

ON REHEARING EN BANC**PUBLISHED**

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 20-1495

LEADERS OF A BEAUTIFUL STRUGGLE; ERRICKA BRIDGFORD; 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.

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

Argued: March 8, 2021

Decided: June 24, 2021

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.

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 Simonsen, 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.

GREGORY, Chief Judge:

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 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

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.”).

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 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

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.

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 planes 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] report.”⁴ *Id.* at 1. Rather than store entire days' worth

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)

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 (2013). Defendants argue that Plaintiffs’ request for preliminary relief is now moot because the AIR program has already concluded on its

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.*

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 (quoting *Already, LLC v. Nike, Inc.*, 568 U.S. 85, 91 (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 (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 (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 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

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.

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outcome of this appeal, and it is possible for this Court to grant them effectual relief. *See Chafin*, 568 U.S. at 172.

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

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.

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 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.

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. 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 (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 (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' 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

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.

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.

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*, 138 S. Ct. 2206 (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 *Camara v. Mun. Ct. of City & Cnty. of S.F.*, 387 U.S. 523, 528 (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 (2014)); *see also Messerschmidt v. Millender*, 565 U.S. 535, 560 (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 (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 (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 (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. 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 (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 (2001) (asking “how much technological enhancement of ordinary perception . . . is too much,” and concluding that thermal 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 (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. 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 (Alito, J., concurring); *id.* at 415 (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 (Alito, J., concurring); *see also id.* at 415 (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 (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. *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 (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

⁸ As the D.C. Circuit aptly explained:

(Continued)

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,

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).

in a specific car, precise to “within 50 to 100 feet.” *See* 565 U.S. at 404. 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 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*, 465 U.S. at 429).

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 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

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.

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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*, 465 F. Supp. 3d at 716.

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”).

“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 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. 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 (citing *United States v. Karo*, 468 U.S. 705 (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 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 (“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 (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

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 (Continued)

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 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.

district court can reach agreement on any definitional questions, craft any necessary exceptions, and ensure procedures for complying with all constitutional obligations.

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 (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 (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 (“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 (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 of the beneficial effects of novel police techniques.”); *see, e.g., Riley*, 573 U.S. at 403 (“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 (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 40–44, 66–70, 74. 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 40, 43, 67, 74. 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 44, 74.

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 41, 74, 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*, 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://ncrc.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 40. 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 38–39 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 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]isenfranchis[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 are beyond the ken of the

**** 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/wp-content/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)

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.

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-unit-20200416-gbqpcplpazd4jkjobiottrdxga-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.aclu-md.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.

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 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 30–31, 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 Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (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 (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*, 138 S. Ct. 2206 (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 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*, 141 S. Ct. 792, 801–02 (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 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 28 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 (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. 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, *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*, 138 S. Ct. 2392, 2426 (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 (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 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 (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 (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. 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 of responsibilities within the judiciary. *See, e.g., Brown v. Plata*, 563 U.S. 493, 517 (2011) (cautioning appellate courts not “to ‘duplicate the role’ of the trial court” (quoting *Anderson v. Bessemer City*, 470 U.S. 564, 573 (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 (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 17. 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 24. 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 the majority does, *Maj. Op., ante* at 23–24—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 (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 (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 (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 (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 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 20, 26 (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 (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 (1983). The Court did qualify this rule in *United States v. Jones*, 565 U.S. 400 (2012), where five Justices concluded that *long-term* surveillance using GPS tracking violated a reasonable expectation of privacy. *Id.* at 414–15 (Sotomayor, J., concurring); *id.* at 430–31 (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 (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 (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 (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, AIR does not involve the invasion of anyone's home or curtilage. If those precedents do not control this 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*, 138 S. Ct. 2206 (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 20. 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 20. 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 26.

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 20, 26. Candidly, the majority confesses that it opposes all warrantless surveillance. Maj. Op., *ante* at 31–32. *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. 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 (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 (2006) (quoting *United States v. Knights*, 534 U.S. 112, 118–19 (2001)).

In *Michigan Department of State Police v. Sitz*, 496 U.S. 444 (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. The Court there emphasized the “magnitude” of the threat posed by drunk drivers to public safety. *Id.* at 451 (“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. 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 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 (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 (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 (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*, 139 S. Ct. 682, 687 (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 (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 Athletics Ass’n*, 138 S. Ct. 1461, 1478 (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 law. *Patterson v. New York*, 432 U.S. 197, 201 (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. 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 (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. 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. 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 (2013) (quoting *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 652 (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 32 (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 30 (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. 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, 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.*

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 effort to deny cities the right to find answers, to discover what works for them.

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.