Probable Cause on a Leash

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I. INTRODUCTION

In 1970, the U.S. government first began using dogs to detect illegal substances as part of President Nixon’s war on drugs. Each year drug detection dogs account for $2 to $3 billion of drug seizures, including heroin, amphetamines, cocaine, hashish, marijuana, and ecstasy. In addition, the forfeiture of personal property associated with criminal activity accounts for even more millions of dollars. For example, one German shepherd named Dandy has led authorities to over $1 billion dollars worth of illegal substances over a six-year period in Southern California. Another detection dog named Trep has detected $63 million worth of illicit drugs over a two-year period in Miami.

While the use of drug-detecting dogs is a relatively new advent, the utilization of drug-sniffing dogs has seen rampant increases in the past years. Moreover, on a number of occasions the Supreme Court has supported the use of dog sniffs to detect contraband without requiring probable cause.

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1 See MARK DERR, A DOG'S HISTORY OF AMERICA: HOW OUR BEST FRIEND EXPLORED, CONQUERED, AND SETTLED A CONTINENT 345 (NORTH POINT PRESS, 2005).
2 Id.
3 EXECUTIVE OFFICE FOR UNITED STATES ATTORNEYS, U.S. DEP’T OF JUSTICE, UNITED STATES ATTORNEYS’ ANNUAL STATISTICAL REPORT 30-31 (2010) [hereinafter STATISTICAL REPORT], available at http://www.justice.gov/usao/reading_room/reports/asr2010/10statrpt.pdf (reporting that $1,786,567,692 has been deposited into the Department of Justice Assets Forfeiture Fund from criminal and civil cases litigated by United States Attorneys).
4 SAMUEL G. CHAPMAN, POLICE DOGS IN NORTH AMERICA 71 (Charles C Thomas, 1990).
5 Id.
6 See Illinois v. Caballes, 543 U.S. 405, 408-10 (2005) (holding that a dog sniff around the exterior of a vehicle during a lawful traffic stop “is not a search subject to the Fourth Amendment”); City of Indianapolis v. Edmond, 531 U.S. 32, 40 (2000) (“The fact that officers walk a narcotics-detection dog around the exterior of each car at the Indianapolis checkpoints does not transform the seizure into a search.”); United States v. Place, 462 U.S. 696, 707 (1983) (finding that a canine sniff of luggage in a public place is a limited intrusion and is not a search within the Fourth Amendment that requires probable cause); Florida v. Royer, 460 U.S. 491, 505-506 (1983) (endorseing the use of trained dogs as a more expeditious and less intrusive procedure “to detect the presence of controlled substances in luggage”).
This article develops in four parts. Part II of this article explores the historical evolution of Supreme Court caselaw and the Court’s recent decision in Florida v. Harris. This article attempts to enlighten the Court’s standard in Harris by looking to prior caselaw and discusses why courts should interpret the holding in a way that allows defendants to challenge the legitimacy and accuracy of training and certification programs. If applied incorrectly, Harris will violate the Fourth Amendment and allow searches to occur on less than probable cause. Part III reviews the fallibility of drug detection dogs and the diversity among training and certification programs. For the first time, this article addresses the most comprehensive, accurate and current data on the reliability of dog sniffs. Additionally, this article discusses the downfalls of relying too heavily on dog handler statistics and the pervasiveness of handler cues.

Part IV looks at the impact that unreliable dogs can have in other areas of criminal law and specifically focuses on the realms of criminal and civil asset forfeiture. To date, there has been no scholarly discussion on the consequences that can follow as a result of unfettered handlers who can establish probable cause by less than reliable means. Part V challenges the reliability of handlers and drug detection dogs and offers ways to combat these inadequacies. This article is the first to argue that in response to the current array of training and certification programs around the nation, a minimum uniform standard of certification should be implemented to ensure that canines are not abrogating constitutional rights. Finally, this article aims to close the gap between various training and certification programs at the state and federal level. This article is both timely and relevant, given the fact that two Supreme Court decisions that focus directly on the impact of drug detection dogs have been decided in the past year.

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7 133 S. Ct. 1050 (2013).
II. EVOLUTION OF DOG SNIFFS: PAST TO PRESENT

The Fourth Amendment protects “[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures . . . .”8 The Fourth Amendment also provides that “no warrants shall issue, but upon probable cause . . . .”9 Nonetheless, over the years the U.S. Supreme Court has developed exceptions to the warrant requirement, allowing warrantless searches to take place if probable cause is established by reliable means.10 In response, law enforcement has utilized detection dogs to sidestep the safeguards of the Fourth Amendment and conduct warrantless searches.11

A. The Beginnings of Dog Sniffs

The Supreme Court first alluded to the worth of canine sniffs in United States v. Chadwick,12 where a trained detection dog alerted to the presence of marijuana in a locked footlocker.13 The Court found that it was unreasonable for the officers to conduct a search of the footlocker without a warrant; however, both the majority and the dissent mentioned in passing that the dog’s positive alert would have furnished probable cause to issue a warrant.14

8 U.S. CONST. amend. IV.
9 Id.
10 See California v. Acevedo, 500 U.S. 565, 569-70 (1991) (finding that a warrantless search of a vehicle can take place if there is probable cause that contraband or evidence is inside); see also United States v. Ross, 456 U.S. 798, 807-08 (1982); Chambers v. Maroney, 399 U.S. 42, 48 (1970); Carroll v. United States, 267 U.S. 132, 158-59, (1925) (holding that a vehicle can be searched without a warrant if there is probable cause to believe there is evidence in the vehicle, coupled with exigent circumstances that a vehicle could be moved from the area).
11 See infra Part III.
13 See id. at 4.
14 See id. at 15; id. at 22 (Blackmun, J., dissenting) (“Probable cause for the arrest was present from the time respondents Machado and Leary were seated on the footlocker inside Boston’s South Station and the agents' dog signaled the presence of marijuana.”).
In *Florida v. Royer*, the Supreme Court addressed the pervasive and expedient use of trained dogs to detect illegal substances in luggage. Soon thereafter the Court had another opportunity to tackle dog sniffs. In *United States v. Place*, federal drug authorities subjected a passenger’s luggage to a sniff test by a dog trained to detect narcotics. One of the issues in the case was whether a dog sniff constituted a Fourth Amendment search. Citing no authority, Justice O’Connor went on to find that “the canine sniff is *sui generis*” because of its unique nature and limited intrusiveness and concluded that the type of investigative procedure that took place “did not constitute a ‘search’ within the meaning of the Fourth Amendment.” Recently, the U.S. Court of Appeals for the Sixth Circuit has taken this one step further and held that when a drug detection dog jumps into the interior of the car to perform a sniff test there is still not a search under the Fourth Amendment.

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16 See id. 460 U.S. 491, 505-06 (1983) (recommending the use of detection dogs and finding that a positive alert would have resulted in an arrest based on probable cause).
18 See id. at 696.
19 See id. at 707; but cf. id. at 719 (Brennan, J., concurring) (The Court also suggests today, in a discussion unnecessary to the judgment, that exposure of respondent's luggage to a narcotics detection dog ‘did not constitute a search within the meaning of the Fourth Amendment….The Court of Appeals did not reach or discuss the issue. It was not briefed or argued in this Court. In short, I agree with Justice BLACKMUN that the Court should not address the issue.”).
20 Sui generis is Latin for “of its own kind” and means to be unique or peculiar. BLACK’S LAW DICTIONARY 1572 (9th ed. 2009).
21 Id. at 707 (majority opinion) (finding that a dog sniff is less intrusive than the traditional rummaging associated with a physical search and the sniff disclosed only limited information, the presence or absence of contraband).
   It is well-settled that a dog's sniff around the exterior of a car is not a search under the Fourth Amendment. Defendant appeals the district court's denial of his motion to suppress because a narcotics dog jumped into his car and sniffed inside the car before “alerting” to the presence of narcotics. The canine's jump and subsequent sniff *inside the vehicle* was not a search in violation of the Fourth Amendment because the jump was instinctive and not the product of police encouragement.
   Id. (emphasis added); United States v. Pierce, 622 F.3d 209, 214 (3d Cir. 2010) (holding that a dog that instinctively enters the interior of the car through a door that was left open by the defendant does not violate the Fourth Amendment).
In 2000, the Court expanded *Place* in *Indianapolis v. Edmond*. Confronted with the issue of whether police could subject the exterior of a vehicle to a sniff test at a drug interdiction checkpoint, the majority opinion held that the roadblock was unconstitutional under the Fourth Amendment. With respect to the dog sniff, the Court found that walking a detection dog around the perimeter of the vehicle at the checkpoint did not constitute a search because the sniff did not require entry into the car and only disclosed the presence or absence of contraband. So, while a canine sniff was not a search under the Fourth Amendment, to perform a lawful canine sniff on a motorist required individualized suspicion.

The Supreme further explained *Place* when it decided *Illinois v. Caballes*. In this case, law enforcement used a trained narcotics dog to sniff the exterior of a vehicle while it was lawfully stopped for a citation. The dog alerted to the vehicle and a subsequent search discovered marijuana in the trunk even though the handler conducting the dog sniff had no suspicion of drug activity. Justice Stevens went on to find that reasonable suspicion is not required to perform a canine sniff on a vehicle that is lawfully stopped. Moreover, the Court found that “governmental conduct that *only* reveals the possession of contraband ‘compromises no legitimate privacy interest,’” and is therefore, “not a search subject to the Fourth Amendment.” Although respondent argued that errors on the dog’s behalf undercut the

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24 Id. at 48.
25 See id. at 40 (citing United States v. Place, 462 U.S. 696, 707 (1983)).
26 See id. at 47-48.
28 See id. at 406.
29 See id. at 406-07.
30 See id. at 408.
31 Id. (quoting United States v. Jacobsen, 466 U.S. 109, 123 (1984)).
assumption that dogs alert only to contraband, the Court, nonetheless found that the dog sniff was sufficiently reliable to establish probable cause to perform a full search of the vehicle.\footnote{See id. at 409; Under the automobile exception to the Fourth Amendment, the police can search a vehicle without a warrant if they have probable cause to believe that there is contraband inside. The rationale for this principle is a vehicle’s capacity to be moved and its reduced expectation of privacy. See California v. Acevedo, 500 U.S. 565, 569-70 (1991); see also Chambers v. Maroney, 399 U.S. 42, 48 (1970); Carroll v. United States, 267 U.S. 132, 158-59, (1925).}

While this strain of Supreme Court caselaw has resolved some of the concerns associated with dog sniffs, the standard dogs must meet to be considered reliable indicators of probable cause has been left unanswered by the Supreme Court.

\textbf{B. Harris: The New Standard for Assessing a Dogs’ Reliability}

The Supreme Court addressed the requisite standard of reliability in \textit{Florida v. Harris}.\footnote{133 S. Ct. 1050 (2013).} In \textit{Harris}, Officer Wheetley pulled over respondent Harris because his truck had an expired license plate.\footnote{See id. at 1053.} Officer Wheetley noticed an open beer can in the cup holder and asked for consent to search the truck.\footnote{See id.} Harris refused consent, so Officer Wheetley deployed his drug detection dog named Aldo to perform a sniff test of the exterior of the truck.\footnote{See id. at 1053-54.} Aldo alerted at the driver’s-side door handle, leading Wheetley to conclude that he had probable cause for a search.\footnote{See id. at 1054 (“Aldo alerted at the driver's-side door handle—signaling, through a distinctive set of behaviors, that he smelled drugs there.”).}

The search did not reveal any substances that Aldo was trained to detect, but the search did discover pseudoephedrine pills and other ingredients for producing methamphetamine.\footnote{See id. (“His search did not turn up any of the drugs Aldo was trained to detect. But it did reveal 200 loose pseudoephedrine pills, 8,000 matches, a bottle of hydrochloric acid, two containers of antifreeze, and a coffee filter full of iodine crystals—all ingredients for making methamphetamine.”).}

Harris was arrested for illegal possession of these substances.\footnote{See id.} About two months later, while Harris was out on bail, Officer Wheetley pulled Harris over again, this time for a broken
Once again, Aldo’s sniff test alerted at the driver’s-side door handle, but this time a subsequent search discovered nothing illegal. Harris brought a motion to suppress challenging the reliability of Aldo’s ability to establish probable cause. Writing for a unanimous majority, Justice Kagan held:

If a bona fide organization has certified a dog after testing his reliability in a controlled setting, a court can presume (subject to any conflicting evidence offered) that the dog’s alert provides probable cause to search. The same is true, even in the absence of formal certification, if the dog has recently and successfully completed a training program that evaluated his proficiency in locating drugs.

The Court noted that one could rebut this presumption by challenging the dog’s reliability. If successful in this challenge then the evidence can be suppressed pursuant to the exclusionary rule. The Court also acknowledged that a dog’s field performance “may sometimes be relevant,” but that such records are ultimately susceptible to misinterpretation. Thus, a defendant must have the opportunity to contest the reliability of a dog’s performance in training and certification programs to determine if their methodologies are too lax. But without any standard to determine when a program is too lax a court will continue to find every certification or training program legitimate and churn out detection dogs that are less than reliable. Therefore, it is imperative that courts define a “bona fide organization” as an accredited certification

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40 See id.
41 See id.
42 See id.
43 Id. at 1057.
44 See id.
45 See id. at 1058.
46 Id. (“[T]he defendant can ask the handler, if the handler is on the stand, about field performance, and then the court can give that answer whatever weight is appropriate.”).
47 See id. (“The defendant, for example, may contest the adequacy of a certification or training program, perhaps asserting that its standards are too lax or its methods faulty. So too, the defendant may examine how the dog (or handler) performed in the assessments made in those settings.”).
program that adequately trains dogs, while discrediting other less rigorous organizations as “shams.”

C. Clarifying Harris: What is the Requisite Level to Establish Probable Cause?

In the realm of dog sniffs, probable cause exists where the facts and circumstances within the officer’s knowledge lead him to believe that illegal substances are present. This standard exists to protect individuals from “unreasonable interferences with privacy and from unfounded charges of crime.” One of the initial shortcomings of dog sniffs is that their accuracy rates are generally quantifiable. Conversely, courts have refused to quantify the standard of probable cause leading to uncertainty as to whether a dog’s performance passes this threshold requirement. Nonetheless, one study asked 166 federal judges to put a numerical probability on probable cause. At least two judges believed that probable cause requires only a 10% probability. On the other hand, one judge believed that probable cause requires a probability of 90%. The majority of judges came down somewhere between 30% and 60%, with an average of 44.52%.

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48 See id. at 1057; United States v. Ludwig, 641 F.3d 1243, 1251 (10th Cir. 2011) cert. denied, 132 S. Ct. 306 (U.S. 2011) (“Of course, if a credentialing organization proved to be a sham, its certification would no longer serve as proof of reliability. But the judicial task, we hold, is so limited: to assessing the reliability of the credentialing organization, not individual dogs.”).
50 Id. at 176.
51 See Maryland v. Pringle, 540 U.S. 366, 371 (2003) (“The probable-cause standard is incapable of precise definition or quantification into percentages because it deals with probabilities and depends on the totality of the circumstances.”).
52 See C.M.A. McCauliff, Burdens of Proof: Degrees of Belief, Quanta of Evidence, or Constitutional Guarantees?, 35 VAND. L. REV. 1293, 1327 tbl. 3 (1982).
53 Id.
54 Id.
55 Id. at 1332 (finding that 148 of the 166 federal judges quantified probable cause at somewhere between 30-60%).
Prior to Harris, the requisite level of reliability dogs had to meet to establish probable cause led to a split in various state and federal courts on the correct standard to apply.\footnote{See infra notes 57-62 and accompanying text.} One district court in Kansas believed that any dog that had completed training and certification and had an accuracy rate in excess of 50\% was sufficient to establish probable cause.\footnote{See United States v. Cantrall, 762 F. Supp. 875, 882 (D. Kan. 1991) (“The court believes that any percentage over 50\%, along with the fact that the dog is trained and certified in narcotics detection, should be sufficient to establish Wenka's abilities to correctly detect narcotics.”).} Florida state courts had held that because there is no uniform standard for training and certification programs, such programs are “not sufficient to establish the dog’s reliability for purposes of determining probable cause” and other evidence, such as field performance records are authoritative.\footnote{See United States v. Kennedy, 131 F.3d 1371, 1378 (10th Cir. 1997) (quoting States v. Wood, 915 F.Supp. 1126, 1136 n. 2 (D.Kan.1996), rev’d on other grounds United States v. Wood, 106 F.3d 942 (10th Cir. 1997)); see also United States v. McCranie, 703 F.2d 1213, 1218 (10th Cir.1983).}

On the other hand, the U.S. Court of Appeals for the Tenth Circuit adopted the view that the requisite level of reliability is satisfied if “the dog is trained and annually certified to perform a physical skill.”\footnote{United States v. Boxley, 373 F.3d 759, 761 (6th Cir. 2004).} While the U.S. Court of Appeals for the Sixth Circuit held that it is not necessary to produce training and performance records.\footnote{See United States v. Ludwig, 641 F.3d 1243, 1250-51 (10th Cir. 2011) cert. denied, 132 S. Ct. 306, 181 (U.S. 2011) (“[A] positive alert by a certified drug dog is generally enough, by itself, to give officers probable cause to search a vehicle.”); United States v. Outlaw, 319 F.3d 701, 704 (5th Cir.2003); United States v. Robinson, 707 F.2d 811, 815 (4th Cir.1983).} Rather, testimony of the dog’s handler is sufficient to establish a dog’s reliability.\footnote{See id.} Additionally, some circuit courts treated a dog’s alert as a conclusive indication that probable cause was established.\footnote{See United States v. Ludwig, 641 F.3d 1243, 1250-51 (10th Cir. 2011) cert. denied, 132 S. Ct. 306, 181 (U.S. 2011) (“[A] positive alert by a certified drug dog is generally enough, by itself, to give officers probable cause to search a vehicle.”); United States v. Outlaw, 319 F.3d 701, 704 (5th Cir.2003); United States v. Robinson, 707 F.2d 811, 815 (4th Cir.1983).}

III. THE REALITY OF A DOG’S RELIABILITY

In cases involving dog sniffing for narcotics it is particularly evident that the courts often accept the mythic dog with an almost superstitious faith. The myth so completely has dominated the judicial psyche in those cases that the courts either
assume the reliability of the sniff or address the question cursorily; the dog is the clear and consistent winner.  

In Illinois v. Caballes, Justice Souter’s dissent acknowledged that “[t]he infallible dog . . . is a creature of legal fiction.” Nonetheless, numerous courts have considered the dog reliable even with questionable error rates. The U.S. Court of Appeals for the Seventh Circuit suggested that where a drug detection dog alerted correctly 62% of the time there was enough to establish probable cause. The U.S. Court of Appeals for the Fourth Circuit found that where a drug detection dog had an accuracy rate of 60% there was enough to establish probable cause. The U.S. Court of Appeals for the Eighth Circuit found that where a drug detection dog had an accuracy rate of at least 54% there was enough to establish probable cause. The U.S. Court of Appeals for the Tenth Circuit found that where a drug detection dog alerted correctly at least 50% of the time there was enough to establish probable cause.

However, these questionable accuracy rates are merely the tip of the iceberg and in reality, the reliability of detection dogs is influenced by a number of factors. While these error

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64 543 U.S. 405 (2005).
65 Id. at 411 (Souter, J., dissenting) (“[The dogs] supposed infallibility is belied by judicial opinions describing well-trained animals sniffing and alerting with less than perfect accuracy, whether owing to errors by their handlers, the limitations of the dogs themselves, or even the pervasive contamination of currency by cocaine.” (alteration in original)).
66 See infra notes 67-70 and accompanying text.
67 See United States v. Limares, 269 F.3d 794, 798 (7th Cir. 2001) (finding that 62% accuracy was enough to establish a preponderance of the evidence and determining that a preponderance was a greater threshold than probable cause).
68 See United States v. Koon Chung Wu, 217 F. App'x 240, 246 (4th Cir. 2007) (“Because ‘the probable cause-standard does not require that the officer's belief be more likely true than false,’ Humphries, 372 F.3d at 660, an accuracy rate of 60% is more than reliable enough for Cody's alert to have established probable cause.’”).
69 See United States v. Donnelly, 475 F.3d 946, 955 (8th Cir. 2007).
70 See United States v. Villa, 348 F. App'x 376, 379 (10th Cir. 2009) (“[Deputy Mathes] did not find drugs about fifty percent of the times his dog alerted, he clarified that in ninety-nine percent of those instances where no drugs were found the subject of the search confirmed that drugs had been kept in the place searched on prior occasions.” (alteration in original)); see also United States v. Kennedy, 131 F.3d 1371, 1378 (10th Cir. 1997) (finding that a dog with 71% accuracy was enough to establish probable cause).
rates may suffice to establish probable cause in the jurisdictions referenced above, the percentages tell little to how the accuracy rate was calculated. Moreover, enforcement agencies that report such accuracy rates may use qualifiers to artificially bolster the mythic belief that the dog is infallible. The reliability of drug detection dogs must be closely scrutinized for a number of reasons. Most importantly, drug-sniffing dogs can establish probable cause to conduct a search, but cannot testify or be cross-examined to defend or account for their actions.

A. Common Misconceptions

1. The Science Behind a Dog’s Olfactory Senses

One of the central tenets underlying dog sniffs is that “governmental conduct that only reveals the possession of contraband ‘compromises no legitimate privacy interest.’” As previously mentioned, the basis for this view is that a search by a trained detection dog reveals only the presence of illegal substances, which the public has no right to possess in the first place and does not expose other noncontraband items that remain hidden from public view.

However, this premise is severely undercut when one examines the science behind a dog’s olfactory senses. In most training and certification programs, dogs are trained to alert to a noncontraband contaminant laced with the drug, which has a vapor pressure that is easier to detect. For example, dogs that are trained to detect cocaine alert not to cocaine itself, but to a

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71 See supra notes 67-70 and accompanying text.
73 United States v. Place, 462 U.S. 696, 707 (1983) (“[T]he [dog] sniff discloses only the presence or absence of narcotics, a contraband item.”).
75 Vapor pressure: the quantity of drug vapor (usually expressed in concentration) of a particular drug compound that exists above the compound in air at equilibrium under a specified set of conditions. Id. at 50.
chemical byproduct in cocaine known as methyl benzoate. Furthermore, these chemical contaminants can also be found in legal products and often lead to searches that expose noncontraband items. These limitations in drug detection training serve to undermine the ability of dogs to accurately alert to the presence of contraband and invalidate the premise that dogs only alert to illegal substances.

*Horton v. Goose Creek* exemplifies the vulnerabilities of detection dogs that alert to lawful items. In this case, students at a school were subjected to random dog sniffs. The detection dogs alerted to two students and upon a full search of their belongings the only item that was discovered was a bottle of perfume that likely contained methyl benzoate, a byproduct of cocaine and a substance that triggered the dog to alert.

2. Bayesian Analysis and Random Searches

Analyzing a dog’s accuracy rates through the lens of Bayes’ Theorem further enlightens the true reliability of drug-sniffing dogs. Courts operate under the misconception that a 95% accuracy rate means that a subsequent search will uncover contraband 95% of the time. Bayes’

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77 See Jacobson v. $55,900 in U.S. Currency, 728 N.W.2d 510, 534 (Minn. 2007) (Hanson, J., concurring) (“The cases that appear to adopt the methyl benzoate theory of dog sniff drug detection do not discuss the fact that methyl benzoate is a common chemical used in multiple consumer products—solvents, insecticides, perfumes, etc.”); 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, 754–57 (2007) (finding that the odor that dogs alert to in heroin is commonly found in vinegar, pickles and glue and that the odor that dogs alert to in marijuana and hashish is commonly found in “hemp products, and fir and juniper trees”).

78 See Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470 (5th Cir. 1982).

79 See id. at 474.

80 Id.

theorem is a statistical formula used for calculating conditional probabilities that effectively debunks this myth.83

When it comes to canine sniffs there are four possible outcomes: a true positive, a false positive, a true negative, and a false negative. (1) A true positive is where a dog alerts to a substance he is trained to detect and that substance is present. (2) A false positive is where a dog alerts to a substance he is trained to detect and that substance is not present. (3) A true negative is where a dog does not alert and no substances he is trained to detect are present. (4) A false negative is where a dog does not alert and substances he is trained to detect are present.

Applying Bayesian analysis in the context of dog sniffs reveals how misleading various accuracy rates can be to judges and juries.84 Imagine the following hypothetical. Training, certification and field performance records indicate that a particular drug detection dog (Fido) has a true positive rate of 95%, meaning that Fido alerts 95% of the time when drugs are present. Fido also has a false positive rate of 6%, meaning that Fido alerts 6% of the time when drugs are not present. Also assume that 2% of a sample population has illegal substances in their possession.85 If random dog sniffs occur on 100,000 vehicles the probability that substances the dog is trained to detect are discovered upon an alert is 24%.86

The reason for this is more coherent when looking at the raw numbers. 2% of 100,000

\[
P(\text{true positive accuracy rate}) \times P(\text{population has illegal substances}) / P(\text{true positive accuracy rate}) \times P(\text{population has illegal substances}) + P(\text{false positive rate}) \times P(\text{population does not have illegal substances}) = \text{Probability drugs are discovered when dog alerts.}
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See Myers, supra note 81.

See generally DEP’T OF COMMERCE, STATISTICAL ABSTRACT (2012), available at http://www.census.gov/compendia/statab/cats/law_enforcement_courts_prisons/arrests.html (showing that 2% of a population that possesses illegal substances is an entirely realistic possibility).

\[.95 \times .02 / (.95 \times .02 + .06 \times .98) = .244\]
people have illegal substances, or 2,000 people. Out of these 2,000 people who were exposed to sniffs, the dog correctly alerted 95% of the time, or 1900 times. So, in 1900 searches the dog alerted and drugs were found. On the other hand, 98% of 100,000 people do not have illegal substances, or 98,000 people. Out of these 98,000 people who were exposed to sniffs, the dog erroneously alerted 6% of the time or 5880 times. So, in 5880 searches the dog alerted and no drugs were found. Thus, 7780 searches took place and illegal substances were discovered in 1900 of them, for a probability of 24%.

The results produced under Bayesian analysis is somewhat mitigated if the population in question has a higher rate of possessing contraband.87 The hypothetical above demonstrated the dangers of performing dog sniffs at random. However, most dog handlers use some amount of discretion before deploying their canine.88 For example, if a canine was deployed to sniff a vehicle after the officer saw a marijuana leaf sticker on the windshield, the probability that this person has illegal substances may jump from 2% to 10%. Thus, increasing the probability that drugs are found after a positive alert to 64%,89 a much more acceptable number, but still well below Fido’s mythic accuracy rate of 95%.

Consequently, the probability that drugs are found pursuant to a dog alert are significantly lower than what accuracy rates would lead the public to believe. Despite this reality, courts continue to make decisions under this delusion.90

87 See Myers, supra note 81 at 15.
88 Most frequently, police utilize a dog sniff only after a vehicle has been lawfully stopped because of a traffic violation. See United States v. Olivera-Mendez, 484 F.3d 505, 509 (8th Cir. 2007); United States v. Alexander, 448 F.3d 1014, 1015 (8th Cir. 2006); United States v. Vazquez, 555 F.3d 923, 925 (10th Cir. 2009).
89 (.95)*(.10) / (.95)*(.10) + (.06)*(.90) = .637
90 See supra notes 67-70 and accompanying text.
3. **Barking Up the Wrong Tree**

*Merret v. Moore*\(^9^1\) illustrates Bayes’ Theorem and evidences the dangers of allowing dogs with less than stellar accuracy rates to perform random searches. In that case, the U.S. Court of Appeals for the Eleventh Circuit held that it was not an unconstitutional search to use dogs to sniff the exterior of cars at a roadblock checkpoint, as long as the motorists were lawfully stopped in a public place and the dog sniff did not cause undue delay.\(^9^2\) At the roadblock, approximately 1450 vehicles were subject to dog sniffs.\(^9^3\) Out of these vehicles the dogs gave positive alerts to twenty-eight of the vehicles.\(^9^4\) Upon performing a full search of these twenty-eight vehicles, only one person was arrested for the possession of drugs that the dogs were trained to detect.\(^9^5\) While the court’s rationale for these searches was that there is no privacy interest in possessing contraband,\(^9^6\) over 96% of the cars were exposed to public opprobrium and embarrassment by means of a full scale search of their vehicle when no drugs were present.\(^9^7\) Overall, the operation was a disaster.\(^9^8\)

*Merret* confirms the risks that law enforcement takes when they allow inaccurate dogs to perform searches on random populaces of motorists.\(^9^9\) Additionally, these findings have spurned research by both government agencies and scholars to determine how accurate the dog’s nose is

\(^9^1\) 58 F.3d 1547 (11th Cir. 1995).
\(^9^2\) See id. at 1553.
\(^9^3\) Id. at 1549.
\(^9^4\) Id.
\(^9^5\) Id.
\(^9^6\) See id. at 1553; see also Illinois v. Caballes, 543 U.S. 405, 408 (2005) (citing United States v. Jacobsen, 466 U.S. 109, 123 (1984)) (finding that government conduct that reveals only the possession of contraband compromises no legitimate privacy interest protected by the Fourth Amendment).
\(^9^7\) See Merret, 58 F.3d at 1549.
\(^9^8\) See id. (“People whose vehicles were actually searched experienced longer delays. In addition, one car overheated; one minor accident occurred; the dogs scratched several cars; and one person was bitten by a dog.”).
\(^9^9\) See id.
when performing in the real world. The next section discusses the research that was gathered and further substantiates the flaws of detector dogs.

B. **Field Studies: Dogs’ Reliability in the Real World**

There are a number of field studies that demonstrate the shortcomings of dogs as reliable indicators of probable cause. As previously mentioned in *Caballes*, Justice Souter’s dissent called the infallible dog a “creature of legal fiction” and cited various cases that demonstrated their dubious reliability.\(^{100}\) However, more recently there have been a number of studies that further undercut the reliability of dogs in the real world and bolster Justice Souter’s theory of the fallible dog.\(^{101}\) Over the past decade a number of studies have been conducted to determine not only the true accuracy rates of dogs in the field, but to expound on the potential consequences of unreliable dogs.

1. **New South Wales Ombudsman\(^{102}\) Study (2006)**

   In the *Harris* oral argument, Justice Sotomayer mentioned she was “deeply troubled” by an Australian study that found a dog’s alert was correct only 12% of the time.\(^{103}\) The study Justice Sotomayer referenced was conducted in 2006 under the auspices of the New South Wales Ombudsman, a neutral and independent agency in Australia that is accountable to the public through Parliament.\(^{104}\)

   This particular study looked at dogs’ performance in the field and their ability to

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\(^{100}\) See *supra* notes 67-70 and accompanying text.

\(^{101}\) See *infra* Parts III.B.1-3.

\(^{102}\) Loosely translated, the term Ombudsman means “the citizen’s defender” or “representative of the people.”

\(^{103}\) Transcript of Oral Argument at 13, Florida v. Harris, 133 S. Ct. 1050 (2013) (No. 11-817).

\(^{104}\) See Who we are, Ombudsman New South Wales, NSW Government, http://www.ombo.nsw.gov.au/what-we-do/about-us/who-we-are (last visited Mar. 27, 2013) (“Our central goal is to keep government agencies and some non-government organisations accountable by promoting good administrative conduct, fair decision-making, high standards of service delivery and the protection of the rights of people in NSW.”).
accurately detect certain types of illegal substances.\textsuperscript{105} The study measured the false positive rates of seventeen detection dogs and their corresponding field performance over a two-year period.\textsuperscript{106} Most dog sniffs occurred in public places in various Australian cities\textsuperscript{107} and were performed on young adults.\textsuperscript{108} According to Australia law, a positive alert on a person’s body or belongings is enough to establish reasonable suspicion to perform a full search of that person.\textsuperscript{109} All the dogs that were observed in the study had completed certification programs and training exercises with their handler in a number of real-world settings, populated with humans and administered in realistic scenarios.\textsuperscript{110} Additionally, each dog was trained to detect cannabis and its derivatives, heroin, cocaine, amphetamines, and ecstasy.\textsuperscript{111}

This Australian agency performed the most comprehensive study to date and monitored dogs that alerted to the presence of drugs 10,211 times.\textsuperscript{112} Overall, police found drugs the dogs were trained to detect on 2,664 occasions, for a success rate of 26\%.\textsuperscript{113} Most troubling was that out of the 10,211 searches, 7,547 full-scale searches found no illegal drugs, resulting in a false

\textsuperscript{106} Id.
\textsuperscript{107} See id. at 29 fig. 4(showing that that places where drug detection sweeps took place were mainly public transport areas, road/street/mall, dance parties, commercial/retail, or park/recreational).
\textsuperscript{108} See id. at 35 (“The median age of persons searched was 26 years. . . . The predominance of young adults among those searched may reflect their greater propensity to frequent the public spaces patrolled by the dogs and/or their greater likelihood to consume or carry prohibited drugs.”).
\textsuperscript{109} See id. at 47 By law, however, the detaining of persons for searching cannot legally be a random exercise and must be based on a reasonable suspicion; see also Drug Misuse and Trafficking Act, sec. 37(4) (1985) (NSW) (Austl.) (codifying the requirement that police must reasonably suspect a person is in possession or control of a prohibited drug before the officer can lawfully stop, search and detain that person).
\textsuperscript{110} See NSW STUDY, supra note 105, at 45 (describing how dogs were initially trained six weeks using various methodologies and continued to train each week, and were accredited every three months by the certification agency); “Each handler generally works with a single drug detection dog. With the guidance of the drug detection dog trainer, the handler conducts the initial training of his or her own dog.” See id. at 21.
\textsuperscript{111} See id. at 45.
\textsuperscript{112} Id. at 27.
\textsuperscript{113} Id. at 29 fig. 5.
positive rate of 74%.\textsuperscript{114}

Despite the fact that all the dogs were the same breed\textsuperscript{115} and trained under the same circumstances, looking at the raw numbers of each individual dog indicates significant variation among the dogs’ ability to detect illegal substances.\textsuperscript{116} Eleven of the seventeen dogs had a success rate that was lower than the average rate of 26%.\textsuperscript{117} Apparently, the dog Justice Sotomayer references in \textit{Harris} was not even the most inaccurate dog – another dog’s accuracy rate was merely 7% over the two-year period.\textsuperscript{118} The most accurate dog had a 56% success rate of finding drugs.\textsuperscript{119} However, these two previous extremes had a relatively low number of alerts in the field when compared to the other dogs.\textsuperscript{120} During the two-year period, the two dogs that signaled most frequently had accuracy rates of 27% and 12%.\textsuperscript{121}

Based on the comprehensive sets of data, the New South Wales government concluded that a dog’s positive alert to illegal substances does not constitute reasonable suspicion to conduct a search of the person and his belongings.\textsuperscript{122} Moreover, the study went on to find that the use of drug-sniffing dogs is not an efficient use of limited police resources.\textsuperscript{123} Finally, the

\textsuperscript{114} \textit{Id.} at 30. (finding that in searches that did not discover illegal substances, a subsequent interview of the person revealed that he or she had contact with cannabis or was present while cannabis was being smoked at some time in the past, these admissions accounted for close to 60% of the group where no drugs were found); \textit{but see id.} at 49 (“NSW Police is not aware of any scientific evidence to suggest that dogs would [alert to] a person who has been in the presence of other people smoking cannabis.”).

\textsuperscript{115} \textit{See id.} at 21 (mentioning that all the dogs used in the study were Labradors).

\textsuperscript{116} \textit{See id.} at 57 tbl. 9.

\textsuperscript{117} \textit{Id.}

\textsuperscript{118} \textit{Id.} (finding that the least successful dog in the study alerted to the presence of drugs on 57 occasions and subsequent searches discovered drugs the dog was trained to detect only 7% of the time).

\textsuperscript{119} \textit{Id.} (finding that the most successful dog in the study alerted to the presence of drugs on 180 occasions and subsequent searches discovered drugs the dog was trained to detect 56% of the time).

\textsuperscript{120} \textit{See id.} (showing that the most accurate dog and the least accurate dog accounted for only 237 alerts out of the 10,211 total).

\textsuperscript{121} \textit{Id.} (showing that the two dogs that accounted for the most number of alerts during the two-year period accounted for 3604 alerts out of the 10,211 total).

\textsuperscript{122} \textit{See id.} at 201.

\textsuperscript{123} \textit{See id.} at 281.
study encouraged law enforcement agencies that utilize drug-sniffing dogs to keep records on the performance of their handlers and dogs in the field.124

This study exemplified not only the limited capabilities of dogs in the real world, but the varied and inadequate accuracy rates of various dogs in substantially similar circumstances. These varied and inadequate rates severely undercut the assumptions in *Harris* that all dogs are created equal if they have completed training and certification. To combat such shortcomings it is essential that dogs complete legitimate training and certification programs and keep accurate and correct field performance records that indicate when a dog’s reliability is beginning to falter.


In addition to inflated accuracy rates that challenge a finding of probable cause and abrogate a person’s privacy interests, incompetent drug detection dogs can also be pretexts to commit racial profiling.125 The Chicago Tribune analyzed three years of data from the Illinois Department of Transportation to determine how effectively local police departments were utilizing drug-sniffing dogs and their propensity for racial profiling.126 The findings showed that a positive alert by a dog led to the discovery of drugs or paraphernalia in a roadside stop only 44% of the time.127 When filtering these results by race, the accuracy rate fell to 27% for Hispanic drivers.128

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124 See id. at 202.
126 See id. (explaining that the study investigated records of vehicle stops in Chicago from 2007-2009).
127 Id.
128 Id.
For the Illinois State Police department, 252 sniffs were conducted on stopped vehicles over the course of eleven months. The dogs positively alerted to substances they were trained to detect in 136 instances. Out of these 136 alerts, thirty-five resulted in the discovery of drugs that led to an arrest, leading to an accuracy rate of 25.7%. In McHenry County, the sheriff’s department’s drug-sniffing dogs alerted on 103 occasions and found drugs or paraphernalia only 32% of the time. Furthermore, in the eight searches of Hispanic drivers, the police found drugs only once. A similar trend was also apparent in the city of Naperville, Illinois. Drugs or paraphernalia were discovered 47% of the time following a dog’s positive alert. But for Hispanic drivers, only one out of the twelve searches led to the discovery of drugs or paraphernalia for a false positive rate of 8%. Most alarming is that when it comes to dog sniffs, the dogs are not the only problem. Alex Rothacker, a trainer who certifies handlers and dogs in the Chicago area places the blame primarily on the handlers. He mentions that while residual odors account for a number of false positives, dogs typically react to cues by the handler when the handler believes the person has illegal substances. Virginia Martinez, an attorney for the Mexican American Legal Defense and Educational Fund, as well as civil rights advocates are concerned that the police are using

130 Id.
131 Id.
132 Hinkel & Mahr, supra note 125.
133 Id.
134 See id.
135 Id.
136 Id.
137 See id. (describing drug-sniffing dogs as a tool that allows police to search innocent drivers, leading to a consequence known as “driving while Mexican”).
138 See id. (finding that many trainers use “suspect methods” and do not stay current on their training regimens).
139 See id.
dogs to target the Hispanic community.\textsuperscript{140} Thus, the dogs are serving as a search warrant on a leash to allow law enforcement to conduct searches when they see fit and for reasons that do not establish probable cause, such as race.\textsuperscript{141} Accordingly, handler misconduct and the dogs could be serving as a pretext to conduct searches based off race in a number of Chicago cities.\textsuperscript{142}

\textbf{3. UC Davis Study: Handler Cuing (2011)}

As evidenced by the Chicago studies, a dog’s reliability can be significantly influenced by the handler’s objectives. Handlers can often unintentionally or intentionally cue the dog to alert if the handler believes the area contains contraband. The aim of one study was to examine whether handler beliefs might affect a dog’s positive alerts in a controlled environment.\textsuperscript{143} Eighteen drug and/or explosive detection teams each completed two sets of four searches.\textsuperscript{144} The handlers were instructed that each of the areas might have a scent that the dogs were trained to detect marked by a piece of red paper.\textsuperscript{145} However, in actuality, there were no scents that the dogs were trained to detect in any of the four areas and a dog that performed with 100\% accuracy would have given no positive alerts.\textsuperscript{146} The results were astounding, 123 out of the 144 searches had at least one positive alert.\textsuperscript{147} And most importantly, the dogs were twice as likely to alert to

\textsuperscript{140} See id. ("Civil rights advocates and Latino activists say the findings support complaints that police unfairly target Hispanic drivers for invasive and embarrassing roadside vehicle searches.").
\textsuperscript{141} See id.
\textsuperscript{142} See Balko, supra note 129; Hinkel & Mahr supra note 125.
\textsuperscript{143} See Lisa Lit, Julie B. Schweitzer, & Anita M. Oberbauer, Handler Beliefs Affect Scent Detection Dog Outcomes, 14 ANIMAL COGNITION 387, 387 (2011).
\textsuperscript{144} Id. at 388 (noting that teams consisted of a dog and a handler who were certified by a law enforcement agency for either drug detection, explosives detection or both drug and explosives detection).
\textsuperscript{145} See id. at 389-390 (noting that area one was completely unmodified, area two had a cabinet marked by red paper, area three was unmarked and had Slim-Jim sausages and a tennis ball in the cabinet, and area four had a cabinet marked by red paper with Slim-Jim sausages and a tennis ball inside).
\textsuperscript{146} See id. at 388.
\textsuperscript{147} Id. at 390 (discovering that one or more false alerts occurred in 85\% of the searches for a total of 225 incorrect alerts).
an area marked by red paper than a different area that was unmarked.\textsuperscript{148} While a number of
handlers admitted to intentionally prompting their dogs to alert at the areas marked by red paper,
the majority of handlers subconsciously communicated their desires to their canine
counterparts.\textsuperscript{149} The Clever Hans effect may help shed light on this phenomena and stands for the
theory that animals have the ability to react to subtle cues provided by humans.\textsuperscript{150}

The research concluded that detection dogs not only alert to the scent of substances they
are trained to detect, but also to their handler’s cues, whether they be inadvertent or
intentional.\textsuperscript{151} This study aptly demonstrates the influence that handlers can have over their
canine counterparts and exhibits how handler cues can pave the way for discriminative searches
based on race, gender, or age. Unfortunately, handler cuing is not the only method that handlers
implement to artificially reach the results they want in the field.

\textit{C. Handler Error}

As previously mentioned, a false positive is where a dog alerts to a substance he is
trained to detect and that substance is not present.\textsuperscript{152} However, there is no uniform standard to
calculate a false positive rate in practice.\textsuperscript{153} As such, handlers tend to inflate the accuracy and
therefore, reliability of their dog by using qualifiers to compute the false positive rate.\textsuperscript{154} Despite
these distortions, handlers continue to use suspect methods to measure the performance of their

\textsuperscript{148} \textit{See id.} at 393 (finding that the dogs were more likely to alert to the red piece of paper than any other area).
\textsuperscript{149} \textit{See id.} at 392. (“[T]he experimenter was informed that three handlers admitted to overtly cueing their
dogs to alert at the marked locations.”).
\textsuperscript{150} \textit{See id.} at 387 (finding that a horse that was originally believed to have been able to perform arithmetic
and other mental tasks by tapping his hoofs, was actually responding to unintentional cues from is trainer).
\textsuperscript{151} \textit{See id.} at 392.
\textsuperscript{152} \textit{See Myers, supra} note 81 at 12.
\textsuperscript{153} \textit{See id.}
\textsuperscript{154} \textit{See id.}
drug detection dogs, ultimately leading to the decreased reliability of a dog’s ability to establish probable cause.

1. Calculating an Accurate…Accuracy Rate

The most reliable means to determine a dog’s accuracy rate in real life circumstances is to track every instance the dog signals an alert. Then the amount of true positives compared to false positives would constitute the accuracy rate for a particular dog in the field. This common-sense computation is the most reliable indicator of a dog’s accuracy in the field and is used by many law enforcement agencies around the country.

However, law enforcement agencies use qualifiers to skew or alter a dog’s accuracy in their favor, falsely leading the public to believe that a dog’s precision in the field is dependable. For instance, a handler may not record a false positive if the interaction does not eventually lead to an arrest. The shortcomings of this approach are apparent. If a dog falsely alerts to contraband it is trained to detect and a subsequent search discovers nothing and no arrest is made, then the false positive goes unreported. Or conversely, officers may record a true positive if the dog sniff ultimately leads to an arrest. Thus, an officer will increase the dog’s accuracy on paper, whether or not the arrest was based on the discovery of drugs the dog was

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156 See id.
158 See Bird, supra note 155 at 424-425 (discussing the prevalence of handler error).
159 See, e.g., Florida v. Harris, 133 S. Ct. 1050, 1054 (2013).
160 See id.
trained to detect. Despite these flaws, handlers will nonetheless use an accuracy rate calculation that exploits these faulty methods.\footnote{See id.}

Furthermore, it is nearly impossible to calculate an accurate false negative rate, or a rate where the dog does not alert when drugs are in fact present.\footnote{See Bird, supra note 155 at 427.} The reason for this is because the only way an officer can determine whether contraband was present when the dog did not alert would be by later discovering the contraband in an unrelated search.\footnote{See id.}

As previously discussed, the Supreme Court recently decided a case that exemplifies many of these shortcomings. In \textit{Florida v. Harris}, the handler of a trained narcotics dog named Aldo, acknowledged that “he maintained records only of alerts resulting in arrests.”\footnote{See \textit{Florida v. Harris}, 133 S. Ct. 1050, 1054 (2013).}

Furthermore, the handler testified that he does not track instances when no drugs are found and only records Aldo’s field performance when he is correct.\footnote{Harris v. State, 71 So. 3d 756, 761 (Fla. 2011), as revised on denial of reh'g (Sept. 22, 2011), \textit{cert. granted}, 132 S. Ct. 1796 (U.S. 2012) and \textit{rev'd}, 133 S. Ct. 1050, (U.S. 2013) (“Officer Wheetley maintains records of Aldo’s field performance only when Officer Wheetley makes an arrest. Officer Wheetley testified that he does not keep records of Aldo’s alerts in the field when no contraband is found; he documents only Aldo’s successes.”).}

In the case at hand, on two different occasions Aldo alerted to the presence of drugs and both times a subsequent search of the vehicle discovered no drugs Aldo was trained to detect.\footnote{See \textit{Harris}, 133 S. Ct. at 1054. The search did not discover any drugs Aldo was trained to detect, but did reveal pseudoephedrine pills. The respondent Harris was arrested and charged with illegal possession of pseudoephedrine, a substance Aldo was not trained to detect. \textit{Id.}} Aldo’s handler claimed that both times Aldo was responding to a residual odor on the door handle of the vehicle.\footnote{\textit{Id.}}

2. \textit{Attributing Blame to Residual Odors}

Compounding the problem is the common misconception that the dog’s nose is infallible. Thus, a handler may \textit{not} record a false positive if the handler believes that residual odors are
According to this belief, handlers’ records frequently reflect near perfect accuracy acting under the assumption that if their dog alerts to a substance that the dog is trained to detect and a subsequent search does not reveal that substance, then the dog must have alerted to a residual odor or the presence of that substance in uncollectible or trace amounts. Consequently, a handler would record this alert as a true positive even though no contraband was seized and no arrest was made.

The sensitivity of a dog’s nose is its greatest asset, but it is also its greatest weakness. Although a dog capable of detecting residual odors from weeks prior may seem like a valuable trait, it actually demonstrates that the dog is less reliable at discerning whether drugs are actually present. If a canine is alerting to a residual odor that was present at some time in the past, then citizen’s privacy interests are infringed when there is no illegal activity. Other factors further exacerbate the problem, such as a dog’s temperament, cognitive ability, illness, and age. The worst case scenario is where officers keep no records at all of a dog’s performance in the field and simply hide behind a dog’s certification or training, that in some cases was completed years ago at a substandard organization.

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168 See United States v. Warren, 997 F. Supp. 1188, 1192 (E.D. Wis. 1998) (observing that if the dog alerts and no drugs are found then the dog must have alerted to a residual odor).
169 See, e.g., United States v. Warren, 997 F. Supp. 1188, 1192 (E.D. Wis. 1998) (“If no drugs are found, Deputy Hanson does not record a false positive alert, but notes that the dog must have smelled the residual odor of drugs which must have been present at some time in the past. Thus, Flea is credited with 100% accuracy by Deputy Hanson.”).
170 See id.
171 But see, e.g., State v. Cabral, 859 A.2d 285, 300 (2004) (“[A] trained drug dog has the ability to detect the presence of drugs . . . as long as 72 hours prior to the alert . . . serves to strengthen the argument that the dog has a superior sense of smell on which to rely to support a finding of probable cause.”).
D. Variation in Training and Certification Programs

Training and certification programs vary drastically across the United States.173 As such, completion at an unacceptable organization does not conclusively establish that a dog is reliable in the real world.174

Take for example, a typical regimen at the state level that certifies police dogs for law enforcement agencies.175 The Hillsborough County Sheriff’s Office in Florida requires dogs to complete an initial thirty-day training course and an annual one-week recertification.176 Furthermore, dogs only need a 70% proficiency level to pass and are not trained to disregard residual odors.177

A number of private organizations also have their own standards for certifying a potential detection dog for the field.178 For example, the United States Police Canine Association’s training program requires a search of only five vehicles.179 Additionally, if the dog receives a minimum score of 70% proficiency it is certified for the field.180 Moreover, if the dog fails, he can eventually re-take the exam.181 The National Police Canine Association requires dogs to

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173 See infra notes 175-190 and accompanying text.
174 See United States v. Ludwig, 641 F.3d 1243, 1251 (10th Cir. 2011) cert. denied, 132 S. Ct. 306 (U.S. 2011) (“Of course, if a credentialing organization proved to be a sham, its certification would no longer serve as proof of reliability.”).
175 See Jardines v. State, 73 So. 3d 34, 60 (Fla. 2011) cert. granted in part, 132 S. Ct. 995 (U.S. 2012) and aff’d, 133 S. Ct. 1409 (U.S. 2013) (comparing the training that was completed by a dog in a previous Florida case, to the rigorous standards of the U.S. Customs Service).
176 Id.
177 Id.
178 See infra notes 179-187.
180 Id.
181 See id. (“Teams failing to successfully certify will not immediately be given a second chance. Multiple Tests of the same team will not be conducted. The team has to undergo a period of retraining, documenting successful performance, before any attempt at re-certification.”).
merely detect three substances out of four, or a 75% accuracy rate to pass.\textsuperscript{182} Finally, the North American Police Working Dog Association’s rules for certification requires an accuracy rate of at least 91.66% for a dog to be declared fit for the field.\textsuperscript{183}

The duration of the training or certification program can also impact the quality of a dog’s alerts in the field.\textsuperscript{184} Some training programs are as short as three weeks, while more extensive training programs can last as long as three months.\textsuperscript{185} For example, one program in Tennessee requires dogs to complete an initial two-month training to become certified.\textsuperscript{186} Whereas less rigorous training programs in Florida certify dogs for the field after an initial 120-hour program.\textsuperscript{187}

The U.S. Customs and Border Protection agency is one of the more rigorous certification programs in the United States.\textsuperscript{188} According to this regimen, dogs must complete a 12-week course.\textsuperscript{189} Most importantly, to be certified as a working dog, the potential detection dog must complete the certification exam at 100% proficiency.\textsuperscript{190}

The aforementioned disparities among various training and certification programs divulge little as to the reliability of drug detection dogs. Accordingly, an endorsement that a dog

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\textsuperscript{182} NATIONAL POLICE CANINE ASS’N, STANDARDS FOR TRAINING & CERTIFICATIONS MANUAL 6 (2011), available at http://www.npca.net/Files/Standards/Standards.pdf (“K-9 Team must locate at least three (3) out of the four (4) finds to certify. This results in a success of seventy-five (75) percent minimum score for certification.”).


\textsuperscript{184} See Bird supra note 155 at 423.

\textsuperscript{185} See id.

\textsuperscript{186} See United States v. Boxley, 373 F.3d 759, 761 (6th Cir. 2004).

\textsuperscript{187} See Florida v. Harris, 133 S. Ct. 1050, 1058 (2013) (“Aldo had successfully completed a 120-hour program in narcotics detection, and separately obtained a certification from an independent company.”).


\textsuperscript{189} See Jardines v. State, 73 So. 3d 34, 60 (Fla. 2011) cert. granted in part, 132 S. Ct. 995 (U.S. 2012) and aff’d, 133 S. Ct. 1409 (U.S. 2013) (looking at the requirements to be a certified dog for the U.S. Customs Service); Bird supra note 155 at 414.

\textsuperscript{190} See Jardines 73 So. 3d at 60; Bird supra note 155 at 414.
\end{flushleft}
is trained or certified at a substandard institution does not effectively reveal whether the dog is successful at discovering contraband in the field.

IV. POLICING FOR PROFIT: CRIMINAL AND CIVIL ASSET FORFEITURE

The danger of allowing unreliable drug-sniffing dogs to establish probable cause extends beyond unconstitutional searches. Dog sniffs have led to a number of other consequences in other areas of the law. Depending on the laws of a particular state, civil asset forfeiture gives law enforcement the green light to seize cash and other property when there is probable cause that the property is associated with criminal activity. Civil asset forfeiture is much more prevalent because unlike criminal asset forfeiture, it does not require that the owner of the property be convicted of a crime. In the fiscal year for 2010, criminal and civil asset forfeiture accounted for nearly 1.8 billion in funds for the Treasury.

Simply put, asset forfeiture forces citizens to turn over property if there is probable cause that those assets helped facilitate illegal activities, such as drug trafficking. Therefore, once a dog signals to his or her handler that illegal substances are present, that alert alone allows officers to seize assets, even if the alleged illegal substance is not subsequently found. Once the property is taken it can take years for the citizen to get their property back through the legal

193 See NORMAN & SANDERS, supra note 191, at 3 (looking at Georgia’s asset forfeiture laws).
194 See id.
195 See STATISTICAL REPORT supra NOTE 3 at 31 (2010), available at http://www.justice.gov/usao/reading_room/reports/asr2010/10statrpt.pdf (reporting that $1,786,567,692 has been deposited into the Department of Justice Assets Forfeiture Fund from criminal and civil cases litigated by United States Attorneys).
196 See POLICING FOR PROFIT, supra note 192 at 15.
197 See id.
system.\textsuperscript{198}

A Georgia case in 2008 aptly illustrates the problems associated with asset forfeiture and unreliable drug detection dogs.\textsuperscript{199} Officers stopped Chris Hunt for speeding on I-75.\textsuperscript{200} The officers performed a search of the vehicle and did not find anything illegal, however, the officers did find $5581 in cash.\textsuperscript{201} The sheriffs then deployed a detection dog that alerted to drug residue on the cash.\textsuperscript{202} Thus, establishing probable cause to confiscate all the money even though Mr. Hunt was never charged with a crime.\textsuperscript{203} Two years later, Mr. Hunt received half of the $5581 back as part of a negotiated settlement.\textsuperscript{204} National Public Radio investigated the incident and discovered more civil asset forfeiture cases from Georgia with similar fact patterns: motorists without previous drug arrests who were forced to forfeit their cash and property when detection dogs simply alerted to residual odors.\textsuperscript{205}

Law enforcement agencies that have a financial incentive to seize assets can exploit man’s best friend to produce a sizeable amount of income for their department.\textsuperscript{206} In essence, the police can use false alerts to confiscate vehicles, cash, and property, even when a subsequent search discovers nothing illegal.\textsuperscript{207} The dog’s alert is treated as conclusive evidence that drugs

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\begin{enumerate}
\item\textsuperscript{198} See id. at 23.
\item\textsuperscript{199} See id. at 36.
\item\textsuperscript{200} See id.
\item\textsuperscript{201} See id.
\item\textsuperscript{202} See id.
\item\textsuperscript{203} See id.; “Unlike criminal asset forfeiture, with civil forfeiture, a property owner need not be found guilty of a crime—or even charged—to permanently lose her cash, car, home or other property.” See id. at 6.
\item\textsuperscript{204} See id.
\item\textsuperscript{205} See John Burnett, Cash Seizures by Police Prompt Court Fights, NATIONAL PUBLIC RADIO (June 16, 2008), http://www.npr.org/templates/story/story.php?storyId=91555835.
\item\textsuperscript{206} See POLICING FOR PROFIT, supra note 192 at 37 tbl. 1 (“Criminologists, economists and legal scholars who have studied forfeiture behavior have found evidence indicating that police departments are taking advantage of lenient forfeiture statutes to ‘pad their budgets.’”).
\item\textsuperscript{207} See id. at 13 (“Eighty percent of persons whose property was seized by the federal government for forfeiture were never even charged with a crime.”).
\end{enumerate}
\end{footnotesize}
are present, when in some cases, no drugs are found.\textsuperscript{208} As such, the improper incentives that exist for police to use dogs as a means to seize property merits stricter requirements for training and certification programs.

V. TRAINING AND CERTIFICATION REFORM

\textit{Harris} simply requires that training or certification be completed at a bona fide organization and makes no mention of what a bona fide organization would encompass.\textsuperscript{209} Thus, despite the decision in \textit{Harris} and the outcry over the reliability of dogs in the real world, outcomes will be much the same as they were pre-\textit{Harris} and lowers courts will continue to rely on rubber stamps from subpar training and certification programs. Consequently, the certification and training processes for detection dogs needs to be in line with more rigorous federal standards to enable courts to rely on a dog’s alert with certainty, no matter where it was completed.

A. U.S. Customs Service Training Model

Law enforcement agencies that employ drug detection dogs should require training or certification at a program that edifies both the handler and the dog together.\textsuperscript{210} One of the most important aspects of a successful program is an emphasis on both the handler and the dog as a team.\textsuperscript{211} Courts can clarify \textit{Harris} by defining a “bona fide organization” using the following program as a model.\textsuperscript{212}

Consider the steps that need to be taken to become a U.S. Customs working dog.\textsuperscript{213} First, dogs are trained and certified by completing a rigorous twelve-week course that has a 50%
failure rate for entering canines. The training course teaches dogs to alert to the scent of a number of illegal substances in a variety of situations. Moreover, the dogs are trained to avoid potential distractions in the field such as food, legal drugs, and prescriptions. Most importantly, unlike a lot of other programs across the nation, Customs dogs are trained to disregard residual scents and odors, which significantly increases the reliability and dependability of an alert. Another feature of the Customs program that manifests the rigor of training is that the certifying exam requires a perfect score from the handler and the dog. If the team erroneously alerts, the dog and handler must undergo corrective training and have a chance to re-take the exam once more. If the team fails again, then the dog is permanently discharged.

After training is complete, the U.S. Customs Service requires handlers to keep records of the dog’s field performance to monitor accuracy in the real world. After one to two months these records are discarded to ensure that the dog’s performance is as current as possible and to avoid relying on past records that may not be indicative of the dog’s current skill.


214 Bird supra note 155 at 414.
215 See id.
216 See id. ("Agents present distractions during training, and reward the dogs when those diversions are ignored.").
217 See id.
218 See id.
219 See id. (explaining that the final exam and annual re-certifications must be completed perfectly to pass, "with no false alerts and no missed drugs").
220 See id. 414-15.
221 See id. at 415.
222 See id. ("Custom Service agents retain a history of a dog's searches, but only for thirty to sixty days. These records are then discarded because a dog's ability can change over a short period of time, thus old records become less probative of skill.").
The comprehensive nature of the Customs Model addresses many of the deficiencies in current training and certification programs. If a training or certification program does not meet a minimum standard similar to the Customs model then courts should define the organization as a “sham.” According to *Harris*, this would allow the defendant to rebut the presumption that the dog completed training or certification at a bona fide organization and instill confidence in an eroding line of jurisprudence. Thus, law enforcement agencies would have to point to other evidence, such as field performance records to verify that the dog is a reliable indicator of probable cause.

**B. Uniformity and Accreditation**

In light of the Supreme Court’s recent decision in *Harris*, a uniform system of certification and training needs to be adopted nationwide to enable courts to establish dogs as reliable indicators of probable cause. The decision in *Harris* will do little to alleviate doubts surrounding drug detection dogs and will lead to futile attacks on subpar certification programs. Moreover, these subpar institutions will continue to act as an authorization for handlers to exploit a dog’s olfactory senses in the field.

The present lack in uniformity among training and certification programs makes it nearly impossible for a defendant to challenge a dog sniff. Consequently, the certification process for drug detection dogs should be standardized and minimum training guidelines that utilize

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223 See *United States v. Ludwig*, 641 F.3d 1243, 1251 (10th Cir. 2011) cert. denied, 132 S. Ct. 306 (U.S. 2011) (“Of course, if a credentialing organization proved to be a sham, its certification would no longer serve as proof of reliability. But the judicial task, we hold, is so limited: to assessing the reliability of the credentialing organization, not individual dogs.”).


225 See *id.*

226 See *id.*

227 See *id.*

228 See *supra* notes 175-190 and accompanying text.
objective and rigorous criteria should be implemented to provide courts with a reliable context for evaluating dog performance. 229 Employing minimum standards for training programs would allow dog training to become a legitimate and accredited endeavor. Thus, allowing courts to trust a given dog, no matter where training was completed.

VI. CONCLUSION

Currently, deficiencies in certification and training programs lead to unacceptable amounts of false positives and undermine the assumption that dogs are infallible indicators of probable cause. Numerous studies have been written on the issue and all point to the same conclusion: dogs are not reliable indicators of probable cause. To remedy the current shortcomings of drug detection dogs, courts should define a bona fide organization using strict standards. By doing so, courts can require dogs to complete instructive and rigorous certification from an accredited program. Thus, raising a meaningful presumption that dogs and their handlers are reliable indicators of probable cause.

229 See supra notes 213-222 and accompanying text.