

No. 11-817

IN THE
Supreme Court of the United States

STATE OF FLORIDA,

Petitioner,

v.

CLAYTON HARRIS,

Respondent.

ON WRIT OF CERTIORARI TO THE
SUPREME COURT OF FLORIDA

**BRIEF OF AMICI CURIAE
THE NATIONAL ASSOCIATION OF CRIMINAL
DEFENSE LAWYERS, THE FLORIDA
ASSOCIATION OF CRIMINAL DEFENSE LAWYERS,
THE AMERICAN CIVIL LIBERTIES UNION,
AND THE AMERICAN CIVIL
LIBERTIES UNION OF FLORIDA
IN SUPPORT OF RESPONDENT**

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QUESTION PRESENTED

Whether an alert by a narcotics-detection dog that law enforcement asserts is “trained” or “certified” is sufficient as a matter of law to establish probable cause for a warrantless search, without any additional evidence of the dog’s reliability.

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INTEREST OF AMICI CURIAE¹

Amicus curiae the National Association of Criminal Defense Lawyers (“NACDL”) is a nonprofit, professional bar association representing public defenders and private criminal defense lawyers across the nation. Founded in 1958, NACDL has a direct national membership of more than 10,000 attorneys and more than 28,000 affiliate members from all fifty states. Amicus curiae the Florida Association of Criminal Defense Lawyers is NACDL’s Florida affiliate. NACDL’s mission is to ensure justice and due process for the accused; to foster the integrity, independence, and expertise of the criminal defense profession; and to promote the proper and fair administration of criminal justice and the defense of individual liberties. Most significantly for purposes of this case, NACDL has a strong interest in ensuring that the Fourth Amendment remains a robust protection against unreasonable encroachments on individual privacy.

The American Civil Liberties Union (“ACLU”) is a nationwide, nonprofit, nonpartisan organization with approximately 500,000 members dedicated to the principles of liberty and equality embodied in the Constitution and our nation’s civil rights laws. In furtherance of that mission, the ACLU has participated as a party or amicus in numerous cases before this Court raising Fourth Amendment issues, including *Illinois v. Caballes*, 543 U.S. 405 (2005). The American Civil Liber-

¹ Letters consenting to the filing of this amicus brief have been filed with the Clerk of the Court. No counsel for a party authored this brief in whole or in part, and no person, other than amici, their members, or their counsel, made a monetary contribution to the preparation or submission of this brief.

ties Union of Florida is a state affiliate of the national ACLU.²

SUMMARY OF ARGUMENT

This case presents the question whether an alert by a narcotics-detection dog, together with the government's statement that the dog is "trained" or "certified," is sufficient to constitute probable cause for a physical search, in the absence of any other evidence of the dog's reliability.

The State would have this Court hold that "evidence that a dog has been trained or certified by canine professionals should be deemed conclusive" of the probable-cause inquiry, irrebuttable except by a showing that the training or certifying organization is a "sham." Pet. Br. 32 & 33 n.7. In its view, absent "extraordinary circumstances," *id.* 24, courts should not consider the nature or quality of the dog's training and certification; the dog's record of false alerts in the field; or other evidence that the dog is not reliable, in the sense that its alert is not likely to lead to contraband.

That rigid approach cannot be reconciled with this Court's recognition that the existence of probable cause must be determined in light of the totality of the circumstances. *See Illinois v. Gates*, 462 U.S. 213, 238 (1983). And it will unacceptably dilute the probable-cause standard. An alert from a "trained" or "certified" dog, absent further evidence of the dog's reliability, simply does not establish the necessary fair probability that a physical search will reveal contraband. To the

² Amici acknowledge and thank Professors Lawrence J. Myers and Richard E. Myers II for their assistance.

contrary, empirical studies show that even trained and certified dogs have a high rate of false alerts in the real world and that the accuracy rate among those dogs varies greatly. Moreover, training and certification procedures—far from conclusively establishing a dog’s reliability—are frequently flawed in a manner that contributes to this high rate of false alerts.

Accordingly, under a totality-of-the-circumstances approach, the mere fact of training or certification, standing alone, cannot be sufficient to establish probable cause. Instead, a number of different factors are relevant to the question whether a particular dog is sufficiently reliable for its alert to establish probable cause. Those factors include the rigorousness of the training or certification program; records of the dog’s actual performance in the field, including its history of false alerts; and the experience and training of the dog’s handler. Excluding those factors from the probable-cause inquiry significantly weakens the Fourth Amendment’s central protection against unreasonable searches.

ARGUMENT

I. AN ALERT BY A “TRAINED” OR “CERTIFIED” NARCOTICS-DETECTION DOG, WITHOUT EVIDENCE OF THE DOG’S RELIABILITY, IS INSUFFICIENT TO ESTABLISH PROBABLE CAUSE

A. Evidence Regarding A Dog’s Reliability Should Form Part Of The Totality-Of-The-Circumstances Analysis

1. “The Fourth Amendment generally requires police to secure a warrant before conducting a search,” *Maryland v. Dyson*, 527 U.S. 465, 466 (1999), and “a warrant may issue only upon a finding of ‘probable

cause,” *United States v. Ventresca*, 380 U.S. 102, 107 (1965). This Court has recognized “an exception to this requirement for searches of vehicles.” *Dyson*, 527 U.S. at 466. However, a warrantless search of a vehicle still must be “supported by probable cause” and “based on facts that would justify the issuance of a warrant, even though a warrant has not actually been obtained.” *United States v. Ross*, 456 U.S. 798, 809 (1982).

Probable cause to search exists when “there is a fair probability that contraband or evidence of a crime will be found in a particular place.” *Illinois v. Gates*, 462 U.S. 213, 238 (1983). In other words, “the probable-cause requirement looks to whether evidence will be found *when the search is conducted*.” *United States v. Grubbs*, 547 U.S. 90, 95 (2006). The probable-cause determination is “an act of judgment formed in the light of the particular situation and with account taken of all the circumstances.” *Brinegar v. United States*, 338 U.S. 160, 176 (1949). The Court has described this analysis as a “totality-of-the-circumstances approach.” *Gates*, 462 U.S. at 230; *id.* at 232 (“[P]robable cause is a fluid concept—turning on the assessment of probabilities in particular factual contexts—not readily, or even usefully, reduced to a neat set of legal rules.”).

Accordingly, an alert by a narcotics-detection dog constitutes probable cause to search a vehicle only if, considering the “totality of the circumstances,” there is a “fair probability” that illegal drugs will be found in the vehicle. This inquiry necessarily requires assessing whether there is a fair probability that the dog’s alert will turn out to be correct—that is, that it will accurately indicate the presence of illegal drugs—or, conversely, whether it is likely to turn out to be a “false positive” or “false alert.”

2. Although the State concedes (at 11-15) that a court must assess probable cause under the totality of the circumstances, it nonetheless advocates a rule that would reduce that analysis to a single question. Under the State’s rule, the fact that a dog has been either trained or certified for narcotics detection—no matter what organization conducted the training or certification, no matter what methods and standards were used, and no matter what the dog’s actual record of accurate versus false alerts may be—would be sufficient, without more, to establish probable cause to search whenever the dog gives an alert. Pet. Br. 22.³

But artificially circumscribing a court’s consideration of reliability in this manner—and thus cutting short the inquiry into the “particular factual context[]” of the dog’s alert, *Gates*, 462 U.S. at 232—would dramatically weaken the probable-cause requirement. A dog-and-handler team’s training and reliability indisputably play an important role in determining whether a dog alert is likely to be accurate. See Pet. Br. 15-16.⁴

³ The State also proposes (at 22) that a dog alert can constitute probable cause even when a dog has been neither formally trained nor certified in drug detection, but it does not elaborate on what criteria should be used in assessing the reliability of such an alert.

⁴ This Court has recognized the importance of training and reliability in a related context. In considering whether a dog sniff of a vehicle constitutes a Fourth Amendment search, this Court limited its holding to “*well-trained* narcotics-detection dog[s]” that “do[] not expose noncontraband items that otherwise would remain hidden from public view.” *Illinois v. Caballes*, 543 U.S. 405, 409 (2005) (emphasis added) (quoting *United States v. Place*, 462 U.S. 696, 707 (1983)). Contrary to the State’s suggestion (at 20), however, this Court did not hold that a dog with any amount of

The mere fact of training or certification, however, cannot replace an individualized assessment of reliability, particularly given that trained or certified dogs do not consistently demonstrate a level of reliability sufficient to establish probable cause.⁵ In fact, as discussed below, the empirical evidence shows the opposite: Even trained or certified dogs frequently make false alerts, and their reliability varies greatly.

B. Real-World Data Demonstrate That Even Trained Or Certified Dogs Have A High Rate Of False Alerts And Vary Greatly In Accuracy Rates

Studies of narcotics-detection dogs' reliability in real-world settings are remarkably consistent regarding two key points, which refute the State's contention that the mere fact of training or certification guarantees reliability. First, for any given occasion on which a dog alerts to the presence of illegal narcotics, it is likely—and, according to several studies, very likely—that illegal narcotics will not be found in the indicated location. Second, even trained and certified dogs vary tremendously in their reliability. One study found that trained and certified dogs ranged from 7% to 56% in accuracy, and aggregate evidence demonstrates an even wider range.

training—regardless of where and by whom it was performed—is necessarily a “well-trained” dog.

⁵ Because this case is limited to the context of general law enforcement, this Court need not determine what standards should apply in other contexts, such as situations involving dog sniffs for explosives, which present issues beyond the scope of the question presented. *See Caballes*, 543 U.S. at 417 n.7 (Souter, J., dissenting); *id.* at 423 (Ginsburg, J., dissenting).

The most comprehensive data available on the rate of false alerts by narcotics-detection dogs in real-world settings come from a two-year-long study conducted by an independent government agency in Australia. See NSW Ombudsman, *Review of the Police Powers (Drug Detection Dogs) Act 2001* (2006), available at http://www.ombo.nsw.gov.au/publication/PDF/other%20reports/ReviewPolicePowers_DrugDetectionDogs_Jun06.pdf. Each dog in the study underwent an extensive training and certification regimen. Police first trained the dogs to detect cannabis, cocaine, heroin, and various forms of amphetamines, including ecstasy. *Id.* at 21, 45. After an initial six-week training period, each dog received additional weekly training and was accredited, or tested for accuracy, every three months. *Id.* at 45.

Over the two-year study period, the dogs generated more than 10,211 alerts, generally to individuals in public spaces. *Id.* at 27, 29. These alerts almost always resulted in a search. *Id.* at 197. For 7,547 of these alerts—approximately 74%—the search found no illegal drugs in the location indicated. *Id.* at 30. Police searches located illegal drugs in only 26% of cases in which the dogs alerted. *Id.* In other words, any given alert was almost three times more likely to be a false alert than an accurate one.⁶

The study also found dramatic variations in the accuracy of alerts by different dogs, ranging from a high

⁶ More recent data from New South Wales show an even higher rate of false alerts. In 2011, no drugs were found in 11,248 cases out of a total of 14,102 alerts—a false-alert rate of approximately 80%. See Patty, *Sniffer Dogs Get it Wrong Four Out of Five Times*, Sydney Morning Herald, Dec. 12, 2011.

of 56% to a low of 7%. *Id.* at 57 tbl. 9. The average accuracy of 26% was skewed upward by a few dogs with better reliability; in fact, almost two thirds of the individual dogs had an accuracy rate *below* 26%. *Id.* These differences arose even though all of the dogs were the same breed and underwent the same training and certification program. *Id.* at 21, 45.

Based on the high likelihood of false alerts, the New South Wales study concluded that “[s]imply relying on a drug detection dog indication alone is not in our view sufficient to form a reasonable suspicion that a person is *currently* in possession of a prohibited drug” and recommended that police be “required to take into account the drug detection dog indication plus other relevant factors.” *Id.* at 201. The study further recommended that police collect and make available data on the accuracy of individual dogs in real-world settings. *Id.* at 202.

Empirical evidence from the United States confirms the Australian studies’ findings. In 2011, for example, the Chicago Tribune studied police use of narcotics-detection dogs during traffic stops, using records from the Illinois Department of Transportation. Hinkel & Mahr, *Drug Dogs Often Wrong*, Chi. Trib., Jan. 26, 2011, at C1. The records covered stops from 2007 to 2009 conducted by several suburban police departments near Chicago. *Id.* The analysis revealed that drugs or paraphernalia were found after only 44% of alerts. *Id.* The accuracy rate varied significantly by police department; for the department with the most alerts, the accuracy rate was only 32%. *Id.* The rate was even lower when dogs alerted to a car with a Hispanic driver; across all departments, only 27% of such alerts led to the discovery of illegal drugs. *Id.* For one police department, the accuracy of alerts to Hispanic

drivers was a mere 8%—or a false-alert rate of 92%. *Id.*

The Eleventh Circuit has also recognized the unreliability of narcotics-detection dogs and their high rate of false alerts. *See Merrett v. Moore*, 58 F.3d 1547, 1549 (11th Cir. 1995). *Merrett* involved an operation by Florida state police in which they stopped cars at roadblocks and then used narcotics-detection dogs to sniff the cars' exteriors. *See id.* If a dog alerted, police employed a second dog to sniff the car. If the second dog *also* alerted, police would search the car, obtaining a search warrant if the driver withheld consent. *Id.*

During the two-day operation, Florida police stopped approximately 1,330 vehicles. The dogs ultimately alerted to 28 vehicles. Of those 28 alerts, only one led to an arrest for possession of illegal narcotics. *Id.* In other words, despite the requirement that two dogs alert before a search, police found illegal narcotics sufficient to justify an arrest in only 4% of cars searched; the likelihood of a false alert was approximately 96%.

C. The High Rate Of False Alerts Has Multiple, Overlapping Causes, Which Are Often Exacerbated By Flawed Training And Certification Procedures

A number of factors explain why narcotics-detection dogs, which indisputably have olfactory abilities that far exceed those of humans, *see, e.g.*, Myers, *Detector Dogs and Probable Cause*, 14 Geo. Mason L. Rev. 1, 3-4 (2006), are nonetheless highly likely to produce false alerts in real-world settings. These errors

may sometimes arise from failures by the dog itself.⁷ For the most part, however, such errors are rooted in failures in the interactions between detection dogs and their human handlers, which can often be exacerbated by flawed training or certification procedures. Indeed, precisely because faulty training or certification procedures contribute to a high rate of false alerts among narcotics-detection dogs, training or certification cannot alone be sufficient proof of reliability.

1. Handler cueing

a. A key source of error is the possibility that dogs will respond, not to an odor they have detected, but rather to external cues, conscious or unconscious, from handlers or others. This phenomenon, known as handler cueing, is vividly illustrated by the investigation—now one of the most celebrated in the history of animal-behavior studies—of a horse named “Clever Hans.”

⁷ Diet, sleep, exercise, stress, and contact with other dogs can all affect a dog’s performance. Mesloh, et al., *Scent as Forensic Evidence and Its Relationship to the Law Enforcement Canine*, 52 J. Forensic Identification 169, 178 (2002); see also *id.* (“[T]he canine is a biological instrument and, as such, can influence findings inadvertently. There is an almost endless list of factors that can influence the performance of the dog.”). Moreover, in any given year about “35 percent of detection dogs temporarily lose their sense of smell because of illness, tooth decay[,] or other physical problems.” See Derr, *With Dog Detectives, Mistakes Can Happen*, N.Y. Times, Dec. 24, 2002, at F3. These and other factors can cause a dog’s skills to vary at different times, and a dog can succeed at a task on one day and fail at the same task on another. Ensminger, *Police and Military Dogs* 11 (2012) (citing Mesloh & James-Mesloh, *Trained Dogs in the Crime Scene Search*, 56 J. Forensic Identification 534 (2006)).

Clever Hans was purportedly able to solve math problems posed by questioners by tapping the answer with his hoof. See Pfungst, *Clever Hans* 1 (Rosenthal ed., 1965). A panel of experts scrutinized the process and concluded that no intentional signals were passed from the questioner to the horse. *Id.* at 5-6. Only after psychologist Oskar Pfungst performed a series of rigorous tests—including, crucially, double-blind testing in which the questioner was unaware of the correct answer—was it revealed that Clever Hans was in fact responding to *unintentional* cues from the questioner. For example, questioners tended to tilt their head down when they expected Clever Hans to start tapping, and to lift their head up slightly when they expected him to stop. *Id.* at 47-48. Although the questioners made these movements unconsciously, Pfungst could duplicate them and thereby cause Clever Hans to tap at will. These findings led Pfungst to conclude that “Hans’s accomplishments are founded first upon a one-sided development of the power of perceiving the slightest movements of the questioner.” *Id.* at 240.

The “Clever Hans” phenomenon also affects dogs, which are well known to be keen observers of human behavior.⁸ It is therefore unsurprising that handler

⁸ See, e.g., Miklósi, et al., *Use of Experimenter-Given Cues in Dogs*, 1 *Animal Cognition* 113, 115, 118-119 (1998) (dogs learn cues—such as pointing, bowing, nodding, head-turning, and glancing—through repetition to obtain treat or reward); Soproni, et al., *Dogs’ (Canis familiaris) Responsiveness to Human Pointing Gestures*, 116 *J. Comp. Psychol.* 27, 33 (2002) (dogs reliably respond to human pointing gestures); Kubinyi, et al., *Dogs (Canis familiaris) Learn From Their Owners via Observation in a Manipulation Task*, 117 *J. Comp. Psychol.* 156 (2003); Topál, et al., *Reproducing Human Actions and Action Sequences: “Do as I Do!” in a Dog*, 9 *Animal Cognition* 355 (2006); Virányi, et al., *Dogs Respond Appro-*

cueing may also cause false alerts by narcotics-detection dogs. *See United States v. Trayer*, 898 F.2d 805, 809 (D.C. Cir. 1990). A host of cues may prompt false alerts. For example, handlers may

cue dogs by changes in their voices (pitch, timing, volume); distracting a dog by talking continuously; praising a dog too much or too soon; reaching for a reward too soon; making movements that appeared to signal a dog, including circling back to previously sniffed locations, changing pace, staring at a place where an item may be hidden, tapping surfaces repeatedly, increasing tension on the leash, making various hand movements, suddenly stopping or standing still, and standing a long time in the vicinity of a possible target.

Ensminger & Papet, *Cueing and Probable Cause* (2011), available at http://www.animallaw.info/articles/arusensminger_papet2011.htm.

Indeed, a recent study at the University of California, Davis confirms that handler cueing causes false alerts by detection dogs. *See Lit, et al., Handler Beliefs Affect Scent Detection Dog Outcomes*, 14 *Animal Cognition* 387, 387 (2011). The study included eighteen dog-and-handler teams, all of which had been certified by a law-enforcement agency. *Id.* at 388-389. On average, the handlers had approximately five years of scent-detection experience, and the dogs had three. *Id.* at 389 tbl. 1.

priately to Cues of Humans' Attentional Focus, 66 *Behav. Processes* 161 (2004).

The dog-and-handler teams were to detect their target scents in four rooms. Handlers were told that each room might contain up to three targets; in fact, however, none of the rooms contained any target scents. Each team conducted two runs through the four rooms; together, they gave a total of 225 false alerts. *Id.* at 390.⁹ In some of the rooms, handlers were falsely told that a scent had been placed at a particular marked location. The dogs were far more likely to give a false alert at the marked location than at other locations, and were more likely to give a false alert in a room with a marked location than in a room without one. *Id.* at 391, 393 tbl. 2. In other words, the handler's belief that the target scent was present in a marked location significantly increased the likelihood that the dog would alert in that location. Moreover, the dog-and-handler teams varied substantially in their accuracy. The best-performing team gave no false alerts (the only team to do so); the worst-performing team gave anywhere from two to five false alerts in each room. *Id.* at 390 fig. 1.

After the test, “three handlers admitted to overtly cueing their dogs to alert at the marked locations.” *Id.* at 392. Most of the other false alerts at the marked locations were likely caused by unconscious cueing. Regardless of whether the cueing was intentional or unintentional, these results demonstrate “that handler beliefs affect outcomes of scent detection dog deployments.” *Id.* at 387.

⁹ Because the target substances were not present in any of the rooms, the false alert rate was 100%.

The potential for handler cueing is particularly problematic in the context of real-world police stops, in which dog handlers will often have formed subjective expectations as to whether narcotics are likely to be found. In such circumstances, the handler's expectations may well influence the dog's behavior via conscious or unconscious cueing and therefore create the possibility of a false alert. See, e.g., *United States v. Christy*, 2008 WL 753888, at *11 (D. Neb. Mar. 19, 2008) (after driver declined consent to search vehicle, officer induced his narcotics-detection dog to alert, a suspicion the court concluded was "borne out by the court's review of the handler's conduct in the videotape"); *State v. Lockstedt*, 695 N.W.2d 718, 726-727 (S.D. 2005) (officer admitted to "encourag[ing]" an alert during dog sniff of vehicle that occurred after driver declined consent to search).

b. Flawed training and certification procedures can exacerbate the problem of handler cueing. Often, dogs are trained or "certified in closed situations where the handler is aware of the location of drugs," a scenario that causes handler cueing to be "more pronounced." Bird, *An Examination of the Training and Reliability of the Narcotics Detection Dog*, 85 Ky. L.J. 405, 424 (1997); see also *Trayer*, 898 F.2d at 809 ("less than scrupulously neutral procedures, which create at least the possibility of unconscious 'cuing', may well jeopardize the reliability of dog sniffs"). Such training methods may reinforce rather than inhibit dogs' natural willingness to respond to handler cues.¹⁰ Indeed, some

¹⁰ The State concedes (at 5) that such techniques were used to train the dog in this case: The handler testified that he "would choose multiple vehicles and hide narcotics in some" and then

training programs may use “overt handler cueing”—such as “verbal commands” and “physical prompting”—to help teach dogs how to detect and alert to drugs, thereby making narcotics-detection dogs even more responsive to handler cueing. Lit, et al., 392.

Double-blind training and testing—where neither the dog nor the handler knows where the drugs have been hidden—can mitigate the handler-cueing problem. See Bird 424. Double-blind testing reduces the likelihood of cueing because “[if] the handler does not know the location of the controlled substance, it is less likely that the handler will exhibit any behavioral changes that could cue the dog.” Smith, *Going to the Dogs*, 46 Hous. L. Rev. 103, 129 (2009) (noting that “[t]raining methods can and should eliminate th[e] problem” of handler cueing). For this reason, double-blind testing is the gold standard for testing and certification of detection dogs. Indeed, the Scientific Working Group on Dog and Orthogonal Detector Guidelines, a coalition of local, state, and federal agencies working to establish best practices for detection dogs, submitted a report to the Department of Justice in 2010 emphasizing that training and certification programs should use double-blind testing. See Furton, et al., *The Scientific Working Group on Dog and Orthogonal Detector Guidelines* 12, 136 (2010), available at <https://www.ncjrs.gov/pdffiles1/nij/grants/231952.pdf> (“SWGDOG Report”). But “few agencies undertake such rigorous testing.” Katz & Golembiewski, *Curbing the Dog*, 85 Neb. L. Rev. 735, 763-764 (2007).

“bring Aldo by” to locate the drugs that the handler had just hidden.

2. Detection of lawful substances

a. False alerts also arise because narcotics-detection dogs can, and often do, alert to the presence of substances other than the contraband they were purportedly trained to detect. This phenomenon, known as “generalization,” can occur because dogs frequently learn to identify narcotics by detecting the scent of a “contaminant or byproduct in the drug” whose odor is more easily perceived than that of the pure form of the drug itself. Lunney, *Has the Fourth Amendment Gone to the Dogs?*, 88 Or. L. Rev. 829, 838 (2009); see Johnston, *Canine Detection Capabilities* 3 (1990), available at http://www.barksar.org/K-9_Detection_Capabilities.pdf (generalization occurs when a dog senses an odor that generally matches the smell of contraband or a chemical associated with contraband, but is not the illegal substance the dog is purportedly trained to detect). Indeed, “studies with narcotics detector dogs have shown that dogs alert to volatile odor chemicals associated with drugs rather [than] the parent drug itself.” Lorenzo, et al., *Laboratory and Field Experiments Used to Identify Canis lupus var. familiaris Active Odor Signature Chemicals from Drugs, Explosives, and Humans*, 376 *Analytical & Bioanalytical Chemistry* 1212, 1213 (2003). Accordingly, dogs trained to detect drugs like cocaine, heroin, and ecstasy may also alert to a host of household items that contain the same “signature” odors, even when no illegal narcotics are present.

For example, field studies have shown that “drug detector dogs alert to the common volatile cocaine byproduct methyl benzoate rather than to ... cocaine itself.” Furton, et al., *Identification of Odor Signature Chemicals in Cocaine Using Solid-Phase Microextraction—Gas Chromatography and Detector-Dog Response to Isolated Compounds Spiked on U.S. Paper*

Currency, 40 J. Chromatographic Sci. 147, 155 (2002). Methyl benzoate is “the dominant odor chemical signature for cocaine.” Macias, et al., *A Comparison of Real Versus Simulated Contraband VOCs for Reliable Detector Dog Training Utilizing SPME-GC-MS*, 40 Am. Lab. 16, 16 (2008). Although methyl benzoate is frequently found in street cocaine, it is not contraband. Indeed, the FDA has approved its use as a synthetic flavoring substance, and it can be found in a number of common household items, including perfume, solvents, and insecticide. Lunney 838-839.

Experiments have proven that methyl benzoate alone can prompt a narcotics-detection dog to alert, even when no cocaine or other contraband is present. Furton, et al., 153 tbl. IV; *see also id.* at 154-155 (dogs failed to alert to pharmaceutical-grade cocaine, which has minimal levels of methyl benzoate); Waggoner, et al., *Canine Olfactory Sensitivity to Cocaine Hydrochloride and Methyl Benzoate*, 2937 SPIE 216, 223 (1997). A detection dog appears to have alerted to methyl benzoate in a bottle of perfume in a student’s purse in *Horton ex rel. Horton v. Goose Creek Independent School District*, 690 F.2d 470, 474 (5th Cir. 1982).

Similarly, acetic acid, the “dominant odor compound in heroin samples,” may prompt dogs to alert to foods and prescription drugs. Macias, et al., 16. Acetic acid is the primary ingredient in vinegar; it is also present in pickles and some glues. Katz & Golembiewski 755. Prescription drugs can also give off the odor of acetic acid through the process of hydrolysis when exposed to air. *Id.*

Piperonal, the “dominant odor used by” detection dogs in alerting to the drug MDMA, also known as ec-

stasy, can also lead to false alerts. Lorenzo 1223. Piperonal is a “[f]lavouring agent in cherry and vanilla flavours” and is used in perfume and mosquito repellent. United Nations Office on Drugs and Crime, Regional Office for South Asia, *Precursor Control at a Glance* 19 (2006), available at http://www.unodc.org/documents/southasia/reports/Precursor_Control_at_a_Glance.pdf. Experiments show that narcotics-detection dogs will readily alert to samples of piperonal that do not contain MDMA or other illegal narcotics. Lorenzo 1220 tbl. 3.

b. Flawed training and certification procedures may encourage dogs to engage in generalization, thereby contributing to false alerts in the field. As discussed above, when trained to detect drugs laced with contaminants or byproducts, dogs may learn to alert to a noncontraband byproduct or contaminant rather than to the drug itself, which can lead to false alerts. See *supra* pp. 16-18; see also Lunney 838 (“Studies show that drug-detection dogs alert not to the illegal drug itself, but instead to a contaminant or by-product in the drug.”); Sachs, *The Fake Smell of Death*, Discover, Mar. 1996, available at <http://discovermagazine.com/1996/mar/thefakesmellofde714/> (“[T]he truly difficult thing about training a dog to a scent is stimulus control.”). Thus, for instance, a trainer who trains a dog to detect cocaine using impure samples of “street” cocaine, which contains more adulterants than does pharmaceutical-grade cocaine, may actually be rewarding the dog for detecting the scent of methyl benzoate or another contaminant rather than the cocaine itself, thereby reinforcing behavior likely to lead to false alerts. See Katz & Golembiewski 756 (noting the increased risk of “false[] alert[s] to many legal products” if trainers “train drug dogs to alert to low levels of

methyl benzoate”); Sachs, *The Fake Smell of Death* (“A dog trained on street drugs can ... get distracted by cutting agents, homing in on baking powder in the fridge and ignoring uncut cocaine in the pantry.”).¹¹

Trainers can minimize the risk of generalization by using purer samples of narcotics to prevent narcotics-detection dogs from learning to alert to the contaminants or byproducts present in street drugs. See Lunney 837 n.31; Sachs, *The Fake Smell of Death*. Many training organizations, however, actively tout the fact that they use street drugs as samples during training exercises. Lunney 837 n.31. Trainers can also specifically train dogs to reduce alerts to legitimate substances through discrimination training, which “is used to train the dog to differentiate contraband from other items ... that the dog might inadvertently associate with what it is being trained to detect.” *United States v. One Million, Thirty-Two Thousand, Nine Hundred Eighty Dollars in U.S. Currency (\$1,032,980.00)*, 2012 WL 684757, at *19 (N.D. Ohio Mar. 2, 2012). Such training, however, is not typical, and many major certifica-

¹¹ Similarly, trainers using impure samples may unwittingly train a dog to alert to other legal substances associated with contraband because a dog may incorrectly believe during training that it is being rewarded for identifying those noncontraband substances. Instead of alerting to the drug itself, dogs may alert “to the presence of some chemical molecule that they have come to associate with a reward.” Myers, *In the Wake of Caballes, Should We Let Sniffing Dogs Lie?*, 20 Crim. Just. 4, 7 (Winter 2006). For example, a “dog might become fixated” on the smell of “Ziploc bags because the police stored drug training samples in them,” increasing the risk of false alerts to the presence of drugs when, in fact, no contraband is present. Derr, *With Dog Detectives, Mistakes Can Happen*; see also Lunney 837 n.31.

tion organizations do not require dogs to distinguish between contraband and other associated odors.¹²

3. Residual odors

a. Narcotics-detection dogs also may give false alerts to “residual odors,” or odors that persist even though the contraband that created those odors is not present. Ensminger, *Police and Military Dogs* 133 (2012). Residual odors can occur even in locations that have never come into contact with contraband, because such odors are easily transmitted by contact from object to object and from person to person. *See, e.g.*, Parmeter, et al., *Guide for the Selection of Drug Detectors for Law Enforcement Applications* 6 (2000), available at <https://www.ncjrs.gov/pdffiles1/nij/183260.pdf>. Thus, for example, “a person who has handled cocaine will transfer cocaine particles to anything else he ... touches, including skin, clothing, door handles, [and] furniture”—whether it belongs to him or not. *Id.* Accordingly, when a dog alerts to a residual odor on a car door handle, it could well be alerting to an odor that was transferred to the handle not by the driver, but rather by a friend, a valet, or a complete stranger. *See*

¹² *See, e.g.*, National Narcotic Detector Dog Ass’n, *Narcotic Detection Standards* 2 (July 17, 2008), available at http://www.mdda.org/official-docs/doc_view/2-narcotics-detection-standard?tmpl=component&format=raw; National Police Canine Ass’n, *Standards for Training & Certification Manual* 6 (Dec. 27, 2011), available at <http://www.npca.net/Files/Standards/Standards.pdf>; United States Police Canine Ass’n, *Certification Rules and Regulations* 11-13, 16-17 (2012), available at <http://www.uspeak9.com/certification/USPCARulebook2012.pdf>; North American Police Work Dog Ass’n, *Bylaws and Certification Rules* 22 (June 19, 2011), available at <http://www.napwda.com/uploads/bylaws-cert-rules.pdf>.

Myers, 14 Geo. Mason L. Rev. at 4-5 (“[I]f the person being searched had attended a party where other people were using drugs,” a dog may alert “because of the residue on clothing or fabric.”). An alert to such an odor in the absence of actual contraband—however the odor was transferred—is, by definition, a false alert. *See infra* Part II.A.2.

b. As with the other causes of false alerts, flawed training methodologies can encourage false alerts to residual odors—or at a minimum, fail to prevent them. The odor concentrations at which a dog will alert depend in part on the quantities contained in the target samples used to train the dog. *See, e.g.*, Goldblatt, et al., *Olfaction and Explosives Detector Dogs, in Canine Ergonomics* 135, 161 (Helton ed., 2009) (explaining that training dogs to alert at very low concentrations can actually inhibit alerts to high concentrations). Handlers also influence the likelihood of false alerts by either rewarding or not rewarding dogs when they alert to residual odors. *See id.* at 159. Skilled trainers can, among other things, use “extinction training” to train dogs to ignore residual odors. *See, e.g.*, *Commonwealth v. Ramos*, 894 N.E.2d 611, 613 (Mass. App. Ct. 2008). Dogs used by the U.S. Customs Service, for example, are trained not to alert to residual odors. Bird 414. But typical dog-training procedures do not train dogs to differentiate between residual odor and the odor of actual narcotics, and indeed some handlers actively train their dogs to alert to residual odors. *See, e.g.*, *State v. Helzer*, 252 P.3d 288, 290 (Or. 2011); *see also supra* n.12 (citing certification standards).

II. UNDER A TOTALITY-OF-THE-CIRCUMSTANCES APPROACH, A VARIETY OF FACTORS ARE RELEVANT TO WHETHER A DOG ALERT CONSTITUTES PROBABLE CAUSE

As illustrated above, a host of factors may cause even trained or certified narcotics-detection dogs to give false alerts—including the training or certification methodology itself—and dog-and-handler teams exhibit great variation in the accuracy of their alerts. Accordingly, mere evidence of training or certification, standing alone, cannot establish that a dog is sufficiently reliable for its alert to provide probable cause. Rather, an individualized assessment of a dog’s reliability based on the totality of the circumstances is essential to the probable-cause determination.

A. A Number Of Different Factors Are Relevant To A Dog’s Reliability

Although under the totality-of-circumstances inquiry, courts should not apply a rigid checklist of factors in determining whether probable cause exists, several factors beyond the mere fact of training or certification are relevant to whether a narcotics-detection dog is sufficiently reliable: the rigorousness of the training or certification program; records of the dog’s actual performance in the field, including its false-alert rate; and the training and experience of the dog’s handler.

1. Rigorousness of the training and certification program at issue

Although dozens of canine training and certification organizations exist in the United States, no common set of regulatory or industry standards governs the conduct of training or certification programs. *See*

SWGDOG Report 9 (recognizing that courts are “increasingly” calling into question the reliability of detector dogs because of the “lack of common best practices for the certification and maintenance of detection teams”); Katz & Golembiewski 761-762.¹³ As a result, “drug-detection dogs are generally trained and certified by private vendors without the benefit of [uniform] standards for training and certification,” leading such organizations to employ training standards and methodology that vary dramatically in quality and effectiveness. Lunney 835.¹⁴

Moreover, many organizations in the business of training and certifying dogs do not use rigorous training methods and certification standards designed to ensure that a dog will perform reliably in the field. Financial concerns may lead police forces employing nar-

¹³ Indeed, although Florida requires certification for certain detection dogs used by law enforcement, Florida’s regulations expressly exclude narcotics-detection dogs from those requirements. See Fla. Admin. Code Ann. 11B-27.013(1)(a) (“[C]anines used by certified officers exclusively for tracking or specific detection ... are excluded from the certification process.”).

¹⁴ For example, the accuracy rate a dog must attain for certification or successful completion of a training program varies widely depending on the organization. Some groups, like the United States Police Canine Association, require only a 70% accuracy rate to certify a narcotics-detection dog. Furton & Heller, *Advances In the Reliable Location of Forensic Specimens Through Research and Consensus*, 3 Canadian J. Police & Sec. Servs. 97, 102 (2005). Others, like the U.S. Customs Service, will not certify a dog unless it demonstrates a 100% accuracy rate. *Id.* And some certification organizations for narcotics-detection dogs simply certify dogs that “pass” their program, providing no parameters at all by which to assess certified dogs’ performance. Katz & Golembiewski 762.

cotics-detection dogs to use private organizations that offer less expensive alternatives—and possibly less rigorous training. Katz & Golembiewski 762 (“While some external, third-party certifications do exist that could meet the requirements of most scientific research demands, the absence of judicial concern for the certification process creates no incentives for canine units to undertake these expensive third-party certifications.”). And the increased demand for detection dogs in recent years has created even greater incentives for training and certifying organizations “to deploy dogs of marginal talent.” Myers, 14 Geo. Mason L. Rev. at 28. Moreover, where local budget pressures are particularly great, some police forces have been forced to undertake their own training of narcotics-detection dogs, see Budd, *Lack of Training Can Come Back to Bite Police K-9 Units*, Dayton Daily News, May 23, 2011, at A4, raising concerns regarding training quality as well as potential conflicts of interest, especially if the standards and methods employed are never subject to scrutiny, see Katz & Golembiewski 762 (“The ability to teach even the ‘amateur’ to train a ‘certified’ dog speaks volumes with regard[] to the limited training actually performed by dog trainers. Of even greater concern is that the entrepreneur has concluded that courts will not question his do-it-yourself training methods.”).

Accordingly, testimony that a dog is “trained” or “certified,” standing alone, is virtually meaningless without evidence of what the training and certification entailed—and in particular evidence that permits assessment of whether the training or certification methodology exacerbates false alerts rather than prevents them. See Myers, 14 Geo. Mason L. Rev. at 27 (“[I]n practice there are many competing standards. ... There is very little oversight of what it means to be certi-

fied.”); Weiner, *Canines and the Constitution*, 23 Florida Defender 41, 47 (Winter 2011) (“Dog certification programs vary tremendously in their methods, elements, and tolerances of failure.”).

2. Records of a dog’s actual performance in the field

a. Crucial to determining whether a particular narcotics-detection dog is reliable is the dog’s actual performance in the field after training or certification is complete—including the number of false alerts it has given. Canine experts agree that “excessive emphasis is often placed on how detector dogs have been trained rather than how [dog-and-handler] teams perform.” Furton & Heller, *Advances In the Reliable Location of Forensic Specimens Through Research and Consensus*, 3 Canadian J. Police & Sec. Servs. 97, 100 (2005); see SWGDOG Report 139 (“Training records do not necessarily reflect reliability of the team.”). “Ultimately, the final performance of the detection team is more important than the specifics of the breed, training, alert and rewards systems, etc.” Furton & Heller 100; see also SWGDOG Report 12.

Because field-performance records provide invaluable insight into a dog’s reliability, SWGDOG has recommended that police departments and other organizations using narcotics-detection dogs keep such documentation, which should include information such as the date and location of a seizure, the length of a search, the description of the canine’s activity, the type of substance that was seized, if any, and any false alerts. See SWGDOG Report 137-139. Such records are crucial in assessing a dog’s reliability because

the only way to tell if [a] particular dog has slipped over to the “dark side” [i.e., is unreliable] is to scrupulously maintain records showing how often the dog alerts and under what circumstances, and make that information available to judges when they are determining if the specific event constitutes probable cause. If records were properly kept, they would offer insights into whether these dogs, as they operate in the real world, have biases or reflect their handlers’ biases.

Myers, *In the Wake of Caballes, Should We Let Sniffing Dogs Lie?*, 20 Crim. Just. 4, 9 (Winter 2006).

b. There is no merit to the contentions of the State (at 25-29) and the United States (at 16-21) that evidence of a dog’s actual performance in detecting drugs in the field is irrelevant to the probable-cause analysis.

First, the State and the United States argue that results of training activities in controlled environments are the only accurate indicators of a dog’s reliability. But a dog’s performance in a controlled testing environment provides an incomplete picture of how that dog will actually perform in the field—and thus an incomplete picture of whether that dog is a reliable detector of drugs *in a real-world setting*, which is the heart of the probable-cause inquiry.

Indeed, because “dogs ... do different things in the field than they do in the controlled environment of a training facility,” training and certification programs will produce skewed results if they use only controlled, indoor settings where many barriers to accurate detection are not present. Myers, 20 Crim. Just. at 7; *see United States v. Florez*, 871 F. Supp. 1411, 1421

(D.N.M. 1994) (“[T]he controlled setting of training centers ... where narcotics dogs are certified is quite different from actual work in the field.”). As an initial matter, reliably distinguishing between contraband and noncontraband substances may be more challenging in the field than in a controlled training environment because of the presence of additional external stimuli. For example, marijuana contains chemical components similar to those present in fir and juniper trees; accordingly, it may be difficult for a dog in the field to distinguish between marijuana and those legal substances present in the environment. *See* Katz & Golembiewski 756.

Similar problems can also arise because, in an uncontrolled environment, “vapor compounds from target odors are unavoidably mixed with other compounds present in the ambient air,” challenges to detection that are not present in controlled situations. Johnston 2; *see also id.* (“training under field conditions” improves dogs’ ability to discriminate between target odors and non-target odors). Empirical study has shown that higher levels of extraneous odors in the environment can have a “pronounced effect on detection performance,” resulting in “increasing proportions of false alarms.” Waggoner, et al., *Effects of Extraneous Odors on Canine Detection*, 3575 SPIE 355, 359 (1998). Indeed, the false-alert rate of most of the dogs studied increased by several times—for one dog, from less than 10% to almost 60%—as the concentration of an extraneous odor increased. *Id.* at 360 fig. 3. Encountering extraneous environmental odors can therefore cause dogs to exhibit significantly higher rates of false alerts in the real world than they do in controlled test settings.

In addition, “environmental factors” not present in a controlled setting can “influence the performance of [a] dog” in the field. Mesloh, et al., *Scent as Forensic Evidence and Its Relationship to the Law Enforcement Canine*, 52 J. Forensic Identification 169, 178 (2002); see also *Florez*, 871 F. Supp. at 1421 (“variable factors such as weather conditions ... may affect the dog[']s reliability and may not have been present at the time the dog was certified”). For that reason, a dog may have a lower false-positive rate in a controlled testing situation than in a real-world setting, which includes everyday environmental impediments to a dog’s accuracy, such as wind, rain, snow, and heat. See Bird 413; see also Derr, *With Dog Detectives, Mistakes Can Happen*, N.Y. Times, Dec. 24, 2002, at F3.

Second, the State (at 30-31) and the United States (at 17-21) erroneously assume that alerts in the field that do not lead to the discovery of narcotics are not false alerts because they are likely to be alerts to residual odors.

As an initial matter, attributing false alerts to residual odors is, in the end, merely speculation, a proposition neither the State nor the United States disputes. See Pet. Br. 6 (contending that it is impossible to determine the accuracy of alerts when contraband is not found because “it is possible ... that the dog has alerted to the residual odor of contraband recently in the vehicle or on the presence of someone using the vehicle”); U.S. Br. 18 (“[W]hen a dog alerts in the field but no drugs are found, it is typically not possible to definitively determine [the cause].”). In most cases, the only certainty is that the dog’s alert did not lead to the discovery of contraband; there is no evidence that the false alert was prompted by residual odors rather than one of the other causes discussed above, or some other

cause altogether. *See, e.g.*, Myers, 14 Geo. Mason L. Rev. at 22 (typically, there is “no objective evidence on which to base” a conclusion that a particular false alert was prompted by a residual odor). Law-enforcement officials have an obvious incentive to attribute errors to whatever cause they deem least offensive to their dogs’ reliability, but courts should not accept such speculation as fact, let alone rely on it to find a dog reliable when the dog’s alerts do not lead to the discovery of actual narcotics.

More fundamentally, the assertion that alerts to residual odors are “correct” for probable-cause purposes entirely misunderstands the nature of the probable-cause inquiry. Probable cause “looks to whether evidence will be found *when the search is conducted*,” *Grubbs*, 547 U.S. at 95, not whether contraband may formerly have been present in a particular location. For this reason, this Court has recognized that a showing of probable cause can grow “stale” if it no longer establishes a sufficient probability that the items sought are *currently* present, even if that showing establishes that the items were present at some earlier time. *See id.* at 95 n.2; *Sgro v. United States*, 287 U.S. 206, 210-211 (1932); *see also, e.g., United States v. Wagner*, 989 F.2d 69, 75 (2d Cir. 1993). Accordingly, when police seek to establish probable cause based on a dog alert, courts must inquire into the likelihood that the police will actually locate the drugs sought *during the search*. A history of alerts to residual odors, when those alerts do not result in drugs being found, therefore weighs *against* a finding of probable cause, rather than in favor of it.

3. Experience and training of the dog's handler

Equally important in determining a narcotics-detection dog's reliability is the experience and training of the handler who must interpret the dog's signals and make the ultimate decision regarding the meaning of those signals. *See* Bird 425 (emphasizing that "[t]he judiciary's sole focus on reliability of the dog is misplaced"). Such a consideration is crucial because the "olfactory ability of the dog has little relevance if the handler cannot properly interpret the alert of the dog." Mesloh, et al., 178; *see also* Hinkel & Mahr, *Drug Dogs Often Wrong* (according to a trainer, "[t]he dogs are only as good as the handlers"); Katz & Golembiewski 762 ("Handler error affects the accuracy of a dog. The relationship between a dog and its handler is the most important element in dog sniffing[.]").

Because each dog may have a unique way of alerting to contraband, handlers should participate in comprehensive training programs to learn how to interpret that particular dog's responses and its other behavior patterns. Bird 423. The length of time a handler has worked with a particular narcotics-detection dog is thus highly relevant to the dog's reliability. Ideally, a dog will work with only one handler for the duration of its career so the handler can become carefully attuned to interpreting the dog's signals. *Id.* at 423-424; *see* Handwerk, "Detector Dogs" Sniff Out Smugglers for U.S. Customs, Nat'l Geographic News, July 12, 2002, available at http://news.nationalgeographic.com/news/2002/07/0712_020712_drugdogs.html. In reality, however, dogs do not always consistently work with the same handler; indeed, in this case, when he alerted to respondent's car, the detection dog was not working with the handler with whom he had trained. JA53-54.

B. Conducting A Totality-Of-The-Circumstances Inquiry Into A Dog's Reliability Is Not Unduly Burdensome

A totality-of-the-circumstances inquiry into a dog's reliability is not, as the State and the United States contend, unduly burdensome. In fact, this Court's precedent has long required fact-intensive "assessment[s] of probabilities in particular factual contexts," *Gates*, 462 U.S. at 232, "with account taken of all the circumstances," *Brinegar*, 338 U.S. at 176, and lower courts conduct such inquiries as a matter of course. In such cases it is the government's duty to present "[s]ufficient information ... to allow [the court] to determine probable cause; [the court's] action cannot be a mere ratification of the bare conclusions of others." *Gates*, 462 U.S. at 239.

For example, to establish the reliability of an informant, police officers often testify to the number of tips they have received from the informant, the number that turned out to be correct, and even the names of those convicted as a result. *See, e.g., McCray v. Illinois*, 386 U.S. 300, 303 (1967); *see also, e.g., United States v. Koerth*, 312 F.3d 862, 867 (7th Cir. 2002) (giving no weight to characterization of informant as reliable where police "fail[ed] to explain the extent, if any, that [the informant] has previously provided information leading to arrests or prosecutions for criminal activity"); *United States v. Foree*, 43 F.3d 1572, 1575 (11th Cir. 1995) (explaining that mere "averment that the [informant] has provided reliable information in the past" provides no basis for judging reliability, absent specific information as to previous tips and "whether

the information resulted in any search, arrest, or conviction”).¹⁵

Moreover, there is nothing unusual or excessively burdensome in inquiring into evidence relevant to a dog’s reliability. In particular, contrary to the State’s arguments (at 33), considering field-performance records in a totality-of-the-circumstances analysis would pose only minimal burdens on local police. Indeed, many police departments across the country already maintain such documentation. *See, e.g.*, Balona, *Courts Raise Drug-Dog Questions*, Daytona Beach News-Journal, May 9, 2011, at 1A; Bradford, *Actions by Drug Dogs Key in Arrests*, Ark. Democrat-Gazette, May 3, 2004; Bird 425 (“A dog’s accuracy rate in detecting narcotics is one of the most easily obtained indicators of reliability. Handlers commonly record their performance, and this data is readily presentable in a courtroom.” (footnote omitted)).

In addition, many courts already “consider the canine’s history of success when reliability is challenged,” with “law enforcement frequently provid[ing] data on

¹⁵ There is no merit to the contention that a dog’s alert, unlike an informant’s tip, should be exempt from any assessment of its reliability. Contrary to the State’s assertion (at 27), it is irrelevant that dogs, unlike some informants, “lack the ... incentive to lie or twist the truth for ulterior objectives.” The probable-cause inquiry does not turn on subjective motivations, but on the likelihood that evidence of a crime will be found. *See Grubbs*, 547 U.S. at 95. And although the United States contends that a dog’s alert is “inherently more reliable than an informant’s tip” because dogs “detect only the presence or absence of narcotics,” U.S. Br. 22 (internal quotation marks omitted), the empirical evidence shows that dogs often alert when contraband is not present, *see supra* Part I.B.

the canine's success history as a standard method of establishing reliability." Minzner, *Putting Probability Back into Probable Cause*, 87 Tex. L. Rev. 913, 949 (2009); see, e.g., *United States v. Limares*, 269 F.3d 794, 797-798 (7th Cir. 2001); *United States v. Diaz*, 25 F.3d 392, 395-396 (6th Cir. 1994); *United States v. Lingenfelter*, 997 F.2d 632, 639 (9th Cir. 1993); *Florez*, 871 F. Supp. at 1420; *State v. England*, 19 S.W.3d 762, 768 (Tenn. 2000) ("[I]n making the reliability determination," the trial court "may consider such factors as ... the canine's 'track record,' with emphasis on the amount of false negatives and false positives the dog has furnished."); *State v. Nguyen*, 726 N.W.2d 871, 877 (S.D. 2007) ("[T]rial courts making drug dog reliability determinations may consider a variety of elements, including such matters as the dog's ... successes and failures in the field.").

In short, engaging in the necessary totality-of-the-circumstances analysis is no more burdensome in the dog-sniff context than in any other. And artificially limiting the inquiry to the question whether the dog is "trained" or "certified"—as the State and the United States advocate—will seriously hinder courts in making the accurate assessments of probable cause on which Fourth Amendment protections depend. By barring courts from inquiring into the nature of a dog's and its handler's training or a dog's reliability in the field, the State's rule will also encourage cheaper and laxer training methods and promote handler cueing, thus worsening the problems that already exist. Turning the probable-cause inquiry into a formality with a foregone conclusion may well make life easier for the government, but this Court has never yet permitted such a shortcut. It should not do so now.

CONCLUSION

The judgment below should be affirmed.

Respectfully submitted.

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