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"Searching" for an Answer

With the click of a key fob, should the U.S. Supreme Court expand criminal procedure's binary analysis?

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IN MAY 2023, THE U.S. COURT OF APPEALS FOR THE SEVENTH CIRCUIT decided *United States v. Miller*.[1] The defendant had pleaded guilty to possession of a firearm as a felon and reserved his right to appeal a motion to suppress a firearm found in his car. Miller's argument centered upon his vehicle's remote keyless entry device—a key fob.

Peoria police officers had responded to a gunfire call and found Miller, who had been shot in the face. Miller was holding his phone in one hand and his key fob in the other. An officer rendered aid to Miller and saw him drop the key fob. The officer later clicked the fob to identify whether a nearby bullet-ridden vehicle—the only car within a hundred feet in any direction—belonged to Miller. Accordingly, this triggered its alarm. No officer entered the vehicle, which instead was towed to the police station and searched after a warrant was obtained. Authorities ultimately found a gun with blood on it inside the vehicle. The blood matched Miller's DNA, and he was indicted as a felon in possession of a firearm.

Miller motioned to suppress the evidence obtained after the key fob had been pressed as the fruit of a warrantless and unlawful search. In the motion to suppress at the trial court, Miller's motion implicitly presumed that the officer's use of the key fob was a search and that it "reveal[ed] that the keys taken from the Defendant belonged to that particular vehicle."[2] Miller also argued generally that a Fourth Amendment search occurs when officers "use a person's keys—whether they be electronic or mechanical—to obtain private

1. *U.S. v. Miller*, 68 F.4th 1065, 1068 (7th Cir. 2023).
2. *U.S. v. Miller*, 1:20-cr-10031 (DKT #42), Def.'s Mtn. to Suppress, at ¶ 3.

ISBA RESOURCES >>

- Stephen Baker, *Cellphone Data—Constitutional Protections Continue To Expand*, Criminal Justice (Oct. 2018), law.isba.org/3PyuVTD.
- David M. Adler, *Recent Court Decision Provides Some Clarity in Ever-Changing Techlaw Landscape*, Privacy and Information Security Law (Sept. 2018), law.isba.org/4ctxpMQ.
- Elizabeth Austermuehle, *Drones, Federal and Illinois Law, Surveillance and the Fourth Amendment*—Ad Coelom Et Ad Inferos?, Real Property (Apr. 2017), law.isba.org/3TN7to4.

information."[3] Put simply, Miller explained that "the officers took Miller's key fob and pressed a button to figure out which car was Miller's."[4]

Judge James Shadid of the U.S. District Court for the Central District of Illinois denied Miller's motion.[5] Judge Shadid reasoned in part that this was not a search because the officer pressed the fob to determine the identity of the car and not to enter it.

On appeal, the Seventh Circuit acknowledged the question—whether activating a key fob is a Fourth Amendment "search"—was unprecedented and "will no doubt arise again."[6] Still, it did not answer it. The Sixth Circuit previously avoided a similar question in a case that coincidentally had the same name.[7] Other circuits have grappled specifically with key fobs, either avoiding the question, or ruling it was a reasonable search.[8] Accordingly, the U.S. Court of Appeals for the District of Columbia Circuit has noted "[t]here is no controlling precedent or clear legal norm regarding the activation of key fobs. Neither this circuit nor any other has held that an officer's warrantless activation of a key fob to locate the vehicle to which it corresponds constitutes a search, let alone an unconstitutional one."[9]

Miller's "analytical tension"

The Seventh Circuit approached the unanswered question through the lens of its precedent. For instance, in *United States v. Concepcion*, an agent of the Drug Enforcement Agency (DEA) tested an arrestee's confiscated keys at a nearby apartment.[10] The court held it was a "search." It reasoned keyholes bear Fourth Amendment protected information "about who has access to the space beyond," and locks possess information "used frequently by the owner and not open to public view."[11] It since explained that this privacy interest is "small."[12] The court also looked to *United States v. Correa*. There, DEA agents uncovered multiple garage-door openers in an operation and drove around pressing them for the corresponding garage, which the court concluded was also a reasonable "search."[13]

The Seventh Circuit ultimately decided *Miller* on grounds that did not conflict with its

3. *Miller*, Case: 22-1896, DKT #13, Appellant's Br, at pp. 6-7.
4. *Id.*
5. *Miller*, 1:20-cr-10031 (DKT # 46), Denial Order, at p. 3 ("the fob was used to identify the vehicle, not to search it.").
6. *Miller*, 68 F.4th at 1066-69.
7. See *U.S. v. Miller*, 982 F.3d 412, 427 (6th Cir. 2020) (analyzing "binary searches" and noting it would not consider whether "hash-value matching" constitutes a search).
8. See, *e.g.*, *U.S. v. Cowan*, 674 F.3d 947, 957 (8th Cir. 2012) (avoiding "the extent" of the question); *U.S. v. Baker*, 58 F.4th 1109, 1119-21 (9th Cir. 2023) (analyzing fob's warrantless seizure); *U.S. v. Dasinger*, 650 F. App'x 664, 672 (11th Cir. 2016); *U.S. v. Fortson*, No. 21-10303, 2022 WL 1214151, at *4 (11th Cir. Apr. 25, 2022).
9. *U.S. v. Williams*, 773 F.3d 98, 105 (D.C. Cir. 2014).
10. *U.S. v. Concepcion*, 942 F.2d 1170, 1171-72 (7th Cir. 1991).
11. *Id.* at 1172.
12. *U.S. v. Thompson*, 842 F.3d 1002, 1008 (7th Cir. 2016).
13. *U.S. v. Correa*, 908 F.3d 208, 212, 217-21 (7th Cir. 2018).

TAKEAWAYS >>

- Federal courts and one state have concluded using a key fob to locate a vehicle is not a search.
- Using a fob this way is more like a binary "on-the-spot" field or dog-sniff test that only detects the presence or absence of a thing.
- The U.S. Supreme Court has relied on such "binary analysis" in various search-related cases but has yet to apply it in a case involving a key fob or similar location technology.

UNLIKE DOG SNIFFS AND CHEMICAL TEST KITS, A CAR KEY FOB IS TECHNOLOGY. JUSTICE BRENNAN'S DISSENT IN *JACOBSEN* FOREWARNED THAT THE MAJORITY'S "UNBOUNDED" ANALYSIS "MAY VERY WELL HAVE PAVED THE WAY FOR TECHNOLOGY TO OVERRIDE THE LIMITS" OF THE FOURTH AMENDMENT.

precedent. But the simplest answer to this question may be the same as whether field drug-detection tests and drug-sniffing dogs are "searches"—that is, no. Rather, those are instances of binary procedure.[14] This refers to a testing method that generates nothing other than one of two results: whether or not something is present. While the U.S. Supreme Court has never formalized this doctrine, it remains constitutionally well-settled.[15] It is sometimes imprecisely referred to by scholars as a "binary search." But because the inquiry is limited and objective, it is *not* a "search" within the meaning of the Fourth Amendment.[16]

The progeny of key-fob cases, including *Miller*, has not viewed the question within the binary-analysis doctrine. In *Miller*, the U.S. Attorney's Office cited the Eighth Circuit's *U.S. v. Cowan*[17] decision. There, officers executing a warrant found Cowan inside a residence. He had a car's key fob but claimed he walked to the building. The officer pressed the fob, activating the alarm of a drug-filled car outside. The Seventh Circuit noted *Cowan* "rests on a rationale that the officer's use of the car's key fob was not a search" but explained *Cowan* "is in some analytical tension with our decisions in *Correa* and *Concepcion*."[18] Still, the Supreme Court has been consistently clear that publicly parked vehicles have lesser privacy expectations,[19] and its treatment of binary procedure over the past four decades has been consistent. Its application may, therefore, be ripe for key fobs.

Binary analysis and the U.S. Supreme Court

This concept of binary analysis found its genesis in 1983. In *United States v. Place*, the Supreme Court analyzed whether using trained narcotics detection dogs to determine the presence of contraband was a Fourth Amendment "search."[20] There, the defendant's luggage was warrantlessly subjected to the dog's detection, which indicated narcotics were present. Officers then acquired a warrant to search the luggage and found cocaine. On behalf of the Court, Justice Sandra Day O'Connor noted that a dog-sniff test is "an on-the-spot inquiry," which offers a "limited disclosure" and does not involve opening the luggage, embarrassment, or exposing noncontraband.[21] The Court reasoned it was, therefore, distinguishable from an officer rummaging through luggage. Ultimately, this "investigative technique" (as the Court characterized it) was binary in nature because it is a limited test of outcomes, wherein "the sniff discloses only the presence or absence" of contraband.[22]

At that time, however, the Court was unaware of any "other investigative procedure that is so limited both in the manner in which the information is obtained and in the content of the information revealed by the procedure."[23] The Court also concluded the dog's sniff was "*sui generis*"—*i.e.*, of its own kind—limited in its procedure, and *not* a Fourth Amendment search.[24]

While *Place* was unanimous in its result, Justices William Brennan and Harry Blackmun (joined by Justice Thurgood Marshall) concurred separately in the outcome alone. Justice Brennan criticized the majority for capitalizing on "issues unnecessary to its judgment" and needlessly expanding criminal procedure.[25] Justice Blackmun lamented that the dog-sniff analysis was "troubling," imprudent, and unnecessary because—among other reasons—it was already pending *certiorari* in two cases.[26] Still, disagreement over this issue had persisted among lower courts.

A year later, in *United States v. Jacobsen*, the Court revisited the subject.[27] This time, it analyzed whether warrantlessly subjecting a suspicious substance to a chemical field test was a "search." There, a damaged Federal Express (now known as FedEx) package was opened by civilian employees to examine it for an insurance claim. This revealed plastic bags of white powder. The civilians repackaged the materials and notified the DEA.

A DEA agent unpacked it and conducted an "on the spot" field test to determine whether the powder was cocaine. The majority noted that the test involved a sequential color change and revealed no evidence other than "whether or not the substance is cocaine."[28] On behalf of the Court, Justice John Paul Stevens explained, the conclusion "[was] dictated by *United States v. Place*" because the field test "could disclose only one fact previously unknown to the agent—*whether or not* a suspicious white powder was cocaine. It could tell him nothing more—not even whether the substance was sugar or talcum powder."[29] Justice

14. Laurent Sacharoff, *The Binary Search Doctrine*, 42 Hofstra L. Rev. 1139, 1149 (2014).
15. See Ben Adams, *What Is Fourth Amendment Contraband?*, 69 Stan. L. Rev. 1137, 1139, n. 2 (2017) ("the Supreme Court has not adopted any systematic name for the line of jurisprudence" and has never "used the phrase 'binary search' in any of its opinions.").
16. *See People v. Williams*, 2020 IL App (3d) 180024, ¶ 76 (McDade, J. dissenting) (the "'binary search' or a 'content-discriminating' search" of "a dog sniff does not implicate the type of implicit racial biases and systemic racism that are alive and well when human beings become involved.").
17. *U.S. v. Cowan*, 674 F.3d 947, 951–52 (8th Cir. 2012).
18. *U.S. v. Miller*, 68 F.4th 1065, 1069 (7th Cir. 2023).
19. See *U.S. v. Knotts*, 460 U.S. 276, 281 (1983) ("We have commented more than once on the diminished expectation of privacy in an automobile").
20. *U.S. v. Place*, 462 U.S. 696 (1983).
21. *Id.* at 706-07.
22. *Id.* at 707.
23. *Id.*
24. *Id.*
25. *Id.* at 711.
26. *Id.* at 723–24.
27. *U.S. v. Jacobsen*, 466 U.S. 109 (1984).
28. *Id.* at 112, n. 1.
29. *Id.* at 122-23 (emphasis added).

Byron White concurred only in the opinion's binary analysis.

Justice Blackmun joined the majority this time. Justice Brennan—joined by Justice Marshall—"agree[d] … the field test in this case was not a search" under the Fourth Amendment but referenced Justice Blackmun's *Place* dissent.[30] Justice Brennan remained critical of "the blanket assumption, implicit in *Place*," writing, "neither the Court's knowledge nor its imagination regarding criminal investigative techniques proved very sophisticated, for within one year we have learned of another investigative procedure that shares with the dog sniff the same defining characteristics that led the Court to suggest that the dog sniff was not a search."[31] The procedure has found its reprise before the Court, but those cases have remained limited to dog sniffs.

Illinois' part in binary analysis

In 2005, in *Illinois v. Caballes*, the U.S. Supreme Court extended *Place* to traffic stops.[32] In *Caballes*, a state trooper radioed in a traffic stop. Another trooper overheard the transmission and responded to the scene with a narcotics-detection dog. He walked the dog around the vehicle, and it caught a scent in the trunk where the officers ultimately found cannabis. The trial court denied a motion to suppress, and the Third District of the Illinois Appellate Court affirmed the conviction, but the Illinois Supreme Court reversed it.

The Illinois Supreme Court reasoned that the dog sniff "unjustifiably broadened the scope of an otherwise routine traffic stop into a drug investigation."[33] Justice Robert Thomas—joined by Justices Thomas Fitzgerald and Rita Garman—dissented, arguing that the U.S. Supreme Court previously established "a canine sniff is *not* a search" and that the majority disregarded this.[34]

Indeed—the U.S. Supreme Court overturned the Illinois Supreme Court and reasoned that the dog sniff did not "compromise any legitimate interest in privacy" and was not a "search."[35] On remand to the Illinois Supreme Court, Justice Garman—on behalf of the majority—reasoned, "a binary search is not [considered] constitutional because of what it does find, but *because of what it is capable of finding*."[36] It consistently and reliably determines one of two outcomes.

Roughly a decade later, in *Florida v. Harris*, the U.S. Supreme Court unanimously affirmed the concept as a reliable practice.[37] In an opinion written by Justice Elena Kagan, the Court affirmed the procedure and noted that a dog's alert is reliable because when "viewed through the lens of common sense" it "reveal[s] contraband or evidence of a crime."[38] Even in cases where the manner of executing binary procedure led to a finding of unconstitutionality, the Court has consistently established that the procedure itself is not a "search."

Technological interplay

Unlike dog sniffs and chemical test kits, a car key fob is technology. Justice Brennan's dissent in *Jacobsen* forewarned that the majority's "unbounded" analysis "may very well have paved the way for technology to override the limits" of the Fourth Amendment.[39] He envisaged a device that police could operate outside a building to detect the presence of cocaine inside. Justice Brennan reasoned "there would be no constitutional obstacle to the police cruising through a residential neighborhood and using the device to identify all homes in which the drug is present."[40]

When the Supreme Court approached the implications of warrantlessly accessing historical cellphone location data, it cautioned, "[w]e have kept … Founding-era understandings in mind when applying the Fourth Amendment to innovations in surveillance tools."[41] Grounding its technological reasoning to officer observations from rightful public vantage points, the Court has reasoned that surveillance aircraft flyovers constitute a use of law enforcement technology that does not require a warrant.[42] But in *Kyllo v. United States*, for instance, the Court stated "more sophisticated" technology must be approached differently.[43] Accordingly, the Court reasoned that it was unconstitutional for police to warrantlessly use thermal imaging of a home to determine whether illegal activity was occurring inside—even if done from a public vantage point. Similarly, in *Riley v. California*, the Court ruled that a search incident to arrest cannot extend to searching the cell phone data on an arrestee's "less sophisticated" phone.[44] But is a car's key fob among "sophisticated" technology?

THE U.S. SUPREME COURT OVERTURNED THE ILLINOIS SUPREME COURT AND REASONED THAT THE DOG SNIFF DID NOT "COMPROMISE ANY LEGITIMATE INTEREST IN PRIVACY" AND WAS NOT A "SEARCH."

In 2019, a Pennsylvania federal court answered that question. It ruled that an officer's use of a key fob to locate a vehicle was not unconstitutional and rejected "attempt[s] to bootstrap" *Kyllo*.[45] Rather, it reasoned the purported "modern technology" at issue was different than the thermal imaging system in *Kyllo*

30. *Id.* at 135.
31. *Id.* at 136.
32. *Illinois v. Caballes*, 543 U.S. 405 (2005).
33. *Illinois v. Caballes*, 207 Ill. 2d 504, 509 (2003).
34. *Id.* at 511-14 (emphasis added).
35. *Id.* at 408.
36. *People v. Caballes*, 221 Ill. 2d 282, 335 (2006).
37. *Florida v. Harris*, 568 U.S. 237, 240 (2013).
38. *Id.* at 248.
39. *U.S. v. Jacobsen*, 466 U.S. 109, 137-38 (1984).
40. *Id.*
41. *Carpenter v. U.S.*, 138 S. Ct. 2206, 2214 (2018).
42. *California v. Ciraolo*, 476 U.S. 207, 214-15 (1986).
43. *Kyllo v. U.S.*, 533 U.S. 27, 36 (2001).
44. *Riley v. California*, 573 U.S. 373, 385-86 (2014).
45. *U.S. v. Burgess*, 425 F.Supp. 3d 413, 418 (E.D. Pa. 2019).

because key fobs are "widely available to the public."[46] According to the American Automobile Association, over 80 percent of new cars currently have this technology.[47]

In *Correa*, Seventh Circuit Judge David F. Hamilton noted compound issues of privacy (without addressing them) if law enforcement uses a garage door opener and sees contraband inside.[48] Unlike those risks, federal courts and one state court have concluded that if an officer uses a key fob only to determine whether a vehicle is present and goes no further to physically breach the vehicle—it does not become a search.[49] Thus, key fobs ultimately have what Justice Brennan considered "defining characteristics" in *Jacobsen*.

In a contemporary society featuring digital tracking tags for keys and luggage, and biometrics software and face identification technology for phone access—some may wonder how far binary procedure may be applied to key fobs. Fear not. *Riley* establishes an objective rule about law enforcement breaching any device to obtain any data or logged information therein.[50] In *United States v. Jones*, the Court recognized the bounds of warrantless usurpation of GPS data.[51] The threshold to the possibility of additional information—beyond a binary outcome of whether a car is present—affords a bright-line rule. Thus, this analysis is limited to the crude functions of a vehicle's key fob and would not extend to mass-information that could be contained within a key fob.

Conclusion

When it comes to binary procedure, there is no "analytical tension" with Seventh Circuit precedent. Rather, the court has acknowledged that under *Place* and *Jacobsen*, field tests with a "whether or not" outcome are not Fourth Amendment searches.

Ultimately, pressing a key fob's alarm button can fall within characterization as a government actor's limited, "on-the-spot" field test that generates one of two results. Without any additional action, the corresponding vehicle is either present or it is not. Like dog-sniffing and chemical field tests, the U.S. Supreme Court may expand this doctrine and reason that the click of a key fob is not a search within the meaning of the Fourth Amendment. IBJ

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46. *Id.*
47. Paula Vasan, *Security Dangers of Key Fobs*, KSDK (Feb. 1, 2023), law.isba.org/4a98QUc.
48. *U.S. v. Correa*, 908 F.3d 212, 221 (2018).
49. *Com. v. Harvard*, 2013 PA Super 64, 64 A.3d 690, 696 (2013); *U.S. v. Duncan*, No. CR 22-76, 2023 WL 2403444, at *4 (E.D. La. Mar. 8, 2023); *U.S. v. Brooks*, 358 F. Supp. 3d 440, 453, 468 (W.D. Pa. 2018).
50. See *Riley v. California,* 573 U.S. 373, 380, 395, 397 (2014) (acknowledging distinguishable protections in the information of a call log, that "the data stored on a cell phone is distinguished from physical records by quantity alone," and that any "analogy" regarding the search of containers incident to arrest "crumbles entirely when a cell phone is used to access data located elsewhere, at the tap of a screen."); see also *U.S. v. Hearst*, No. 1:18-CR-054-RWS-AJB, 2022 WL 16832834, at *22 (N.D. Ga. Mar. 10, 2022), *report and recommendation adopted*, No. 1:18-CR-54-RWS, 2022 WL 8163946 (N.D. Ga. Oct. 14, 2022) ("warrantlessly checking the phone to see if the passcode would unlock it, even if he conducted no further intrusion, was in fact a search, just as inserting a key into a door lock or using a key fob to unlock a door constitutes a search").
51. See *U.S. v. Jones*, 565 U.S. 400, 409–10 (2012) (finding unreasonable search where government warrantlessly used a GPS tracking device to track the movement of defendant's vehicle on public thoroughfare).