2d 1096, 1106, 80 Cal.Rptr. 633, 458 P.2d 713; *People v. Johnson* (1969), 70 Cal.2d 541, 547, 551, 552, 554, 75 Cal.Rptr. 401, 450 P.2d 865; *People v. Faris* (1965), 63 Cal.2d 541, 546, 47 Cal.Rptr. 370, 407 P.2d 282.) Since the prosecution has failed to meet that burden, the marijuana plants and the observations of the officers from the air as well as from the ground and the admissions of the appellant at the scene should have been excluded as the fruits of that illegal search.

In the absence of the improperly admitted evidence, there was insufficient proof to sustain the conviction. The judgment must therefore be reversed.

GARGANO and FRANSON, JJ., concur.

All Citations

32 Cal.App.3d 535, 108 Cal.Rptr. 146

Footnotes

1 Flying the helicopter at 20—25 feet over this area could very well have been a violation of state statutes and federal regulations. [Public Utilities Code section 21012](#) provides: “Aircraft’ means any contrivance used or designed for navigation of, or flight in, the air.’ [Section 21401 of the Public Utilities Code](#) provides: ‘Sovereignty in the space above the land and waters of this State rests in the State, except where granted to and assumed by the United States pursuant to a constitutional grant from the people of the State. The operation of aircraft in such space is a privilege subject to the laws of this state.’ [Section 21402 of the Public Utilities Code](#) provides: ‘The ownership of the space above the land and waters of this State is vested in the several owners of the surface beneath, subject to the right of flight described in Section 21403. . . .’

[Section 21403 of the Public Utilities Code](#) provides in part: ‘(a) Flight in aircraft over the land and waters of this State is lawful, unless at altitudes below those prescribed by federal authority, or unless so conducted as to be imminently dangerous to persons or property lawfully on the land or water beneath. . . .’ Civil Aeronautics Board regulations provide:

‘No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property or (sic) another.’

(14 C.F.R. s 91.9.)

‘Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

‘(a) Anywhere. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

‘. . .whe

‘(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In that case, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

‘(d) Helicopters. Helicopters may be operated at less than the minimums prescribed in paragraph . . . (c) of this section if the operation is conducted without hazard to persons or property on the surface. . . .’

(14 C.F.R. s 91.79.)

2 As we have related, the prosecution did not show that Mr. Nyman had the corral area under lease. Therefore, in no event could he have had the authority to authorize the officers to go farther than the edge of the cornfield.

684 Fed.Appx. 703

This case was not selected for publication in West's Federal Reporter.

See Fed. Rule of Appellate Procedure 32.1 generally governing citation of judicial decisions issued on or after Jan. 1, 2007. See also U.S.Ct. of App. 10th Cir. Rule 32.1. United States Court of Appeals, Tenth Circuit.

UNITED STATES of
America, Plaintiff-Appellee,
v.
Ruben CANTU, Defendant-Appellant.

No. 16-2191
|
Filed April 5, 2017

Synopsis

Background: Defendant was convicted on conditional guilty plea in the United States District Court for the District of New Mexico of being a felon in possession of a firearm and ammunition. The District Court denied defendant's motion to suppress. Defendant appealed.

The Court of Appeals, [Timothy M. Tymkovich](#), Chief Judge, held that defendant did not have reasonable expectation of privacy in outdoor common area between defendant's residence and his brother's residence next door.

Affirmed.

(D.C. No. 5:14-CR-02114-RB-1) (D. New Mexico)

Attorneys and Law Firms

[Terri J. Abernathy](#), Office of the United States Attorney, District of New Mexico, Las Cruces, NM, for Plaintiff-Appellee

[Brock Morgan Benjamin](#), Benjamin Law Firm, El Paso, TX, for Defendant-Appellant

Before [TYMKOVICH](#), Chief Judge, [HOLMES](#), and [PHILLIPS](#), Circuit Judges.

ORDER AND JUDGMENT*

[Timothy M. Tymkovich](#), Chief Judge

Ruben Cantu appeals the district court's denial of his motion to suppress evidence seized as the result of surveillance by a camera placed without a warrant on a utility pole near his residence. After the district court denied his motion to suppress, Cantu pleaded guilty to being a felon in possession of a firearm and ammunition, in violation of [18 U.S.C. § 922\(g\)](#), reserving the right to appeal the district court's order. The only issue before us in this appeal is whether the district court erred in denying Cantu's motion to suppress.

We affirm because we can find no error in the district court analysis. The district court correctly followed our decision in [United States v. Jackson](#), 213 F.3d 1269, 1280 (10th Cir.), judgment vacated on other grounds, 531 U.S. 1033, 121 S.Ct. 621, 148 L.Ed.2d 531 (2000), which involved similar facts, as well as the relevant Supreme Court precedent.

I. Background

The arrest in this case arose from an investigation by the Lea County Drug *704 Task Force and the FBI of a drug-trafficking organization operating in Hobbs, New Mexico. One of the subjects of their investigation was Rolando Cantu, the defendant's brother and also his next-door neighbor. At the request of the Task Force, the local utility company installed a video camera on a utility pole approximately 70 yards from the brothers' adjacent residences. This was the closest utility pole to the properties. The pole was on the side of a paved alley providing access to a parking lot and commercial buildings. The camera allowed agents to observe the front of the brothers' properties, as well as a common, unpaved area between Rolando Cantu's house and the defendant's trailer. The camera did not record sound, and it did not allow the agents to see inside either property. It provided a continuous live feed to a television screen at the Task Force office. Agents at the Task Force office could adjust the camera, zoom it in and out, and take still photographs. Although they are uncertain precisely when it was removed, the Task Force was using the camera at another address a few months after the surveillance of the Cantus's properties.

During the course of this surveillance, the Task Force's commander saw someone on the video feed walking in the common area between the two residences, carrying what looked like an assault rifle. The commander captured several still photographs from the feed. It is apparent from these photographs that a car or pedestrian coming down the street would have seen the man carrying the weapon. See Attachments to Aple. Br. The Task Force agents knew from New Mexico Probation and Parole that Ruben Cantu, the defendant, lived in the residence next to Rolando Cantu. The agents compared a photograph of Ruben Cantu with the still photographs from the video camera, which allowed them to identify the man carrying the assault rifle as Ruben Cantu. After reviewing his criminal history and seeing a prior felony conviction, the Task Force obtained a search warrant for Ruben Cantu's property. The agents found an AR-15 assault rifle and over 100 rounds of ammunition.

II. Analysis

The parties have stipulated all relevant facts, so we review only the district court's legal analysis. We review questions of law de novo, including the "ultimate determination of reasonableness under the Fourth Amendment." *United States v. Shuck*, 713 F.3d 563, 567 (10th Cir. 2013) (quoting *United States v. Polly*, 630 F.3d 991, 996 (10th Cir. 2011)).

Our analysis could begin and end with *United States v. Jackson*, 213 F.3d 1269 (10th Cir.), judgment vacated on other grounds, 531 U.S. 1033, 121 S.Ct. 621, 148 L.Ed.2d 531 (2000). The facts in *Jackson* were quite similar. Law enforcement had "installed video cameras on the tops of telephone poles overlooking the residences of" the suspected leaders of drug organizations. *Id.* at 1276. "[B]oth of these cameras could be adjusted by officers at the police station, and could zoom in close enough to read a license plate, [but] neither had the capacity to record sound, and neither could view the inside of the houses." *Id.*

On appeal, the subject of the surveillance argued the pole cameras violated her Fourth Amendment rights because they were installed without a warrant. *Id.* at 1280. We disagreed, holding that "[t]he use of video equipment and cameras to record activity visible to the naked eye does not ordinarily violate the Fourth Amendment." *Id.* at 1280-1281 (citing *Dow Chem. Co. v. United States*, 476 U.S. 227, 106 S.Ct. 1819, 90 L.Ed.2d 226 (1986); *California v. Ciraolo*, 476 U.S. 207, 213, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986)). Not only that, but

*705 "activity a person knowingly exposes to the public is not a subject of Fourth Amendment protection, and thus, is not constitutionally protected from observation." *Id.* at 1281 (citing *Katz v. United States*, 389 U.S. 347, 351, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967)). Pointing to two facts—(1) the pole cameras could not see inside the houses and (2) the pole cameras could only see what a passerby could observe—we found the subject of the surveillance "had no reasonable expectation of privacy that was intruded upon by the video cameras." *Id.* The surveillance therefore did not violate the Fourth Amendment, and the police officers did not need to obtain a warrant to install or use the pole camera. *Id.*

Cantu attempts to distinguish his case from *Jackson*. He points out that the pole camera evidence in *Jackson* was used against the subject of the investigation, whereas he "simply unknowingly walked into the path" of the pole camera. Aplt. Br. at 25. But this is a distinction without legal significance. Our holding in *Jackson* was not premised on the fact that the evidence was used against the subject of the investigation. Here, agents saw a man walk from a suspected drug trafficker's residence to a neighboring house carrying a large assault rifle. "Fourth Amendment protection of the home has never been extended to require law enforcement officers to shield their eyes." *Ciraolo*, 476 U.S. at 213, 106 S.Ct. 1809. And it has never been extended to prevent them from acting when in the course of their investigation they see someone other than their target committing a likely criminal act.

Cantu also argues that *Florida v. Jardines*, 569 U.S. 1, 133 S.Ct. 1409, 185 L.Ed.2d 495 (2013), a Supreme Court case decided after *Jackson*, casts *Jackson*'s holding into doubt. We disagree. Cantu's argument confuses the two different tests articulated in the Fourth Amendment jurisprudence: the reasonable-expectation-of-privacy test and the common-law trespassory test. The Supreme Court clarified in *United States v. Jones*, 565 U.S. 400, 405-08, 132 S.Ct. 945, 181 L.Ed.2d 911 (2012), that an unconstitutional search can be established under either standard. As Cantu himself notes, the "reasonable-expectation-of-privacy test has been added to, not substituted for, the common-law trespassory test." Aplt. Br. at 13 (quoting *Jones*, 565 U.S. at 409, 132 S.Ct. 945). *Jardines*, unlike here, involved a "physical intrusion of a constitutionally protected area." 133 S.Ct. at 1414 (quoting *United States v. Knotts*, 460 U.S. 276, 286, 103 S.Ct. 1081, 75 L.Ed.2d 55 (1983) (Brennan, J., concurring)). The police in *Jardines* "gather[ed] information in an area belonging to [the suspect] and immediately surrounding his house ... by

physically entering and occupying the area.” *Id.* at 1414. By contrast, Cantu's motion to suppress must be assessed under the reasonable-expectation-of-privacy test, since he does not allege any physical intrusion occurred. *Jardines* has no bearing on *Jackson* or on Cantu's appeal.

Cantu also tries to avoid *Jackson's* application by arguing that the common area in which he was carrying the assault rifle was his curtilage and thus a protected area under the Fourth Amendment. Even assuming for the sake of argument that it was curtilage, the surveillance did not violate Cantu's constitutional rights. “That [an] area is within the curtilage does not itself bar all police observation.” *Ciraolo*, 476 U.S. at 213, 106 S.Ct. 1809. The question is still whether society is willing to recognize Cantu's expectation of privacy as reasonable. *See, e.g., Smith v. Maryland*, 442 U.S. 735, 740, 99 S.Ct. 2577, 61 L.Ed.2d 220 (1979). And *Jackson* stands for the proposition that it is not. 213 F.3d at 1281.

*706 He further argues that the surveillance failed to comply with our precedent in *United States v. Mesa-Rincon*, 911 F.2d 1433 (10th Cir. 1990) (delineating requirements for domestic video surveillance). But that case is not on point: *Mesa-Rincon* involved the installation of a video camera *inside* a business, a place where there was a reasonable expectation of privacy. Its requirements do not pertain to surveillance of places where, like here, there is no reasonable expectation of privacy.

III. Conclusion

Finding no error in the district court's reliance on our opinion in *Jackson*, we **AFFIRM** its judgment.

All Citations

684 Fed.Appx. 703

Footnotes

- * This order and judgment is not binding precedent except under the doctrines of law of the case, res judicata and collateral estoppel. It may be cited, however, for its persuasive value consistent with [Fed. R. App. P. 32.1](#) and [10th Cir. R. 32.1](#).

982 F.3d 50
United States Court of Appeals, First Circuit.

UNITED STATES, Appellant,

v.

Nia MOORE-BUSH, a/k/a Nia
Dinzey, Defendant, Appellee.

United States, Appellant,

v.

Daphne Moore, Defendant, Appellee.

Nos. 19-1582

|

19-1625

|

Nos. 19-1583

|

19-1626

|

Entered: December 9, 2020

Before [Howard](#), Chief Judge, [Lynch](#), [Thompson](#), [Kayatta](#), and
[Barron](#), Circuit Judges.

ORDER OF COURT

A majority of the active judges who are not disqualified have voted to hear this case en banc. Accordingly, the petition for rehearing en banc is granted. In accordance with customary practice, the panel opinion and the concurrence released on June 16, 2020 are withdrawn, and the judgment entered the same date is vacated. See 1st Cir. I.O.P. X(D).

The en banc court will have copies of the parties' previously filed briefs. The parties may file supplemental briefs addressing any questions the parties may wish to address.

Any supplemental briefs should be filed simultaneously on, or before, January 25, 2021, and shall comply with applicable rules concerning format, service, and other requirements. Amici are welcome to submit amicus briefs no later than 7 days after the principal supplemental briefs are filed. Any reply supplemental briefs must be filed no later than 30 days after the amicus brief deadline. Seventeen paper copies of all briefs filed should be provided to the Clerk's Office no later than one business day after the electronic brief is filed.

The en banc hearing will be scheduled for March 23, 2021, at 10:00 am.

All Citations

982 F.3d 50 (Mem)

911 F.Supp.2d 836
United States District Court, D. Arizona.

UNITED STATES of America, Plaintiff,

v.

Rafiq Albert BROOKS, Defendant.

No. CR 11–2265–PHX–JAT–003.

|

Nov. 28, 2012.

Synopsis

Background: Defendant in criminal prosecution moved to suppress evidence.

The District Court, [James A. Teilborg](#), J., held that warrantless installation of pole camera and use of camera for video surveillance did not violate Fourth Amendment.

Motion denied.

Attorneys and Law Firms

***837** Michael Allen Lee, U.S. Attorney's Office, Phoenix, AZ, for Plaintiff.

[D. Stephen Wallin](#), D. Stephen Wallin Attorney at Law, Phoenix, AZ, for Defendant.

ORDER

[JAMES A. TEILBORG](#), District Judge.

Pending before the Court is Defendant Brooks' Motion to Suppress Evidence Obtained from Pole Camera Surveillance. (Doc. 123). On October 31, 2012 at 1:00 p.m. and November 5, 2012 at 9:00 a.m., this Court held an evidentiary hearing on the Motion to Suppress. The Court now rules on the Motion.

I. BACKGROUND

In March 2011, Special Agents and Task Force Officers of the DEA began an investigation into a Jamaican Drug Trafficking Organization (“DTO”). The DTO was suspected of packaging bulk marijuana and then either distributing or

shipping the packages to others for further distribution.¹ The case agent for the DTO, Detective Kurt Kinsey, testified that this investigation led law enforcement officers to set up surveillance on 17212 N. Scottsdale Rd., # 2072, Scottsdale, AZ (the “Scottsdale Apartment”). Detective Kinsey testified that co-Defendant Bianca McKinney was on the lease of the Scottsdale Apartment, and a large quantity of packing supplies seen at the apartment, along with “heat runs”² from occupants of the Scottsdale Apartment, aroused suspicion that the Scottsdale Apartment was being used by the DTO in connection with drug trafficking. Detective Kinsey testified that these suspicions were heightened on two occasions: first, when two Hispanic men were pulled over and found to have about \$296,000 in a bag after leaving the Scottsdale Apartment, and second, when the driver of a black Taurus that had just visited the Scottsdale Apartment mailed a package that contained marijuana, which was subsequently seized by the Postal Inspector.

Detective Kinsey testified that, through the use of a pole camera aimed at the Scottsdale Apartment, on May 18, 2011, law enforcement learned that a U–Haul moving truck and co-Defendant McKinney's white Civic were being loaded with furniture from the Scottsdale Apartment. Detective Kinsey testified that he then followed both vehicles to Apartment # 3096, 6610 N. 93rd Avenue, Glendale, AZ (the “Glendale Apartment”). Detective Kinsey testified that he then pulled into the Jobing.com Arena parking lot and observed the furniture being unloaded from the U–Haul and white Civic into the Glendale Apartment and the garage assigned to that unit.

***838** Detective Kinsey testified that the Glendale Apartment is located within the apartment complex known as the Pillar at Westgate, which is comprised of 251 apartment units that are housed in several buildings, and that co-Defendant McKinney was on the lease of the Glendale Apartment at the time. Detective Kinsey testified that the Glendale Apartment is located in Building “L” of the Westgate complex, and that the complex is located 200 yards directly east of the Jobing.com Arena and the arena's open-air parking lot. Detective Kinsey testified that the Westgate complex is surrounded by a five foot ten inch wall that separates the complex from the Jobing.com Arena parking lot, and that this wall had openings in the wrought iron openings and in the brickwork that allowed a person walking by to see into the complex and the Glendale Apartment parking area. Detective Kinsey also testified that Building “L” has three floors, with east and west stairwells that connect each floor to the ground, and that

the front doors of the apartment units are accessible from a common breezeway on each floor.

Detective Kinsey testified that, on June 16, 2011, with permission from the arena's head of security and a belief that the Glendale Apartment was a new location associated with the DTO, investigators affixed a camera to a service pole on the Jobing.com Arena. Detective Kinsey testified that the camera was being utilized because previous locations connected to the DTO, including the Scottsdale Apartment, had drug and money seizures associated with their occupants, and the pole camera footage of the Glendale Apartment, which could be viewed and monitored from police computers, would assist law enforcement in identifying patterns, co-conspirators, boxes, drop-offs and deliveries. Detective Kinsey then testified that the Westgate location of the Glendale Apartment made it hard for officers to get to the area to provide surveillance, and that the pole camera would allow for "24/7" remote surveillance of the Glendale Apartment to alert police when to perform physical surveillance.

Detective Kinsey testified that the camera was fixed, but had the ability to zoom and pan. Detective Kinsey testified that the camera was not motion-sensored, but was manually operated and typically faced east toward the western side of Building "L." Detective Kinsey testified that law enforcement had the capability of moving the camera's viewpoint up, down, east or west, but the camera could not read license plates of vehicles associated with the Glendale Apartment because its view would get distorted and out of focus if it was zoomed in that far. As seen in Government's Exhibit 2, which is a still shot of a typical view from the pole camera, the camera allowed for the monitoring of Building "L's" west stairwell, the building's balconies, and the surrounding open parking spaces and parking lot.

Detective Kinsey testified that the Glendale Apartment was on the third floor and had two balconies, and the Glendale Apartment's front door, which faces south, was not within the camera's view. Detective Kinsey testified that people walking by the Glendale Apartment or in the Jobing.com Arena parking lot would have a similar view as the pole camera, and that there were no barriers or obstructions to prevent him from accessing the Glendale Apartment. Detective Kinsey added that he obtained access to the Glendale Apartment complex via an unlocked pedestrian gate off of 93rd Avenue on the morning of November 9, 2011 to place a global positioning system ("GPS") tracking device on a Silver Buick. Although Detective Kinsey did testify that each apartment had carports

on the ground floor that were assigned and separated by pillars, he also testified that there were no obstructions to *839 stop people from walking between carport spaces and that people did not need to access the western stairwell by way of the carports alone, but could also use the complex parking lot to get there.

Officer Morse testified that, after the pole camera's installation, law enforcement monitored the Glendale Apartment via the pole camera and, on one occasion, saw what looked to be bales of marijuana wrapped up in a blanket carried up the stairs and into the apartment. Detective Kinsey testified that, on another occasion, the pole camera allowed him to see that packing materials, including packing peanuts, were brought into the Glendale Apartment. Detective Chris DiPiazza testified that, after his independent investigation of Christopher Paul Stone merged with the investigation of the DTO, he was able to view live footage and tape from the pole camera focused on the Glendale Apartment to observe Mr. Stone show up to the Glendale Apartment and, on one occasion, remove boxes from the Glendale Apartment and load them into his vehicle before driving away. Detective DiPiazza also testified that he observed camera footage of boxes and other packing materials being carried in and out of the Glendale Apartment on multiple dates.

Officer Morse also testified that, in August 2011, law enforcement was able to make seizures of marijuana being sent through the mail based upon the camera's footage of the Glendale Apartment. Specifically, Detective Kinsey testified that the pole camera at the Glendale Apartment allowed law enforcement to observe that a silver Buick left the Glendale Apartment on the morning of November 9, 2011. Detective Kinsey then testified that the silver Buick stopped at a location near the intersection of Cave Creek Road and Bell Road in Phoenix, and continued to Apartment # 1180, 1601 East Highland Avenue, Phoenix, AZ (the "Highland Apartment"). Detective Kinsey further testified that, after the Silver Buick's stop at the Highland Apartment, Defendant drove the Silver Buick to a U.S. Post Office in Glendale, Arizona, where he mailed a parcel that contained 5.5 kilograms of marijuana. Defendant testified that he shipped the package that contained marijuana on December 9, 2011, but he did not know that marijuana was in the box. Defendant further testified that someone told him to mail the box, but he did not remember who, and that he was under the impression that there were clothes inside.

Subsequent to the pole camera activity at the Glendale Apartment, as Officers Morse, Chris Crescione, Detective Kinsey, and Detective DiPiazza all testified, there were multiple arrests made at the Highland Apartment complex on November 17, 2011. Officer Morse testified that, on that occasion, after Defendant was arrested, Defendant claimed ownership of a silver Buick in the Highland Apartment parking lot, and consented to its search. Officers Morse and Crescione testified that they both searched the silver Buick and that Officer Crescione found a handgun located near the center console in the vehicle. Officer Crescione testified that the handgun was found on the passenger side of the center console with the grip of the weapon exposed out of the plastic molding that was peeled back to house the handgun. After the events on the day of November 17, 2011, law enforcement executed warrants on the Glendale Apartment and the Highland Apartment.

Defendant argues that his Fourth Amendment rights were violated when a pole camera was placed on Jobing.com Arena without a warrant. Defendant argues that all evidence obtained against him due to the use of the pole camera should be suppressed. Defendant argues that such evidence includes: footage that led to the *840 seizure of marijuana that was dropped off at the Post Office by Defendant on November 9, 2011, the pole camera video from the Glendale Apartment, Defendant's statements to agents, items found in the Glendale Apartment and the Highland Apartment upon the execution of the warrants, the handgun and bullets found in Defendant's silver Buick, the package of marijuana and shipping labels seized on November 9, 2011, and any surveillance video or stills from November 9, 2011.

In response, the Government argues that the use of the pole camera did not violate Defendant's Fourth Amendment rights and that much of the evidence that Defendant seeks to suppress was not obtained by the use of the pole camera.

II. LEGAL STANDARD

The Fourth Amendment protects “[t]he right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures.” U.S. Const. amend. IV. The Fourth Amendment “embodies ‘a particular concern for government trespass,’ ” and applies “when government officers violate a person's ‘reasonable expectation of privacy.’ ” *Patel v. City of Los Angeles*, 686 F.3d 1085, 1087 (9th Cir.2012) (citing *United States v. Jones*, — U.S. —, 132 S.Ct. 945, 950, 181 L.Ed.2d 911 (2012)). However, “a Fourth Amendment search does *not* occur ... unless ‘the

individual manifested a subjective expectation of privacy in the object of the challenged search,’ and ‘society [is] willing to recognize that expectation as reasonable.’ ” *Kyllo v. United States*, 533 U.S. 27, 33, 121 S.Ct. 2038, 150 L.Ed.2d 94 (2001) (citing *California v. Ciraolo*, 476 U.S. 207, 211, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986)). Building upon this, the U.S. Supreme Court made clear in *Jones* that, while the reasonable expectation of privacy test is not the exclusive test for evaluating whether a Fourth Amendment search occurred, cases “involving merely the transmission of electronic signals without trespass would *remain* subject to the [reasonable expectation of privacy] analysis.” *Jones*, 132 S.Ct. at 953 (emphasis in original). As such, to determine whether a search was conducted under the Fourth Amendment, this Court must analyze the Fourth Amendment implications of pole camera surveillance under a “reasonable expectation of privacy” test.

In order to clarify the scope of one's “reasonable expectation of privacy,” the Supreme Court has established some guidelines to determine permissible government action. “[W]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.” *Katz v. United States*, 389 U.S. 347, 351, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967). Along these lines, law enforcement agents may utilize their resources to conduct surveillance where they have a legal right to occupy. *See, e.g., Florida v. Riley*, 488 U.S. 445, 449, 109 S.Ct. 693, 102 L.Ed.2d 835 (1989) (citing *California v. Ciraolo*, 476 U.S. 207, 213, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986)) (“[T]he police may see what may be seen ‘from a public vantage point where [they have] a right to be....’ ”); *United States v. Dubrofsky*, 581 F.2d 208, 211 (9th Cir.1978) (“Permissible techniques of surveillance include more than the five senses of officers and their unaided physical abilities.”). Nothing in the Fourth Amendment prohibits government officers “from augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afford[s] them.” *United States v. Knotts*, 460 U.S. 276, 282, 103 S.Ct. 1081, 75 L.Ed.2d 55 (1983). Further, the Ninth Circuit Court of Appeals has held that, “the use of photographic equipment to gather evidence that could be lawfully observed by a law enforcement *841 officer does not violate the Fourth Amendment.” *United States v. McIver*, 186 F.3d 1119, 1125 (9th Cir.1999).

III. ANALYSIS

In support of his motion to suppress, Defendant asserts that the U.S. Supreme Court's recent decision in *United States v. Jones*, — U.S. —, 132 S.Ct. 945, 181 L.Ed.2d

911 (2012) demonstrates that the pole camera evidence should be suppressed. Defendant argues that five members of the United States Supreme Court suggest that long-term continuous surveillance violates a person's Fourth Amendment rights because it allows government officials to record and aggregate a person's activities in a way that violates a person's expectation of privacy.

Defendant argues that a “majority” of Supreme Court Justices would not allow long-term pole camera surveillance because the documenting and cataloging of one's daily associations would develop a picture of one's life that a person would reasonably expect to keep private. Based on this, Defendant argues that the Government was required to obtain a warrant prior for the installation of the pole camera because the video surveillance of the Glendale Apartment allowed law enforcement to generate a record of the schedule of every person at the residence as well as the visitors of the residence. Defendant concludes that this video surveillance of the Glendale Apartment violates one's expectation of privacy.

In response, the Government argues that Defendant's arguments are based merely on portions of the non-binding concurring opinions in *Jones*, and does not reflect the majority holding. The Government argues that the majority opinion in *Jones* simply analyzed the trespassory nature of GPS installation, but did not inquire about the point where GPS surveillance of a person becomes constitutionally problematic. Furthermore, the Government argues that the *Jones* majority did not adopt a “mosaic” theory, nor did it extend the theory from GPS surveillance to the more limited and non-trespassory fixed pole camera surveillance of a location in public view.

As indicated by Defendant, the *Jones* Court unanimously ruled that the installation of a GPS monitoring device on the defendant's car was a “search” under the Fourth Amendment, but there existed a 5–4 split over the rationale behind that decision. The majority opinion was authored by Justice Scalia and concluded that the physical installation of the GPS device on defendant's vehicle to obtain information was a trespass and constituted a search for Fourth Amendment purposes. *Jones*, 132 S.Ct. at 949. However, the majority expressly declined to consider whether this type of search violated an individual's reasonable expectation of privacy. *Id.* at 954 (“It may be that achieving the same result through electronic means, without an accompanying trespass, is an unconstitutional invasion of privacy, but the present case does not require us to answer that question.”).

Justice Alito, joined by Justices Ginsburg, Breyer, and Kagan, concurred in the judgment, but opposed the majority's reasoning because the majority's trespassory analysis would “present particularly vexing problems in cases involving surveillance that is carried out by making electronic, as opposed to physical, contact with the item to be tracked.” *Id.* at 962 (Alito, J., concurring). The four-member concurrence stated that “the use of longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy [, but f]or such offenses, society's expectation has been that law enforcement agents and others would not—and indeed, in the main, simply could not—secretly monitor *842 and catalogue every single movement of an individual's car for a very long period.” *Id.* at 964 (Alito, J., concurring). In the face of a lack of a statutory circumscription of the use of advancing technologies, such as GPS tracking, by law enforcement, Justice Alito then recommended that “[t]he best that we can do ... is to apply existing Fourth Amendment doctrine and to ask whether the use of GPS tracking in a particular case involved a degree of intrusion that a reasonable person would not have anticipated.” *Id.* at 964 (Alito, J., concurring).

While it does appear that in some future case, a five justice “majority” is willing to accept the principle that Government surveillance can implicate an individual's reasonable expectation of privacy over time, *Jones* does not dictate the result of the case at hand because it merely reaffirms the reasonable expectation of privacy analysis. See *United States v. Graham*, 846 F.Supp.2d 384, 394 (D.Md.2012). Accordingly, the Court must determine whether Defendant's reasonable expectation of privacy required law enforcement to obtain a warrant before conducting pole camera surveillance on the parking lot of a gated apartment complex associated with Defendant from a camera whose installation was permitted.

Both parties agree that a reasonable expectation of privacy analysis is appropriate in the present case to determine whether a warrant was needed for law enforcement to install and monitor a pole camera at the Glendale Apartment. Defendant asserts a blanket statement that an expectation of privacy analysis should be applied in this situation, without explaining how, and supports this contention solely on the strength of a footnote that states simply that the Glendale Apartment was housed in “a gated community with keypad access” that prevented “the general public” from viewing the “comings and goings at the apartment.” (Doc. 123 fn. 4).

In response, the Government argues that law enforcement officials did not violate Defendant's Fourth Amendment rights when using pole camera surveillance. The Government asserts that everything viewed on the camera was within public view, and that the casual observation of persons walking or driving by Building "L" in the complex parking lot would yield a similar, if not clearer, view of the same location. In addition, the Government argues that despite the wall that separates the complex and theJobing.com Arena's open-air parking lot, persons in the arena parking lot are able to observe the Glendale Apartment in a manner similar to the camera's view. In that sense, the Government concludes that the video surveillance of the Glendale Apartment did not violate Defendant's Fourth Amendment rights because law enforcement agents were allowed to use photographic equipment from an area where they were permitted to be. As such, the Government is asking that Defendant's motion to suppress the pole camera evidence from the Glendale Apartment be denied.

In *United States v. McIver*, defendants were found cultivating marijuana on public land, and were monitored by law enforcement through the use of a motion activated camera. *McIver*, 186 F.3d at 1125. The defendants were under the impression that their actions were not being observed, and maintained that the use of unmanned cameras without a search warrant violated their reasonable expectation of privacy. *Id.* Although the marijuana was monitored in a remote area and the defendants did not expect to be seen by the law enforcement's camera, the Ninth Circuit Court of Appeals held that the defendants failed to demonstrate an objectively reasonable expectation of privacy, because law enforcement *843 had a clear right to be in a national forest that was open to the public. *Id.*

The *McIver* Court explained that the use of photographic equipment by law enforcement to gather this evidence did not violate the Fourth Amendment, but was "a prudent and efficient use of modern technology" under the circumstances because it gathered "evidence that could be lawfully observed by a law enforcement officer." *Id.*; see also *Maisano v. Welcher*, 940 F.2d 499, 503 (9th Cir.1991) (holding that the seizure of automobiles from a deficient tax-payer's driveway by the Government did not require a warrant because it was not shown that the driveway was the location of activities that required Fourth Amendment protection, that the driveway "obstructed or enclosed" in any way, or "that the vehicles seized were not visible from the street.").

Like the officers in *McIver* who installed a surveillance camera in a national forest that they were allowed to occupy, in this case, law enforcement had permission from the head of security at theJobing.com Arena to install the pole camera on the arena. Thus, officers had a right and permission to mount a camera on the arena, and law enforcement's use of the pole camera affixed to the arena was "a prudent and efficient use of modern technology" to enhance their sense of sight and allowed for law enforcement to see "what may be seen" from a public vantage point where they had a right to be.

Additionally, as argued by the Government, despite a block wall that could potentially act as an enclosure or barrier that could obstruct the view of a person standing on the outside of the Westgate complex, the typical focal point of the pole camera was visible to any passerby inside the complex or to any person in the arena parking lot. In fact, Detective Kinsey testified that the complex's outer wall also had iron openings that allowed for easy visibility of Building "L" for someone standing outside of the complex. Defendant presented no evidence to rebut Detective Kinsey's testimony that he could simply walk into the complex from the street, leaving Defendant's assertions about the apartment community's keypad access as insufficient to show that there were special features or activities associated with the Westgate complex parking lot to support a reasonable expectation of privacy in the parking lot.

The evidence points to the fact that a person would not be required to be a complex resident to see the "comings and goings" at the Glendale Apartment, and any expectation of privacy by Defendant in the complex parking lot in front of Building "L" from surveillance was unreasonable. Therefore, law enforcement's use of the pole camera did not violate the Fourth Amendment and, thus, there was no need for law enforcement to seek a warrant before using the camera.

Because there has been no violation of the Fourth Amendment by law enforcement in regards to the use of the pole camera, the Court need not determine what evidence the use of the pole camera actually elicited.

IV. CONCLUSION

Based on the foregoing,

IT IS ORDERED that Defendant Brooks' Motion to Suppress Evidence Obtained from Pole Camera Surveillance (Doc. 123) is denied.

All Citations

911 F.Supp.2d 836

Footnotes

- 1 Although there are various facts regarding the investigation of Defendant in this matter, this background section only attempts to set forth the facts relevant to the motion at issue.
- 2 A “heat run” is described by Detective Kinsey to be a maneuver performed by a suspected drug dealer with the purpose of detecting the presence of law enforcement surveillance. An example given by Detective Kinsey occurs when a suspect who is being followed by police surveillance purposefully drives into a cul-de-sac and turns around to determine who is monitoring the suspect's activities.

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