CRIMINAL PROCEDURE — FOURTH AMENDMENT — SEVENTH CIRCUIT HOLDS LONG-TERM, WARRANTLESS VIDEO SURVEILLANCE IS NOT AN ILLEGAL SEARCH. — *United States v. Tuggle*, 4 F.4th 505 (7th Cir. 2021).

Digital cameras are cheaper, smaller, and more easily connected than ever before, and the costs of storing footage have plummeted.[1] It's no surprise, then, that law enforcement is putting them to new uses. Recently, in *United States v. Tuggle*,[2] the Seventh Circuit found no Fourth Amendment search occurred when police watched a suspect's home around the clock for eighteen months using cameras they installed on nearby utility poles.[3] In finding no search, the court missed a chance to clarify a murky area of Fourth Amendment law by building on recent Supreme Court rulings on prolonged tracking. The court should have held that this extensive monitoring was a search, bolstering privacy protections as increasingly invasive surveillance technologies proliferate.

In 2013, several federal agencies began investigating a large meth ring in Illinois.[4] Travis Tuggle soon emerged as a key suspect.[5] Without seeking a warrant,[6] federal agents installed a camera on a nearby utility pole with a clear view of his driveway and the front of his residence in order to surveil him unnoticed.[7] They later added a second camera to the same pole and a third one a block away.[8] The cameras were basic but effective, and the government ran them continuously for eighteen months.[9] Over that period, the cameras recorded nearly 100 suspected meth deliveries at Tuggle's house.[10] Investigators determined that Tuggle's operation had distributed over twenty kilograms of meth,[11] and the pole camera footage helped indict him on two drug charges.[12]

Tuggle moved to suppress the pole camera evidence, arguing that filming his yard and home for eighteen months without a warrant was an impermissible search that violated the Fourth Amendment.[13] The

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1 Richard Trenholm, *History of Digital Cameras: From '70s Prototypes to iPhone and Galaxy's Everyday Wonders*, CNET (May 31, 2021, 5:00 AM), https://www.cnet.com/tech/computing/history-of-digital-cameras-from-70s-prototypes-to-iphone-and-galaxys-everyday-wonders [https://perma.cc/NQ73-K3RF].

2 4 F.4th 505 (7th Cir. 2021).

3 *Id.* at 511.

4 United States v. Tuggle, No. 16-CR-20070, 2018 WL 3631881, at *1 (C.D. Ill. July 31, 2018).

5 *Id.*

6 *Id.* at *2.

7 *Id.* at *1–2, *2 n.1.

8 *Id.* at *2 & n.1.

9 *See id.*

10 *Id.*

11 *Tuggle*, 4 F.4th at 512.

12 *Tuggle*, 2018 WL 3631881, at *1.

13 *Id.*

district court denied his motion.[14] First, the court applied the test from *Katz v. United States*,[15] which asks whether the target of an alleged search had an actual expectation of privacy, and if so, whether society would recognize that expectation as reasonable.[16] The court found that Tuggle had neither a subjective nor an objective expectation of privacy in the front of his house.[17] The court then concluded that the eighteen-month duration of the surveillance was also permissible.[18] Tuggle pled guilty before trial but reserved his right to appeal the denials of his motions to suppress.[19] The district court sentenced him to thirty years in prison, and Tuggle then appealed.[20]

The Seventh Circuit affirmed.[21] Writing for a unanimous panel, Judge Flaum[22] decided that the surveillance of Tuggle was not a search, although he called the case a "harbinger" of the growing challenge of applying Fourth Amendment protections to shifting surveillance technologies.[23] Tuggle argued that his reasonable expectations had been violated in two ways. First, he claimed that *any* use of pole cameras outside his house was an unreasonable search, regardless of the duration.[24] Judge Flaum applied the *Katz* test and determined it "clearly" was not.[25] Tuggle had not shown a subjective expectation of privacy (for example, by "erect[ing] any fences or otherwise tr[ying] to shield his yard or driveway from public view"),[26] and in any case, such an expectation would not have been reasonable because his property was visible to the public.[27] Isolated pole camera use was therefore not a search any more than in-person observation would have been.

Second, Tuggle argued that even if one-off use of pole cameras was not a search, the long duration transformed the surveillance into a

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[14] *Id.* Tuggle later made two similar motions, which were also denied. *Tuggle*, 4 F.4th at 512.

[15] 389 U.S. 347 (1967).

[16] *Tuggle*, 2018 WL 3631881, at *2. The Supreme Court has recognized physical intrusions by the government into an area protected by the Constitution as another category of search. *Tuggle*, 4 F.4th at 512 (citing United States v. Thompson, 811 F.3d 944, 948 (7th Cir. 2016)).

[17] *See Tuggle*, 2018 WL 3631881, at *3.

[18] *Id.* The court distinguished videotaping a home from tracking a target's location, which the Supreme Court has held impinges on expectations of privacy. *Id.* (citing United States v. Jones, 565 U.S. 400, 404 (2012)).

[19] *Tuggle*, 4 F.4th at 512.

[20] *Id.*

[21] *Id.* at 529.

[22] Judges Hamilton and Brennan joined Judge Flaum's opinion.

[23] *Tuggle*, 4 F.4th at 510.

[24] *Id.* at 513; Appellant's Brief & Appendix at 6–13, *Tuggle*, 4 F.4th 505 (No. 20-2352).

[25] *Tuggle*, 4 F.4th at 513.

[26] *Id.* at 514; *cf.* People v. Tafoya, 2021 CO 62, ¶¶ 49–50, 494 P.3d 613, 623 (holding that three months of pole camera use was a search in part because the camera could see into a fenced yard).

[27] *Tuggle*, 4 F.4th at 514. The court emphasized that the "Fourth Amendment . . . has never been extended to require law enforcement officers to shield their eyes when passing by a home on public thoroughfares." *Id.* (quoting California v. Ciraolo, 476 U.S. 207, 213 (1986)).

search.[28] Judge Flaum rejected this argument as well.[29] He first reviewed the "mosaic theory" of the Fourth Amendment, which captures how the "government can learn more from a given slice of information if it can put that information in the context of a broader pattern, a mosaic."[30] The theory suggests that assembling a mosaic could be a search even if obtaining any piece of it was not — that "the whole is greater than the sum of its parts."[31] In one 2012 case on prolonged surveillance, five Supreme Court Justices joined concurrences that applied mosaic reasoning,[32] but Judge Flaum emphasized that the Court had not explicitly embraced the theory nor bound lower courts to apply it.[33] Further, he highlighted how many lower courts have disapproved of the theory, and how other federal circuits have "almost uniformly" declined to find searches in pole camera cases.[34]

While declining to explicitly adopt the mosaic theory, Judge Flaum applied the reasoning embodied in recent Supreme Court cases to determine that the "mosaic" of Tuggle's life assembled from the eighteen months of collected footage "did not paint the type of exhaustive picture of his every movement that the Supreme Court has frowned upon."[35] He distinguished the 554 days of pole camera surveillance of Tuggle from the 28 days of GPS tracking in *United States v. Jones*[36] and the 127 days of retrospective location data collection in *Carpenter v. United States*[37] — cases in which the government had tracked actual movements through public and private spaces, enabling it to piece together a complete play-by-play.[38] Judge Flaum compared recording Tuggle at his home with tracking his location, concluding that the camera surveillance "pale[d] in comparison" and was not a search.[39]

Still, the court acknowledged its "unease" about the implications of its decision for future surveillance and called the government's behavior "concerning, even if permissible."[40] Judge Flaum identified two challenges. First, he noted the "obvious line-drawing problem" of "[h]ow

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[28] *Id.* at 513; *see* Appellant's Brief & Appendix, *supra* note 24, at 14–15.

[29] *Tuggle*, 4 F.4th at 524–25.

[30] *Id.* at 517 (quoting Matthew B. Kugler & Lior Jacob Strahilevitz, *Actual Expectations of Privacy, Fourth Amendment Doctrine, and the Mosaic Theory*, 2015 SUP. CT. REV. 205, 205).

[31] *Id.* (quoting Kugler & Strahilevitz, *supra* note 30, at 205).

[32] *See* United States v. Jones, 565 U.S. 400, 430 (2012) (Alito, J., concurring in the judgment) (joined by Justices Ginsburg, Breyer, and Kagan); *id.* at 415 (Sotomayor, J., concurring).

[33] *Tuggle*, 4 F.4th at 517.

[34] *Id.* at 521–22.

[35] *Id.* at 524.

[36] 565 U.S. 400; *see id.* at 403.

[37] 138 S. Ct. 2206, 2211–12 (2018).

[38] *Tuggle*, 4 F.4th at 524.

[39] *Id.*

[40] *Id.* at 526.

much pole camera surveillance is too much?"[41] Judge Flaum declined to draw a line in an attempt to hew closely to Supreme Court precedent.[42] Second, he emphasized the "precarious circularity" of current Fourth Amendment law: "Cutting-edge technologies will eventually and inevitably permeate society," changing "society's expectations of privacy" and potentially causing the Constitution to fail as a "backstop" against increasing surveillance.[43] Having reluctantly held that the government's monitoring of Tuggle was not a search, Judge Flaum ultimately concluded with a call for the Supreme Court or Congress to revisit the expectations-based test laid out in *Katz*.[44]

By declining to apply the mosaic theory to find that continuous monitoring of Tuggle was a search even if instantaneous use of cameras was not, the Seventh Circuit missed an opportunity to clarify an uncertain corner of Fourth Amendment law in favor of greater privacy. Nonstop surveillance of Tuggle at his home for eighteen months should have been considered a search. That this outcome was considered out of reach shows how the current method for delineating searches lacks a satisfying mechanism for dealing with the growing volume of digital surveillance. The mosaic theory offers a better framework. Judge Flaum should have applied the Supreme Court's important (if admittedly still emerging) mosaic precedent more broadly to find a search in this case and bolster protections against long-term surveillance.

The mosaic theory offers a novel approach for delineating searches under the Fourth Amendment that addresses the traditional method's shortcomings when assessing long-term surveillance. Under the conventional approach, courts assess each step of the government's conduct sequentially to determine whether the target's privacy expectations were invaded at any point.[45] With this approach, only two principles limit the government's surveillance power: the privacy expectations of society[46] and the practical constraints imposed by limited resources and capabilities.[47] New technologies are simultaneously eroding both limits,[48]

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[41] *Id.*

[42] *Id.*

[43] *Id.* at 527.

[44] *Id.* at 528.

[45] *See* Orin S. Kerr, *The Mosaic Theory of the Fourth Amendment*, 111 MICH. L. REV. 311, 315–17 (2012). An action may also constitute a search if it is a physical intrusion. *Tuggle*, 4 F.4th at 512.

[46] Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

[47] *See* United States v. Jones, 565 U.S. 400, 429 (2012) (Alito, J., concurring in the judgment) (explaining that precomputer privacy was primarily protected by "practical" constraints because prolonged surveillance "was difficult and costly and therefore rarely undertaken").

[48] First, expectations of privacy are receding as surveillance proliferates and people are increasingly tracked. *See, e.g.*, MARY MADDEN & LEE RAINIE, PEW RSCH. CTR., AMERICANS' ATTITUDES ABOUT PRIVACY, SECURITY AND SURVEILLANCE 7 (2015), https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2015/05/Privacy-and-Security-Attitudes-5.19.15_

meaning the Fourth Amendment will become increasingly worthless against some of the most comprehensive forms of surveillance unless courts take a different tack. Courts and commentators have offered the mosaic theory as one possibility. Even if a single data point — whether a photograph, cellphone ping, GPS signal, or license plate scan — can be obtained without a search,[49] mosaic theory posits that aggregation so fundamentally changes the level of insight the government can obtain that Fourth Amendment protections must kick in.[50]

Although the Supreme Court has not explicitly adopted the mosaic theory, it has tiptoed toward it in two recent cases: *Jones* and *Carpenter*. In *Jones*, the majority focused on a trespass theory to hold that installing a GPS device on a defendant's car to track him for twenty-eight days was a search.[51] But, in a concurrence joined by Justices Ginsburg, Breyer, and Kagan, Justice Alito echoed the lower court's mosaic logic and emphasized that the long duration of the tracking violated reasonable expectations of privacy.[52] Justice Sotomayor invoked mosaic reasoning in a separate concurrence, focusing on the "comprehensive record" and intimate detail that tracking can reveal.[53] Several years later, the *Carpenter* majority cited the *Jones* concurrences to hold that collecting 127 days of cellphone location data was a search.[54] Scholars argue that *Carpenter* "in effect endorses the mosaic theory of privacy"[55] — although how far this endorsement reaches remains to be seen.[56]

Instead of embracing this mosaic rationale, however, Judge Flaum confined *Carpenter* to monitoring of physical movements. He concluded that the "passing endorsement"[57] of mosaic theory by five Justices was not a "full and affirmative adoption" and that lower courts were therefore not bound to apply the theory.[58] Instead, he read *Carpenter* as "limited to the unique features of the historical [cellphone location data]

FINAL.pdf [https://perma.cc/EX59-9ENX]. Second, new technology and lower prices make it easier to surveil at scale. *See, e.g.*, Trenholm, *supra* note 1.

49 *See, e.g.*, *Tuggle*, 4 F.4th at 513 (addressing isolated use of pole cameras).

50 *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, 414–15 (2013).

51 *See Jones*, 565 U.S. at 400, 404–11.

52 *Id.* at 430 (Alito, J., concurring in the judgment) (noting that "the use of longer term GPS monitoring . . . impinges on expectations of privacy," and "the line was surely crossed before the 4-week mark"); *see* United States v. Maynard, 615 F.3d 544, 562 (D.C. Cir. 2010).

53 *Jones*, 565 U.S. at 415 (Sotomayor, J., concurring) ("GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations.").

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

55 Paul Ohm, *The Many Revolutions of* Carpenter, 32 HARV. J.L. & TECH. 357, 373 (2019).

56 *See generally* Robert Fairbanks, Note, *Masterpiece or Mess: The Mosaic Theory of the Fourth Amendment Post-*Carpenter, 26 BERKELEY J. CRIM. L. 71 (2021).

57 *Tuggle*, 4 F.4th at 519.

58 *Id.* at 520.

at issue."[59] In Judge Flaum's view, collecting real-time pole camera video footage captured only a "sliver of Tuggle's life."[60] Judge Flaum justified this constrained application of *Carpenter* in part based on that opinion's own stated narrowness: the Court had stipulated that its "decision today [was] a narrow one" and declined to "question conventional surveillance techniques and tools, such as security cameras."[61]

However, by confining *Carpenter* so narrowly, the Seventh Circuit missed a chance to clarify this uncertain area of law in favor of greater privacy protections. Whether prolonged pole camera surveillance is constitutional has been unclear, and courts have "splintered" on the issue.[62] Some state supreme courts considering pole camera surveillance in light of *Carpenter* have found searches.[63] By contrast, other federal appeals courts evaluating pole camera surveillance "almost uniformly declined to find . . . searches."[64] Crucially, though, the no-search decisions in the appellate pole camera cases cited in *Tuggle* were all decided before *Carpenter*.[65] If anything, the Seventh Circuit was therefore uniquely well-positioned to apply *Carpenter*'s mosaic rationale to bolster privacy protections: unlike in other circuits that had already found no search for pole camera surveillance before *Carpenter*, this was a question of first impression in the Seventh Circuit and presented no conflict between new Supreme Court rationale and prior on-point circuit precedent.[66]

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[59] *Id.* at 525.

[60] *Id.* at 524.

[61] Carpenter v. United States, 138 S. Ct. 2206, 2220 (2018). However, the Court did not distinguish between cameras installed in order to indefinitely monitor a particular *place* (like a bank or store), and those installed to specifically surveil a particular *person*, as in *Tuggle*. *See id.*

[62] *Tuggle*, 4 F.4th at 520.

[63] *See, e.g.*, Commonwealth v. Mora, 150 N.E.3d 297, 302, 304–05 (Mass. 2020) (citing *Carpenter* and the mosaic theory, and holding that 169 days of pole camera use was a search under the Massachusetts constitution); People v. Tafoya, 2021 CO 62, ¶¶ 28–29, 49–50, 494 P.3d 613, 619, 623 (citing *Carpenter* to find that three months of pole camera use was a Fourth Amendment search).

[64] *Tuggle*, 4 F.4th at 521.

[65] *See id.* at 521 & nn.6–9 (citing United States v. Houston, 813 F.3d 282 (6th Cir. 2016); United States v. Bucci, 582 F.3d 108 (1st Cir. 2009); United States v. Vankesteren, 553 F.3d 286 (4th Cir. 2009); United States v. Jackson, 213 F.3d 1269 (10th Cir. 2000); United States v. Gonzalez, 328 F.3d 543 (9th Cir. 2003)). *But see* United States v. Trice, 966 F.3d 506, 518–20 (6th Cir. 2020) (relying in part on pre-*Carpenter* pole camera precedent to find no search when police used a motion-activated camera to record four short videos in an apartment building hallway), *cert. denied*, 141 S. Ct. 1395 (2021). In the First Circuit, a district court read *Carpenter* as essentially repudiating an earlier case finding no search for use of pole cameras. *See* United States v. Moore-Bush, 381 F. Supp. 3d 139, 144 (D. Mass. 2019). On appeal, the First Circuit reversed on stare decisis grounds. United States v. Moore-Bush, 963 F.3d 29, 32 (1st Cir. 2020). A petition for rehearing en banc was granted, however, and the full court's decision remains pending. United States v. Moore-Bush, 982 F.3d 50, 50 (1st Cir. 2020). The Fifth Circuit held that pole camera use was a search as far back as 1987, although for a camera that was used to see over a fence. United States v. Cuevas-Sanchez, 821 F.2d 248, 248, 250 (5th Cir. 1987).

[66] *See Tuggle*, 4 F.4th at 510–11.

Judge Flaum distinguished the *type* of information collected about Tuggle from the location data in *Jones* and *Carpenter*, but it's not clear that Tuggle's footage was less revealing. While *Jones* and *Carpenter* both dealt with monitoring physical movement, the mosaic rationale motivating these decisions can be abstracted beyond location tracking. In *Carpenter*, it was the "deeply revealing nature of [cell-site location information], its depth, breadth, and comprehensive reach, and the inescapable and automatic nature of its collection" that warranted its protection by the Fourth Amendment.[67] In *Jones*, Justice Sotomayor emphasized that location tracking can reveal "a wealth of detail," including "familial, political, professional, religious, and sexual associations,"[68] and warned that "unrestrained power to assemble data that reveal private aspects of identity is susceptible to abuse."[69] In both cases, it is easy to imagine other kinds of data that, collected in bulk over time, reveal similar levels of intimate or sensitive information, even if the individual data points do not. Indeed, scholars have outlined many other types of surveillance that might also fit within *Carpenter*'s logic, including internet browsing history, telephone and bank logs, medical records, genetic information, smart utility meters, and, of course, pole cameras.[70]

Cameras aimed at Tuggle's front door and driveway didn't capture his every movement the way location logs might have. But the cameras recorded other sensitive aspects of his life that location tracking could not: who he received as visitors, what he did around his home, when the lights were on and in which rooms, and so on. Furthermore, the cameras directly and continuously recorded Tuggle's home, a sensitive location that is "first among equals," as the Supreme Court has explained, "when it comes to the Fourth Amendment."[71] Indeed, as state courts applying *Carpenter* to pole cameras have reasoned, "this type of surveillance is 'at least as intrusive as tracking a person's location — a dot on a map — if not more so.'"[72]

Adopting the mosaic theory to limit continuous surveillance would better protect privacy against erosion by a flood of cheap, new monitoring technologies. Privacy violations impose real harms on both individ-

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[67] Carpenter v. United States, 138 S. Ct. 2206, 2223 (2018).

[68] United States v. Jones, 565 U.S. 400, 415 (2012) (Sotomayor, J., concurring).

[69] *Id.* at 416.

[70] *See, e.g.*, Ohm, *supra* note 55, at 378–85; Aparna Bhattacharya, Note, *The Impact of* Carpenter v. United States *on Digital Age Technologies*, 29 S. CAL. INTERDISC. L.J. 489, 496–512 (2020).

[71] Florida v. Jardines, 569 U.S. 1, 6 (2013).

[72] People v. Tafoya, 2021 CO 62, ¶ 46, 494 P.3d 613, 623 (quoting People v. Tafoya, 2019 COA 176, ¶ 43, 490 P.3d 532, 540); *see also* Commonwealth v. Mora, 150 N.E.3d 297, 311 (Mass. 2020) ("[P]rolonged and targeted video surveillance of a home has the potential to generate far more data regarding a person's private life [than GPS tracking]. . . . [V]ideo surveillance reveals how a person looks and behaves, with whom the residents of the home meet, and how they interact with others.").

uals and society — harms that are no less serious because they are hard to measure, involve future injury and chilling effects, and can be small but numerous.[73] Mosaic theory recognizes that these small harms accumulate as the amount of surveillance grows. But Judge Flaum's approach of delineating which kinds of bulk surveillance are permissible based on the *category* of data collected (in this case, home footage versus GPS data) rather than the *depth* of insight revealed leads to arbitrary inconsistencies where some forms of harm are prevented but not others.

While surveillance can be aggregated across many dimensions, time is one of the easiest and most important axes along which courts should draw a line. Indeed, by first considering whether isolated use of pole cameras constituted a search and then evaluating whether continuous use did, Judge Flaum recognized duration as a critical dimension.[74] Other courts evaluating pole camera surveillance have similarly explained that "*Jones* and *Carpenter* suggest that when government conduct involves *continuous, long-term* surveillance, it implicates a reasonable expectation of privacy," and that "the *duration*, continuity, and nature of surveillance" can determine whether there is a search.[75] After all, just like how a short, wide glass and a tall, slender one can hold the same amount of water, the total amount of information revealed through surveillance is a product of both the breadth of the methods used and the duration.[76] While the mosaic theory raises difficult questions about how courts should evaluate the breadth of surveillance, a simple starting point would be to set a baseline time limit for continuous, automated surveillance of a particular person.[77]

The eighteen months of pole camera surveillance of Tuggle should have been considered a search. By declining to apply the Supreme Court's mosaic reasoning to find one, the Seventh Circuit missed a chance to bolster privacy protections and clarify an uncertain area of law. Having opened the door to mosaic reasoning, the Supreme Court will eventually need to decide how far it reaches. Ultimately, bolstering Fourth Amendment protections by more fully adopting the mosaic theory for continuous, long-term surveillance is the better approach as surveillance technologies improve and the gulf between reasonably expected privacy and the protections offered by the Fourth Amendment continues to expand.

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[73] *See generally* Danielle Keats Citron & Daniel J. Solove, *Privacy Harms*, 102 B.U. L. REV. (forthcoming Mar. 2022) (on file with the Harvard Law School Library).

[74] *See Tuggle*, 4 F.4th at 513, 517.

[75] *Tafoya*, 2021 CO 62, ¶ 36, 494 P.3d at 620 (emphases added).

[76] *See Mora*, 150 N.E.3d at 310 ("[O]ur analysis . . . turns on whether the surveillance was so targeted and extensive that the data it generated, in the aggregate, exposed otherwise unknowable details . . . . This combination of duration and aggregation in the targeted surveillance here is what implicates a person's reasonable expectation of privacy." (citations omitted)).

[77] A one-month threshold like in *Jones* could be a start. Courts might also consider longer thresholds for more serious offenses. *See* Jeffrey Bellin, *Crime-Severity Distinctions and the Fourth Amendment: Reassessing Reasonableness in a Changing World*, 97 IOWA L. REV. 1, 45 (2011).