LEADERS OF A BEAUTIFUL STRUGGLE V. BALTIMORE POLICE DEPARTMENT: THE FOURTH AMENDMENT CONTINUES ITS STRUGGLE TO MAKE SENSE OF THE TWENTY-FIRST CENTURY

INTRODUCTION: WE WILL REMEMBER FOR YOU

Our cities are places where we can get lost. They are places where we can remain anonymous no matter how many people see us. There is joy in the momentary interaction with a stranger that remains only in its spirit after our memory of the person gets lost. Getting lost—in our own surroundings and in the minds of others—is a special quality of urban life, and it is worth preserving in the digital age. There is value in forgetting and in being forgotten. Of course, the same is true in remembering and in being remembered, but hardly anybody would say they want to remember *everything*.

There is, however, one important exception: your city's law enforcement agency. This makes sense: the more it knows about you—for example, your workplace, partner, politics, family, health, or socioeconomic status—the more it has to tie you to a crime you might commit. But despite the utility in knowing as much as possible, we have never permitted law enforcement to access certain information without providing justification for why it needs to be known.[1] Keeping some information private from the government is such an important value that it was enshrined in the United States Constitution.[2] The Fourth Amendment protects "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures . . . ."[3] It not only protects from physical invasion, but also protects "the privacies of life" and the rights of "personal security" and "personal liberty."[4] The Constitution was "designed . . . to place obstacles in the way of a too permeating police surveillance . . . ."[5] However, the Fourth Amendment is a long way from its birthplace of 1791. It finds itself having to navigate police surveillance that the Framers could never have imagined, and courts have expressed hesitancy at the Amendment's ability to "adequately protect individual

1. Carpenter v. United States, 138 S. Ct. 2206, 2221 (2018) (finding that the statutory standard of "'reasonable grounds' for believing that the records were 'relevant and material to an ongoing investigation'" fell "well short of the probable cause required for a warrant" when obtaining the records is a search under the Fourth Amendment).

2. *See* U.S. CONST. amend. IV.

3. *Id.*

4. *See* Boyd v. United States, 116 U.S. 616, 630 (1886).

5. United States v. Di Re, 332 U.S. 581, 595 (1948).

privacy" when assessing the constitutionality of contemporary police surveillance techniques.[6]

Those difficulties are the highlight of the *Leaders of a Beautiful Struggle v. Baltimore Police Department*[7] (the en banc opinion is hereinafter referred to as "*Beautiful Struggle III*"), where the constitutionality of the Baltimore Police Department's ("BPD") newest surveillance program was the subject of a well-reasoned opinion, thoughtful concurrences, and often-contemptuous dissents. But the conclusion of the *Beautiful Struggle* litigation should not have been open to reasonable dispute. The courts were presented with a surveillance mechanism that made appropriate, if not obvious, an application of new law set forth by the Supreme Court in *Carpenter v. United States*[8] following its earlier case, *United States v. Jones*.[9] The fact that two courts wrongly decided *Beautiful Struggle*[10] before a narrow majority[11] of a seventeen-judge court got it right should cause concern for everybody.[12] The extraordinary differences between the reasoning of the various opinions throughout the litigation expose the inadequacies of the current law's ability to address modern police surveillance techniques in a way that protects the public from "too permeating police surveillance."[13] Surely, surveillance that not only tracks and stores public movements with exact precision, but also allows the government to deduce the intimate details of our lives, is too permeating.

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6. *See, e.g.*, United States v. Tuggle, 4 F.4th 505, 527 (7th Cir. 2021) ("[W]e conclude by sounding a note of caution regarding the current trajectory of Fourth Amendment jurisprudence," suggesting that government use of body cameras, license plate readers, drones, and facial recognition software will not be adequately curbed by the Fourth Amendment under its current state).

7. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330 (4th Cir. 2021) [hereinafter *Beautiful Struggle III*] (en banc).

8. *See* Carpenter v. United States, 138 S. Ct. 2206 (2018).

9. *See* United States v. Jones, 565 U.S. 400 (2012).

10. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 703 (D. Md. 2020) [hereinafter *Beautiful Struggle I*]; Leaders of a Beautiful Struggle v. Balt. Police Dep't, 979 F.3d 219, 222 (4th Cir. 2020) [hereinafter *Beautiful Struggle II*].

11. The Fourth Amendment issue was decided by a margin of eight to five. Two of the seven dissenting judges did not join the dissenting opinion on the issue.

12. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 333 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

13. *See* United States v. Di Re, 332 U.S. 581, 595 (1948).

Beautiful Struggle III also raised questions regarding the role and ability of the courts to address new methods of surveillance.[14] Additionally, the case might have changed who can bring legal actions to achieve redress for being swept up in police surveillance and when these litigants are able to do so.[15] Though these aspects of the case are tremendously important, they ultimately fall outside the scope of this Casenote, which will only discuss the Fourth Amendment issue. Part I of this Casenote lays out the history, details, and capabilities of the surveillance at issue in this case in addition to the case's uniquely difficult procedural history. Part II discusses the current state of Fourth Amendment jurisprudence and how it has—and has not—evolved to address mass surveillance. Part III illustrates the two fundamentally different approaches that the court took in answering the Fourth Amendment question. Part IV explains why the majority is correct and offers thoughts on why some might disagree. Finally, this Casenote concludes with a prognosis of the Fourth Amendment's ability to adequately protect our privacy in the future and discusses why we should be reassured by this case.

I. FACTS AND HOLDING

In 2016, Baltimoreans learned that aerial surveillance was being carried out behind their backs and over their heads by a company known as Persistent Surveillance Systems ("PSS") on BPD's behalf.[16] The backlash was so severe that BPD and PSS canceled the surveillance partnership.[17] Then, in December 2019, Michael Harrison, Commissioner of BPD, announced that the BPD and PSS would reinstate aerial surveillance over Baltimore.[18] The new program, aptly named Aerial Investigation Research ("AIR"), was introduced in an effort to combat violent crime.[19] Supposedly, things would be different this time: the public would be consulted and informed, the program would run only as a six-month pilot, and it would be minimally invasive.[20] After three public meetings

14. *See Beautiful Struggle III*, 2 F.4th at 353 (Wilkinson, J., dissenting).

15. *See id.* at 336-39 (majority opinion).

16. *Id.* at 333.

17. *Id.*

18. *Id.*

19. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 704 (D. Md. 2020) [*Beautiful Struggle I*].

20. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 333-34 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

intended to educate concerned community members about AIR,[21] the city executed the nearly $3.7M contract—funded entirely by a private organization named Arnold Ventures—with PSS on April 1, 2020.[22]

A. AIR'S TECHNICAL CAPABILITIES AND THE POTENTIAL CONSTITUTIONAL DILEMMA

The surveillance undertaken by AIR was conventional in means, but immense in scope. During the daytime and when the weather was clear, three PSS aircraft would continuously circle Baltimore at altitudes between 3,000 and 12,000 feet.[23] For no less than forty hours a week, each plane would take one photograph per second at a resolution of one pixel per 1.45 square feet, roughly representing a person as a single pixel.[24] AIR was used to track vehicles' movements too, which were typically depicted as fifteen to twenty pixels.[25] The combined imagery provided coverage of over ninety percent of the city.[26] From those movements, much more could be deduced: immense amounts of private information can be gleaned from a person's habits as exemplified through their repeated public movements.[27]

The proprietary software that PSS used to analyze the surveillance imagery was designed with law enforcement in mind.[28] This software was able to seamlessly integrate with BPD's pre-existing, extensive surveillance network, which included surveillance cameras, license plate readers, and gunshot detection systems.[29] When a "target crime"[30] took place, BPD officers would transmit a request to PSS for a report of the incident.[31] PSS aimed to provide

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21. Two of the three were held as Facebook livestreams due to the onset of the COVID-19 pandemic. *See Beautiful Struggle I*, 456 F. Supp. 3d at 703.

22. *Beautiful Struggle III*, 2 F.4th at 333-34.

23. BARRY FRIEDMAN ET AL., THE POLICING PROJECT AT NYU LAW, CIVIL RIGHTS AND CIVIL LIBERTIES AUDIT OF BALTIMORE'S AERIAL INVESTIGATION RESEARCH (AIR) PROGRAM 50 (2020).

24. *Id.* at 12.

25. *Id.*

26. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 334 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

27. *See id.* at 341 (citing Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018)).

28. *See id.*

29. *See id.* at 334.

30. Target crimes included: homicides, attempted murders, other shootings with injuries, armed robberies, and carjackings. *See id.*

31. *See id.*

this within eighteen hours of the request before compiling a full "Investigation Briefing Report" within three days.[32] All the images collected by AIR were stored on PSS's servers; those which were never used in connection with a BPD investigation were to be deleted forty-five days from capture.[33] In actuality, however, this limitation on bulk retention was mostly theoretical: if BPD requested a report from a particular day, PSS kept all of the imagery collected on that day indefinitely.[34] Essentially, AIR created an infallible memory of the movements of nearly every person who stepped outside and every vehicle that was driven in Baltimore when all three planes were flying.[35]

It does appear that BPD made an effort to impartially study the legal implications of AIR's operation.[36] It tasked the New York University School of Law Policing Project with preparing a "civil rights and civil liberties audit" of AIR.[37] However, this very audit discovered that AIR had failed to adhere to at least one of the program's crucial self-imposed and publicly proclaimed limitations: the deletion of aerial footage after forty-five days.[38] In retrospect, such failure does not inspire confidence that operating AIR legally or as BPD represented it to the public was BPD's first priority. Indeed, in 2017, BPD entered into a consent decree with the United States Department of Justice[39] ("DOJ") in response to a DOJ investigation concluding that BPD had a pattern or practice of

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32. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 334 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc). ("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.").

33. *Id.*

34. *See* FRIEDMAN ET AL., *supra* note 23, at 17-18.

35. *See id.* at 9 n.14, 17-18.

36. *See Beautiful Struggle III*, 2 F.4th at 334-35.

37. *See id.* at 335 (internal quotations omitted); *See* FRIEDMAN ET AL., *supra* note 23, at 6.

38. *Compare* FRIEDMAN ET AL., *supra* note 23, at 17-18, *with* BALT. POLICE DEP'T, COMMUNITY EDUCATION PRESENTATION: AERIAL INVESTIGATION RESEARCH (AIR) PILOT PROGRAM 12, 15 (Mar. 2020), https://www.baltimorepolice.org/sites/default/files/General%20Website%20PDFs/Public_Education_Presentation_Plane_final.pdf.

39. *See* Consent Decree, United States v. Police Dep't of Balt. City, No. 1:17-cv-00099-JKB (D. Md. 2017), https://www.justice.gov/opa/file/925056/download.

committing constitutional violations.[40] It did so without "admitt[ing] wrongdoing or liability."[41]

B. PROCEDURAL HISTORY AND HOLDING

Can BPD be trusted to make constitutional decisions? The three plaintiffs in this case answered in the negative.[42] Two are individual community activists, Erricka Bridgeford and Kevin James.[43] The third is an advocacy group and think tank, Leaders of a Beautiful Struggle.[44] On April 9, 2020, the plaintiffs filed suit pursuant to 42 U.S.C. § 1983[45] in the United States District Court for the District of Maryland against BPD and its commissioner, Michael Harrison.[46] They sought two forms of relief: first, a judgment from the court declaring that AIR violated the First and Fourth Amendments of the U.S. Constitution, and, second, a permanent injunction that would prevent BPD and PSS from operating AIR.[47]

Additionally, immediately after filing suit, the plaintiffs filed a motion for a temporary restraining order ("TRO") and a preliminary injunction that would prevent BPD and PSS from commencing AIR.[48] The same day, the district court convened a telephone conference in which the parties agreed that no AIR surveillance would be conducted until the court ruled on the plaintiffs' motion.[49] The parties argued the motion via telephone a few weeks later.[50] However, the district court ultimately denied the plaintiffs' motion, holding that the relief sought was inappropriate because the

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40. *See* United States v. Balt. Police Dep't, 249 F. Supp. 3d 816, 820 (D. Md. 2017).

41. *Id.* at 818.

42. Complaint at 3-4, Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699 (D. Md. 2020) [*Beautiful Struggle I*] (No. 1:20-cv-00929-RDB).

43. *See id.*

44. *Id.* at 4.

45. *Id.* at 20. 42 U.S.C. § 1983 is a procedural mechanism used by plaintiffs to seek damages and other relief from governmental entities and agents who have allegedly violated a plaintiff's constitutional rights.

46. Complaint at 1, 4, 20, *Beautiful Struggle I*, 456 F. Supp. 3d 699 (No. 1:20-cv-00929-RDB).

47. *Id.* at 21.

48. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 702 (D. Md. 2020) [*Beautiful Struggle I*].

49. *Id.* at 705-06.

50. *Id.*

plaintiffs had failed to show that they were likely to succeed on the merits of their claims.[51] AIR took flight a week after the ruling.[52]

The plaintiffs filed a notice of interlocutory appeal on the same day that the court denied their motion.[53] The United States Court of Appeals for the Fourth Circuit docketed the appeal and the plaintiffs moved to accelerate the appellate proceedings.[54] The Fourth Circuit granted that motion on May 1, 2020, and heard oral arguments on September 10, 2020.[55] Just under two months later, a split panel affirmed the district court's denial of plaintiffs' motion for a TRO and preliminary injunction.[56] However, the court later granted the plaintiffs' petition for rehearing en banc.[57] Oral arguments before the en banc court were finally heard on March 8, 2021.[58]

More than ten months passed between the docketing of the appeal and the hearing of the en banc arguments.[59] In that time, difficult factual developments ensued.[60] Most notably, the six-month pilot of AIR ran its course: the surveillance ended on October 31, 2020.[61] Moreover, on February 2, 2021, Baltimore announced that all but 14.2% of the imagery collected by AIR had been deleted by the end of January 2021.[62] BPD terminated its contract with PSS the next day, meaning that BPD would not be able to retrieve any data collected by AIR that it did not already

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51. *See Beautiful Struggle I*, 456 F. Supp. 3d at 716-17.

52. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 335 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

53. *Id.* Typically, a party may only appeal a "final judgement" of a federal district court—a judgement that ends the litigation on the merits. *See* 28 U.S.C. § 1291. But when a court refuses to grant an injunction, that decision may be immediately appealed. 28 U.S.C. § 1292(a). Also, when an order "involves a controlling question of law as to which there is substantial ground for difference of opinion and that an immediate appeal from the order may materially advance the ultimate termination of the litigation," the decision may be immediately appealed so long as the appellate court agrees to entertain it. 28 U.S.C. 1292(b).

54. *Beautiful Struggle III*, 2 F.4th at 335.

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.* at 336.

59. *See id.* at 335-36.

60. *See id.*

61. *Id.* at 335.

62. *Id.* at 335-36.

have.[63] After this, the defendants filed a motion to dismiss the appeal on grounds that the issue had become moot.[64] Indeed, how can the commencement of a program that has already lived and died be prevented? This question was at the forefront of the court's mind during the en banc oral arguments. Before counsel for plaintiffs could finish his opening remarks, the en banc court asked its first question: "Isn't this moot?"[65]

In an eight-seven decision written by Chief Judge Gregory, the en banc Fourth Circuit Court concluded that the case was not moot.[66] Further, the court reversed and remanded the district court's decision.[67] The court held that the warrantless access of AIR's data and operation of the program violated the Fourth Amendment because it allowed police to draw inferences from "the whole of individuals' movements."[68] Chief Judge Gregory also authored a concurring opinion in which Judges Wynn, Thacker, and Harris joined.[69] Judge Wynn wrote a concurring opinion, joined by Judges Motz, Thacker, and Harris.[70] Judge Wilkinson wrote the primary dissenting opinion.[71] Judges Niemeyer and Diaz also wrote dissenting opinions that were not joined by any other judges.[72] This Casenote limits its discussion of the opinions to the majority opinion and Judge Wilkinson's dissenting opinion, as those opinions exemplify the competing views of the Fourth Amendment issue.

II. BACKGROUND

This section of the Casenote proceeds in two parts to adequately explain the concepts at hand in the *Beautiful Struggle* litigation and the sources of law that support and oppose AIR's constitutionality. First, Part A discusses generally how the Fourth

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63. *See Beautiful Struggle III,* 2 F.4th at 335-36.

64. *See id.* at 336.

65. Oral Argument at 0:01:06, *Beautiful Struggle III*, 2 F.4th 330 (No. 20-1495), https://www.ca4.uscourts.gov/Oaarchive/mp3/20-1495-20210308.mp3 (question by Judge Stephanie Thacker of the United States Court of Appeals for the Fourth Circuit).

66. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 333 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

67. *Id.*

68. *See id.* at 336-48.

69. *Id.* at 348 (Gregory, J., concurring).

70. *Id.* at 350 (Wynn, J., concurring).

71. *Id.* at 351 (Wilkinson, J., dissenting).

72. *Id.* at 369 (Niemeyer & Diaz, JJ., dissenting separately).

Amendment has evolved over the past five decades to its current state in 2021. Specifically, it discusses the current test employed by the courts to determine whether a given action by the government is a search under the Fourth Amendment, how the Supreme Court has applied the test to sensory enhancing technologies and the inferential reasoning made possible by those technologies, and how the Supreme Court has applied the test to long-term surveillance of individuals' public movements. It also discusses a recently developed framework, the mosaic theory, that can be used to supplement or replace the current Fourth Amendment search inquiry. Part B discusses the Supreme Court's treatment of aerial surveillance under the Fourth Amendment, which is important in this Casenote to understand the dissent's approach to the case in *Beautiful Struggle III*.

A. THE FOURTH AMENDMENT'S JOURNEY TO 2021

1. THE REASONABLE EXPECTATION OF PRIVACY

The Fourth Amendment protects those things in which a person holds a reasonable expectation of privacy, an idea that has long been implicit in Supreme Court precedent.[73] A hotel room may just as easily be gifted Fourth Amendment protections from a warrantless search one day as it may lose them the next. What makes the difference is whether somebody calls it home, even if only for a night.[74] In other words, it is an individual's expectation of privacy in a place or thing, rather than the kind of place or thing, that implicates the Fourth Amendment's protections.[75]

Many kinds of places, such as homes, can reasonably be understood as synonymous with those expectations, which led the litigants in the Supreme Court's seminal Fourth Amendment case, *Katz v. United States*, to misplace their focus on the place instead of the person.[76] The parties found themselves posing the wrong

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73. *See, e.g.*, *Ex parte* Jackson, 96 U.S. 727, 733 (1877) ("Letters and sealed packages . . . in the mail are as fully guarded from examination and inspection . . . as if they were retained by the parties forwarding them in their own domiciles. The constitutional guaranty of the right of the people to be secure in their papers against unreasonable searches and seizures extends to their papers, thus closed against inspection, wherever they may be.").

74. *See generally* Abel v. United States, 362 U.S. 217, 241 (1960).

75. *See* Hester v. United States, 265 U.S. 57, 59 (1924) ("The distinction between [open fields] and the house is as old as the common law." Just because a place might be private property does not implicate Fourth Amendment protections).

76. *See* Katz v. United States, 389 U.S. 347, 350-51 (1967).

question: "Whether a public telephone booth is a constitutionally protected area."[77] The Supreme Court recognized that this was not the issue actually presented in the case—"[f]or the Fourth Amendment protects people, not places."[78] Like a hotel room, whether or not a phonebooth is a protected area depends in part on whether a person in it seeks privacy.[79] "[W]hat [a person] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected [by the Fourth Amendment]."[80] Ultimately, the Court concluded that the words spoken by the petitioner into the mouthpiece of a payphone were protected by the Fourth Amendment. The court noted that the petitioner was "entitled to assume that the words he utter[ed] into the mouthpiece [would] not be broadcast to the world."[81]

Assumptions alone, however, surely cannot confer constitutional protections; a person cannot under all circumstances be "entitled to assume" that their "persons, houses, papers, and effects"[82] will be protected by the Fourth Amendment. On this premise, Justice Harlan's concurrence in *Katz* has emerged as not only the essential teaching of the case, but also as the prevailing Fourth Amendment search inquiry.[83] The now-essential question of any Fourth Amendment search analysis is whether "a person has a constitutionally protected reasonable expectation of privacy. . . ."[84] The threshold inquiry is whether the person seeking the Fourth Amendment's protection possessed and exhibited an expectation of privacy in their actions.[85] The second, more sensitive inquiry demands "that the expectation be one that society is prepared to recognize as 'reasonable.'"[86]

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77. *See Katz,* 389 U.S. at 349.

78. *See id.* at 351.

79. *See id.* at 351.

80. *Id.*

81. *Id.* at 352.

82. U.S. CONST. amend. IV.

83. *See, e.g.*, Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018) (emphasis added) (noting that a majority of the Court had found "*a reasonable expectation of privacy* in the whole of their physical movements."); Smith v. Maryland, 442 U.S. 735, 739 (1979) ("Consistently with *Katz,* this Court uniformly has held that the application of the Fourth Amendment depends on whether the person invoking its protection can claim a 'justifiable,' a 'reasonable,' or a 'legitimate expectation of privacy' that has been invaded by government action.")

84. Katz v. United States, 389 U.S. 347, 360 (1967) (Harlan, J., concurring).

85. *Id.* at 361.

86. *Id.*

Most importantly, *Katz* finally and explicitly repudiated the doctrine, which had long been on unsteady ground, "that if officers had not been guilty of a common-law trespass they were not prohibited by the Fourth Amendment from eavesdropping."[87] The Fourth Amendment cases that followed in the fifty-one year period between *Katz* and *Carpenter*, in which the Supreme Court held that "individuals have a reasonable expectation of privacy in the whole of their physical movements," [88] can be difficult to follow and reconcile. This is particularly true in the unique factual circumstances confronted by the courts in *Beautiful Struggle*, where one line of cases disapproves of warrantless long-term surveillance (to be discussed further in this Part) and another generally approves of aerial surveillance (to be discussed in Part B).

2. THE REASONABLE EXPECTATION, SENSORY AUGMENTATION, AND INFERENTIAL REASONING

Technological developments have made it possible to observe more than what is immediately visible to the naked eye. As the twenty-first century neared, the Supreme Court undertook its first examination of the relationship between the Fourth Amendment and sensory-enhancing technology in *United States v. Knotts*—although the technologies involved were not necessarily comparable to contemporary mass surveillance and bulk data collection.[89] There, investigators agreed with a chemical manufacturer that a radio transmitter ("beeper") would be placed in the next container of chloroform that the defendant purchased.[90] The beeper periodically transmitted signals that could be picked up by radio and, in turn, used to track the defendant's movements so long as the chloroform was in his possession.[91] The Court held that the beeper essentially augmented the investigators' vision, "amount[ing] principally to the following of an automobile on public streets and highways."[92] Further, the Court held that "[a] person travelling in an

87. Rakas v. Illinois, 439 U.S. 128, 143 (1978) (clarifying that *Katz* reputed the longstanding search and seizure standards of Olmstead v. United States, 277 U.S. 438 (1928) and Goldman v. United States, 316 U.S. 129 (1942)).

88. Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018) (citation omitted).

89. *See* United States v. Knotts, 460 U.S. 276 (1983).

90. *Id.* at 277-78.

91. *Id.*

92. *Compare id.* at 278-81 (finding that use of beeper to monitor movements in a vehicle was not a search), *with* United States v. Karo, 468 U.S. 705, 714 (1984) (answering yes to "the question [of] whether the monitoring of a beeper in a private

automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another."[93] In a display of remarkable foresight, the defendant complained that the result of the Court's decision "would be that 'twenty-four hour surveillance of any citizen in this country [would] be possible, without judicial knowledge or supervision.'"[94] The Court replied that such issues were not at hand, and "if such dragnet type law enforcement practices . . . should eventually occur, there will be time enough then to determine whether different constitutional principles may be applicable."[95]

In *Kyllo v. United States*, the next time the Court addressed the Fourth Amendment's application to an advanced technology, dragnet law enforcement practices still were not at issue.[96] Agents of the United States Department of Interior had used a thermal imaging device to detect heat emanating from the petitioner's home to determine whether it was being used as a marijuana grow house.[97] The Court noted that "[i]t would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology."[98] To that point, the Court's holding was premised on "assur[ing] preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted."[99] Therefore, it held that "obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical 'intrusion into a constitutionally protected area' constitutes a search . . . ."[100]

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residence . . . violates the Fourth Amendment rights of those who have a justifiable interest in the privacy of the residence.").

93. *Knotts*, 460 U.S. at 281.

94. *Id.* at 283 (quoting Resp't's Br. 9).

95. *Id.* at 284 (citation omitted).

96. For definition and discussion of "dragnet" practices, see *infra* Part II.A.3.

97. Kyllo v. United States, 533 U.S. 27, 29 (2001).

98. *Id.* at 33-34.

99. *Id.* at 34.

100. *Id.* (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)). The author recognizes the confusing nature of the Court's reference to a "constitutionally protected area" after it had repudiated the idea of equating Fourth Amendment protections with certain kinds of places in *Katz*. In the sentences preceding the author's quotation, the Court recognized that the interior of a home is "the prototypical . . . area of protected privacy" and that "there is a ready criterion . . . of the minimal expectation of privacy that *exists* [in the interior of a home], and that is acknowledged to be *reasonable*." *Id.* (emphasis in original). It appears that the Court acknowledged an almost *per se* reasonable expectation of privacy in the interior of homes, then proceeded to refer to

Furthermore, the Court rejected the dissent's "proposition that inference insulates a search[.]"[101] The Court explained its understanding of the dissent's use of the word "inference" to mean that "since the technologically enhanced emanations had to be the basis of inferences before anything inside the house could be known, the use of the emanations could not be a search."[102] The dissent's opening remarks exemplify its attempt to draw a distinction between an inference and a search:

> There is, in my judgement, a distinction of constitutional magnitude between "through-the-wall surveillance" that gives the observer or listener direct access to information in a private area, on the one hand, and the thought processes used to draw inferences from information in the public domain, on the other hand.[103]

However, the Court rejected the premise that the government obtaining information is not a search so long as an inference—or other intermediate thought process—must be drawn before that information is rendered valuable.[104] The Court acknowledged that it may have misunderstood what the dissent was attempting to communicate, but it rejected the principle nonetheless.[105]

3. THE "DRAGNET," OR "LONG-TERM," CASES AND THE MOSAIC THEORY

The Supreme Court employed *Kyllo*'s rejection of "inference insulation" in its most recent Fourth Amendment case, *Carpenter v. United States*.[106] The rejection in *Kyllo* and its subsequent affirmance in *Carpenter* provided key support for the Fourth Circuit's determination in *Beautiful Struggle III* that BPD's warrantless

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the interior of the home as a "constitutionally protected area" after making that recognition.

101. Kyllo v. United States, 533 U.S. 27, 36 (2001).

102. *Id.* at 37 n.4.

103. *Id.* at 41 (Stevens, J., dissenting).

104. *Id.* at 37 n.4 (majority opinion).

105. *Compare id.* ("[I]f [the dissent] means only that an inference is not a search, we certainly agree. That has no bearing, however, upon whether hi-tech measurement of emanations form a house is a search"), *with id.* at 44 (Stevens, J., dissenting) (finding that thermal-imaging measurement of the emanations coming from a home was not a search because it concluded that the measurement itself did not provide information about what exactly was happening inside the home).

106. Carpenter v. United States, 138 S. Ct. 2206, 2218 (2018) (quoting Kyllo v. United States, 533 U.S. 27, 36 (2001)).

operation of AIR amounted to a search.[107] Before *Carpenter*, however, an influential circuit court case, *United States v. Maynard*,[108] set the stage for the Supreme Court's first decision relating to "dragnet"[109] surveillance. In *Maynard*, the D.C. Circuit faced the hypothetical situation posited by the defendant in *Knotts*: the legality of precise surveillance for an extended time.[110] With no valid warrant, the government attached a GPS tracking device to the defendant's vehicle and monitored his movements for four weeks.[111] In approaching the inquiry, the Court offered its interpretation of the reasonable expectation of privacy inquiry: "[W]e ask not what another person *can* physically and *may* lawfully do but rather what a reasonable person expects another might *actually* do."[112] In applying an individual's *actual* expectation to the facts at hand, the court found that "[a] reasonable person does not expect anyone to monitor and retain a record of every time he drives his car, including his origin, route, destination, and each place he stops and how long he stays there; rather, he expects each of those movements to remain 'disconnected and anonymous.'"[113] Based on this reasoning, the court concluded that "the whole of a

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107. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 345 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (quoting *Carpenter*, 138 S. Ct. at 2218).

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

109. Dragnet surveillance (which is also referred to in this Casenote as long-term surveillance) in this context is surveillance that is conducted in a fashion that collects all available information, or all information within a certain set of parameters, about a subject or subjects over a period of time (often an extended period) that can later be sifted through to find relevant pieces, *see Carpenter*, 138 S. Ct. at 2212-13 (government acquired 129 days of defendant's phone records and used those to place the defendant at four specific locations, each at the time of a robbery at the location), or used to analyze patterns or habits from which other information can be inferred or deduced, *see* United States v. Jones, 565 U.S. 400, 416 (2012) (Sotomayor, J., concurring) (noting that continuous GPS monitoring "enables the government to ascertain . . . their political and religious beliefs, sexual habits, and so on."). Oftentimes, the dragnet nature of a given program is essential to its function, as was the case with BPD's AIR. *See Beautiful Struggle III*, 2 F.4th at 342 ("And here, as [in *Carpenter*], the government can deduce [private information] only because it recorded *everyone's* movements.") (citing *Carpenter*, 138 S. Ct. at 2218).

110. *See Maynard*, 615 F.3d at 555.

111. *Id.*

112. *Id.* at 559 (emphasis added) (citations omitted); *see also id.* (discussing Bond v. United States, 529 U.S. 334, 338-39 (2000) (stating that a bus passenger expects that his overhead baggage may be handled, but not "in an exploratory manner." The Supreme Court held that "the agent's physical manipulation of the petitioner's bag [in an exploratory manner] violated the Fourth Amendment")).

113. United States v. Maynard, 615 F.3d 544, 563 (D.C. Cir. 2010) (quoting Nader v. Gen. Motors Corp., 255 N.E.2d 765, 772 (N.Y. 1970) (Breitel, J., concurring)).

person's movements over the course of a month is not *actually* exposed to the public because the likelihood a stranger would observe all those movements is not just remote, it is essentially nil."[114] Thus, the court held that the use of the tracking device on the defendant's vehicle to monitor his movements was an unreasonable search under the Fourth Amendment.[115]

The Supreme Court affirmed *Maynard* in *United States v. Jones*.[116] Though the Court's decision to affirm was unanimous, the Justices disagreed as to how that conclusion should be reached. Justice Scalia, delivering the opinion of the Court, decided the case—somewhat vexingly—on grounds of trespass, holding that "[b]y attaching the device to the Jeep, officers encroached on a protected area," effecting a warrantless search.[117] But concurring Justices Sotomayor and Alito would have decided *Jones* in a more contemporary fashion that faced characteristics of the surveillance itself head-on, mirroring the D.C. Circuit's rationale that found long-term, precision surveillance infringed upon reasonable expectations of privacy.[118]

Indeed, the concurrences embody *Jones*'s enduring legacy. Justice Sotomayor agreed with Justice Alito that "physical intrusion is now unnecessary to many forms of surveillance," noting vehicle tracking devices and smartphones with GPS.[119] Both concurring opinions recognized that "the same technological advances that have made possible nontrespassory surveillance techniques will also affect the *Katz* test by shaping the evolution of societal privacy expectations."[120] They agreed that "longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy."[121] For most offenses, "society's expectation has been that law enforcement agents and others would not—and indeed, in the main, simply could not—secretly monitor and catalogue every single movement of an individual's car for a very long period" even though "[n]ew technology may provide increased convenience or

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114. *Maynard*, 615 F.3d at 560 (emphasis added).

115. *Id.* at 566.

116. United States v. Jones, 565 U.S. 400 (2012).

117. *Id.* at 410.

118. *See id.* at 413 (Sotomayor, J., concurring); *id.* at 418 (Alito, J., concurring) (Justices Ginsburg, Breyer, and Kagan joined Justice Alito's concurrence).

119. *Id.* at 414-15 (Sotomayor, J., concurring).

120. *Id.* at 415 (citing Alito, J., concurring at 426-29).

121. *Id.* (internal quotations omitted) (quoting Alito, J., concurring at 430).

security at the expense of privacy, and many people may find the tradeoff worthwhile."[122]

Jones laid the foundation for *Carpenter*'s decision six years later, in which the Court answered in the affirmative the question of "whether the Government conducts a search under the Fourth Amendment when it accesses historical cell phone records that provide a comprehensive chronicle of the user's past movements."[123] The Court noted that "[a] majority of this Court has already recognized that individuals have a reasonable expectation of privacy in the whole of their physical movements."[124] When a person travels with their cell phone, the towers to which it connects make a record of the unique device identifier along with the time and date the connection occurred.[125] These records are called cell-site location information ("CSLI").[126] The FBI and federal prosecutors obtained over a hundred days' worth of CSLI from the petitioner's phone, which included 12,898 individual "location points cataloging [his] movements."[127] The Court noted the similarities between GPS and CSLI technology: both collect information about a person's whereabouts that is "detailed, encyclopedic, and effortlessly compiled."[128] Thus, the Court held "that an individual maintains a legitimate expectation of privacy in the record of his physical movements as captured through CSLI. The location information obtained from [the petitioner's] wireless carriers was the product of a search."[129] The Court placed emphasis not only on the nature of the surveillance itself and the data it collected, but the information that could be discerned from the data.[130]

To that end, some scholars assert that the *Jones* concurrences and *Carpenter* majority applied, and perhaps adopted, the mosaic theory—an approach that alters the Fourth Amendment search

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122. *Jones*, 565 U.S. at 427, 430 (Alito, J., concurring).

123. Carpenter v. United States, 138 S. Ct. 2206, 2211, 2217 (2018).

124. *Id.* at 2211 (first citing United States v. Jones, 565 U.S. 400, 415 (2012) (Sotomayor, J., concurring); and then citing *Jones*, 565 U.S. at 430 (Alito, J., concurring)).

125. *See id.*

126. *Id.*

127. *Id.* at 2212.

128. *Id.* at 2216.

129. *Id.* at 2217.

130. *See id.*

inquiry when the surveillance is dragnet or long-term.[131] The mosaic theory is an approach to the Fourth Amendment search inquiry that treats the usage of an aggregated set of information or the doing of a series of acts as a search, even though the usage of one individual piece of information or the doing of one individual act would not by itself qualify as a search.[132] The best justification of the mosaic theory comes from *Maynard*, the case that created it:

> Prolonged surveillance reveals types of information not revealed by short-term surveillance, such as what a person does repeatedly, what he does not do, and what he does ensemble. These types of information can each reveal more about a person than does any individual trip viewed in isolation. 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.[133]

In essence, the "whole reveals more—sometimes a great deal more—than does the sum of its parts."[134] Thus, under the theory, "we maintain reasonable expectations of privacy in certain quantities of information even if we do not have such expectations in the constituent parts."[135] Some scholars have come to a consensus that the *Jones* concurrences adopted this theory, following the lead of

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131. *See* Paul Ohm, *The Many Revolutions of Carpenter*, 32 HARV. J. L. & TECH. 357, 372-74 (2019).

132. *See* David Gray & Danielle Keats Citron, *A Shattered Looking Glass: The Pitfalls and Potential of the Mosaic Theory of Fourth Amendment Privacy*, 14 N.C.J.L. & TECH. 381, 411-17 (2013).

133. United States v. Maynard, 615 F.3d 544, 562 (D.C. Cir. 2010) (footnote omitted). It should be noted that Professor Kerr, not the D.C. Circuit, created the *name* "Mosaic Theory" on the day *Maynard* was decided. *See* Orin Kerr, *The Mosaic Theory of the Fourth Amendment*, 111 MICH. L. REV. 311, 313 n.5 (2012).

134. United States v. Maynard, 615 F.3d 544, 558 (D.C. Cir. 2010).

135. Gray & Citron, *supra* note 132, at 381-82.

the D.C. Circuit's predicate opinion.[136] Others also agree that *Carpenter* applied, and perhaps altered, the mosaic theory.[137] The *Jones* concurrences reflect applications of the mosaic theory because they emphasized either the fact that some private information could be inferred only after a significant period of surveillance or the fact that such extensive surveillance activities simply would not have been possible without new technologies, thereby intruding upon reasonable privacy expectations.[138] *Carpenter* adopted similar reasoning.[139]

Courts generally agree that *Jones* and *Carpenter* applied principles reflected in the mosaic theory.[140] But whether they adopted the theory, requiring its application by the lower courts, has been doubted.[141] Further, whether application of the mosaic theory is practical, necessary, or wise is the subject of sharp disagreement between courts and commentators alike.[142] Though it does not adopt the mosaic theory by name, the Fourth Circuit's decision in *Beautiful Struggle* relied on it to reach its conclusion that BPD's access and collection of AIR program data constituted a search.[143]

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136. *See* Gray & Citron, *supra* note 132, at 396-97; Kerr, *supra* note 133, at 326-28.

137. *See* Taylor H. Wilson, Jr., *The Mosaic Theory's Two Steps: Surveying* Carpenter *in the Lower Courts*, 99 TEX. L. REV. ONLINE 155, 162-64 (2020-2021); Ohm, *supra* note 131, at 372-74.

138. *See* United States v. Jones, 565 U.S. 400, 416 (2012) (Sotomayor, J., concurring) ("I would ask whether people reasonably expect that their movements will be recorded and aggregated in a manner that enables the government to ascertain . . . their political and religious beliefs, sexual habits, and so on"); *id.* at 430 (Alito, J., concurring) (explaining that short-term tracking is reasonably expected, while long term tracking is not).

139. *See* Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018) (quoting *Jones*, 565 U.S. at 415 (Sotomayor, J. concurring) (noting that, like GPS, CSLI allows "an intimate window into a person's life, revealing not only his particular movements, but through them his 'familial, political, professional, religious, and sexual associations.'")).

140. *See* Wilson, *supra* note 137, at 165.

141. *See* United States v. Tuggle, 4 F.4th 505, 520 (7th Cir. 2021) ("At a minimum, the Supreme Court has not yet required lower courts to apply [the Mosaic Theory]").

142. *See id.*; United States v. Howard, 426 F. Supp. 3d 1247, 1255-56 (M.D. Ala. 2020) (summarizing disagreements between courts and listing individual justices and judges, courts, and commentators who have questioned the Mosaic Theory's merits and practicality).

143. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 342 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (first citing United States v. Jones, 565 U.S. 400, 415-17 (Sotomayor, J., concurring); and then quoting United States v. Maynard, 615 F.3d 544, 562-63 (D.C. Cir. 2010)) (AIR data, when aggregated, is worth something "greater than the sum of the individual trips . . . [it] 'reveal[s] more about a person than does any individual trip viewed in isolation.").

Regardless of whether *Carpenter* applied or adopted the mosaic theory, the case's recognition of a privacy expectation that exists in the "whole" of one's movements effected a change, albeit vague, in the Fourth Amendment landscape.[144] True enough, the Court's evolving interpretation of the Fourth Amendment has made substantial progress over the past decade in curbing the government's use of advanced technology to "effortlessly" collect "encyclopedic" private information about citizens. But the extent and impact of these developments—particularly *Carpenter*'s holding—have yet to be settled by the lower courts.[145] Indeed, this dilemma was the subject of fierce disagreement in *Beautiful Struggle III*.[146]

B. AERIAL SURVEILLANCE AND THE REASONABLE EXPECTATION OF PRIVACY

Though *Beautiful Struggle* is a case about mass surveillance of citizens' public movements, it is also, by virtue of its facts, about aerial surveillance. The Supreme Court has generally held that aerial surveillance does not violate reasonable expectations of privacy so as to constitute a search within the meaning of the Fourth Amendment.[147] What a person displays to the outside world—whether that exposure may be perceived from eye-level, above, or below—is "not a subject of Fourth Amendment protection."[148] All three of the Court's seminal cases on the issue were decided in the second half of the 1980s—*California v. Ciraolo* and *Dow Chemical Co. v. United States* (hereinafter "*Dow*") were decided on the same day.[149]

In *Ciraolo*, the Court held that Santa Clara Police officers did not violate the Fourth Amendment when, without a warrant, they used a small aircraft to fly at 1,000 feet over the defendant's home

144. *See Carpenter*, 138 S. Ct. at 2219.

145. *See, e.g.*, Bailey v. State, 311 So. 3d 303, 315-16 (Fla. Dist. Ct. App. 2020) (noting "*Carpenter*'s seemingly sweeping language, its discussion of the technology revolution of the 21st century[,] and discussion of an expansion of individual constitutional rights in [historical location data]," but finding that the defendant did not have a reasonable expectation of privacy in the historical GPS records of his girlfriend's car because *Knotts* controlled).

146. *Compare Beautiful Struggle III*, 2 F.4th at 341 ("*Carpenter* applies squarely to this case."), *with id.* at 361 (Wilkinson, J., dissenting) ("[The majority] overreads *Carpenter*.").

147. *See, e.g.*, Florida v. Riley, 448 U.S. 445 (1988); California v. Ciraolo, 476 U.S. 207 (1986); Dow Chem. Co. v. United States, 476 U.S. 227 (1986).

148. *See* Katz v. United States, 389 U.S. 347, 351 (1967).

149. *See Ciraolo*, 476 U.S. at 207; *Dow Chem. Co.*, 476 U.S. at 227.

and take pictures of marijuana plants growing in his backyard.[150] Even though the defendant had erected a ten-foot fence, the Court found that an "expectation that his garden was protected from [aerial observation was] unreasonable" because "[a]ny member of the public flying [above his home] who glanced down could have seen everything that the[] officers observed."[151] Thus, the officers did not effect a search when observing and taking photos of the yard.[152]

In *Dow*, the Court reached a similar conclusion despite the government's use of sophisticated photography equipment.[153] Environmental Protection Agency ("EPA") officials were denied an inspection of a Dow Chemical manufacturing facility in Midland, Michigan.[154] They hired an aerial photographer with a "precision aerial mapping camera" that created imagery allowing for the "identification of objects such as wires as small as 1/2-inch in diameter."[155] The Court decided *Dow* on the basis of the open fields doctrine, which holds that "an individual may not legitimately demand privacy for activities out of doors in fields, except in the area immediately surrounding the home."[156] The Court reasoned that an industrial complex is more similar to an open field,[157] "open to the view and observation of persons in aircraft lawfully" above it, than to the curtilage of a dwelling.[158] In a nod to the future, the Court indicated that "[i]t may well be . . . that surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public, such as satellite technology, might be constitutionally proscribed absent a warrant," but ultimately it decided that the imagery that the EPA captured did not rise to that level.[159] The photography of the chemical plant was

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150. *Ciraolo*, 476 U.S. at 215.

151. *Id.* at 213-14.

152. *See id.* at 213-214.

153. *See id.* at 229.

154. *Id.*

155. *Id.* at 229, 238; *but see id.* at 239 n.5 (noting that no evidence in the record showed that such small objects were sought out or recognizable in the imagery).

156. Dow Chem. Co. v. United States, 476 U.S. 227, 235-36 (1986) (quoting Oliver v. United States, 466 U.S. 170, 178 (1984)).

157. *See id.* at 239; *see also Oliver*, 466 U.S. at 179 (footnote omitted) ("open fields do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance . . . the public and police lawfully may survey [such] lands from the air.").

158. *Dow Chem. Co.*, 476 U.S. at 239.

159. *Id.* at 238.

not so intrusive as to constitute an unreasonable search under the Fourth Amendment.[160]

Three years later, the Court had occasion to revisit this issue in *Florida v. Riley*, which was decided by a four-Justice plurality opinion and a concurrence authored by Justice O'Connor.[161] There, an officer investigating whether the defendant was growing marijuana on his property took a helicopter to view the property at an altitude of 400 feet, where he could see marijuana growing in the greenhouse with his naked eye.[162] With this information, the officer obtained a warrant that led to the defendant's charges.[163] The Court decided that *Ciraolo* controlled and that the observation was not a search, reasoning that the defendant "could not reasonably have expected the contents of his greenhouse [that were exposed to viewing from above] to be immune from examination by an officer . . . flying in navigable airspace . . . ."[164] Justice O'Connor criticized this reasoning for relying too heavily on Federal Aviation Administration regulations governing airspace and too lightly on what the Fourth Amendment would allow.[165] But ultimately, her concurrence noted that the defendant had no reasonable expectation of privacy from "naked-eye aerial observation" because "there is reason to believe that there is considerable public use of airspace at altitudes of 400 feet and above . . . ."[166] In *Beautiful Struggle*, the district court, the majority of the original three-judge Fourth Circuit panel, and the dissent in the en banc Fourth Circuit opinion relied heavily on these three cases to support their conclusion that AIR was compatible with the Fourth Amendment.[167] However, as discussed in the next section, the en banc majority decided that *Carpenter*[168] controlled the case.[169]

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160. *Dow Chem. Co.*, 476 U.S. at 238-39.

161. *See* Florida v. Riley, 448 U.S. 445 (1988).

162. *Id.* at 448.

163. *Id.* at 448-49.

164. *Id.* at 449-50.

165. *See id.* at 452 (O'Connor, J., concurring).

166. *Id.* at 455.

167. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 712-14 (D. Md. 2020) [*Beautiful Struggle I*]; Leaders of a Beautiful Struggle v. Balt. Police Dep't, 979 F.3d 219, 227-28 (4th Cir. 2020) [*Beautiful Struggle II*]; Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 360 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (Wilkinson, J., dissenting).

168. Carpenter v. United States, 138 S. Ct. 2206, 2221 (2018).

169. *See Beautiful Struggle III*, 2 F.4th at 341-46.

III. THE COURT'S DECISION

A. CHIEF JUDGE GREGORY'S MAJORITY OPINION

Principally, the majority relied on *Carpenter* to hold that BPD's accessing of data collected by AIR is a search.[170] It understood *Carpenter* to solidify "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."[171] Though individuals do not have a reasonable expectation of privacy from short-term surveillance, like in *Knotts* where the beeper was merely used to track the defendant from his origin to his destination,[172] prolonged tracking "invades the reasonable expectation of privacy that individuals have in the whole of their movements . . . ."[173] Thus, the majority concluded that the data the program collects is more analogous to the CSLI in *Carpenter* and the GPS in *Jones* than to the radio beeper in *Knotts*, because it "'tracks every movement' of every person outside in Baltimore."[174] Additionally, "[b]ecause the data is retained for 45 days—at least—[AIR creates] a 'detailed, encyclopedic,' record of where" people traveled during the daytime in that period, allowing BPD to "'travel back in time' to observe" people's movements, both before and after the target crime occurred.[175] Ultimately, the majority found that, like CSLI, "the 'retrospective quality of the data' enables police to 'retrace a person's whereabouts,' granting access to otherwise 'unknowable' information."[176]

The majority reached that conclusion while acknowledging AIR's limits.[177] For example, though data collection may be impossible when the weather is poor, leaving only "snippets" of data throughout the day, those snippets still capture several hours of a person's movements.[178] The majority also recognized that AIR only

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170. *See Beautiful Struggle III*, 2 F.4th at 341-46.

171. *Id.* at 341 (quoting *Carpenter*, 138 S. Ct. at 2217).

172. *See* United States v. Knotts, 460 U.S. 276, 278-79 (1983).

173. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 341 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (quoting *Carpenter*, 138 S. Ct. at 2217).

174. *Id.* (quoting Carpenter v. United States, 138 S. Ct. 2206, 2215-19 (2018)).

175. *Id.* (quoting *Carpenter*, 138 S. Ct. at 2215-19).

176. *Id.* at 342 (quoting *Carpenter*, 138 S. Ct. at 2215-19).

177. *See id.* at 342-43.

178. *See id.* at 342.

operated during the day.[179] However, it concluded that the most useful data would be collected during the day anyway, because "most people do most of their moving during the daytime" and "many people start and end most days at home, following a relatively habitual pattern in between."[180] Therefore, BPD would be able to look through several days' data to look for patterns that would allow it to attach an identity to a given pixel.[181]

Moreover, the majority, in following a mosaic theory approach, refused to segregate individual instances of data collection, instead opting to view them in relation to each other.[182] Even if tracking was interrupted, it noted that there is a good chance police will "be able to re-identify the same target over consecutive days."[183] Ultimately, the majority found that context clues, habitual patterns, and other available information "will often be enough for law enforcement to deduce the people behind the pixels."[184] Having the benefit of hindsight, it indicated that despite occasional interruptions and the built-in limitations, the program was, indeed, successful in tracking individuals and vehicles over the course of multiple days.[185] The majority asserted that the aggregation of data and the deductions and inferences that can be drawn from such aggregation provide the basis for an individual's expectation of privacy in the whole of their movements.[186] Such "deductions go to the privacies of life, the epitome of information expected to be beyond the warrantless reach of the government."[187]

The district court had reached the opposite conclusion by relying on a misunderstanding that AIR is only short-term surveillance, from which the whole of individuals' movements could not be ascertained or recorded.[188] The majority also faulted the district court for looking for the "search" in the wrong place, finding that the district court had largely disregarded the inferences and

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179. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 343 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

180. *Id.*

181. *See id.*

182. *See id.* at 343-44.

183. *Id.* at 343.

184. *See id.*

185. *See id.* at 343 n.9.

186. *See id.* at 342.

187. *Id.* (citing Carpenter v. United States, 138 S. Ct. 2206, 2214, 2218 (2018)).

188. *See id.* at 342 (citing Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 714, 716 (D. Md. 2020) [*Beautiful Struggle I*]).

deductions AIR made possible when it "reason[ed] that [the] [p]laintiffs were 'lump[ing] together discrete surveillance activities as one Fourth Amendment search.'"[189] The district court had posited that "[t]he addition of one more investigative tool—in this case, aerial surveillance—does not render the total investigatory effort a Fourth Amendment 'search.'"[190] But the majority disagreed, finding that this missed the point: "[The] [p]laintiffs 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.'"[191] The majority reasoned that "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."[192] In conclusion, the majority held that "when BPD 'accesses' AIR data, it invades the recorded individuals' reasonable expectation of privacy, conducting a search."[193]

B. JUDGE WILKINSON'S DISSENTING OPINION

Putting aside the mootness issue that the dissent ultimately would have used to settle the case, the dissent reached the opposite conclusion on the constitutional question based on a fundamentally different interpretation of the facts and law.[194] The dissent understood AIR to be short-term, rather than long-term, surveillance.[195] Based on that understanding, the dissent distinguished AIR from the long-term "GPS tracking [that the concurrences in *Jones* held] violated a reasonable expectation of privacy."[196] Because *Jones* stands for the proposition that "*short-term* surveillance of an individual's public movements is less likely to violate a reasonable expectation of privacy," the dissent decided that AIR's constitutionality, based on the facts as found by the district court,

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189. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 344 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (emphasis in original) (alterations in original) (quoting *Beautiful Struggle I*, 456 F. Supp. 3d at 716).

190. *Id.* (quoting *Beautiful Struggle I*, 456 F. Supp. 3d at 716).

191. *See id.* (quoting *Carpenter*, 138 S. Ct. at 2219-20).

192. *Id.* (emphasis added) (quoting *Carpenter*, 138 S. Ct. at 2218).

193. *Id.* (emphasis added) (citing *Carpenter*, 138 S. Ct. at 2218).

194. *Compare id.* at 360-62 (Wilkinson, J., dissenting), *with id.* at 341-45 (majority opinion).

195. *See id.* at 360 (Wilkinson, J., dissenting).

196. *Id.* (first citing United States v. Jones, 565 U.S. 400, 414-15 (2012) (Sotomayor, J., concurring); and then citing *Jones*, 565 U.S. at 430-31 (Alito, J., concurring)).

"checks out."[197] The dissent found that AIR's surveillance was strictly short-term because it agreed with the district court that AIR "could not be used to track individuals from day-to-day" and could not be used to tell if an individual leaving a building was the same "pixel" who entered it.[198] Thus, under the dissent's reasoning, people seeking to evade detection could essentially re-anonymize themselves to the PSS analyst simply by walking inside of a building and walking right back out.

The dissent fiercely disagreed with what it perceived as the majority's failure to adequately consider *Ciraolo*, *Dow*, and *Riley*.[199] The dissent focused on (1) *Ciraolo* and *Riley*'s view that objects within the curtilage of a person's home, even if sought to be hidden from eye-level, are not protected from eyes watching from above; and (2) *Dow*'s supposed sanctioning of high-fidelity photography of private property.[200] The dissent correctly noted that AIR's imagery is less detailed in terms of fidelity than that in *Dow*, the former representing a person as a pixel rather than with a detailed image in which a viewer could discern the shape of the person's nose.[201] It also correctly recognized that AIR tracked public movements instead of looking into the curtilage of people's homes.[202] Therefore, the images themselves that were captured in AIR's operation were, in a sense, less invasive than the aerial surveillance approved by the Supreme Court in *Ciraolo*, *Dow*, and *Riley*: AIR's images depicted public movements instead of private places, from higher altitudes, at lower resolutions.[203] The dissent remarked that "[i]f those . . . [three cases] do not control this case, the majority should frankly state that it no longer deems them palpable or binding."[204]

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197. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 360 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (Wilkinson, J., dissenting) (citing Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 704 (D. Md. 2020) [*Beautiful Struggle I*]).

198. *Id.* (citing *Beautiful Struggle I*, 456 F. Supp. 3d at 704).

199. *Id.* ("The majority also effectively nullifies the Supreme Court's repeated decisions sanctioning aerial surveillance.").

200. *See id.* (first citing California v. Ciraolo, 476 U.S. 207, 209 (1986); and then citing Dow Chem. Co. v. United States, 476 U.S. 227, 238 (1986)).

201. *See id.*

202. *See id.*

203. *See id.* (first citing *Ciraolo*, 476 U.S. at 209 (1986); then citing *Dow Chem. Co.*, 476 U.S. at 238; and then citing Florida v. Riley, 488 U.S. 445, 450 (1989)).

204. *Id.* at 360-61.

Next, the dissent contended that the majority "overreads *Carpenter*."[205] The dissent thought that CSLI was "far more invasive of privacy than the limited aerial surveillance . . ." of AIR.[206] It further distinguished AIR from CSLI, noting that the latter is "detailed, encyclopedic, and effortlessly compiled"[207] and that it is used to "target [specific] individuals of interest," unlike AIR's bulk collection of the "public movements of non-preidentified individuals . . . ."[208] The dissent believed that the district court's factual findings prescribed a finding of constitutionality, arguing that the majority could only have reached its conclusions "by tossing out the district court's factual findings and replacing them with 'facts' more convenient to its preferred conclusion."[209] Finally, the dissent distinguished AIR from CSLI based on the amount of time and effort that it took to get probative information from the data.[210] It thought that applying *Carpenter* was inappropriate because AIR required "hours of work by an analyst to tag a person of interest and reconstruct a couple of hours of that person's public movements."[211] In distinguishing AIR from CSLI, the dissent emphasized that CSLI surveillance is "remarkably easy" and "cheap."[212] The dissent suggested that "[t]he majority [was] not applying *Carpenter*'s 'narrow' holding. It [was] extending it beyond recognition to bar all warrantless tracking of public movements."[213]

IV. ANALYSIS: PROTECTING THE PERSON BEHIND THE PIXEL

The development of Fourth Amendment jurisprudence over the past several decades is complicated. Reasonable people can disagree as to what outcome it dictates in a given case and may reach very different answers to the same question even when using the same tools. The razor-thin margin by which *Beautiful Struggle* was decided illustrates this problem. Indeed, the future of our

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205. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 360 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (Wilkinson, J., dissenting).

206. *Id.*

207. *Id.* at 360 (internal quotations omitted) (quoting Carpenter v. United States, 138 S. Ct. 2206, 2216 (2018)).

208. *Id.*

209. *Id.* at 361.

210. *See id.*

211. See *id.* at 361-62.

212. *Id.* at 361 (internal quotations omitted) (quoting Carpenter v. United States, 138 S. Ct. 2206, 2217-18 (2018)).

213. *Id.* (citation omitted) (quoting *Carpenter*, 138 S. Ct. at 2220).

right to privacy may depend on continued judicial acceptance of the *Beautiful Struggle* majority's reasoning.

This section begins by discussing the incorrect dissenting opinion. It lays out the apparent virtues of the dissent's arguments and then explains why they are misplaced for the case at hand. Next, it examines the majority opinion and sets out the reasons why it correctly ascertained the true constitutional issues presented by the AIR program in the current Fourth Amendment landscape. Finally, this section works to demystify *Carpenter*'s holding and the concept of "long-term" tracking. It explains why *Beautiful Struggle* was ideal for its application, and that the case can be useful precedent for other courts to follow when determining whether a given type of warrantless surveillance is of such a "long-term" or "dragnet" nature that it violates the Fourth Amendment.

The dissent's rhetoric exemplifies just how far it believed the majority to be from the correct answer to the question before it.[214] The dissent essentially posed a question: is society at a place where courts are willing to ignore the constitution, disregard norms, or even subvert democracy to curb surveillance and protect privacy? The dissent thought that "[t]here 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."[215] The dissent found that the supposedly egregious overreach of the majority was flatly incorrect: "[T]he law is not on the majority's side."[216] Putting the rhetoric aside, however, the law *is* on the majority's side. The majority answered the question correctly based on the facts before it.

The dissent, on the other hand, zeroed in on non-dispositive facts and failed to ascertain a correct understanding of AIR's capabilities. As discussed in the previous section, the original appellate court and the Fourth Circuit en banc dissent heavily relied upon AIR's aerial nature to support its constitutionality.[217] At a cursory

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214. *See generally* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 359-360 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (Wilkinson, J., dissenting).

215. *Id.*

216. *See id.* at 360.

217. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 713-14 (D. Md. 2020) [*Beautiful Struggle I*]; Leaders of a Beautiful Struggle v. Balt.

level, this reliance has merit, but if too much emphasis is placed on comparing the operational and technical specifications of AIR's planes and cameras to those of the aircraft and cameras in *Dow* and *Riley*, it is easy to lose sight of the issue in the plethora of factual minutiae. Yes, the surveillance in AIR took place at a higher altitude than that in *Dow* (1,200, 3,000, and 12,000 feet)[218] and *Riley* (400 feet).[219] It is also true that the areas that AIR sought to record were public—certainly less private than the defendant's curtilage in *Riley* and more exposed to observation by passers-by than the interior of Dow's chemical plant.[220] Finally, the images that AIR captured were, indeed, of a lower fidelity than those captured in *Dow*.[221] So, based on those initial comparisons, everything looks constitutional—AIR did not seek to invade the privacy of a home or business because it was less physically intrusive in terms of where its planes flew, and the photography it captured could not discern details on the ground.[222] In comparing AIR to the surveillance conducted in *Ciraolo*, the dissent stated, "If a plane can fly just one thousand feet over a home with cameras able to photograph individual items within the home's curtilage . . . I fail to see how AIR photographs representing daytime movements on public streets violate a reasonable expectation of privacy."[223] Therefore, on those facts, it would appear that Supreme Court precedent permits AIR's photography of Baltimore from above. Stopping the comparison there, as the dissent does, however, would be a grave error. It is neither the *kind* of information (photographs) nor the means by which it is collected (airplane) that determines whether its warrantless collection and access is violative of the Fourth Amendment. Instead, what matters for Fourth Amendment

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Police Dep't, 979 F.3d 219, 227-28 (4th Cir. 2020) [*Beautiful Struggle II*]; *Beautiful Struggle III*, 2 F.4th at 360 (Wilkinson, J., dissenting).

218. Dow Chem. Co. v. United States, 476 U.S. 227, 229 (1986).

219. Florida v. Riley, 448 U.S. 445, 448 (1988).

220. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 337 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc); *Riley*, 488 U.S. at 450; *Dow Chem. Co.*, 476 U.S. at 241.

221. *Compare Beautiful Struggle III*, 2 F.4th at 334, *with Dow Chem. Co.*, 476 U.S. at 238.

222. *See Beautiful Struggle III*, 2 F.4th at 360 (Wilkinson, J., dissenting) (first citing Caljfornia v. Ciraolo, 476 U.S. 207, 209 (1986); then citing *Dow Chem. Co.*, 476 U.S. at 238; and then citing *Riley*, 488 U.S. at 450).

223. *Id.* (citation omitted) (citing *Ciraolo*, 476 U.S. at 209).

purposes is whether the government violated an individual's reasonable expectation of privacy.[224]

The majority correctly understood that "the AIR program's 'aerial' nature [was] only incidental to Plaintiffs' claim, just as cell phone technology [was] ultimately incidental to the outcome in *Carpenter*."[225] If you were in the helicopter with the EPA in *Dow*, you might have been able to discern what a hypothetical plant foreman looked like, but you could not tell where he lived, who he was dating, where he stopped for a coffee on the way to work, what health issues he had, or where he went on the weekends to decompress. Which set of information would have told you more about who he *is*? This is the essence of the distinction between short- and long-term surveillance that the Supreme Court drew in *Jones* and *Carpenter*.[226] The question posed in *Beautiful Struggle* really is this: does it make a difference if you could not see his face?

It does not. AIR is antithetical to the types of targeted, short-term surveillance sanctioned by the Supreme Court in its aerial surveillance cases.[227] It is a quintessential example of dragnet surveillance—capturing everything there is to see and combing through it after the fact.[228] It is the functional equivalent of hiring over 600,000 police officers and assigning one to capture the movements of nearly every citizen of Baltimore. Nonetheless, the district court, the original Fourth Circuit panel, and the Fourth Circuit en banc dissent failed to ascertain the applicable legal principles. This failure is also exemplified by the dissent's assertion that AIR cannot be considered long-term surveillance because there were gaps in the data.[229] However, the Supreme Court's distinction between short- and long-term surveillance can also be

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224. *See Beautiful Struggle III*, 2 F.4th at 342-43 (majority opinion); *see also Ciraolo*, 476 U.S. at 215 ("[I]t is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet.").

225. *Beautiful Struggle III*, 2 F.4th at 345.

226. *See* Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018) (citing United States v. Jones, 565 U.S. 400, 415-17 (2012) (Sotomayor, J., concurring)) ("all-encompassing record" of defendant's location obtained through CSLI provided "an intimate window into [his] life").

227. *Compare* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 334 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc) (discussing AIR's purpose and function), *with* Florida v. Riley, 448 U.S. 445, 447-48 (1988) (discussing a helicopter used on a singular occasion to make one observation of a targeted location).

228. *See Beautiful Struggle III*, 2 F.4th at 347.

229. *See id.* at 361 (Wilkinson, J., dissenting).

understood as the difference between what "law enforcement could [and could not] do 'prior to the digital age[.]'"[230] Even in *Knotts*, the technology available to law enforcement only enhanced the abilities of the officers to follow the defendant for a short time.[231] Since *Knotts*, incredible technological progress has made possible "prolonged tracking that can reveal intimate details through habits and patterns."[232] Thus, today's reasonable expectation of privacy in the whole of one's movements is not so much an expectation that those movements will not be casually observed by strangers, but that they will not be used in their totality to gather information about—or perhaps to build a mosaic of—"the privacies of [one's] life."[233]

When such a massive amount of information is collected, it makes little difference if there are occasional gaps in the data. In this regard, the dissent made much ado about nothing.[234] For example, if AIR was unable to track the movements of a given car on one cloudy day but was then able to find that car the next day because the PSS analyst knew where it would be parked,[235] no meaningful interruption or gap in the data would have existed because the analyst could pick up right where they left off despite missing an entire day's worth of surveillance. The twelve-hour or shorter increments in which AIR collected data would allow analysts to glean information that is "greater than the sum of the individual trips."[236] It is *that* information in which individuals have a reasonable expectation of privacy.[237] The dissent, in pointing out the gaps

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230. *Beautiful Struggle III*, 2 F.4th at 341 (majority opinion) (quoting Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018)).

231. *See* United States v. Knotts, 460 U.S. 276, 278-81 (1983).

232. Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 341 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

233. *See id.* at 342 (citing *Carpenter*, 138 S. Ct. at 2218).

234. *See id.* at 361 (Wilkinson, J., dissenting) (finding AIR less intrusive than CSLI because the latter "could be used to reliably track an individual's movement from day to day," whereas "AIR could only be used to track someone's outdoor movements for twelve hours at most.").

235. *See id.* at 343 n.9 (majority opinion) (though the facts presented by the author are a hypothetical, the en banc majority found this sort of tracking to be well within AIR's capabilities).

236. *See id.* at 342.

237. *See id.* (citing United States v. Jones, 565 U.S. 400, 415-17 (2012) (Sotomayor, J., concurring) ("people [reasonably] do not expect 'that their movements will be recorded and aggregated in a manner that enables the government to ascertain' private information about their lives")); *see also* Carpenter v. United States, 138 S. Ct.

in AIR's coverage, neglected the fact that similar gaps existed in both *Jones* and *Carpenter*. In those cases, the "whole" was an aggregation of many smaller parts—allowing the government to create a mosaic of a person's life with the individual collected components.[238] AIR posits the same ability.[239] Admittedly, it only collects data during the day, it cannot collect data if it is rainy, and individuals are depicted only as blurry pixels.[240] However, like GPS and CSLI, it could also track people from day to day and aggregate these data points to create an encompassing record of an individual's movements and activities.[241]

We must address the obvious: AIR's purpose was to *identify people*. If those anonymous pixels remained anonymous, the program would be an exercise in futility; it makes little difference whether they were pre-identified. So, how did AIR attribute an identity to those blurry pixels? By analyzing their movements—their origins, their destinations, their routes, and the patterns that those three things established—in conjunction with BPD's existing surveillance apparatus.[242] This is why the mosaic theory has merit. To allow the government to circumvent the Fourth Amendment by engaging in piecemeal rather than continuous data collection to learn an enormous amount of information about a person's private life is an egregious invasion of privacy. This process of aggregation necessitates undertaking the endeavor that the Supreme Court has recognized as long-term tracking: the process of using multiple pieces of data in conjunction with each other in a way that "provides an intimate window into a person's life . . . ."[243] It does not matter whether that process is used to learn more about a person who has already been identified or to use that "more" to attribute an identity to a person who—in reality—the government already knows on an intimate level. How else could a blurry pixel be identified than by learning details unique, and likely private, to that person?

2206, 2218 (2018) ("the retrospective quality of [CSLI] gives police access to a category of information otherwise unknowable.").

238. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 342-43 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc). (describing deficiencies in the GPS data collected in *Jones* and the CSLI in *Carpenter*).

239. *See id.*

240. *See id.* at 334.

241. *See id.* at 342-43.

242. *See id.* at 334.

243. Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018).

There has been criticism of *Carpenter* by those who think that "long-term" is too vague of a concept.[244] However, "long-term" is somewhat of a misnomer. *Beautiful Struggle III* shows that, considering the reasons that the Supreme Court has given in support of protecting the whole of a person's movements, the term simply refers to the amount of time that it takes to collect the data that provides enough insight into a person's "privacies of life"[245] to enable the successful identification of a blurry pixel.[246] This is the invasion against which the principles set forth in *Carpenter* and *Jones* protect.[247] Those cases were decided on their own facts,[248] but their principles were faithfully and carefully applied in *Beautiful Struggle*—a case that, in the end, was decided correctly.[249]

CONCLUSION: *KATZ*'S FLAWS AND *CARPENTER*'S VIRTUES

The government should not be able to create a catalogue of its citizens' second-by-second movements spanning extended periods of time. Yet under the current state of Fourth Amendment jurisprudence, that conclusion was not certain—not even likely—at the outset of *Beautiful Struggle*.[250] It took three opinions to get it right.[251] This case, though reaching the legally and normatively correct result, is a quintessential example of the current law's inadequacies and pitfalls. The chain of inferences that must be laid to establish a search is far too long and relies upon a test that some

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244. See *Carpenter*, 138 S. Ct. at 2266-67 (Gorsuch, J., dissenting), for Justice Gorsuch's criticism on the Court's application of these principles.

245. *See* Boyd v. United States, 116 U.S. 616, 630 (1886).

246. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F.4th 330, 342-43 (4th Cir. 2021) [*Beautiful Struggle III*] (en banc).

247. *See* United States v. Jones, 565 U.S. 400, 415-16 (2012) (Sotomayor, J., concurring); *Carpenter*, 138 S. Ct. at 2217.

248. *See* Carpenter v. United States, 138 S. Ct. 2206, 2223 (2018) ("In light of the deeply revealing nature of CSLI, its depth, and comprehensive reach, and the inescapable and automatic nature of its collection . . . . [t]he Government's acquisition of the cell-site records here was a search . . . ."); *Jones*, 565 U.S. at 416, 418 (Sotomayor, J., concurring) (noting that GPS makes "available at a relatively low cost such a substantial quantum of intimate information whom the government, in its unfettered discretion, chooses to track . . . ," but joining the majority opinion because it supplied "a narrower basis for the decision.").

249. *See Beautiful Struggle III*, 2 F.4th at 342-43.

250. *See* Leaders of a Beautiful Struggle v. Balt. Police Dep't, 456 F. Supp. 3d 699, 715-17 (D. Md. 2020) [*Beautiful Struggle I*].

251. *See id.* at 703; Leaders of a Beautiful Struggle v. Balt. Police Dep't, 979 F.3d 219, 222 (4th Cir. 2020) [*Beautiful Struggle II*]; *Beautiful Struggle III*, 2 F.4th at 330.

say has been distorted, or needs distorting, to stand the test of time.[252] Societal expectations of privacy can change. Nothing is to say they are not changing to favor surveillance. The University of Baltimore studied citizens' thoughts about the AIR program and found that most of the Baltimoreans who knew of AIR approved of it.[253] Indeed, "many people may find the tradeoff worthwhile."[254] It may very well be time to consider alternatives to *Katz*.

Justice Harlan adopted the reasonable expectation of privacy test based on his synthesis of the Court's previous decisions.[255] But did this test take into account the future?[256] Today, does anybody get into a car and expect *not* to be tracked in some way? Does anybody in a city walking past a pole with a police camera on top think twice? Have our societal expectations of privacy not significantly diminished? Or, have courts simply been so slow to catch up with modern advances in technology that the government's use of widespread, dragnet surveillance has eluded review altogether, causing citizens to perceive it as an inevitability? Under either hypothesis, will *Katz* force the Fourth Amendment to cannibalize itself?

From the perspective of what we as a society *actually expect*, it might not be true that *Carpenter* and *Jones* are correct in their determination that "individuals have a reasonable expectation of privacy in the whole of their physical movements."[257] Even if the Court was wrong in that regard though, its determination is the law. We are better off for it. Some still suggest that *Katz* may do more harm than good in the digital age and that *Carpenter* did not remedy its ills.[258] Others say that *Carpenter* fundamentally

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252. *See* Carpenter v. United States, 138 S. Ct. 2206, 2267 (2018) (Gorsuch, J., dissenting) (opining "lower court[s] . . . are left with . . . amorphous balancing tests, a series of weighty and incommensurable principles to consider in them, and a few illustrative examples that seem little more than the product of judicial intuition.").

253. *See* P. ANN COTTEN ET AL., U. BALT.: SCHAEFER CTR. FOR PUB. POL'Y, BALTIMORE AERIAL INVESTIGATION RESEARCH PROJECT: FINDINGS FROM THE EARLY LAUNCH COMMUNITY SURVEY 75 (2020).

254. United States v. Jones, 565 U.S. 400, 427 (2012) (Alito, J., concurring).

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

256. *See Jones*, 565 U.S. at 420, 427 (Alito, J., concurring).

257. Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018) (first citing *Jones*, 565 U.S. at 430 (Alito, J., concurring); and then citing *Jones*, 565 U.S. at 415 (Sotomayor, J., concurring)).

258. *See, e.g.*, United States v. Tuggle, 4 F.4th 505, 527 (7th Cir. 2021) ("In other words, once society sparks the promethean fire—shifting its expectations in response to technological developments—the government receives license under current Fourth

changed the Fourth Amendment landscape despite its narrow holding, and for the better.[259] Neither view has prevailed entirely.[260] An analysis of the various competing views is ultimately outside the scope of this Casenote. What is certain, however, is that *Beautiful Struggle* is a faithful application of *Carpenter*'s holding. As a result, we are better off for this case, too. As the circuits attempt to decipher how *Carpenter* did and did not change the law, *Beautiful Struggle*'s en banc application of *Carpenter*'s holding will provide guidance to other courts as to how the Fourth Amendment is supposed to regulate increasingly intrusive government surveillance programs. However, it is clear, in any case, that the law could be better prepared for that task.

In 1890, many years before he became a Supreme Court Justice, Louis D. Brandeis co-authored an article with Samuel D. Warren in the fourth volume of the Harvard Law Review, which lamented that "[i]nstantaneous photographs and newspaper enterprise have invaded the sacred precincts of private and

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Amendment jurisprudence to act with greater constitutional impunity," suggesting "it might soon be time to revisit the Fourth Amendment test established in *Katz*.").

259. *See, e.g.*, Ohm, *supra* note 131, at 378, 416 (Asserting that "*Carpenter* promulgates a new three-factor test that should be applied . . . to the category of information being sought," and suggesting that "court[s] should ask whether a given category of information (1) has a deeply revealing nature; (2) possesses depth, breadth, and comprehensive reach; and (3) results from an inescapable and automatic form of data collection." Ohm concluded that "[w]hat *Katz* did to *Olmstead*, *Carpenter* will do to *Katz*, transforming the Fourth Amendment into something fundamentally new."); Elle Xuemeng Wang, *Erecting a Privacy Wall Against Technological Enhancements: The Fourth Amendment in the Post-Carpenter Era*, 34 BERKELEY TECH. L.J. 1205, 1238 (2019) (quoting *Carpenter*, 138 S. Ct. at 2214) (noting that "*Carpenter* is no doubt another landmark case in the history of data privacy cases. The decision shows that the Court is moving further away from a 'mechanical interpretation' of the Fourth Amendment to be more adaptive to the digital era," and concluding that, post-*Carpenter*, "The privacies of life are not at the mercy of the technology advancements in the digital era.").

260. *Compare* United States v. Trader, 981 F.3d 961, 967-69 (11th Cir. 2020) (the defendant did not have a reasonable expectation of privacy in thirty days of his IP address records collected by private messenger app, from which his location was ascertained), *and Tuggle*, 4 F.4th at 525-26 (adopting a narrow interpretation of *Carpenter* and finding that eighteen months of warrantless pole camera surveillance of the defendant's residence was not a search under the Fourth Amendment), *with* People v. Tafoya, 494 P.3d 613, 623 (Colo. 2021) (en banc) (relying on *Jones* and *Carpenter* to conclude that three months of warrantless pole camera surveillance of the defendant's backyard was a search under the Fourth Amendment), *and* United States v. Moore-Bush, 982 F.3d 50 (1st Cir. 2020) (granting rehearing en banc to determine whether circuit precedent that warrantless, extended monitoring of residence with pole camera required re-examination in light of *Carpenter*); *see also Moore-Bush*, 963 F.3d at 49 (1st Cir. 2020) (Barron, J., concurring).

domestic life; and numerous mechanical devices threaten to make good the prediction that 'what is whispered in the closet shall be proclaimed from the house-tops.'"[261] Have we come far from these worries? Or, is it perhaps the case that there is no meaningful difference between the basis for our desire not to have private actors disclose our private affairs[262] and the motivations behind the Framers' choice to enshrine rights in the Constitution to keep the intimate details of our lives safe from warrantless government intrusion?[263] It might be true that past worries about "idle gossip" by private actors[264] appear trivial compared to the threat of "millions of unblinking eyes" ceaselessly surveilling and analyzing our movements[265] on behalf of government actors. However, maybe worries about both issues are valid, and the common denominator is that people deserve, and might even have a right, to be "let alone"[266] by other individuals, and by the government too.

In multiple arenas, our privacy has undoubtedly been eroded, but we should still seek to protect it. Insofar as making sure that the Fourth Amendment remains able to adequately protect our privacy, *Carpenter* allowed the court in *Beautiful Struggle III* to do that this time—but the litigation's long and contentious journey to its final decision also made evident that the Fourth Amendment needs more help to avoid similar struggles in the future.

Scott A. Havener

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261. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 195 (1890).

262. *See id.* at 205-06.

263. *See* Carpenter v. United States, 138 S. Ct. 2206, 2214 (2018) (first quoting Boyd v. United States, 116 U.S. 616, 630 (1886) (the Fourth "Amendment seeks to secure 'the privacies of life' against 'arbitrary power.'"); and then quoting United States v. Di Re, 332 U.S. 581, 595 (1948) (noting "that a central aim of the Framers was to 'place obstacles in the way of a too permeating police surveillance.'")).

264. *See* Warren & Brandeis, *supra* note 261, at 196.

265. *See* United States v. Tuggle, 4 F.4th 505, 509 (7th Cir. 2021).

266. Warren & Brandeis, *supra* note 261, at 205-06.