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THE BINARY SEARCH DOCTRINE

Laurent Sacharoff*

I. INTRODUCTION

When scholars or courts talk about privacy, they often focus on protecting facts. Many of the hard privacy questions involve protecting our web surfing habits from imbedded cookies and banner ads, our medical information from the public, or our DNA from law enforcement. The issue of privacy over information looms as one of the most challenging problems of our time, especially when law enforcement seeks to capture this information outside the protections or regulation of the Fourth Amendment.

But this focus on information as the basis for privacy blinds us to another type of Fourth Amendment privacy: a person's right to solitude or seclusion, and the right of privacy over a place or area such as the person, car, or home.⁵ True, in some instances we can reconfigure this right to seclusion as simply a desire to protect personal facts: we do not want the government snooping on what happens in our bedroom because

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^{1.} E.g., HELEN NISSENBAUM, PRIVACY IN CONTEXT: TECHNOLOGY, POLICY, AND THE INTEGRITY OF SOCIAL LIFE 1 (2010) (seeking the appropriate flow of personal information initially through the lens of privacy); Paul M. Schwartz & Daniel J. Solove, The PII Problem: Privacy and a New Concept of Personally Identifiable Information, 86 N.Y.U. L. REV. 1814, 1821 (2011); Daniel J. Solove, Privacy and Power: Computer Databases and Metaphors for Information Privacy, 53 STAN. L. REV. 1393, 1424 (2001).

^{2.} NISSENBAUM, supra note 1, at 29.

^{3.} Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 110 Stat. 1936, 1992; Whalen v. Roe, 429 U.S. 589, 602 (1977).

^{4.} United States v. Mitchell, 652 F.3d 387, 415-16 (3d Cir. 2011) (finding DNA collection from arrestees unconstitutional); King v. State, 42 A.3d 549, 580-81 (Md. 2012), rev'd, 133 S. Ct. 1958, 1980 (2013) (same).

^{5.} Hamberger v. Eastman, 206 A.2d 239, 242 (N.H. 1964) (finding that a listening device in bedroom was an invasion of privacy, though no facts were learned from it).

it may also learn what we read, or whom we sleep with, both of which can be stated as facts. But, many aspects of privacy over an area, and our desire for seclusion, cannot be disaggregated into a collection of facts we wish to protect, or at least such an attempt fails to capture what we really care about in protecting privacy for seclusion. Even if we can point to no concrete fact we wish to hide, we still seek a right of privacy in our home or other private place, simply for its own sake. This allows us to relax unobserved and enjoy the sense of dignity and autonomy that comes simply from this power or choice to retire from the gaze and scrutiny of others.⁶

This Article argues that the Fourth Amendment protects not only informational privacy—not only facts⁷—but also the more ineffable interest in seclusion in a place or area, especially cars, homes, and persons.⁸ It argues that too many court cases atomize privacy into a set of concrete harms represented by disclosure of discrete facts.⁹ Privacy does protect facts, of course, but it also protects more.

The Court's dog sniff cases present a perfect case study, encapsulating what Orin Kerr has called the "private facts" model of privacy. The privacy of For example, in *Illinois v. Caballes*, a state trooper pulled the defendant over for speeding. As he wrote the ticket, another trooper arrived and walked his dog around the car until it alerted to the trunk. Based on the alert, the officers searched the trunk and found marijuana. The defendant argued the initial dog sniff violated the Fourth Amendment because it was a search of his car without probable cause or reasonable suspicion. 15

The Court rejected his argument, holding that a dog sniff does not count as a Fourth Amendment search, because it does not reveal any private fact other than the possession of drugs, and the possession of

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^{6.} E.g., Ruth Gavison, Privacy and the Limits of Law, 89 YALE L.J. 421, 459 (1980).

^{7.} As discussed more fully below, this Article defines information and facts as true propositions. See infra Part IV.

^{8.} The Court in *Katz v. United States* famously said that the Fourth Amendment "protects people, not places," but later rejected this concept as shown in Part II. 389 U.S. 347, 351 (1967); *see infra* Part II.

^{9.} Dow Chemical Co. v. United States, 476 U.S. 227, 238-39 (1986) (holding that the Fourth Amendment protects intimate details only); United States v. Jacobsen, 466 U.S. 109, 123 (1984) (finding that the Fourth Amendment protects legitimately private facts only); United States v. Place, 462 U.S. 696, 706-07 (1983) (same).

^{10.} Orin Kerr, Four Models of Fourth Amendment Protection, 60 STAN. L. REV. 503, 512-13 (2007).

^{11. 543} U.S. 405 (2005).

^{12.} Id. at 406.

^{13.} Id.

^{14.} Id.

^{15.} Id. at 409.

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drugs is not a legitimately private fact. ¹⁶ As the Court put it, a dog sniff "discloses only the presence or absence of . . . contraband." ¹⁷ This binary nature has led some courts and scholars to categorize the dog-sniff cases as examples of the binary search doctrine; a search of an area that only reveals the presence or absence of contraband does not count as a Fourth Amendment search. ¹⁸

Caballes involved a car on the open highway, but the police have expanded their use of drug-sniffing dogs, using them in schools, ¹⁹ for example, sniffing every locker in a hallway, every car in a parking lot, and, occasionally, every student as well²⁰—all without any individual suspicion. More dramatically, a majority of the Federal Circuit Courts of Appeal addressing the issue have applied the binary search doctrine to the home, holding that the police may direct a drug-sniffing dog to the outer door of an apartment or house to sniff for drugs without probable cause or any suspicion.²¹

Of course, the Fourth Amendment does protect places—including private places and the right to seclusion—when the police physically invade those areas with a trespass. A person's right to seclusion in his home enjoys broad protection against the police breaking down doors and simply entering uninvited to search and seize, and the Court's new trespass test under *United States v. Jones*²³ will protect against the most obvious and harmful incursions upon seclusion.

^{16.} Id. at 409-10

^{17.} Id. at 409 (quoting United States v. Place, 462 U.S 696, 707 (1983)) (internal quotations omitted).

^{18.} United States v. Colyer, 878 F.2d 469, 474 (D.C. Cir. 1989) (discussing the "binary nature" of the search); State v. Rabb, 920 So. 2d 1175, 1190 (Fla. Dist. Ct. App. 2006) ("[A] binary search, which reveals only the presence or absence of contraband, is never a search for purposes of the Fourth Amendment."); Ric Simmons, From Katz to Kyllo: A Blueprint for Adapting the Fourth Amendment to Twenty-First Century Technologies, 53 HASTINGS L.J. 1303, 1349-50 (2002).

^{19.} Nate Schweber, *Drug-Sniffing Dogs Patrol More Schools*, N.Y. TIMES, Mar. 22, 2009, at 3 (reporting that random dog sniffs of lockers and cars have become "increasingly common in public schools" in the Northeast).

^{20.} Doe v. Renfrow, 631 F.2d 91, 92 (7th Cir. 1980) (holding that a dog sniff of all 2780 students was not a search). *But see* B.C. v. Plumas Unified Sch. Dist., 192 F.3d 1260, 1266 (9th Cir. 1999) (finding a dog sniff of high school students from close proximity to be a search).

^{21.} United States v. Scott, 610 F.3d 1009, 1016 (8th Cir. 2010) (holding that a dog sniff from outside the front door of an apartment did not constitute a search); United States v. Brock, 417 F.3d 692, 695-96 (7th Cir. 2005) (holding that a dog sniff outside of a locked bedroom door did not constitute a search); United States v. Reed, 141 F.3d 644, 649 (6th Cir. 1998) (holding that a dog sniff of dresser drawers by a dog already lawfully in the apartment did not constitute a search). But see United States v. Thomas, 757 F.2d 1359, 1367 (2d Cir. 1985) (holding that a dog sniff from outside the front door of an apartment is a search).

^{22.} United States v. Jones, 132 S. Ct. 945, 949 (2012).

^{23. 132} S. Ct. 945, 949 (2012).

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But the trespass test protects against physical intrusions only, and therefore provides no protection against remote surveillance. When that remote surveillance involves dog sniffs, and perhaps other binary searches, the desire to protect privacy in seclusion for its own sake requires us to develop a conception of privacy that involves more than trespass on the one hand, and the protection of discrete facts on the other. In other words, the right to seclusion protects a place, as does trespass, but when the surveillance involves no physical intrusion, it protects privacy, even though the surveillance reveals no legitimately private discrete facts.

The Court's most recent dog-sniff case reinforces this point. In Florida v. Jardines,²⁴ the police brought a drug-sniffing dog onto a person's front yard and porch where the dog alerted to marijuana within the home.²⁵ The Court held that this conduct constituted a Fourth Amendment search—not because of what the sniff revealed about the interior of the home, but because the police trespassed upon the home's curtilage, its yard, and porch, in order to effect the dog sniff.²⁶ In other words, the Court evaded the original question presented to it: does a dog sniff of the home itself, as a remote type of surveillance, constitute a search?²⁷ If, for example, the police bring a drug-sniffing dog to the door of an apartment, not having trespassed to arrive there, does the sniff of the interior of that apartment count as a Fourth Amendment search? Jardines leaves this question open, but Caballes suggests the conduct does not count as a search.²⁸ I argue that a proper understanding of privacy in the home requires us to find that such dog sniffs count as Fourth Amendment searches, even absent trespass.

Outside dog sniffs, the binary search doctrine potentially blesses searches of a person's computer hard drive for child pornography without any suspicion, using a technique known as hash values.²⁹ The search is binary because the hash reveals nothing about the computer's

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^{24. 133} S. Ct. 1409 (2013).

^{25.} Id. at 1413.

^{26.} Id. at 1415, 1417-18.

^{27.} See id. at 1414; Brief for Petitioner at i, id. (No. 11-564) ("QUESTION PRESENTED: Whether a dog sniff at the front door of a suspected grow house by a trained drug-detection dog is a Fourth Amendment search requiring probable cause?").

^{28.} Illinois v. Caballes, 543 U.S. 405, 409-10 (2005).

^{29.} United States v. Mann, 592 F.3d 779, 781 (7th Cir. 2010) (describing the technique). A hash is an algorithm that returns for each computer file a practically unique value that can be compared to the value of known images or videos of child pornography. If the hash values match, the file is child pornography. The hash value is not truly unique, but practically so, since the chances that two files will share the same hash value stands at 1 / (2^128). Richard P. Salgado, Fourth Amendment Search and the Power of the Hash, 119 HARV. L. REV. 38, 39, 42, 46 (2005).

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files other than the presence or absence of contraband.³⁰ As with *Jardines*, a trespass test *might* solve the problem if the hash value search involves an electronic trespass; but, courts are sharply divided about whether an electronic invasion of another's computer actually does constitute a trespass.³¹ If not, we must again rely upon a privacy concern in protecting our hard drives from these initial government intrusions.

This Article reorients our thinking about privacy by establishing a right to seclusion or privacy under the Fourth Amendment in an area such as the person, car, or home for its own sake. It makes the corollary claim that dog sniffs should be considered Fourth Amendment searches. Part II, therefore, uses the dog sniff cases³² as a case study, examining closely their justification and ramifications.³³ Part III then contrasts these cases with the Court's cases that do recognize place or area as deserving of Fourth Amendment protection for its own sake, such as *Kyllo v. United States*.³⁴ *Kyllo* held that the Fourth Amendment protects the home even if no intimate facts are disclosed. Part III also addresses the Court's drug-testing cases,³⁵ which recognize that a blood, urine, or breath test for drugs or alcohol counts as a Fourth Amendment search, in part because we value the integrity of the body for its own sake.³⁶

Part IV surveys privacy scholarship and philosophy.³⁷ Though some scholars premise a right to privacy on the value in protecting facts,³⁸ many other scholars expressly recognize a right to seclusion to further such interests as dignity, relaxation, and autonomy.³⁹

Finally, Part V employs Fourth Amendment values that lie somewhat outside the concept of privacy, but perhaps best illustrate why

^{30.} Salgado, *supra* note 29, at 44 (arguing the Court's dog sniff cases would allow authorities to search hard drives for known child pornography without a warrant). *But see* Marcia Hofmann, *Arguing for Suppression of 'Hash' Evidence*, 33 CHAMPION 20, 21-23 (2009) (arguing that the Court's dog sniff cases would not allow authorities to search hard drives).

^{31.} See, e.g., McLeodUSA Telecomm. Serv. v. Qwest Corp., 469 F. Supp. 2d 677, 703 (N.D. Iowa 2007) (finding that electrons can trespass); Compuserve Inc. v. Cyber Promotions, Inc., 962 F. Supp. 1015, 1021 (S.D. Ohio 1977) (noting that a spammer's electronic signals are "sufficiently physically tangible to support a trespass cause of action"); Intel Corp. v. Hamidi, 71 P.3d 296, 301, 311 (Cal. 2003) (holding that a former employee sending bulk email over plaintiff's servers was not a trespass since it did not impair the server's functioning).

^{32.} Caballes, 543 U.S. at 410; City of Indianapolis v. Edmond, 531 U.S. 32, 40 (2000); United States v. Place, 462 U.S. 696, 706-07 (1983).

^{33.} See infra Part II.

^{34. 533} U.S. 27 (2001); see infra Part III.A-B.

^{35.} E.g., Skinner v. Ry. Labor Execs. Ass'n, 489 U.S. 602, 633-34 (1989).

^{36.} Id. at 616-17; see infra Part III.C.

^{37.} See infra Part IV.

^{38.} Charles Fried, Privacy, 77 YALE L.J. 475, 482-83 (1968); W.A. Parent, Privacy, Morality, and the Law, 12 PHIL. & PUB. AFF. 269, 269-70 (1983).

^{39.} JUDITH WAGNER DECEW, IN PURSUIT OF PRIVACY: LAW, ETHICS, AND THE RISE OF TECHNOLOGY 18, 20, 48 (1997); Gavison, *supra* note 6, at 423, 435.

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we care about seclusion in certain places beyond protecting identifiable facts. For example, the text of the Fourth Amendment does not refer to privacy, but rather, ensures that a person is "secure." Secure means more than privacy and even more than simply the right to physically exclude, and includes the *feeling* of security, that is, being free from fear or apprehension of danger. Consider a real dog sniff under this standard, a routine traffic stop suddenly altered when an aggressive German Shepherd, often cross-trained to take down suspects, begins to sniff the car, including or perhaps especially, near the open window near the driver. These dogs, also capable of physically extracting a driver from a car, can certainly create the fear or apprehension of danger in the driver, and thus, intrude upon his Fourth Amendment security in his car and person. Part V elaborates on this almost entirely neglected concept of "secure" under the Fourth Amendment.

Part VI considers further ramifications of the binary search doctrine as well as a model of privacy rooted in protecting facts only, in particular, the use of hash values to locate child pornography on computer hard drives.⁴⁶

Nothing in this Article denies that protection of personal facts and data should play a central role in the right to privacy, whether statutory or constitutional. But, alongside that right stands the right to seclusion. The value in this type of privacy lies in the choice to be alone, the sense of security, and a feeling of dignity as against those who would intrude upon our personal space.

^{40.} See infra Part V.

^{41.} U.S. CONST. amend. IV ("The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated . . . ").

^{42.} United States v. Reed, 141 F.3d 644, 647 (6th Cir. 1998) (indicating that the dog, Cheddy, was cross-trained to find suspects and drugs); State v. Reed, No. M2008-01850-CCA-R3-CD, slip op. at 10 n.2 (Tenn. Crim. App. 2009). The International Association of Chiefs of Police National Law Enforcement Policy Center has issued a model policy and white paper on the use of dogs for apprehending suspects, as well as finding drugs. See generally IACP NATIONAL LAW ENFORCEMENT POLICY CENTER, LAW ENFORCEMENT CANINES (2001). The white paper also recommends that officers use more docile breeds of dogs that will only be used to detect narcotics to avoid unnecessary bites. Id. at 5-7.

^{43.} See, e.g., United States v. Sharpe, 689 F.3d 616, 617-18 (6th Cir. 2012) (collecting such cases as a dog sniffing outside a car and suddenly jumping into it); United States v. Lyons, 486 F.3d 367, 369-70 (8th Cir. 2007) (describing how a dog stuck its head into a car window left open by the driver); United States v. Stone, 866 F.2d 359, 361 (10th Cir. 1989) (discussing a dog that jumped in an open hatchback).

^{44.} See, e.g., Kerr v. City of West Palm Beach, 875 F.2d 1546, 1549-50 (11th Cir. 1989) (describing serious injuries that can result from the city's use of German Shepherds to apprehend suspects by repeatedly biting their arms, legs, or any available body part).

^{45.} See infra Part V.A.

^{46.} See infra Part VI.

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II. JUSTIFICATIONS FOR THE BINARY SEARCH DOCTRINE

The hard Fourth Amendment cases involving new surveillance techniques, including dog sniffs for drugs, require the Court to decide which techniques count as a "search" under that provision. If the technique does not count as a search, the Fourth Amendment provides no protection, and the police may use the technique without any individualized suspicion and with complete discretion unguided by policies or regulation, assuming no other provision or statute governs the practice. This threshold inquiry therefore operates as a crucial on-off switch for Fourth Amendment protection.

Absent physical trespass, police conduct counts as a Fourth Amendment search if it invades a person's reasonable expectation of privacy.⁴⁷ This Part discusses how the Court has applied that test to dog sniffs and other binary searches.

A. Place to Caballes

The Court's justification for excluding dog sniffs from Fourth Amendment coverage has evolved from a multi-factored analysis to what we might call the "pure binary search doctrine." In the first main case, *United States v. Place*, ⁴⁸ DEA agents subjected the defendant's luggage to a dog sniff. ⁴⁹ The Court held that the sniff was not a search under the Fourth Amendment based on two main factors: (1) a dog sniff reveals the presence or absence of contraband only; ⁵⁰ and (2) the manner of dog sniffs is generally not intrusive. ⁵¹ Likewise, in *City of Indianapolis v. Edmond*, ⁵² the Court said that a dog sniff of a car for drugs during a traffic checkpoint was not a search based on the same two factors. ⁵³

^{47.} Katz v. United States, 389 U.S. 347, 353 (1967). The Court augmented the privacy test with a trespass test in *United States v. Jones*, 132 S. Ct. 945, 950 (2012).

^{48. 462} U.S. 696 (1983).

^{49.} Id. at 699.

^{50.} *Id.* at 707. Many lower courts and some scholars infer a third factor from the first factor: a drug-sniffing dog alert with close to 100% accuracy. *See, e.g.*, United States v. Waltzer, 682 F.2d 370, 372 (2d Cir. 1982); William C. Heffernan, *Fourth Amendment Privacy Interests*, 92 J. CRIM. L. & CRIMINOLOGY 1, 74 (2001). *Place* does not expressly rely upon such a finding, and according to *Caballes*, that is no longer a factor. *See* Illinois v. Caballes, 543 U.S. 405, 409 (2005); *Place*, 462 U.S. at 707. As discussed below, the dog's accuracy plays a role in whether a positive alert establishes probable cause, but plays a far less significant role in determining whether the sniff is a search. *See infra* Part III.B.

^{51.} Place, 462 U.S. at 707.

^{52. 531} U.S. 32 (2000).

^{53.} Id. at 40.

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But subsequently in *Caballes*, the Court appeared to rely entirely upon the first justification, that dog sniffs reveal only the presence or absence of contraband.⁵⁴ In that case, the police directed a dog to sniff a car pulled over for speeding.⁵⁵ In holding the sniff was not a search, *Caballes* did not expressly jettison the other rationale—that the manner of dog sniffs is relatively unintrusive—but its language makes somewhat clear that the first justification suffices because it relied so heavily on the nature of the facts disclosed and not upon the manner of the search.⁵⁶

Caballes, therefore, appears to establish a pure form of the binary search doctrine,⁵⁷ under which a dog sniff does not count as a search solely because it does not reveal any private or personal facts other than the possession of contraband.

B. The Home and Jardines

The binary search doctrine has taken on new urgency as numerous courts have applied the doctrine to the home, allowing the police to bring dogs to the door of an apartment or house to sniff for drugs within. Some courts, such as the Sixth Circuit, have read *Caballes* as creating a pure binary search doctrine, excluding intrusiveness from the equation. In upholding a dog sniff of dresser drawers once the police were validly within a home, the Sixth Circuit held that the location does not matter as long as the sniff reveals no (legitimate) private fact. 59

Unlike the majority of Federal Circuit Courts of Appeal, however, the Florida Supreme Court held that a dog sniff of a home, at least on those facts, counted as a Fourth Amendment search.⁶⁰ In doing so, the Florida court deviated in two important respects from *Caballes*: first, it

^{54.} Caballes, 543 U.S. at 410.

^{55.} Id. at 406.

^{56.} Id. at 409-10.

^{57.} Ric Simmons, *The Two Unanswered Questions of Illinois v. Caballes: How to Make the World Safe for Binary Searches*, 80 Tul. L. REV. 411, 414-17 (2005) (arguing that even earlier cases, such as *Place*, created a pure version of the binary search doctrine, and that the Court should focus on results and not the manner of the search).

^{58.} United States v. Scott, 610 F.3d 1009, 1012, 1016 (8th Cir. 2010) (describing a dog sniff from outside the front door of an apartment); United States v. Brock, 417 F.3d 692, 693-94, 696 (7th Cir. 2005) (discussing a dog sniff of a locked bedroom door); United States v. Reed, 141 F.3d 644, 649-50 (6th Cir. 1998) (describing a dog sniff of dresser drawers by a dog already lawfully in the apartment); United States v. Colyer, 878 F.2d 469, 472-77 (D.C. Cir. 1989) (discussing a dog sniff of a train sleeper compartment); cf. United States v. Lingenfelter, 997 F.2d 632, 637-39 (9th Cir. 1993) (discussing a dog sniff outside a warehouse). But see United States v. Thomas, 757 F.2d 1359, 1366-67 (2d Cir. 1985) (finding that a dog sniff from outside the front door of an apartment was not permissible).

^{59.} Reed, 141 F.3d at 650 ("[T]he location of the contraband [is] irrelevant").

^{60.} Jardines v. State, 73 So. 3d 34, 49 (Fla. 2011), aff'd on other grounds, 133 S. Ct. 1409 (2013).

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considered the level of intrusiveness; and second, it acknowledged the possibility of police abuse. That is, it rejected the pure version of the binary search doctrine.

Even though the Supreme Court affirmed the Florida court on different grounds, it is useful to consider in depth the Florida opinion, since it provides important perspective on the binary search doctrine; in particular, it relied heavily upon intrusiveness, a factor apparently absent in Caballes. 61 The facts in Jardines, as described by the Florida court, were as follows: based on a tip, numerous law enforcement agencies coordinated an elaborate procedure that involved many police vehicles, officers, and, of course, the dog itself, Franky. 62 The Court described a surveillance procedure that ran the length of the block and lasted for hours, a "public spectacle" that everyone on the street could see. 63 As part of this procedure, a police dog handler and dog went onto Jardines' porch where the dog sniffed and alerted for marijuana within, leading to a search warrant, search, and arrest.⁶⁴ The Court assessed not merely the dog sniff in isolation, but the entirety of the long procedure, and concluded that the procedure not only involved public humiliation and embarrassment for the defendant, but worse, "an official accusation of a crime."65 Therefore, it was a Fourth Amendment search.66

The Court distinguished this level of intrusion from that present on the facts of the leading Supreme Court cases. In *Place*, it noted that the police dog merely sniffed a person's luggage, and did so away from its owner so that no one at the airport would link the luggage with the owner.⁶⁷ In *Edmond* and *Caballes*, the Florida court described the traffic stops as minimally intrusive because the defendants, within their cars, "retained a degree of anonymity."⁶⁸ Jardines, by contrast, enjoyed little anonymity as a result of this extended public spectacle on his residential street.⁶⁹

The Florida court also noted that allowing police to conduct dog sniffs of homes without any level of suspicion could lead to police using

^{61.} Caballes, 543 U.S. at 409 ("Any intrusion on respondent's privacy expectations does not rise to the level of a constitutionally cognizable infringement."); *Jardines*, 73 So. 3d. at 45-46, 48-49, 52-53.

^{62.} Jardines, 73 So. 3d at 37, 48.

^{63.} Id. at 48.

^{64.} Id. at 37-38.

^{65.} Id. at 48.

^{66.} Id. at 49.

^{67.} Id. at 44-45.

^{68.} Id. at 45.

^{69.} Below, I argue that even the traffic stop dog sniff involves sufficient humiliation and public attention to warrant some Fourth Amendment protection. See infra Part V.B.1.

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the sniffs in an arbitrary or discriminatory manner. ⁷⁰ It noted that in *Place* and *Caballes*, the police already had reasonable suspicion for the seizures leading to the dog sniffs, and such suspicion would limit police discretion. ⁷¹ In *Edmond*, the Court required police to follow protocols to ensure against discriminatory or arbitrary stops of cars that would similarly reduce abuse at the search stage. ⁷² No such protections existed in *Jardines*.

The Florida court nicely distinguished *Caballes* and the other dog sniff cases on their facts, but the question remains whether the principle in *Caballes* admits of such distinctions. That is, if we read *Caballes* as a pure binary search case, as a case that baldly asserts that conduct that reveals no personal or private fact cannot count as a search, regardless of the intrusiveness of the method, or any other potential problems such as profiling, then the factors *Jardines* relies upon to distinguish that case are out of bounds.

1. Jardines in the Supreme Court

The Supreme Court affirmed the Florida court, holding the dog sniff to be a search, but on the separate rationale of trespass. ⁷³ Under the Court's recent jurisprudence, if the police commit a physical invasion akin to trespass as part of an investigation, that conduct constitutes a Fourth Amendment search, aside from whether it invades a reasonable expectation of privacy. ⁷⁴ As noted above, in *Jardines*, the police walked up the front path of Jardines' home with a drug-sniffing dog and spent a short time on the porch where the dog performed a sniffing ritual before alerting. ⁷⁵ The front path, and the porch in particular, form part of a home's curtilage, treated under Fourth Amendment analysis as tantamount to the home itself. ⁷⁶ Any entrance to such an area normally constitutes trespass unless the person has license to enter, and such license can be implicit in society's custom.

The case, therefore, hinged on whether the police have an implicit license to enter the front path and porch with a drug-sniffing dog to conduct an investigation. The majority decided no.⁷⁷ It conceded that Girl Scouts, peddlers, and others enjoy implicit consent to enter those

^{70.} Jardines, 63 So. 3d at 36.

^{71.} Id. at 45.

^{72.} Id

^{73.} Florida v. Jardines, 133 S. Ct. 1409, 1417-18 (2013).

^{74.} United States v. Jones, 132 S. Ct. 945, 949 (2012).

^{75.} Jardines, 133 S. Ct. at 1413.

^{76.} Id. at 1414.

^{77.} Id. at 1417.

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areas, knock on a door, and ask to sell their goods.⁷⁸ But, the police in this case entered with a different purpose: to find evidence of a crime.⁷⁹ At least when they enter with such a purpose with dogs to sniff on the porch, they enjoy no such license; rather, a homeowner seeing someone entering his property with drug-sniffing dogs "would inspire most of us to—well, call the police."⁸⁰

The Court, thus, sidestepped the harder question: whether a dog sniff of a home that does not involve a physical invasion or trespass counts as an invasion of a reasonable expectation of privacy, and, thus, a search. Justice Kagan in her concurrence argued yes;⁸¹ Justice Alito in his dissent argued no, relying on *Caballes*.⁸² The case parallels *Jones*, where the Court held that a GPS device attached to a person's car counts as a search because of the physical trespass.⁸³ By relying upon trespass, the *Jones* case left unanswered the harder, privacy question: whether the police can conduct a Fourth Amendment search if they use advanced technology to follow a person for weeks without any physical invasion.

Read together, *Jardines* and *Caballes* may construct an unfortunate two-tiered regime: those who live in homes with a front yard or porch enjoy Fourth Amendment protection against drug-sniffing dogs; those who live in apartments and public housing units with common areas that the police may freely enter—particularly those labeled "high crime"—do not. ⁸⁴ A majority of Circuit Courts have found no reasonable expectation of privacy in apartment hallways, ⁸⁵ and those who live in public housing have no expectation of privacy in the hallways. ⁸⁶ In apartment buildings with high crime, landlords will often give consent to police entry. ⁸⁷ On the other hand, in wealthier apartment complexes, especially with doormen, police will not be able to enter common hallways, ⁸⁸ and, again, they will not be able to enter front yards or porches of houses.

Admittedly, the case law is split. Based upon the foregoing principles, for example, the court in *United States v. Deleon-Bayardo*⁸⁹

^{78.} Id. at 1415.

^{79.} Id. at 1416.

^{80.} Id.

^{81.} Id. at 1418-19 (Kagan, J., concurring).

^{82.} Id. at 1425-26 (Alito, J., dissenting).

^{83.} United States v. Jones, 132 S. Ct. 945, 949 (2012).

^{84.} United States v. Mendoza, 281 F.3d 712, 715 (8th Cir. 2002).

^{85.} United States v. Nohara, 3 F.3d 1239, 1242 (9th Cir. 1993) (collecting cases that have reached this conclusion).

^{86.} People v. Grier, 552 N.Y.S.2d 383, 384 (App. Div. 1990).

^{87.} See, e.g., United States v. Kelly, 551 F.2d 760, 764 (8th Cir. 1977).

^{88.} Even in high-security apartments, however, law enforcement may sometimes gain entrance to common areas. *Nohara*, 3 F.3d at 1240-42.

^{89.} No. 07-99, 2008 WL 141761 (D. Minn. Jan. 14, 2008).

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held that the police who entered an apartment hallway to conduct a dog sniff outside defendant's apartment door did not conduct a Fourth Amendment search. Other courts, however, have applied *Jardines* to apartments to find protection. Either way, in public housing and apartment buildings in which the landlord gives consent, *Jardines* is unlikely to provide protection against dogs in common hallway areas outside apartments. Since a great many of the dog sniff residence cases involve such apartments rather than houses, a trespass rationale alone could give rise to disparities in race and wealth for dog sniffs of residences without warrant or probable cause. This Article, therefore, provides a crucial supplement to *Jardines*; even absent trespass, such a dog sniff of a home (or car) constitutes a search since it invades a person's reasonable expectation of privacy.

III. PLACE IN FOURTH AMENDMENT LAW

The dog sniff cases have largely ignored the value of privacy in an area such as the car or home for its own sake, and have relied instead on a model of privacy that protects concrete personal facts only. This Part surveys how the Supreme Court has treated Fourth Amendment protection of place—first in its early cases, second in *Arizona v. Hicks*⁹⁴ and *Kyllo*, and finally in the drug testing cases such as *Skinner v. Railway Labor Executives' Association*. 95

A. Seesawing History

The Court's treatment of place in Fourth Amendment law has seesawed over time. The Framers of the Fourth Amendment relied, in large part, on several key precedents in England and the colonies that all

^{90.} See id. at *2-3; see also United States v. Scott, 610 F.3d 1009, 1015-16 (8th Cir. 2010) (holding that a dog sniff of an apartment door from the hallway does not constitute a Fourth Amendment search).

^{91.} E.g., McClintock v. State, 405 S.W.3d 277, 283-84 (Tex. App. 2013); see also United States v. Jackson, 728 F.3d 367, 373-74 (4th Cir. 2013) (suggesting that if a trash can had been sitting near the apartment's back door within the "apartment's curtilage," Jardines would have protected that area from police intrusion); United States v. Davis, No. 12-CR-95-LRR, 2013 WL 1635867, at *3 (N.D. Iowa Apr. 16, 2013) (noting that Jardines "may call into question" police right to bring a drug-sniffing dog to an apartment door).

^{92.} E.g., Fitzgerald v. State, 864 A.2d 1006, 1017 (Md. 2004); State v. Davis, 732 N.W.2d 173, 181-82 (Minn. 2007); State v. Ortiz, 600 N.W.2d 805, 812 (Neb. 1999); People v. Dunn, 564 N.E.2d 1054, 1055 (N.Y. 1990); see also United States v. Villegas, 495 F.3d 761, 767-69 (7th Cir. 2007) (holding that warrantless entry of a duplex's common hallway did not violate the Fourth Amendment).

^{93.} See supra notes 84-88.

^{94. 480} U.S. 321 (1987).

^{95. 489} U.S. 602 (1989).

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involved traditional physical searches of houses, persons, papers, and effects. He physical search of a home was so obviously a search, and the home so obviously a place, that the question of what conduct constituted a search, and what role place played, did not arise. In England, the King's messengers searched the houses and businesses of dissident writers and their printers, and arrested them all on general warrants that named no persons or places to be searched. In the colonies, customs agents and others searched houses, ships, and warehouses for undutied goods. In all the cases the government physically trespassed and conducted what were obviously searches, long before newer investigative techniques brought into question what a "search" meant.

The Fourth Amendment incorporated the principles developed in opposition to these unreasonable searches, and made clear these principles apply to places, as well as facts or information. Its text lists places such as houses, persons, and effects, and expressly mentions "place" in the warrant clause, requiring that any search warrant describe with particularity the "place" to be searched. Beyond place, the text makes clear it protects information not only because a chief reason to protect an area such as the house is to protect information, but also because it expressly protects "papers." 100

But in one of the first Fourth Amendment cases, *Boyd v. United States*, ¹⁰¹ the Court did not require any physical intrusion or trespass by the government into a private place, such as the home or a person's pockets as a premise to finding a search. ¹⁰² In *Boyd*, the government subpoenaed documents to build a forfeiture case, similar enough to a criminal case to trigger Fourth Amendment protections. ¹⁰³ Even though the government proceeded by subpoena rather than any physical search, the Court considered the subpoena sufficiently similar in function and effect to a physical search to count as a Fourth Amendment search. ¹⁰⁴ Because the subpoena involved papers, also specified by name in the

^{96.} See, e.g., Paxton's Case, 1 Quincy 51, 52, 55 n.15, 57 (Mass. 1761) (discussing searches of houses, warehouses, and ships); Entick v. Carrington, (1765) 95 Eng. Rep. 807, 807-08 (K.B.) (involving government officials forcibly entering a person's house, breaking open his locks, and seizing his papers); Wilkes v. Wood, (1763) 98 Eng. Rep. 489, 490 (K.B.) (same).

^{97.} Entick, 95 Eng. Rep. at 810; Wilkes, 98 Eng. Rep. at 490, 494; WILLIAM J. CUDDIHY, THE FOURTH AMENDMENT: ORIGINS AND ORIGINAL MEANING 602-1791, at 148-49, 151-52 (2009).

^{98.} E.g., CUDDIHY, supra note 97, at 236-41.

^{99.} U.S. CONST. amend. IV.

^{100.} Id.

^{101. 116} U.S. 616 (1886).

^{102.} Id. at 622.

^{103.} Id. at 618, 634.

^{104.} Id. at 634-35.

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text of the Fourth Amendment, we can understand more readily why the Court did not need to find that the government had conducted a physical search of a place.

The Court later withdrew from this expansive view of a Fourth Amendment search in the 1928 wiretapping case, *Olmstead v. United States*. There, prohibition officers set up wiretaps on the phone lines *outside* the defendants' homes and transcribed months of conversations concerning criminal liquor activities. The defendants sought to exclude the evidence as an illegal search under the Fourth Amendment. To a support of the court o

Under *Boyd*, the conduct would likely have counted as a search. The government intercepted communications, which are very analogous to papers, such as letters. Though the wiretapping involved no physical trespass on defendant's property, neither did the conduct in *Boyd*. But, the Court rejected the analogy to papers, and particularly, the analogy to the government opening someone's mail, holding that the wiretaps were not searches for two reasons: first, the agents did not search or seize anything tangible; and second, the agents did not physically invade or trespass upon the property of the defendants. In the years following *Olmstead*, the Court did not develop a clear rule for what counted as a search, sometimes relying on a test focused on place and physical intrusion and other times rejecting it.

Nevertheless, in 1967, the seesaw swung back, and away from an emphasis on place, in *Katz v. United States*. ¹¹⁰ There the Court overruled *Olmstead* and held that electronic eavesdropping, even without a physical invasion, constituted a "search" under the Fourth Amendment. ¹¹¹ The Court held that the Fourth Amendment protects privacy in general and did not require the invasion of a constitutionally protected area. ¹¹²

The majority in *Katz* decoupled Fourth Amendment privacy from any particular area when it famously stated: "The Fourth Amendment protects people, not places." This notion that the Fourth Amendment protects privacy in some free-floating way, irrespective of place, quickly

^{105. 277} U.S. 438 (1928).

^{106.} Id. at 456-57.

^{107.} Id. at 462.

^{108.} Id. at 464-65.

^{109.} Orin S. Kerr, The Curious History of Fourth Amendment Searches, 2013 SUP. CT. REV. 67, 82-86 (2013).

^{110. 389} U.S. 347 (1967).

^{111.} Id. at 353.

^{112.} *Id*.

^{113.} Id. at 351.

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runs into conceptual difficulty, however. If the police, for example, interview a spouse and ask him very personal and private information about his wife, and the husband discloses these secrets, the police have invaded the wife's privacy, but they certainly have not conducted a "search" under the Fourth Amendment. Indeed, the police will learn personal and private details about suspects without invading their privacy in the normal sense of the term, without seeming to veer even close to the concerns of the Fourth Amendment.

These examples show that the Fourth Amendment will almost necessarily have some connection to an area or place. Indeed, Justice Harlan in his concurrence in *Katz* rejected the majority's view that area no longer mattered; he argued, instead, that the phone booth was a constitutionally protected area because Katz had essentially rented it out as he would a hotel room.¹¹⁴ Since the Court soon adopted Harlan's concurrence as its test for privacy, we should also acknowledge his view of the continuing importance of place.

The final shift came in 2012 when the Court in *Jones* expressly established a trespass test, holding that if the police trespassed upon a constitutionally protected area in looking for something, that conduct counts as a Fourth Amendment search, whether or not it also invades a reasonable expectation of privacy. The Court expressly retained the privacy test for non-trespass cases, but the decision goes far to reconnecting the Fourth Amendment to place. 116

B. Hicks and Kyllo

Jones represents the culmination of several cases written by Justice Scalia that emphasize the importance of place. In these cases he relies on the text of the Constitution, and perhaps on his general desire to place at least some reliance on the common law of 1791. Lither way, the cases both connect the Fourth Amendment to place as they broaden Fourth Amendment protection by expanding what counts as a search. In *Hicks* and *Kyllo*, the Court further cements the privacy of place by affording privacy protection even when no concrete information is

^{114.} Id. at 361 (Harlan, J., concurring).

^{115.} United States v. Jones, 132 S. Ct. 945, 950 (2012).

^{116.} Id. at 949, 952.

^{117.} See Kyllo v. United States, 533 U.S. 27, 34 (2001) (stating that the Fourth Amendment protects the interior of the home "with roots deep in the common law"). On the other hand, in Kyllo, Scalia recognized that the common law cannot answer all questions concerning new technology, and noted that courts must "take the long view, from the original meaning of the Fourth Amendment forward." Id. at 38-40 (emphasis added).

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or might be revealed, thus recognizing privacy over place beyond informational privacy.

In *Hicks*, a police officer was validly in an apartment to search for weapons or gunshot victims and came across a turntable.¹¹⁸ He thought it might be stolen so he moved it so he could see its serial number, either turning it around or upside down.¹¹⁹ The serial number revealed it was stolen, leading to Hicks' arrest and motion to suppress the evidence.¹²⁰ The Court held the police officer had conducted a search, but not because he learned any information, personal or otherwise.¹²¹ The Court noted that a serial number is not important or personal, but it also noted that even if there had been no serial number under the turntable, the action would constitute a search.¹²² It is the private area underneath the turntable that the Fourth Amendment protects¹²³ and not any particular facts that might be learned there. "A search is a search even if it happens to disclose nothing but the bottom of a turntable." ¹²⁴

Similarly, in *Kyllo*, the Court put special emphasis on the area searched and not upon the information learned. In that case, federal agents suspected Kyllo was growing marijuana in his home. ¹²⁵ They therefore trained a thermal imaging device to the outside of his house, and discovered that the garage roof and one side of the house were hotter than the rest of the house and other homes in the triplex. ¹²⁶ Based on this heat difference, as well as utility bills and tips, they obtained a warrant and discovered marijuana plants in Kyllo's house. ¹²⁷ Kyllo moved to suppress the drugs. ¹²⁸

The Court held that the agents had conducted a warrantless search of Kyllo's house when they used the thermal imaging device. ¹²⁹ The Court did not rely upon the facts learned, but rather, emphasized that the home is special, indeed sacred. ¹³⁰ The Court conceded the only fact learned was that the garage roof and one side of the house were hotter

^{118.} Arizona v. Hicks, 480 U.S. 321, 323 (1987).

^{119.} *Id*.

^{120.} Id. at 323-24.

^{121.} Id. at 324-25.

^{122.} Id. at 325.

^{123.} In light of the new trespass test under *Jones*, a court could also find a search based upon a trespass to chattel, namely, the turntable. But, in *Hicks*, the Court clearly relied upon a privacy rationale. *Hicks*, 480 U.S. at 325.

^{124.} *Id*.

^{125.} Kyllo v. United States, 533 U.S. 27, 29 (2001).

^{126.} Id. at 29-30.

^{127.} Id. at 30.

^{128.} Id.

^{129.} Id. at 34-35, 40.

^{130.} Id. at 37.

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than other areas and that this fact was "unimportant" (not to mention outside the home). ¹³¹ But the nature of the facts didn't matter, the area did. As Scalia put it: "The Fourth Amendment's protection of the home has never been tied to measurement of the quality or quantity of information obtained." ¹³²

Of course, at times, the Court in *Kyllo* did speak of facts and information since ultimately what the government learned, as in *Hicks*, were facts, such as the relative heat of certain areas or the inference that the person inside was growing marijuana. As a result, the Court phrased its holding in terms of information, stating that the government conducts a search when it learns information about the inside of the home it could not have learned—absent the technology—without going inside. ¹³³ But, in a criminal case, the court will *always* be addressing factual information the government seeks to introduce into evidence, or that was used to obtain a warrant. However, that question differs from whether the Fourth Amendment protects only facts, or personal facts, or also protects areas.

Kyllo says that the Fourth Amendment protects the home as an area, with the result that any fact learned from within—even a fact of criminal activity—becomes private because it is in the home. 134 That fact takes its character not from its inherent nature—for example, there are marijuana plants within—but rather from the area it describes: activity within the home. That is, even if the activity is criminal, it enjoys protection because it occurs in the home. "In the home, our cases show, all details are intimate details, because the entire area is held safe from prving government eves." 135 Some read this quote to mean that the Fourth Amendment protects intimate details only, and that all details of the home are intimate. But really, what it means is that we can deem even non-intimate facts intimate because they are in the home; or rather, the area is protected and not particular facts. After all, as a matter of fact not all details of the home are intimate; as the Court noted in Kyllo, whether a closet light is on is not intimate; a rug just inside the door is not intimate; nevertheless, we deem them intimate because of where they are, which is really another way of saving the area itself is protected. It questions the entire approach of breaking privacy protections down into identifiable facts.

^{131.} Id. at 40.

^{132.} Id. at 37.

^{133.} Id. at 40.

^{134.} Id. at 37.

^{135.} Id. (emphasis in original).

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But the greatest confusion has come from Scalia's somewhat stray, but vivid, remark that has taken on a life of its own. Those who have interpreted *Kyllo* as having relied on a model of privacy that protects intimate details have pointed to, and endlessly repeated, the hypothetical of the sauna. The thermal imager, according to the Court, "might disclose, for example, at what hour each night the lady of the house takes her daily sauna and bath—a detail that many would consider intimate." The Court in *Caballes* misread this statement to mean: (1) the thermal imager actually did detect such intimate details; or at least (2) that its ability to detect such intimate details was critical to the *Kyllo* Court's holding. Dozens of cases and some scholars have followed this misunderstanding of the quotation. 138

First, the thermal imager did not, in this case, reveal such a fact. All it revealed was the relative heat of certain exterior walls that led to the inference of grow lights, not a sauna. The Court largely concedes that the presence of grow lights is not intimate, comparing it to a policeman who pushes a few inches into the home and sees nothing but the "nonintimate rug on the vestibule floor." The intrusion is a search under the Fourth Amendment not because of the fact learned, but because of the area intruded upon.

Second, even if the imager were merely capable of revealing such an intimate detail, *Caballes* misconstrues the remark by ignoring its context. The sauna quote comes as part of Scalia's argument that the Fourth Amendment is *not* limited to protecting intimate details. That is, the dissent proposed that thermal imaging could count as a search, but only when it reveals intimate details. The dissent's test would not measure whether a given technology in a given case had actually revealed intimate details, but rather, whether it would be capable of doing so. The Court rejected this test—after all, sophisticated technology may fail to disclose intimate details and unsophisticated technology might succeed in doing so. The Court then used the thermal imager in

^{136.} Id. at 38 (internal quotation marks omitted).

^{137.} Illinois v. Caballes, 543 U.S. 405, 409-10 (2005).

^{138.} E.g., United States v. Brock, 417 F.3d 692, 696 (7th Cir. 2005); People v. Jones, 755 N.W.2d 224, 230 (Mich. Ct. App. 2008); Mark E. Smith, Going to the Dogs: Evaluating the Proper Standard for Narcotic Detector Dog Searches of Private Residences, 46 HOUS. L. REV. 103, 109-10 (2009) (reading Kyllo as holding that using the thermal imager was a search because it could reveal "intimate details," and quoting the sauna remark). But see Timothy C. MacDonnell, Orwellian Ramifications: The Contraband Exception to the Fourth Amendment, 41 U. MEM. L. REV. 299, 316-17 (2010).

^{139.} Kyllo, 533 U.S. at 29-30.

^{140.} Id. at 37.

^{141.} Id. at 44 (Stevens, J., dissenting).

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Kyllo as an example—that imager was relatively unsophisticated and yet it could, in theory, disclose intimate facts, such as sauna habits, whereas more sophisticated technology might not be able to—showing that the dissent's use of sophistication as a proxy for disclosing intimate details would not yield accurate results, even if we were to use a test based on whether the surveillance disclosed intimate detail. Thus, the sauna remark means exactly the opposite of what some have said since Scalia uses it to reject a rule that would be based on whether the technology could reveal intimate details or not. Again, what mattered to the Court was the area—the home—and not what details were revealed or even could be revealed.

No doubt *Kyllo* presented a tough case for *Caballes* because if the Fourth Amendment protects areas rather than facts only, the car will receive at least some protection. The Court in *Caballes* could have drawn this distinction, perhaps, that the car simply enjoys less protection than the home, and it could have pointed to language in *Kyllo* emphasizing the home's special protection; but it did not. Rather, it focused on facts, that a dog sniff reveals only one fact, whether a person possesses contraband, and this fact enjoys no privacy protection.

Caballes thus relied upon the sauna remark to mischaracterize Kyllo as a personal facts case, saying that "critical" to the decision in Kyllo was that the thermal imager could reveal "intimate details." Again, Kyllo meant the exact opposite.

Scalia wrote the majority opinion for both *Hicks* and *Kyllo*, cases that use area to establish bright-line Fourth Amendment protections. These cases were consistent with his general philosophy in two ways: first, to provide bright-line rules to police in the field; and second, to glean those bright-line rules from the common law. As for the second, in *Kyllo*, he emphasizes the common law roots of the protection of the area of the home from even a small or technical invasion.

It is, therefore, not surprising that Scalia also wrote the recent GPS case, *Jones*, holding that even a technical trespass on a protected area such as the car, no matter how small an invasion, will result in a finding of a Fourth Amendment search. In *Jones*, the government put a small GPS device on the undercarriage of defendant's car in order to follow his movements at all times for twenty-eight days. The government

^{142.} Illinois v. Caballes, 543 U.S. 405, 409-10 (2005).

¹⁴³ Id

^{144.} Kyllo, 533 U.S. at 40 (majority opinion); Arizona v. Hicks 480 U.S. 321, 325 (1987).

^{145.} Kyllo, 533 U.S. at 34.

^{146.} United States v. Jones, 132 S. Ct. 945, 949 (2012).

^{147.} Id. at 948.

argued this was not a search, but the Court disagreed, holding that a trespass, however slight, if in aid of discovering information, counts as a search. 148 Notice the role both area and information play in the *Jones* case. The trespass occurs on an area (a car here). The Court makes no inquiry into whether intimate facts, or even any facts, were disclosed, or even likely to be disclosed—surely no facts were disclosed concerning the interior of the car or its bottom.

C. Drug Testing Cases

The drug testing cases present another challenge to the binary search doctrine since they are themselves practically binary searches—yet count as Fourth Amendment searches. The Court has addressed government programs that require drug or alcohol testing of certain employees by blood, breath, or urine, and consistently held that each type of test constitutes a search under the Fourth Amendment. ¹⁴⁹ Urine and breath tests are particularly germane because, like dog sniffs, they do not physically intrude into a person's body, but rather permit the government to infer whether someone has taken drugs or alcohol from what has emanated from within the body, if emanate is the right word to describe urinating and breathing.

The Court addressed such tests in *Skinner*.¹⁵⁰ If a railway employee was involved in a train accident, federal regulations required blood and urine tests; if an employee violated certain safety rules, the regulations authorized breath and urine tests.¹⁵¹ If the employee tested positive for any amount of drugs or alcohol, the railway usually fired him.¹⁵²

The Court treated each type of test—blood, breath, and urine—separately, finding that each constituted a search despite varying levels of intrusion. The first type, blood tests, were easily denominated searches. A blood test physically intrudes, penetrating beneath the skin, and therefore violates a person's reasonable expectation of privacy. ¹⁵³ The Court also referenced "security," noting that it must consider the question "in light of our society's concern for the security of one's person." ¹⁵⁴ In addition to the blood draw, the Court held that the "ensuing chemical analysis" effected a further privacy invasion. ¹⁵⁵

^{148.} Id. at 950.

^{149.} E.g., Skinner v. Ry. Labor Execs. Ass'n, 489 U.S. 602, 616-18 (1989).

^{150. 489} U.S. 602, 609-11 (1989).

^{151.} Id. at 609, 611.

^{152.} Id. at 606-07, 629-30.

^{153.} Id. at 616.

^{154.} Id.

^{155.} Id.

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When the Court turned to the breath test, it likewise found a privacy violation, even though the government does not physically intrude upon the body as with a blood test. Both, the Court said, implicate "similar concerns about bodily integrity." The Court emphasized that the procedure required a person to produce a "deep lung' breath for chemical analysis." The Court evidently considered the process to be a physical intrusion into the body, perhaps akin to requiring a person to empty his pockets.

The Court did, however, note that collecting a urine sample differed from a blood draw, since the former does not involve a "surgical intrusion into the body." Nevertheless, the Court held that requiring a urine sample invaded a reasonable expectation of privacy for two reasons: first, the chemical analysis of the urine can reveal private medical facts about a person such as epilepsy, pregnancy, or diabetes; load second, urinating is a particularly private activity, and requiring a urine sample, especially when it involves visual or aural monitoring, implicates privacy. 161

Once the Court held that the tests were searches, it also found that the government did not need probable cause and a warrant to conduct them, in part because the government interest in a safe railroad was high and the intrusion of the test limited. 162

Subsequent drug testing cases likewise held urine drug tests to be searches when required of customs agents, students, and test candidates for office, and hospital patients, and these simply cited or quoted *Skinner* without further discussion. In *Chandler v. Miller*, for example, the state of Georgia required candidates for certain offices to certify they have taken and passed a drug test. The statute permitted the candidate to produce the urine sample in his doctor's office before sending it to an independent lab, and the candidate received the results first and could control further disclosure.

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^{156.} Id. at 616-18.

^{157.} Id. at 616-17.

^{158.} Id. at 616.

^{159.} Id. at 617.

^{160.} Id.

^{161.} Id.

^{162.} Id. at 633-34.

^{163.} Nat'l Treasury Emps. Union v. Von Raab, 489 U.S. 656, 665 (1989).

^{164.} Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646, 652 (1995).

^{165.} Chandler v. Miller, 520 U.S. 305, 313 (1997).

^{166.} Ferguson v. City of Charleston, 532 U.S. 67, 76 (2001).

^{167. 520} U.S. 305 (1997).

^{168.} Id. at 308-09.

^{169.} *Id.* at 312.

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The Court in *Chandler* held that the required urine test was a search, even though it lacked the key invasive features mentioned in *Skinner*.¹⁷⁰ First, the candidate could produce the urine in the privacy of his doctor's office, without the visual or aural monitoring mentioned in *Skinner*.¹⁷¹ Second, an independent lab tested for drugs only and provided the results to the candidate, who controlled any further disclosure, unlike the hypothesis in *Skinner* that a urine test could disclose information other than drug use, such as diabetes, pregnancy, or epilepsy.¹⁷²

These drug testing cases all find privacy interest in the human body, not solely because of the information revealed, but also because privacy protects the integrity of the body for its own sake. The body is a place listed in the Fourth Amendment ("persons") just as are houses and, in case law, cars. These latter places, when subjected to dog sniffs, therefore bear similarities to the drug testing cases discussed below.

1. Similarities and Differences

The similarities between a dog sniff and the drug tests are straightforward. In both cases, the test results disclose the presence or absence of contraband only.¹⁷³ In both cases, at least with urine and breath tests, the government does not physically intrude into the interior of the area at issue—the home, car, or person for dog sniffs, and the interior of the human body for drug tests. In both cases, in light of *Chandler*, the government does not directly observe the person urinating in the drug test case or living in the home in the dog sniff case; in *Chandler* the government simply receives the information about drug positivity just as a dog sniff would return, and the person has even more control since she can withhold the result.

But, we can identify differences as well. In the drug testing cases, and alcohol breathalyzer cases, the person is required to produce something from the inside of his body, and thus, the test might resemble a police order to empty one's pockets. This argument is tricky, however, because we all breathe and urinate all the time, and, in fact, cannot help but do so. The police could, in theory, collect our urine once we have finally succumbed and urinated, or test the air near where we breathe.

^{170.} Id. at 313.

^{171.} Id. at 312; Skinner v. Ry. Labor Execs. Ass'n, 489 U.S. 602, 617 (1989).

^{172.} Chandler, 520 U.S. at 312; Skinner, 489 U.S. at 617.

^{173.} Indeed, the Court in *Skinner* made precisely this point. Though a search, the tests were, according to the *Skinner* Court, a minor intrusion—in large part because they revealed the presence or absence of contraband only. *Skinner*, 489 U.S. at 625-26. The breath tests, for example, "reveal the level of alcohol in the employee's bloodstream and nothing more." *Id.* at 625. The breath tests "reveal no other facts in which the employee has a substantial privacy interest." *Id.* at 626.

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Indeed, certain breath tests now allow the police to do just that: to test the air a person naturally breathes out.¹⁷⁴ Thus, this difference does not seem significant.

The other difference is that when the government collects a urine or blood sample, it could, in theory, retain the sample and test it for all sorts of things other than drugs, including such personal matters as pregnancy. This does seem to be a real difference from a dog sniff; the potential for other testing does seem an additional incursion of privacy. But in none of the drug cases was this subsequent search a realistic possibility. In *Chandler*, for example, an independent lab tested the samples and provided the results to the candidate only. More to the point, the Court did not, in the end, place much reliance on this potential since in discussing reasonableness, the Court in *Skinner* noted that the tests reveal the presence of contraband only. 176

Our privacy interest in our blood, breath, and urine seems to relate not to the information potentially gained but to a far more important value, bodily integrity. Blood constitutes our very essence, carrying oxygen, hormones, and antibodies through the body; it signifies life and death, in metaphor and film. A bloody protest is a deadly one. To share blood, to be consanguine, is to be family. Our breath is our spirit; words like "spirit," "inspire," and "expire" come from the Latin *spirare*, to breathe. Urine, though less lofty, represents another type of human value, the value in hiding the beastly. 177

All three, blood, urine, and breath, are highly personal and intimate, even once they leave the body. We avoid touching another's blood, we hide our urine and dispose of it as quickly as possible, and we avoid getting close enough to breathe another's breath unless we enjoy an intimate relationship with that person. Our breath in particular creates a small zone of privacy directly around our faces; someone who comes close enough to breathe it is a "creep;" someone who gets in our face is a "challenge."

In sum, a dog sniff, particularly in close proximity to a person, even a person in a car, exhibits a similar intrusion upon privacy as blood, urine, and particularly breath tests, and all of these methods of drugs tests have been clearly held to be searches under the Fourth Amendment. These drug testing cases challenge the dog sniff cases, and demonstrate

^{174.} See 1 Wayne R. Lafave, Search and Seizure: A Treatise on the Fourth Amendment § 2.2(h), at 549-53 (4th ed. 2004).

^{175.} Chandler, 520 U.S. at 312.

^{176.} Id. at 313, 323; Skinner, 489 U.S. at 625-26.

^{177.} See FERDINAND DAVID SCHOEMAN, PRIVACY AND SOCIAL FREEDOM 16-17 (1992).

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how they ignore bodily integrity in particular, and the value of seclusion in an area in general.

D. Tort Privacy

In assessing privacy under the Fourth Amendment, the Court rarely draws on state tort privacy law.¹⁷⁸ But tort privacy sheds important light on the notion that privacy, including privacy under the Fourth Amendment, protects areas as well as facts. In fact, the right to privacy as a tort has deep roots in the right to seclusion, and one strand of tort privacy protects specifically against "intrusion upon seclusion." The tort focuses on the physical intrusion, and protects not only against an intrusion upon a person's "private affairs or concerns," but also simply upon his solitude or seclusion. The express language of the tort, as well as many of the key precedential examples, illustrate a desire simply to protect physical solitude or seclusion.

For example, perhaps the first privacy tort case, though not using that term, was *De May v. Roberts*, ¹⁷⁹ decided in 1881. ¹⁸⁰ In that case, a couple called their country doctor late at night to come deliver their baby. ¹⁸¹ The doctor arrived with a friend, Scattergood, providing no explanation for his presence. ¹⁸² The couple assumed he was associated with the medical profession and allowed him in. ¹⁸³ He ended up witnessing the birth. ¹⁸⁴ The couple sued and the court awarded damages. ¹⁸⁵ The couple's consent to his entry was wrought by deceit and, therefore, void. ¹⁸⁶ The court did not say whether the case was one of battery or trespass, but today it stands for invasion of privacy and, in particular, intrusion upon seclusion. ¹⁸⁷ One could try to wrestle its facts into his model, implying that Scattergood observed concrete facts; but,

^{178.} E.g., Illinois v. Caballes, 543 U.S. 405, 408 (2005); Kyllo v. United States, 533 U.S. 27, 40 (2001); Skinner, 489 U.S. at 614-16. One court has noted that the reasonableness inquiry under the Fourth Amendment differs from the analogous inquiry under the state privacy tort. Wilcher v. City of Wilmington, 139 F.3d 366, 379-80 (3d Cir. 1998) (finding that urine drug tests including visual monitoring were reasonable under the Fourth Amendment, but that a separate inquiry was required under state privacy law).

^{179. 9} N.W. 146 (Mich. 1881).

^{180.} Id. at 146.

^{181.} Id. at 146-47.

^{182.} Id. at 147.

^{183.} Id.

^{184.} Id. at 148.

^{185.} Id. at 149.

^{186.} *Id*.

^{187.} RESTATEMENT (SECOND) OF TORTS § 652B cmt. b (1977). *But see* DAN B. DOBBS ET AL., THE LAW OF TORTS § 580 (2d ed. 2011) (arguing "recovery could have been justified on a trespass theory as well as any other").

of course, the situation is better described without reference to the specific facts he may have learned. The harm lies simply in his intrusion upon seclusion, his invasion of a private area in which an unclothed woman was giving birth.

In another canonical case,¹⁸⁸ a landlord hid a microphone behind the headboard of a couple's rented room in order to listen to their conversation.¹⁸⁹ He never heard anything, and, of course, disclosed no private facts about the couple.¹⁹⁰ Nevertheless, the New Hampshire Supreme Court held that the landlord had intruded upon the seclusion of the couple and ordered that damages be awarded.¹⁹¹

Another case that captures the essence of intrusion as opposed to disclosure of facts arose when a doctor took a picture of a dying patient against his will.¹⁹² The doctor had no desire to publish the photograph or use it in teaching interns; rather, he simply meant to keep it in his files.¹⁹³ As a result, the photograph would show nothing more, and reveal no other facts than what the doctor had observed in person. Nevertheless, the Maine Supreme Court held that the taking of the photograph violated the man's right to privacy.¹⁹⁴

These cases all fall under the strand of privacy known in the RESTATEMENT (SECOND) OF TORTS as intrusion upon seclusion. ¹⁹⁵ Its formulation shows that it protects more than simply facts, because it prohibits highly offensive intrusions into "the solitude or seclusion of another or his private affairs or concerns." ¹⁹⁶ Private affairs or concerns seem to capture personal facts, while solitude or seclusion remain for their own sake. It also expressly protects more than physical intrusions, including wiretapping, eavesdropping, ¹⁹⁷ and, as noted above, photographing.

IV. PHILOSOPHY OF PRIVACY

As noted in the Introduction, a great deal of recent privacy scholarship and court cases have focused on private facts because the growing use of data collection—whether from our web surfing habits or

^{188.} Hamberger v. Eastman, 206 A.2d 239 (N.H. 1964).

^{189.} Id. at 240.

^{190.} Id. at 242.

^{191.} Id

^{192.} Estate of Berthiaume v. Pratt, 365 A.2d 792, 793 (Me. 1976).

¹⁹³ *Id*

^{194.} Id. at 794-95.

^{195.} RESTATEMENT (SECOND) OF TORTS § 652B (1977).

^{196.} Id.

^{197.} Nader v. Gen. Motors Corp., 255 N.E.2d 765, 770-71 (N.Y. 1970).

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concerning medical information—has made disclosure of such often highly personal facts extremely problematic. ¹⁹⁸ For this reason and others, many scholars who consider the more philosophical aspects of privacy have likewise focused on privacy as a right that protects personal, and often intimate, facts. But, much scholarship on privacy also argues that privacy protects areas and the right to seclusion. Sometimes these arguments come in the context of an argument in favor of recognizing a right to contraception, abortion, and sexual liberty as a strand of privacy, and area, therefore, plays an important role; but others simply recognize that privacy protects physical seclusion for its own sake.

For the purposes of this discussion, when I refer to information or facts, I mean a true or false proposition. A central example of a personal fact would be HIV status, which of course can be stated in the form of a proposition: "George is HIV positive." Other examples would include statements such as: "William is having sex with Zoe," or "Alice makes \$150,000 per year." Though I contrast with the disclosure of personal facts the protection of seclusion or area, one could, in theory, reduce every aspect of that seclusion to a set of facts, but those facts would fail to capture the person's desire for seclusion. That is, a person often seeks seclusion without seeking to hide any facts.

A. Personal Facts

Alan Westin's definition and discussion of privacy from his book, PRIVACY AND FREEDOM, written in 1967, has proved very influential in addressing the already pervasive use by the government and others of modern surveillance techniques, including data collection and usage. ¹⁹⁹ He defined privacy as "the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others." ²⁰⁰ On the surface, this definition seems to relate primarily to facts, and in discussing some of the functions of privacy, Westin does, in fact, emphasize facts. For example, he argues that privacy protects a person's autonomy to keep secret certain "ultimate" and "intimate secrets."

But Westin's theory, upon closer examination, involves far more than simply the protection of personal facts. Westin emphasizes that individuals play different roles and wear different "mask[s]" in different

^{198.} See supra Part I.

^{199.} ALAN F. WESTIN, PRIVACY AND FREEDOM 7 (1967).

^{200.} Id.

^{201.} Id. at 33.

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social contexts.²⁰² When a person plays a certain role, but hides another part of himself, he takes advantage of a type of privacy to develop his personality. Even more, when a person seeks seclusion, either total isolation or the sanctuary of close family members, he does so to avoid the need to play the more taxing roles required in larger society. Westin describes this as "emotional release," as a time needed "off stage" to be himself, and privacy and seclusion afford that time.²⁰³ A person's desire to relax at home and be himself is far better described as a desire for seclusion to be by himself, rather than as a desire to hide certain personal facts.

On the other hand, William Parent truly does argue that privacy only protects facts—those facts that are personal and essentially secret to some extent, what he calls "undocumented." This is his definition of the state or condition of privacy, not the right to privacy. That is, if no one knows whether Andy missed work because of a hangover, he enjoys privacy over this fact; if the newspaper publishes the fact, he no longer enjoys privacy. Parent expressly ties his definition to the increased threat technology presents to the privacy of personal data. The right to privacy relates to whether others have a duty to avoid revealing information that lies in a state of privacy.

With his focus on information, intrusion upon seclusion presents a problem for Parent, which he addresses in two ways. First, he argues that it is still a valid tort and should be legally cognizable, but that it should not be ranked as part of a unified or coherent concept of "privacy." Second, he argues many seclusion cases could still fall under his definition of privacy, because we can often identify personal facts that the intrusion upon seclusion reveal. To the extent the intrusion does disclose personal facts, it invades privacy.

If intrusion upon seclusion remains a viable legal action in Parent's view, who cares whether we call it privacy or not? The problem seems to be this: Parent argues that the Fourth Amendment protects "privacy" and there is, therefore, the danger that a Court will import wholesale his limited notion of privacy to the separate context of the Fourth Amendment.²⁰⁸

^{202.} Id. at 33-34.

^{203.} Id. at 34-35 (internal quotation marks omitted).

^{204.} Parent, supra note 38, at 269-71.

^{205.} Id. at 270-71.

^{206.} Id. at 283-86.

^{207.} Id. at 285-86.

^{208.} Id. at 287-88.

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Richard Posner maintains an unsentimental view of privacy. He argues that privacy protects personal facts, but finds little to celebrate about such secrecy, since, in his view, people keep secrets in order to manipulate others.²⁰⁹

One of the most interesting theories of privacy is that of Charles Fried, who emphasizes that privacy protects personal facts. Fried argues that the heart of privacy is the right to control such personal facts from disclosure. This right, in turn, furthers interpersonal relationships. By creating certain information that is private, and over which a person has control over disclosure, we give people the tools to create intimate relationships since they can selectively disclose this personal and private information only to a select few in the inner circle of intimacy. Privacy thus turns certain personal information into a type of "capital" that a person can spend on creating a personal relationship.

Fried's view focuses on information and the way we can share it, but it seems adaptable to seclusion as well: we may wish to exclude everyone from our bedroom but our partner, and there do the most intimate things in order to establish the relationship itself. We can thus treat seclusion as capital, just as he argues we treat private information as capital. Even this revised version of Fried does seem to miss another aspect of seclusion, which is our desire for isolation from *everyone*. Sometimes we just want to be alone. This desire might include the obvious withdrawal behind a closed door of a bathroom. But it also includes everyone's desire for solitude for no concrete reason at all. The desire for seclusion, like the desire for privacy, can include individual seclusion as well as group seclusion; each protects not information, but the desire not to be seen, touched, or otherwise sensed by others, and the desire simply to avoid the physical proximity of others.

David Schoeman builds upon Fried's view of relationships, that privacy can foster them, but he separates out a different kind of privacy, the type that protects certain bathroom activities. We individually want the first kind of privacy to foster relationships by allowing us to have something special to share, as well as to keep the information private within that group. But the privacy of bathroom activities does not foster relationships—we generally do not share those in order to build relationships, and, in fact, we are required to keep those matters private

^{209.} Id. at 277.

^{210.} Fried, supra note 38, at 482-83.

^{211.} *Id*.

^{212.} SCHOEMAN, supra note 177, at 15-16.

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even if we wished to share them. This second type of privacy protects human dignity "by protecting us from public association with the beastly, the unclean."²¹³

B. Beyond Personal Facts

On the other hand, many philosophers, in defining privacy, flatly reject the requirement of, or emphasis on, personal facts. They recognize that personal facts form an important type of privacy, but argue that privacy also protects seclusion. For example, Judith Wagner DeCew argues that privacy protects three overlapping interests: (1) informational privacy; (2) accessibility privacy; and (3) expressive privacy.²¹⁴

Informational privacy, of course, embraces the type emphasized by others above, and expressive privacy includes the decisional privacy exemplified by the contraception²¹⁵ and abortion cases.²¹⁶ It is the accessibility to privacy that captures the right to seclusion important in the dog sniff cases. That subtype includes seclusion for sexual and bathroom activities, "that social norms already prescribe as private."²¹⁷ But it also protects against physical closeness or surveillance in private or public that can cause "fear of overbearing scrutiny."²¹⁸

DeCew applies this type of accessibility privacy to drug testing. She acknowledges the binary nature of such tests, but argues that even a blood test that discloses only the presence or absence of contraband violates this type of accessibility privacy.²¹⁹ She argues many of the drug testing cases give too little weight to the physical intrusion upon bodily integrity.²²⁰

Similarly, Ruth Gavison rejects those who restrict privacy to informational privacy, though she notes, "the most lively privacy issue now discussed is that related to information-gathering." Technology has led to new ways in which informational privacy is invaded, but physical access privacy is invaded largely the same way as before.

Like DeCew, Gavison recognizes protection of information but also protection of seclusion; though unlike DeCew she would exclude

^{213.} Id. at 17.

^{214.} DECEW, supra note 39, at 75-78.

^{215.} Griswold v. Connecticut, 381 U.S. 479, 485-86 (1965).

^{216.} Roe v. Wade, 410 U.S. 113, 154 (1973).

^{217.} DECEW, supra note 39, at 76.

^{218.} Id.

^{219.} Id. at 137.

^{220.} Id.

^{221.} Gavison, supra note 6, at 429.

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Griswold-type privacy.²²² Thus, her main categories of privacy are "secrecy, anonymity, and solitude."²²³ She describes the perfect state or condition of privacy as a person on an island: "no one has any information about X, no one pays any attention to X, and no one has physical access to X."²²⁴ To the degree this perfect state is diminished, privacy is diminished.

In assessing solitude, or what she also calls "physical access," we must consider whether a person is close enough to touch or whether the person is close enough to observe through ordinary senses. ²²⁵ Such privacy, she says, relates not to information learned but to the loss of aloneness: "our spatial aloneness has been diminished."

She applies the distinction between informational privacy and solitude to assess what privacy remains for those committing crimes and capture in general the distinction this Article draws. That is, few would support informational privacy for a person committing a crime, but rather would reject the criminal's interest in keeping secret his criminal activity. But when we phrase his interest as the interest we all have in seclusion, we see that this privacy interest remains, even for the criminal. After all, "solitude and anonymity [are] related not only to the wish to conceal some kinds of information, but also to needs such as relaxation, concentration, and freedom from inhibition." 228

Finally, Edward Bloustein premises a right to privacy on dignity.²²⁹ In large part, he responds to William Prosser's attempt to identify for each type of privacy a concrete, measurable harm such as mental distress or damage to reputation. Bloustein argues Prosser's mission misses the more fundamental interest at stake, the interest in human dignity.²³⁰ A man, Bloustein writes, whose home may be entered at will, "is less of a man."²³¹ Though Bloustein considers dignity the central value of privacy, I consider dignity below as a Fourth Amendment value separate from privacy.

^{222.} Id. at 428-29, 433-39.

^{223.} Id. at 428.

^{224.} Id.

^{225.} Id. at 433.

^{226.} Id.

^{227.} Id. at 435-36.

^{228.} Id. at 435.

^{229.} Edward J. Bloustein, Privacy as an Aspect of Human Dignity: An Answer to Dean Prosser, 39 N.Y.U. L. REV. 962, 973-74 (1964).

^{230.} Id.

^{231.} Id.

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C. Conclusions on Privacy Scholars

The foregoing represents merely a small sample of the privacy scholarship, viewed through a prism that divides it into theories that focus on information versus those that also recognize the importance of seclusion for its own sake. We can easily justify a right to privacy over information: we may seek privacy to discuss dissent or unpopular politics, engage in special religious rituals that require secrecy, or discuss embarrassing medical questions with our doctor. Privacy over information allows us to engage in a variety of important practices and behavior that society recognizes and values.

Privacy over an area and seclusion for its own sake, on the other hand, present a greater challenge to justify in such simple terms when no information is involved, but it seems idiosyncratic to exclude from privacy the socially central concept of seclusion. To say that what we do in the bathroom is not protected by privacy simply excludes this important and central use of that term. The simple, or seemingly simple, desire of a teenager to be left alone in his bedroom, not to hide some loathsome fact, but simply to be alone, must surely rank as central to any notion of privacy.

One way to capture the ineffable value in seclusion may lie in recognizing that dignity alone is an important subset of privacy, as Gavison argues, or perhaps one of its driving forces, as Bloustein argues. But dignity seems distinct from privacy in many contexts, since it involves a sense of self-worth. Therefore, below I consider dignity separate from privacy as an independent value protected by the Fourth Amendment.

Also, we must remember that much privacy scholarship discusses privacy as a general concept not necessarily limited by the text or history of the Fourth Amendment. Though these scholars sometimes take their discussion of privacy and apply it wholesale to the Fourth Amendment, as if that Amendment were congruent with the concept of privacy.

V. BEYOND PRIVACY

This Article has argued that the dog sniff cases rely upon a narrow notion of privacy that solely protects personal facts and ignores the other strand of privacy that protects seclusion in an area for its own sake, even if no personal facts are disclosed. Our reasons for protecting seclusion for its own sake become even more clear when we move beyond any concept of privacy to embrace other core Fourth Amendment values. Perhaps these values are simply another way of illuminating privacy interests, but they seem better explicated, at least under different labels.

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Most important, the text of the Fourth Amendment does not mention privacy, but seeks to make people "secure" in their homes and persons. Below, I will show how the concept of security applies particularly well to dog sniffs and helps to show the Fourth Amendment harm that arises from them.

The Fourth Amendment also protects interests closely related to security, such as personal dignity against humiliation by authorities. I explore this idea below. Finally, the Fourth Amendment ought to play a role in limiting certain abusive police practices, such as dragnet searches, unlimited police discretion, and racial profiling—all implicated by dog sniffs. ²³²

All these concepts—security, dignity, limiting discretion, and racial profiling—must still be seen in reference to some area or thing mentioned in the Fourth Amendment. That is, the Fourth Amendment does not protect a person's security or dignity in all contexts; rather, it protects these interests when the police conduct an investigation that has some connection or reference to a person, house, paper, or effect—which nowadays includes cars.

As a consequence, these additional values of security, dignity, etc., help show why privacy in an area for its own sake is important, even aside from any personal information that may be protected. This Part, therefore, continues the theme that the Fourth Amendment protects against more than simply legitimate personal information, and embraces the protection of persons and places for their own sake in order to promote a person's sense of security, their dignity, etc., and to reduce the risk of racial profiling.

A. "Secure"

The text of the Fourth Amendment guarantees the right of the people to be "secure." Secure means "free from danger... or attack" as in "a secure fortress." Based on this definition, some have argued that the term secure in the Fourth Amendment means the right to exclude only. Viewing secure as equivalent to the right to exclude seems to adopt a pure trespass view of the Fourth Amendment.

^{232.} See Lewis R. Katz & Aaron P. Golembiewski, Curbing the Dog: Extending the Protection of the Fourth Amendment to Police Drug Dogs, 85 NEB. L. REV. 735, 748-50 (2007); Dan Hinkel & Joe Mahr, Drug Dogs Often Wrong: Police Canines Can Fall Short, but Observers Cite Residue and Poor Training as Factors, CHI. TRIB., Jan. 6, 2011, § 1, at 1, 10. One could see racial profiling as violating an individual and a collective right.

^{233. 2} NOAH WEBSTER, AN AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE 66 (1828).

^{234.} Thomas K. Clancy, What Does the Fourth Amendment Protect: Property, Privacy, or Security?, 33 WAKE FOREST L. REV. 307, 351-66 (1998).

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But scholars, viewing secure as the right to exclude only, have missed another closely related definition of secure that helps us breathe life into the term; for secure also means "free from fear or anxiety," as in "he felt secure in his old job." The Oxford English Dictionary shows that this second meaning, "feeling no care or apprehension," has been in use since the Sixteenth Century. Noah Webster's 1828 dictionary likewise defines secure not only as free from danger, but also as "free from fear or apprehension of danger."

We should not go so far as to interpret secure as meaning free from anxiety in all its forms, including keeping a person secure in his job; after all, the Fourth Amendment matches secure with houses, persons, papers and effects, a correspondence that limits its meaning. But, we can read secure to mean more than simply the right to exclude and include the fear or anxiety that this right to exclude will be breached. Essentially, secure is the right to be free from trespass or the threat of trespass or some other physical danger, and is analogous to the relation between assault and battery. Assault protects a person's fear of danger, the danger of a physical trespass such as battery or false imprisonment, and the tort of assault plays an important role in our sense of physical security. The same applies to searches and physical trespass to places other than the person, such as cars and homes. This view of secure as a feeling, albeit one still closely tied to the places and things described in the Fourth Amendment, as well as to some threat of trespass, helps us to see that the Fourth Amendment protects against more than actual trespass.

Whether the Framers and Ratifiers of the Fourth Amendment believed "secure" in the Fourth Amendment embraced this broader meaning will have to await further study. For the purposes of this Article, I assume that secure under the Fourth Amendment includes this feeling of being secure against serious threats or risk of a physical search, in part because this meaning follows so naturally from both our use of the term secure as well as from its historical use and etymology, ²³⁸ and because it so nicely captures why dog sniffs should fall under the Fourth Amendment search provision.

1. Security Applied to Dog Sniffs

A dog sniff can undermine one's security depending upon the type. When a drug dog sniffs a person, the suspect will naturally feel insecure

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^{235.} See id. at 350-51.

^{236. 14} THE OXFORD ENGLISH DICTIONARY 851 (2d ed. 1989).

^{237.} WEBSTER, supra note 233, at 66.

^{238. &}quot;Secure" likely has roots in the Latin se secures, "without care." See THE OXFORD ENGLISH DICTIONARY, supra note 236, at 851.

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that the dog will touch the person or pry his nose into hidden places, especially between the legs.²³⁹ In this case trespass means battery—an offensive, unconsented-to touching. A person will also fear that the dog will bite him, and this fear is far from unreasonable. As noted in the Introduction, many dogs are cross-trained to detect drugs as well as to apprehend suspects.²⁴⁰ Dogs apprehend suspects by biting their arms, legs, or other available body parts. As the Eleventh Circuit explained, these repeated bites can lead to serious injuries.²⁴¹ No doubt in most cases the dog will not bite the suspect, but a suspect's reasonable fear that it will, significantly undermines his security because he reasonably apprehends danger.

Even a motorist will suffer significant apprehension of danger. If the driver exits the car, he experiences the same problem described above. If the driver remains in the car, the window will often be left open during his talk with the officer. A dog sniffing for drugs will likely stick its head through the open window or perhaps jump into the car;²⁴² even if it does not, the driver will feel the apprehension of danger from an itchy German Shepherd sniffing near the window.

With cars and homes, people will also experience another apprehension: that the dog will alert, leading to a full-blown search. The subsequent search will enjoy the endorsement of probable cause, but the sniff itself retains an indissoluble link to the potential search in the suspects' minds. It is this scenario that most challenges current Supreme Court doctrine. The Court currently separates the dog sniff from the eventual full-blown search that may result; they are separate inquiries. ²⁴³ That is, it does not matter how the police establish probable cause—if they have, they may search anywhere in the car that the drugs might be

^{239.} See, e.g., Doe v. Renfrow, 451 U.S. 1022, 1023 (1981) (Brennan, J., dissenting from denial of certiorari) ("[T]he police dog pressed forward, sniffed at her body, and repeatedly pushed its nose and muzzle into her legs.").

^{240.} See supra text accompanying notes 42-44.

^{241.} Kerr v. City of West Palm Beach, 875 F.2d 1546, 1550 (11th Cir. 1989). Justice Tjoflat stated that:

Under the bite and hold method of training, a dog seeks to subdue a suspect by biting his arm or leg; if, however, the dog has no access to such an appendage, the dog will bite the suspect on any available area of his body. Upon being bitten by a dog, a suspect usually attempts to free himself; the dog, however, is trained to maintain his hold on the suspect [I]f the dog should lose his hold . . . the dog will seek to reestablish it. As a result, suspects often suffer serious injury from multiple bites received during the course of an apprehension.

Id.

^{242.} United States v. Lyons, 486 F.3d 367, 370 (8th Cir. 2007) (describing how a dog stuck its head into a car window left open by the driver); United States v. Stone, 866 F.2d 359, 361 (10th Cir. 1989) (describing a dog that jumped in an open hatchback).

^{243.} Illinois v. Caballes, 543 U.S. 405, 408-09 (2005).

found. The Court does not take into account the intrusiveness of this second search when evaluating whether a dog sniff counts as a search. If the Fourth Amendment only protects against actual physical invasions, or intrusions upon privacy that reveal personal information, then the dog sniff is not a search, and the subsequent full-blown search occurs with the blessing of probable cause.

But when we assume that secure under the Fourth Amendment means free from the fear or anxiety of a full-blown search and not simply free from the search, then we begin to see how the dog sniff must incorporate to some extent what will happen if the dog alerts.

Of course, not every police tactic that might establish probable cause can for that reason alone be considered a search. If the police observe a person committing a crime, that observation would not be a search. If the police question a person about whether he had committed a particular crime, that questioning would also not count as a search. These tactics lead to probable cause, but they do not involve conduct that already constitutes a search in normal parlance. That is, when the police look for something in a place protected by the Fourth Amendment using a device—dog, drug test, or breathalyzer—that will create probable cause almost per se, then that situation presents sufficient threat of a full-blown search to count as a search itself. No one is secure in his car or home with this imminent threat looming.

B. Dignity

The Fourth Amendment protects dignity,²⁴⁴ and like security, dignity bears a close relation to area or place. For example, the Supreme Court has expressly said that the police commit a far greater intrusion upon a person's Fourth Amendment privacy when they touch or frisk the person, or touch or squeeze the person's luggage, as compared to a visual inspection—likely because the physical invasion into a protected area intrudes upon the person's dignity as much as their privacy.²⁴⁵

The value of dignity becomes most clear in connection with the integrity of the person. In *Terry v. Ohio*, ²⁴⁶ the Court approved police stop and frisks on less than probable cause, but took into account that police often used such stops to humiliate people, especially minorities. "This is particularly true in situations where the 'stop and frisk' of

^{244.} Bond v. United States, 529 U.S. 334, 337-39 (2000); Skinner v. Sec'y of Ry. Labor Execs. Ass'n, 489 U.S. 602, 613-14 (1989); Schmerber v. California, 384 U.S. 757, 767 (1966); John D. Castiglione, *Human Dignity Under the Fourth Amendment*, 2008 WIS. L. REV. 655, 674-75 (2008).

^{245.} See, e.g., Bond, 529 U.S. at 337-39.

^{246. 392} U.S. 1 (1968).

youths or minority group members is 'motivated by the officers' perceived need to maintain the power image of the beat officer, an aim sometimes accomplished by 'humiliating anyone who attempts to undermine police control of the streets." The Court also held that stop and frisks in general exact a significant toll on the dignity of the suspect: "it is simply fantastic to urge that such a procedure performed in public by a policeman while the citizen stands helpless, perhaps facing a wall with his hands raised, is a 'petty indignity." Instead, it may inflict "great indignity." ²⁴⁹

In Bond v. United States,²⁵⁰ the Court applied similar reasoning to luggage. In that case, a border patrol agent entered a Greyhound bus at a check point to check immigration status, and while there, felt each passenger's luggage in the overhead compartment.²⁵¹ When he squeezed defendant's luggage, he felt a brick and asked for consent to search it.²⁵² Having received consent, the agent searched and found a brick of meth.²⁵³ The question was whether the initial squeezing constituted a Fourth Amendment search.

The Court found there was a search and suppressed the evidence, holding that squeezing the luggage violated a reasonable expectation of privacy. In answering this question, it focused in particular on the grave intrusion upon a person's dignity, noting that squeezing luggage, like frisking a suspect, "may inflict great indignity and arouse strong resentment." True, the Court held that the incursion upon dignity arose from the physical invasion, as opposed to a visual inspection, but the general point remains: we determine whether conduct counts as a search in part by determining whether the tactic impinges upon dignity.

Earlier, I discussed the drug testing cases and showed how similar they are, how similarly binary, to the dog sniff situation.²⁵⁷ It is, therefore, significant that in the leading drug and alcohol testing cases,

^{247.} *Id.* at 14-15 n.11 (quoting Lawrence P. Tiffany et al., Detection of Crime: Stopping and Questioning, Search and Seizure, Encouragement and Entrapment 47-48 (1967)).

^{248.} Id. at 16-17.

^{249.} Id. at 17.

^{250. 529} U.S. 334 (2000).

^{251.} Id. at 335.

^{252.} Id. at 336.

^{253.} Id.

^{254.} Id. at 338-39.

^{255.} Id. at 337 (quoting Terry v. Ohio, 392 U.S. 1, 17 (1968)) (internal quotation marks omitted).

^{256.} Id.

^{257.} See supra Part III.

Schmerber v. California²⁵⁸ and Skinner, the Court has referred to dignity as a Fourth Amendment value. In Schmerber, the police took a drunk driver to the hospital, where medical personnel took his blood to test for alcohol.²⁵⁹ After saying the Fourth Amendment protects privacy and dignity, the Court said of the blood draw that the "interests in human dignity and privacy which the Fourth Amendment protects forbid any such intrusions on the mere chance that desired evidence might be obtained."²⁶⁰ In the end, the Court in Schmerber held that probable cause to believe that the person was drunk sufficed to make such a blood draw and test reasonable.²⁶¹

Skinner similarly held that the Fourth Amendment protects dignity. ²⁶² In applying this standard to a requirement that certain railroad employees produce a urine sample for drug testing, the Court hinted that such a procedure impinged upon their dignity. It referred to the "visual or aural monitoring of the act of urination," and said that there are few activities "more personal or private than the passing of urine." ²⁶³

The premise that the Fourth Amendment guards against humiliation and incursion upon dignity also follows from one of the key historical precedents that led to the Fourth Amendment in the colonies, *Paxton's Case*. ²⁶⁴ In 1760 Boston, the authorities sought to reinstate the writs of assistance, which would grant local customs officers and their deputies complete discretion to search any house they chose for contraband. ²⁶⁵ Wealthy Boston merchants hired James Otis, Jr. to argue the writs were unlawful.

In his famous argument against these writs, Otis made numerous arguments, including technical statutory arguments that the writs were not authorized by law. But perhaps his most moving lines came when he emphasized how the writs would degrade the dignity of those searched.

^{258. 384} U.S. 757 (1966).

^{259.} Id. at 758.

^{260.} Id. at 767, 769-70.

^{261.} Id. at 768-71.

^{262.} Skinner v. Sec'y of Ry. Labor Execs. Ass'n, 489 U.S. 602, 613-14 (1989) ("The Amendment guarantees the privacy, dignity, and security of persons against certain arbitrary and invasive acts by officers of the Government").

^{263.} Id. at 617 (quoting Nat'l Treasury Emps. Union v. Von Raab, 816 F.2d 170, 175 (5th Cir. 1987)).

^{264.} See CUDDIHY, supra note 97, at 377-402 (2009) (calling Paxton's Case "a landmark in the law of privacy" (quoting Richard B. Morris, The Current Statesmen's Papers Publication Program: An Appraisal from the Point of View of the Legal Historian, 11 AM. J. LEGAL HIST. 95, 97 (1967) (internal quotation marks omitted))).

^{265.} Id. at 378-81; John Adams, Petition of Lechmere (Argument on Writs of Assistance), in 2 LEGAL PAPERS OF JOHN ADAMS, 144-47 (L. Kinvin Wroth & Hiller B. Zobel eds., 1965) (reproducing a draft writ of assistance).

He largely cast this argument in the form of class, that the lowly customs agent's assistants, whom he called "their menial servants," and "servant of servants," could at their discretion search the entire home and "may break locks, bars and everything in their way" in a "wanton exercise of...power." ²⁶⁶

What initially lies implicit in his argument—the impropriety of a person from low station searching the home of an upper class merchant—becomes more express when Otis provides a vivid example from recent experience. A criminal defendant, Mr. Ware, appeared in court for breach of the Sabbath day and profanity. When the proceeding had finished, Ware commanded the judge to permit him, under a writ of assistance, to search his house for uncustomed goods, saying, "I will shew [sic] you a little of my power." Ware went on to search the house "from the garret to the cellar." In the end, Otis lost the argument, the court issued the writs, and the use of these writs for general searches created continuing friction between England and the colonies. 270

Today, we would disagree that the type of humiliation Otis described—a person from lower orders searching the home of a merchant—warrants particular protection, but, at a more general level, Otis established the principle that we need protection against unlawful general searches pursuant to unfettered discretion because such searches humiliate the person searched.

Dignity might be difficult to apply to concrete cases, but we can gain additional purchase on the concept by considering its obverse: humiliation or degradation.²⁷¹ Of course, the Fourth Amendment does not protect all individual dignity in all possible permutations; it does not, for example, stop an incumbent President from running campaign ads that humiliate and impinge the dignity of his opponent. To be a search, we must have some government conduct that involves, for example, an investigation of an area. When the police engage in an investigation that involves what in ordinary language would be a search—such as a dog sniff of a home, a car, or a person—we should treat such a tactic

^{266.} Adams, supra note 265, at 142.

^{267.} Id. at 143.

^{268.} Id.

^{269.} Id.

^{270.} Id. at 145.

^{271.} Castiglione, *supra* note 244, at 695. Castiglione defines dignity in part based upon the conduct that intrudes upon it; and conduct that is demeaning, degrading, or humiliating, following R. George Wright, who similarly defines dignity by its obverse. R. George Wright, *Dignity and Conflicts of Constitutional Values: The Case of Free Speech and Equal Protection*, 43 SAN DIEGO L. REV. 527, 532-34 (2006).

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as a search protected by the Fourth Amendment, because it also raises the precise dangers of humiliation implicated by more traditional physical searches.

In other words, when we try to render concrete the harms from searches of an area that do not reveal personal facts, we can rely upon a concept of dignity. When a border patrol agent squeezes luggage searching for drugs, he will often learn nothing about the interior of the luggage. When a police officer frisks a suspect on the street, he may similarly learn no personal facts about the suspect. Nevertheless, in both cases, the authorities have conducted a search, in part, because they have imposed so thoroughly upon the person's dignity.²⁷²

1. Dignity Applied to Dog Sniffs

How does dignity apply to the binary search doctrine and dog sniffs in particular? Different scenarios present different levels of intrusion. First, when the police direct a dog to sniff a person, even without contact, this conduct seems most intrusive of dignity, and most analogous to a frisk. Even if the dog does not alert and, therefore, reveals nothing about the person—including no private fact—the direct sniff of a person creates alarm, as well as humiliation; the sniff fails to respect a person's personal, physical autonomy and intrudes upon his sense of personal dignity. It is difficult to maintain one's sense of worth or importance as a police dog sniffs one's person.

The courts have been divided over whether the dog sniffs of the person count as a search.²⁷³ Most cases involve students, and most predate *Caballes*. The Seventh Circuit found no search, even when the dogs sniffed very close to students' bodies and pressed their noses into their legs.²⁷⁴ The Fifth Circuit held that a dog sniff of passengers exiting a bus was not a search as long as the dogs did not come too close—four feet in that case.²⁷⁵ The Fifth Circuit also held that dog sniffs of students, at least where there was contact, was a search.²⁷⁶ The Ninth Circuit held that dog sniffs of students from "close proximity," even without actual contact, were searches.²⁷⁷

^{272.} I say "in part" because both a frisk and the squeezing of luggage involve physical invasions, and at least the latter now counts as a Fourth Amendment search under the holding of *Jones*, as well as the privacy rationale of *Bond*. United States v. Jones, 132 S. Ct. 945, 949 (2012); Bond v. United States, 529 U.S. 334, 337-39 (2000).

^{273.} See Katz & Golembiewski, supra note 232, at 777-85, 787-88 & n.202, 789-91.

^{274.} Doe v. Renfrow, 631 F.2d 91, 94 (7th Cir. 1980) (Swygert, J., dissenting) (disagreeing with the majority holding that a dog sniff of all 2780 students was not a search).

^{275.} United States v. Reyes, 349 F.3d 219, 221-22, 224 (5th Cir. 2003).

^{276.} Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470, 479 (5th Cir. 1982).

^{277.} B.C. v. Plumas Unified Sch. Dist., 192 F.3d 1260, 1266 (9th Cir. 1999).

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The Fifth and Ninth Circuit cases that found the dog sniffs to be searches were civil rights actions brought by students, rather than individual criminal cases and, therefore, had the benefit of extensive testimony of innocent children describing the fear and humiliation they felt as the dogs persistently sniffed, and often falsely alarmed to the students' persons.²⁷⁸ The courts had little choice but to recognize the gravity of the intrusion.

These cases holding the close dog sniffs of a person to be Fourth Amendment searches, based primarily on the fear and indignity of the search, make sense, but contradict the pure binary search doctrine announced by *Caballes*. After all, *Caballes* urges courts to assess whether the dog sniff reveals any private fact other than contraband, and ignores the importance of the area searched. Justice Souter in dissent argued that the majority's holding would permit wholesale sniffs of pedestrians on sidewalks.²⁷⁹ But, common sense and the holdings of *B.C.* v. *Plumas Unified School District*²⁸⁰ and *Horton v. Goose Creek Independent School District*²⁸¹ show that the sanctity of the area searched—in these cases the person—does matter. As with the drug testing cases, we can and should extend this lesson to other protected areas such as the car and the home.

The level of intrusion and humiliation involved when a dog sniffs the exterior of a car obviously ranks lower than a dog sniffing a school child's legs as she is pinned against the school hallway. Nevertheless, the sniff involves the same type of humiliation and incursion upon dignity as an ordinary physical search and should, therefore, be subject to Fourth Amendment regulation. In addition, the procedure will likely attract the notice of passers-by, whether on foot or in cars, subjecting the person to additional public humiliation.

As for the home, the *Jardines* case itself presents an even starker example. There, both federal and state governments deployed teams of law enforcement personnel along the street on which Jardines lived, conducting hours of surveillance of his home with several officers going onto his porch.²⁸² One of those officers brought a drugsniffing dog, which alerted, leading to a warrant and a full-blown search of the home.²⁸³

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^{278.} See id. at 1262, 1267; Horton, 690 F.2d at 473-74, 479.

^{279.} Illinois v. Caballes, 543 U.S. 405, 410-11 (2005) (Souter, J., dissenting).

^{280. 192} F.3d 1260 (9th Cir. 1999).

^{281. 690} F.2d 470 (5th Cir. 1982).

^{282.} Jardines v. State, 73 So. 3d 34, 37, 46, 48 (Fla. 2011).

^{283.} Id. at 46-48.

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The Florida Supreme Court held that the entire procedure constituted a search, in large part because of the extensive and public deployment of officers along the street and directly in front of Jardines' home invaded a reasonable expectation of privacy. 284 In examining why, the court identified the direct harms of the intrusion itself, including humiliation and embarrassment.²⁸⁵ The harm arose, the court said, because the conduct would be viewed by neighbors as an "official accusation of crime."286 This accusation, if Jardines were aware of it, would contribute to any humiliation he might feel; even if not, it would certainly damage his reputation and count that way as a direct harm, one identified by Prosser as protected by the right to privacy.²⁸⁷

On the other hand, dog sniffs of cars in a parking lot do not raise problems with humiliation or incursion upon dignity because the person is not present. Such searches, however, raise the problem of dragnet searches, addressed below.

C. Dragnet Searches

As Justice Souter pointed out in his dissent, nothing in the principle of Caballes forbids the police from conducting dragnet searches of every car in a parking garage, and every pedestrian on a sidewalk.²⁸⁸ Since Caballes, the authorities have increasingly used drug dogs in dragnet searches, they have become "increasingly common in public schools" in parts of the Northeast.²⁸⁹ Those searches include dogs sniffing school lockers and parking lots at random for drugs.²⁹⁰

In some ways, dragnet searches of lockers or cars in a parking lot avoid certain Fourth Amendment problems, including humiliation, as discussed above, and the racial profiling of individuals. Dragnet searches may still present a risk of racial profiling by neighborhood or school, however, and when police departments act unregulated by any Fourth Amendment scrutiny, we will have little knowledge as to whether such neighborhood-wide discrimination occurs.

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^{284.} Id. at 48.

^{285.} Id.

^{286.} Id.

^{287.} See William L. Prosser, Privacy, 48 CALIF. L. REV. 383, 392-98 (1960). Prosser divides the right to privacy into four categories, including the right against public disclosure of private facts, and it is this category, which, in his view, protects reputation. Id. One could easily characterize this more as a downstream harm that arises not directly from the intrusion upon the person's seclusion but as a result of that intrusion becoming public.

^{288.} Illinois v. Caballes, 543 U.S. 405, 411 (2005) (Souter, J., dissenting).

^{289.} Schweber, supra note 19, at 3.

^{290.} Id.

But aside from the danger of racial profiling of neighborhoods, dragnet searches independently raise Fourth Amendment problems because they involve tactics that simply involve too much scrutiny. Our knowledge that the police may direct dogs to our cars, lockers, or any other possession in a wholesale fashion deprives us of any feeling of security in those areas. The innocent possessor probably presents the best concrete demonstration. Imagine we lived in a world where the police conducted dog sniffs of all houses and apartments regularly, though randomly. If a person lives alone, he can take reasonable steps to ensure his apartment has no drugs in it and, thereby, has some control over whether a dog alerts leading to a full-blown search. But, if he has a roommate, he would need to constantly monitor whether his roommate has drugs. Similarly, anytime anyone gets into his car, he would have to search the passenger to ensure they do not have drugs. It quickly becomes clear that such dragnet searches would make all of us unduly suspicious of our friends, family, colleagues, and anyone else we share space with.

D. Discretion and Racial Profiling

Finally, the dog-sniff jurisprudence may produce a risk of racial profiling. The open discretion afforded police will allow them to choose which neighborhoods or which individuals to subject to dog sniffs without any Fourth Amendment regulation. But the use of dogs can lead to racial bias in another, subtler way: do the police who handle the dog have an unconscious racial bias, an unconscious belief that a person of color is more likely to possess drugs? If so, do they communicate that unconscious belief to their dog, causing the dog to alert falsely? This Part will consider this latter problem of unconscious racial bias.

As for the first question, extensive research has shown that everyone has some degree of implicit racial bias, and for many people it can play a significant role in the conclusions they draw.²⁹¹ Those studies show the police are more likely to suspect blacks or Hispanics of criminal activity than whites based upon the same external conduct.²⁹² The studies establish this bias both in the laboratory with controlled experiments, as well as by examining hit rates for officers.²⁹³ With respect to the latter, studies show that the police find contraband up to

^{291.} See, e.g., L. Song Richardson, Police Efficiency and the Fourth Amendment, 87 IND. L.J. 1143, 1146-51 (2012) (collecting studies).

^{292.} See id.

^{293.} Id.

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half as often on blacks as on whites, suggesting that they are more likely to suspect black people because they are black. 294

The statistics for drug sniffs are sparse, in part because there is no Fourth Amendment regulation of them. But, the Chicago Tribune recently conducted a study of traffic stops and drug dogs that gave way, at least, to the inference of profiling Hispanic drivers. 295 The false alerts for Hispanic drivers were far higher than for other drivers, a disparity that could be explained by dogs that alert not to drugs but to cues from their handlers who, in turn, have preconceptions that Hispanics are more likely to possess drugs in their cars. 296 Admittedly, this survey merely demonstrates a risk of ethnic bias; after all, the same survey did not appear to show a bias against black motorists. 297

The second step requires us to show that dog handlers communicate their belief that a person possesses drugs to their dogs, leading to false positives. This premise was strongly confirmed in 2011 in a rigorous, double-blind laboratory study. 298 The study used 18 handler/dog teams, each certified by a law enforcement agency to detect drugs or explosives.²⁹⁹ None of the target scents actually contained drugs or explosives, yet the dogs falsely alerted to an astounding degree. The experiment included 144 separate runs, and a dog might alert more than once per run. 300 The dogs falsely alerted at least once in 85% of the runs, and there were overall 225 alerts, again, all false.301

But the experimenters tested handler cues by telling the handlers that those scents marked with red paper did indeed contain a drug or explosive (when they did not in reality). 302 The dogs were far more likely to alert (falsely) for those scents that the handler already believed were truly drugs or explosives. 303 The authors considered the possibility

^{294.} L. Song Richardson, Arrest Efficiency and the Fourth Amendment, 95 MINN. L. REV. 2035, 2037-38 & nn.9-19 (2011) (surveying hit rates from Minnesota, Los Angeles, New York, Illinois, Rhode Island, Missouri, and West Virginia); see also Floyd v. City of New York, No. 08 Civ. 1034, 2013 WL 4046209, at *24 (S.D.N.Y. Aug. 12, 2013) (finding that racial profiling in New York City's stop and frisk program from 2004 through 2009, was based, in part, on a lower hit rate for contraband for blacks than whites (eight percent lower)).

^{295.} Hinkel & Mahr, supra note 232, § 1, at 1 (three years of data for suburban police departments showed dog alerts accurate forty-four percent in general, but only twenty-seven percent for Hispanic drivers).

^{296.} See id. § 1, at 10.

^{297.} See id. § 1, at 1.

^{298.} Lisa Lit et al., Handler Beliefs Affect Scent Detection Dog Outcomes, 14 ANIMAL COGNITION 387, 389-90 (2011).

^{299.} Id. at 388.

^{300.} Id. at 390.

^{301.} Id.

^{302.} Id. at 389-90.

^{303.} Id. at 391.

that the handlers claimed the dogs alerted when they did not simply because the handler believed the scent was positive, but ultimately concluded that it is more likely the dogs alerted based upon unconscious cues from the handlers. Either way, the dog alert resulted from the handler's beliefs and not the dog's actual detection of the contraband scent.

Putting together the robust research on implicit racial bias among police officers with the strong showing that dog handlers communicate their beliefs to their dogs, which alert falsely, we find a significant risk that the use of drug-sniffing dogs could lead to racially discriminatory searches. But, this problem does not mean we must abandon the use of dog sniffs. Rather, the results suggest that we take measures to regulate it, including bringing the practice under Fourth Amendment scrutiny. After all, the same studies that identify implicit racial bias also suggest that training can help officers avoid it. If officers can use dog sniffs without any regulation, implicit bias will remain a risk; but, if the Fourth Amendment (or statutes) require safeguards similar to those used in traffic stops—with the addition of the type of training proposed in the implicit bias literature—the risk of racial bias can be reduced.

VI. FURTHER RAMIFICATIONS—HASH VALUES

The binary search doctrine, or at least the model of privacy that focuses almost exclusively on facts, can lead to other potentially troubling incursions upon Fourth Amendment interests. I will consider one technique here: the use of hash values to search computer memory.

Binary searches of computers present a pure form of a binary search, because they truly can disclose the presence or absence of contraband only without revealing other information, and often, with almost no physical intrusion whatsoever. Currently, law enforcement uses binary searches chiefly to discover child pornography, and those who possess and distribute it. Numerous off-the-shelf computer programs—such as FTK by AccessData Group or Encase by Guidance Software—can compute a "hash value" for any computer file. A hash value has two key attributes. First, for any given hash value, the chances that any two files will share that hash value is "astronomically small." For the MD5 hash algorithm, the chance is 1 / (2^128) or roughly one chance in 3.4 x 10^38, and for the SHA-1 algorithm it is 1 / (2^160) or 1 / (1.4 x 10^48). In other words, if two files share the same hash value,

^{304.} Id. at 392-93.

^{305.} Salgado, supra note 29, at 39.

^{306.} Id. at 39 n.6.

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they are copies of the same file. Law enforcement has compiled hash values for known images or videos of child pornography, and can simply compare those hash values to the hash value for a file on a computer to determine one thing, and one thing only: whether that file is child pornography.

The second attribute of a hash value is that it is one way.³⁰⁷ The authorities cannot take a hash value and reverse engineer it to obtain the original file. Thus, when law enforcement determines the hash values of files on a person's computer, those hash values are meaningless and cannot be used to determine what the original file was—unless compared to hash values of known files. True, in theory the authorities could compare hash values of a person's files to known hash values of files that are not contraband, and thus, learn their content, but this possibility also exists for dogs, which can be trained to smell things other than drugs. But assuming law enforcement compares the hash values only to known child pornography, then it can conduct a pure binary search, a computer analysis that will disclose nothing but child pornography.

A hash value search for known child pornography seems to be a pure binary search that should be permitted under *Caballes*. The search discloses nothing other than the presence or absence of contraband—far more accurately than a drug-sniffing dog. The search, therefore, should not count as a Fourth Amendment search. Yet, courts addressing such hash value searches, even after *Caballes*, have been reluctant to so hold.

For example, in *United States v. Crist*,³⁰⁹ a landlord cleared out the possessions of his tenant, including a computer, which eventually fell into the hands of someone who found a small amount of child pornography.³¹⁰ This person turned the computer over to the police, who performed a hash value analysis, which disclosed numerous other files of known pornography.³¹¹ The Court held that running the hash values on the hard drive was a Fourth Amendment search.³¹²

^{307.} Id. at 40.

^{308.} Id. at 45-46 (arguing the Court's dog sniff cases would allow authorities to search hard drives for known child pornography without a warrant). But see Hofmann, supra note 30, at 21-23 (arguing that the use of "hash" evidence obtained without a warrant would violate the Fourth Amendment).

^{309. 627} F. Supp. 2d 575 (M.D. Pa. 2008).

^{310.} Id. at 577.

^{311.} Id. at 577-79.

^{312.} Id. at 585-86.

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A concurrence by Chief Judge Alex Kozinski in the Ninth Circuit made a similar pronouncement, albeit in dicta:

[T]he government has sophisticated hashing tools at its disposal that allow the identification of well-known illegal files (such as child pornography) without actually opening the files themselves. These and similar search tools should not be used without specific authorization in the warrant, and such permission should only be given if there is probable cause to believe that such files can be found on the electronic medium to be seized.³¹³

The issue remains largely undecided, however, because in the vast majority of court cases, law enforcement has searched a peer-to-peer network for child pornography, using hash values, and when it discovers a hit, it traces the file back to the computer (and person) offering that file. These cases do not question whether the initial search of the peer-to-peer network constitutes a search, because those networks are offered to the public. However, the "explosion" of child pornography identified by the Justice Department may well lead to more aggressive efforts to discover child pornography, including conducting binary searches with hash values randomly, even on hard drives owned by people who wish to keep them secret.

VII. CONCLUSION

The Court's overreliance on a model of privacy that protects facts only has led it to discount the important value of seclusion in an area; a value protected by privacy, as well as the Fourth Amendment principles of security and dignity. The dog-sniff cases are the chief culprit; dog sniffs of cars for drugs do not count as Fourth Amendment searches. Cases such as *Caballes*, thus, leave unregulated the quickly growing use of such dogs, not only with cars but also with schools and homes. The Court's recent holding in *Jardines* does little to remedy this problem, since it relied entirely upon a trespass rationale involving police entering the front walk and porch of a house, whereas the vast majority of

^{313.} United States v. Comprehensive Drug Testing, Inc., 621 F.3d 1162, 1179 (9th Cir. 2010) (Kozinski, J., concurring).

^{314.} See, e.g., United States v. Cobb, No. 11-12390, slip op. at 3-4 (11th Cir. May 24, 2012); United States v. Miknevich, 638 F.3d 178, 182-85 (3d Cir. 2011); United States v. Wellman, 663 F.3d 224, 226 (4th Cir. 2011).

^{315.} State v. Daigle, 93 So. 3d 657, 665 (La. Ct. App. May 2, 2012).

^{316.} U.S. DEP'T OF JUSTICE, THE NATIONAL STRATEGY FOR CHILD EXPLOITATION PREVENTION AND INTERDICTION: A REPORT TO CONGRESS 2, 8-27 (2010).

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residential dog sniffs involve police validly entering common hallways of apartment buildings. 317

The search-free conclusion of the binary search doctrine could also lead to other more widespread searches, such as scans of every hard drive in America for contraband such as child pornography. Since such a scan would reveal nothing but the presence or absence of contraband, it should not fall under the Fourth Amendment if we accept the binary search doctrine. The doctrine could also permit the authorities to test a home's sewage for drugs; such a sewage test would reveal nothing but the presence or absence of contraband and, thus, could be used without any suspicion in dragnet fashion or to target and harass individuals. If the results are positive, they could provide probable cause for a wholesale search of the home for drugs.

These situations share a notion of privacy rooted solely in protecting facts. The only fact revealed concerns contraband and, thus, does not establish a right to privacy, undermining any Fourth Amendment protection. But this Article has shown that the right to solitude or seclusion—recognized for a century in tort law and eloquently elaborated on by privacy scholars such as Gavison³¹⁸—provides another model of privacy. Privacy rooted in seclusion shields areas—such as cars and homes—from dog sniffs simply to protect that seclusion.

Beyond privacy, a view of "secure" in the text of the Fourth Amendment adds additional perspective. When we remember that secure includes, amongst its meanings, free from apprehension of danger, we can develop a Fourth Amendment notion of secure that includes a fear of imminent physical invasion. A dog sniff fits this expectation nicely because a positive alert, at least outside a car, will almost certainly lead to an immediate full-blown search involving a physical invasion. Even with the home, where the police must obtain a warrant, they are almost certain to do so in reaction to a positive alert, making the eventual physical invasion inevitable, if not immediate.

From the modest dog sniff we have developed a richer view of privacy, of the Fourth Amendment, and of law enforcement—one that embraces values beyond personal information. The dog sniff reminds us of the complexity of the Fourth Amendment, and the variety of its sources and values.

^{317.} See supra Part II.B.1.

^{318.} See supra Part IV.B.
