

BEST IN SHOW: ADMISSIBILITY OF POLICE DOG EVIDENCE.

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I. *Introduction.*

A few years ago, we undertook the defense of a “cold case” and, in the course of that case, had to learn about dogs and their olfactory abilities. Our client was accused of killing his former spouse thirty years prior; the former spouse had gone missing around the time of her divorce from our client and her body had never been found. The state’s case was built, in part, on the testimony of human-remains-detection-dog handlers who would testify to the reaction of their dogs at various locations associated with our client. While a homicide case can be prosecuted without a body, this was a novel theory of prosecution. Here, the state was attempting to prove the element of death through the scent of a decaying body at locations tied to our client. The following article reflects what we learned from the standpoint of the admissibility of dog-sniff evidence.

The use of dogs by police agencies is increasing such that it is, in some categories of olfactory interest, *de rigueur*. Dogs have been and are being trained to detect controlled substances, currency,¹ cell phones,² agricultural contraband, explosives and accelerants, bedbugs³ and even semen.⁴ Dogs are used to track suspects⁵ and rescue those in distress. Increasingly, they are used to find bodies and

¹ *United States v. Funds in the Amount of \$30,670 United States Currency*, 403 F.3d 448 (7th Cir. 2005).

² Ian Frazier, *Man’s Best Friend: Scratch and Sniff*, NEW YORKER (October 19, 2009).

³ Penelope Green, *Dogs That Detect Bedbugs*, NEW YORK TIMES (March 10, 2010).

⁴ *Sperm Sniffer-Dog’s Evidence To Be Used In Trial of Suspected Rapist In World First*, DAILY MAIL ONLINE available at (<http://www.dailymail.co.uk/news/article-2016141/Sperm-sniffer-dog-used-battle-convict-rapists.html>)(last accessed July 19, 2011).

⁵ Andrew Taslitz, *Does the Cold Nose Know? The Unscientific Myth of the Dog Scent Lineup*, 42 HASTINGS L. J. 15 (1990); Innocence Project of Texas, *Dog Scent Lineups, A Junk Science Injustice*

body parts.⁶ As a result, the use of dogs in the criminal justice system is increasing. Understanding dogs and the science behind their reactions will allow courts and counsel to better evaluate, test and challenge such evidence in the crucible of trial.

II. *A Dog Is A Dog—That Makes Her A Tool, Not A Witness.*

When a dog handler testifies about the alert of her canine companion, the question is begged: which is the expert? The handler or her dog?

To a point, the question is answered by analogy. A police officer who scans bedding with a Wood's lamp looking for biological evidence employs a tool and testifies about what she has observed. It is the officer who is both competent to testify and possesses special skill or training requisite to giving opinion testimony.⁷ Another who tests for a controlled substance with a field kit employs a tool and testifies about what he has observed. Again, it is the officer, not the tool, which is possessed of the requisite competence and training.

The dog is the tool.

However, while tools such as a Wood's lamp and a field kit are mass-produced to specification, dogs are not. Every dog is unique. They are not self-validating. Even the most well bred and carefully trained dog may give rise to the lament: "that dog don't hunt."

Unique too is every handler. The handler must have specific knowledge of the singular animal. While the relationship of an officer to his field kit is nothing of note, the relationship between a dog handler and her tool is one of a kind.

(September 21, 2009), available at <http://ipoftexas.org/wordpress/wp-content/uploads/2009/09/Dog-Scent-Lineups-Texas.pdf>); *Winfrey v. State*, 323 S.W.3d 875 (Tex. Crim. App. 2010); *Winston v. State*, 78 S.W.3d 522 (Tex. Crim. App. 2002).

⁶ Andrew Rebman et al., *Cadaver Dog Handbook: Forensic Training and Tactics for the Recovery of Human Remains*, CRC Press (2000).

⁷ See Rules 601, 602 & 702, FED. R. EVID.; WIS. STAT. §§ 906.01, 906.02 & 907.02. *People v. Centolella*, 305 N.Y.S.2d 279 (1969) (Bloodhound tracking evidence "falls into the category of opinion evidence rather than hearsay. The animals are not witnesses against a defendant any more than microscope or a spectrograph").

When a reagent turns blue, such as in Scott Test (cobalt thiocyanate), to indicate the presence of cocaine in a sample or when the radar gun produces a reading showing the speed of an automobile, the results are capable of being read the same way by anyone viewing them. The reaction of a dog is not. It must be interpreted. Was the bark (an active alert) or the dog's sitting (a passive alert) a response to having detected something, or a response to an outside influence (the passing of a cat or the need for a rest)? And, unlike electronic and chemical devices, even a great dog can have a cold, an allergy or just a bad day. So too, the dog's handler.

Resultantly, the import of a purported alert is dependant on the accuracy of the dog (the tool) and of the handler (the interpreter); both in general and at the time of the search.

III. *Admissibility Of Dog Sniff Evidence Begins With Dog's Reliability.*

The prosecutor who seeks a warrant to search with a dog, the judge who considers signing such a warrant, and the defense lawyer dealing with the result of the search cannot properly perform his duties absent sufficient knowledge of the dog's and the handler's reliability, individually and as a team.

The analysis of reliability necessitates a rudimentary understanding of how and what a dog can smell. How and what a dog can smell are still the subject of research. What is known is the product of science, for which there is a relative paucity of publication, and of anecdote, for which there is a conflicting plentitude.

A. *Dog's Reliability Is Premised On Comprehension Of What Dog's React To; More Anecdote Than Science.*

It is difficult, if not impossible, to distinguish the source of scent which causes a dog to alert. Alerts whether subtle or demonstrative are binary, not empirical.

Dogs react to smells at a threshold well below that of humans.⁸ Some studies place a dog's capacity to detect a particular odor at a concentration of 500 parts per

⁸ Taslitz, *supra*, note 5.

trillion.⁹ Dogs detect molecules which have a scent, and can be trained to detect a specific molecule or a combination of molecules.¹⁰ There are limitations to such training.

Take, for example, a dog trained to detect human remains (oft referred to as a “cadaver dog,” an imprecise term). It can be trained to detect either putrescine or cadaverine, two aptly monikered molecules which are specific to decaying carbon based life forms. But while a deceased and thus decaying human gives off such molecules, so too does decaying vegetation. On the other hand, handlers have been known to train human remains dogs with human remains. In that case, however, one cannot tell whether the dog has reacted to a specific molecule or to a combination of molecules. That is of import, because parts of the body decay at different rates; and the cocktail of molecules released by the cadaver may differ from one day to another. So too, the body may decompose at different rates depending on the environmental conditions. A dog trained on one combination of molecules may not react to a different combination even though a body is present in the vicinity. Moreover, the dog may react to hair, nails, flesh and/or blood, or their remnants, which are shed by the living as well as by the dead. There is an inverse relationship between the number of substances which a dog has been trained to identify with particularity, and the specificity of the dog’s alert.

Another example involves canines trained to detect controlled substances. One scientist has developed a pseudo-scent for cocaine.¹¹ It is the replication of a single molecule specific to cocaine. Yet many handlers continue to train their dogs on the real item. But pure cocaine is an anesthetic. It cannot be accurately detected because it can interfere with the dog’s ability to smell. Cocaine, however, is seldom

⁹ J.M. Johnson, Institute for Biological Detection Systems, Auburn University, *Canine Detection Capabilities: Operational Implications of Recent R&D Findings*, 1 (1999).

¹⁰ Allison Curran et al., *The Differentiation of the Volatile Organic Signatures of Individuals Through SPME-GC/MS of Characteristic Human Scent Compounds*, 55 J. FORENSIC SCI. 50 (January 2010); David Hudson et al., *The Stability of Collected Human Scent Under Various Environmental Conditions*, 54 J. FORENSIC SCI. 1270 (November 2009).

¹¹ Sigma Pseudo™ is the trade-name for the scent used for training police dogs. Manufactured by Sigma Aldrich, the manufacturer sells specific scent formulations for training on controlled substances (cocaine, heroin, LSD and marijuana). Also, for recovery of human bodies four specific formulations are produced: corpse scent 1 (for early detection), corpse scent 2 (post-putrefaction), drowned victim scent, and distressed body scent (trauma and fear formulation).

pure. It is almost always cut with one or more chemical agents. The resulting mixture makes it difficult, if not impossible, to discern whether a dog so trained has reacted to the cocaine, to methyl benzoate, aspirin or ordinary corn starch (common cutting agents), or to a combination thereof. What molecules drug dogs actually alert to is not fully understood.¹²

Just how scent is carried to the dog is not known to a reasonable degree of scientific certainty. Decaying human remains, for example, release gasses which contain molecules which a dog can smell. Whether the animal detects the molecules below the surface of the ground, at the surface, above the surface, or any combination of the three is the subject of opinion premised more upon anecdotal than empirical evidence. Research is currently underway. Knowing the answer is of practical concern. If the dog detects molecules above the surface of the ground, wind and weather can affect the effort. If below, knowing what else lies, or has lain, below (e.g., an old Indian mound) is of import. If at the surface, the interval between a suspected event and the sniff is a period during which the ground can be affected by unrelated passers by or events (e.g., an automobile crash in which someone was injured).

Of great controversy, too, is the notion of residual odor for which, again, anecdotal evidence far exceeds empirical. Some believe that a dog can smell molecules even when the source of them is not present. Think of the elevator in which you are the only occupant, but the smell of cheap perfume has lingered. Molecules have half-lives.¹³ To determine whether an alerting dog has actually detected such an odor, and that the alert is not a false positive, one must know the molecules to which the dog alerts, what the half-life of those molecules are, and the length of the interval between the presence of the molecules' source and the time of the alert. Except in a controlled setting, this is almost always impossible. Thus, what is of general acceptance in the "dog sniff" industry, is that an alert which is not

¹² Kenneth G. Furton et al., *Odor Signature of Cocaine Analyzed by GC/MS and Threshold Levels of Detection for Drug Detection Canines*, 14 CURRENT TOPICS IN FORENSIC SCI. 329, 329 (1997); Kenneth G. Furton et al., *Field and Laboratory Comparison of the Sensitivity and Reliability of Cocaine Detection on Currency Using Chemical Sensors, Humans, K-9s and SPME/GC/MS/MS Analysis*, Investigation and Forensic Science Technologies 41, 42 (Kathleen Higgins ed., 1999).

¹³ Methyl benzoate diffuses so that only 10% remains after 2 hours. Furton et al., *Odor Signature of Cocaine, supra*, at 332. Cadaverine and putrescine have a half-life of approximately 2 hours and "persistence times" of about 574 hours according to the United States Environmental Protection Agency.

corroborated by the presence of the source (e.g., a body or drugs) is a false alert. Nonetheless, there have been attempts to prove the existence of the source merely from the fact of a dog's alert.¹⁴ Such cases, however, do not shed light on whether the alert has evidentiary value.

Not all molecules which a sniffing dog is trained to detect come from crimes or contraband. As noted previously, a human remains dog which is trained on human remains, rather than a specific molecule, can react to hair, blood, flesh and fingernails from a *living person*.

Similarly, a drug dog, trained to detect cocaine, can react to perfectly lawful objects on which cocaine residue is found. Most commonly, currency. This observation has led to a dichotomy of opinion. One view is that all United States currency is contaminated with controlled substances.

It has been estimated that one out of every three circulating bills has been involved in a cocaine transaction. Cocaine and other drugs attach to the oily surface of currency in a variety of ways. Each contaminated bill contaminates others as they pass through cash registers, cash drawers, wallets, and counting machines. If, in fact, a substantial part of the currency in this country will cause a trained dog to alert, then the alert obviously has no evidentiary value.¹⁵

If one adopts this view, then a drug-detecting dog's alert on currency is unreliable and does not manifest probable cause that the currency or the owner was involved in drug trafficking.

¹⁴ See, e.g., *Jacobson v. \$55,900 in United States Currency*, 728 N.W.2d 510 (Minn. 2007), in which the court held that the trial court committed clear error by relying on dog sniff as substantive evidence that cash found in a safe was connected to drug trafficking (cash was deposited into bank before testing could occur). The substantive use of alert is based on concept of residual odor; a concept that remains controversial among scientists.

¹⁵ Smith, 1 *Prosecution & Defense of Forfeiture Cases* § 4.03, P.4-82.3 (footnotes omitted). The author cites experts finding that 70-97% of all currency is contaminated with cocaine. *Id.* at § 4.03, P4-82.1-4-88.2, cited in Congressional Record H2049 April 11, 2000; see also Charles Mesloh et al., *Sniff Test: Utilization of the Law Enforcement Canine In the Seizure of Paper Currency*, 52 J. FORENSIC IDENT. 704 (2002); and Adam Negrusz et al., *Detection of Cocaine on Various Denominations of United States Currency*, 43 J. FORENSIC SCI. 626 (1998)(reporting finding cocaine in amounts up to 10 micrograms per bill of randomly selected general circulation currency).

The opposing view is that the contaminated money theory lacks scientific validity.¹⁶ The proponents of this view cite five flaws with the former theory.

1. Studies attempting to determine the extent and quantitative level of cocaine contamination in a particular geographic area must obtain a sufficient number of different denomination bills ensuring that a representative sample of currency in circulation is obtained.
2. Studies should be carried out on a regular basis to account for constant turnover of paper bills and the resulting variability of contamination as a function of time.
3. Studies need to confirm the threshold, range and specificity of canine to detect volatile chemicals associated with cocaine.
4. Quantitative levels of volatile chemicals such as methyl benzoate, have never been reported on paper currency.
5. Drug detector dogs have been shown repeatedly not to alert to circulated currency; this is an issue with respect to proper training and documentation of the drug detector dog.

Anecdotal evidence of dogs which detect human scent is rife; but science and scientific method raise questions for which there is insufficient empirical evidence to reach a conclusion. Consider the blood hounds which tracked Paul Newman's character, Luke Jackson, an escapee in *Cool Hand Luke* (1967). Having been given an item of clothing which the escapee had worn, the dogs set out to follow his trail. Human scent is a combination of volatile to semi-volatile compounds which differ in ratio from person to person, along with additional compounds which vary between individuals.¹⁷ The premise of the tracking dog is the assumption that each human has a unique odor profile which remains constant over time. Was the fugitive's profile indeed unique? Was it constant over time, or did his running away

¹⁶ Furton et al., *Novel Sample Preparation Methods, supra*.

¹⁷ Allison Curran, et al., *Analysis of the Uniqueness and Persistence of Human Scent*, FORENSIC SCI. COMM. 7(2) (April 2005); Rex Stockham et al., *Survivability of Human Scent*, FORENSIC SCI. COMM. 6(4) (October 2004).

as fast as he could affect it? Did his shirt carry the entire profile? If so, was all of that profile detected and recalled, or just a part? If just a part, was that part unique to the runaway? In the film, the fugitive's identity was known both before and after his run. But such dogs have been used to track unknown perpetrators whose identity was established solely by the dog's alert.¹⁸

B. How A Dog Reacts – And How The Handler Interprets The Reaction – Is Part Of The Reliability Equation.

Equally as important as understanding what a dog can smell, and how it smells, is understanding how it alerts.

Alerts are a trained response to what is hopefully a target odor. Most often, dogs are trained by reward which is conferred when the dog reacts in a specific and desired way to a known stimulus. Alerts are either active (e.g., barking, jumping) or passive (e.g., sitting, lying down). There are four classifications of alert:

- True Positive: Dog alerts; item of evidentiary value is found.
- False Positive: Dog alerts; nothing of evidentiary value is found.
- True Negative: Dog fails to alert; nothing of evidentiary value is found.
- False Negative: Dog fails to alert; item of evidentiary value is found nevertheless.

False positives are a reality.¹⁹ That is the reason that a true positive requires corroboration. The alert does not take the place of further testing, examination or

¹⁸ See, e.g., *Brooks v. People*, 975 P.2d 1105 (Co. 1999), *Trejos v. State*, 143 S.W.2d 30 (Texas 2007), *Clark v. State*, 781 A.2d 913 (Md. 2002), *State v. White*, 676 S.E.2d 684 (S.C. 2009)(four elements to admissibility based on reliability of dog), *People v. Cruz*, 643 N.E.2d 636 (Ill. 1994), *Brafford v. State*, 516 N.E.2d 45 (Ind. 1987), *State v. Storm*, 238 P.2d 1161 (Mont. 1952), *Brott v. State*, 97 N.W 593 (Neb. 1903).

¹⁹ *Illinois v. Caballes*, 543 U.S. 405, 412 (2005)(Souter, J. dissenting)(false positives may occur anywhere between 12% and 60% of the time); *State v. Loucks*, 656 P.2d 480 (Wash. 1983).

investigation.²⁰ Evidence of an alert absent corroboration can be misleading and, in a court setting highly prejudicial.²¹

Only true positives and true negatives ought be rewarded. But this means that there can occur a substantial delay between the alert and the reward while there is a search for corroboration. The dog must be capable of connecting its alert (or in the case of a true negative, its lack of alert) to the delayed reward; and, similarly, in the case of a false positive or false negative, to the lack of reward.

The dog's usefulness is a product of the skill of its handler. Its reliability, thus, is a function of the handler's interpretation. Some courts have likened a search dog to an informant.²² As with a human informant, a handler can unconsciously cue a dog.²³ Indeed, there have been recorded instances of dishonest handlers having consciously done so.²⁴ Too, the handler's interpretation is necessarily subjective.

²⁰ See, e.g., Nat'l Fire Protection Assoc., *Standard 921 Guide for Fire & Explosion Investigation* (2004 Ed.) (Proper objective of the use of dog team is to assist with the selection of samples that have higher probability of laboratory confirmation; dog should be used in conjunction with, and not in place of fire investigation methods).

²¹ 1 A. J. Wigmore, *Evidence* § 177, at 1852 (1983) ("In actual usage, evidence of the conduct of an animal is apt to be highly misleading, to the danger of the innocent men ... the very limited nature of the inference possible is apt to be overestimated--a consequence dangerous when the jurors are moved by local prejudice"); 1968 American Bar Association statement on use of dogs, cited in Andrew Taslitz, *Does the Cold Nose Know? The Unscientific Myth of the Dog Scent Lineup*, 42 HASTINGS L. J. 15 (1990).

²² *Harris v. State*, 2011 WL 1496470, *9, __ So.3d __ (Fla. 2011).

²³ Lisa Lit et al., *Handler's Beliefs Affect Scent Detection Dog Outcomes*, ANIM. COGN. (January, 2011). A response to Lit's study may be found at Membership Commentary, Scientific Working Group on Dog and Orthogonal detector Guidelines (available at www.swgdog.org).

In the case mentioned at the outset of this article, police attempted to determine whether a human remains detection dog could detect residual odor from a decomposing body they suspected had been transported some time earlier in a rental car. The rental car, a subcompact, was placed in a police parking garage that was filled with various police vehicles. The rental car was the only non-police vehicle, the only subcompact, and had out of state license plates, facts which the dog handler admitted to having noticed. A film of the event showed the dog passing by the subject rental car without alert until the handler drew the attention of the dog to it again.

²⁴ *United States v. Anderson* (E.D. Mich. Case No. 2003 CR 80602) (dog handler planted bones and pretended to discover them during a search for a missing person). The very same handler and

How, then, does one assess the dog's reliability?

Good handlers maintain a log in which they document the dog's history from birth. It addresses the dog's training, health, and performance.²⁵ With respect to training, it ought reveal and describe each training session and identify any certifications which the handler and dog may have earned.²⁶ With respect to performance, the log should document every effort of the dog to detect an object or substance: what the purpose of the activity was, where it occurred, what the weather conditions were, what the health of the dog was at the time of the activity, what external conditions existed which could have affected the dog's perception (e.g., the direction of the wind; whether, in the case of a human remains dog for example, the search occurred near a funeral home), whether the dog alerted and whether the alert was corroborated. And, like any other tool employed by the police, the dog's skills are subject to inspection and testing by litigants. The accuracy of the handler's records is critical to an assessment of the dog's reliability.²⁷ A sloppy log, or the lack of one, reveals much.

From the log and from independent testing of the dog, one can arrive at some

dog, "Eagle," was used by the State in a homicide case in Sauk County. *State v. Kupaza*, 264 Wis. 2d 892, 664 N.W.2d 126 (any error in admitting evidence relating to the dog was harmless).

²⁵ See, e.g., guidelines promulgated by SWGDOG.org for each type of canine used by police; Robert C. Bird, *An Examination of the Training and Reliability of the Narcotics Detection Dog*, 85 KY. L. J. 405 (1997)(noting some of the empirical evidence showing instances of low accuracy by dog inspections and examining the factors that cause such errors).

²⁶ There are certifications, and then there are certifications. One assessing the reliability of a dog must pay attention to the source of certification. Are there dog enthusiasts who set up a certification program run from their kitchens and executed in their back yards? Unfortunately, yes. Is a single certification in the dog's life sufficient to assure reliability? No. Dog's age and, like humans, their physical abilities decline. Reassessment must occur with regularity. One must also pay attention to the certification curriculum to ensure that it is comprehensive and that, for example, it employs double blind testing procedures.

²⁷ See Douglas Heller et al., *Observations and Recommendations Regarding Training Record keeping and Deployment of Explosive Detection Canine Teams* (available at <http://www2.fiu.edu/~ifri/Observations%20and%20Recommendations.pdf>)(accessed July 29, 2011).

estimation of the dog's error rate.

Knowing the dog's error rate is important when it relates to the issuance of a search warrant, for example. There is a difference in reliability if one knows that the dog's alerted correctly (true positive) during its last search and learning later that while the dog's last positive alert uncovered contraband, the dog's last 25 alerts (whether in training or on-the-job) did not uncover contraband. The amount of false alerts (whether false positive or true negative) define the reliability of the dog. The failure to consider such information may affect later review of a search warrant that was premised on a dog's alert.²⁸

C. Math Shows Dogs Get It Wrong (Some Of The Time).

As Mark Twain pointed out, there are lies, damn lies and statistics. All the same, mathematical equations may help in evaluating the reliability of a certain dog. Bayes Theorem offers a mathematical basis to assess probable cause. It demonstrates that a 90% success rate does not mean that there is a 90% chance that the subject vehicle will contain a controlled substance; Bayes Theorem accounts for false positives.²⁹

Repeated alerts without corroboration do not implicate the Doctrine of Chances. Nor do the repeated uncorroborated alerts make more likely that contraband was associated with the location of the alert. Just the opposite is true.

A coin flip offers an easy example. The chance of getting tails in one flip is

²⁸ See *Franks v. Delaware*, 438 U.S. 154 (1978); *State v. Mann*, 123 Wis. 2d 375, 367 N.W.2d 209 (1985).

²⁹ Richard E. Myers II., *Detector Dogs and Probable Cause*, 14 GEO. MASON L. REV. 1 (2006). Myers notes that "The use of Bayesian analysis in court has been the subject of some controversy, especially where the proponent of evidence wants to use Bayes' Theorem to show that a particular piece of evidence has extraordinary probative value." See Michael O. Finkelstein & William B. Fairley, *A Bayesian Approach to Identification Evidence*, 83 HARV. L. REV. 489 (1970); Kenneth S. Broun & Douglas G. Kelly, *Playing the Percentages & the Law of Evidence*, 1970 U. ILL. L. REV. 23; Lawrence H. Tribe, *Trial By Mathematics: Precision & Ritual in the Legal Process*, 84 HARV. L. REV. 1329 (1971). Bayes Theorem and how it works is explained by Eliezer Yudkowsky, *An Intuitive Explanation of Bayesian Reasoning: Bayes Theorem for the Curious and Bewildered; an Excruciatingly Gentle Introduction*, <http://yudkowsky.net/bayes/bayes.html>.

50%, but in 3 flips the chance of getting tails on all three decreases to 12.5%. This is commonly known as the “product rule.” “[T]he product rule means that the probability of two events occurring together is equal to the probability that event one will occur multiplied by the probability that event two will occur.”³⁰ The classic illustration is coin tossing; the probability of finding “heads” on two successive coin tosses is equal to the probability of heads on the first toss, 50%, times the probability of heads on the second toss, 50%, equaling 25%.³¹

IV. *The Legal Basis For The Admissibility Of Dogs: Police’s Best Friend.*

The United States Supreme Court first addressed dog sniff evidence in *United States v. Place*, 462 U.S. 696, 707 (1983). *Place* involved a dog sniff of a piece of luggage, and found it a limited intrusion for the purpose of accurately determining whether the luggage contained contraband. Thus, the Court held, the sniff was not a search within the meaning of the Fourth Amendment. Though the Court’s statement about the sniff was not central to the issue presented, it established doctrine premised on three principles the Court attributed to dog sniffs: (1) a dog sniff is a minimal intrusion; (2) a dog sniff was solely for the presence of contraband; and (3) a dog is highly accurate.

No authority was offered for these conclusions by Justice O’Connor. Justice Blackmun’s dissent was critical of the court for its “haste in resolving the dog sniff issue” which had not been fully briefed by the litigants.

Twenty-one years later the Court once again addressed dog sniff evidence.³² The majority opinion recycled *Place* to conclude that a

dog sniff conducted during a concededly lawful traffic stop that reveals no information other than the location of a substance that no individual

³⁰ R. Freund & W. Wilson, *Statistical Methods* 62 (1993).

³¹ R. Johnson, *Elementary Statistics* 143 (4th ed. 1984); *Armstead v. State*, 342 Md. 38, 69-70, 673 A.2d 221 (Md. 1996.)

³² *Illinois v. Caballes*, 543 U.S. 405 (2005).

has any right to possess does not violate the Fourth Amendment.³³

Justice Souter was critical of the reliability of dogs and challenged the Court's underlying assumption that dogs are infallible. He noted that studies show false positives occur in dog alerts anywhere from 12.5% to 60% of the time.³⁴

A. Chewing On The Myth Of The Infallible Dog.

As the use of sniffing dogs by public agencies and private interests has become more prolific, and as litigants' attorneys have necessarily begun to learn about sniffing dogs, courts have begun to question the notion of a sniffing dog's infallibility.

Consider the Florida Supreme Court's most recent case on this point. The Court questions

When will a drug-detection dog's alert to the exterior of a vehicle provide an officer with probable cause to conduct a warrantless search of the interior of the vehicle? That is the question in this case, and the answer is integral to the constitutional right of all individuals in this

³³ *Id.* at 409.

³⁴ 543 U.S. at 412. Justice Souter was skeptical of the legal justification dog sniff evidence decided in *Place* as well as the implications for the Fourth Amendment.

What we have learned about the fallibility of dogs in the years since *Place* was decided would itself be reason to call for reconsidering *Place's* decision against treating the intentional use of a trained dog as a search. The portent of this very case, however, adds insistence to the call, for an uncritical adherence to *Place* would render the Fourth Amendment indifferent to suspicionless and indiscriminate sweeps of cars in parking garages and pedestrians on sidewalks; if a sniff is not preceded by a seizure subject to Fourth Amendment notice, it escapes Fourth Amendment review entirely unless it is treated as a search. We should not wait for these developments to occur before rethinking *Place's* analysis, which invites such untoward consequences.

Illinois v. Caballes, 543 U.S. 405, 410-11 (2005).

state to be protected from unreasonable searches and seizures.³⁵

[...]

We conclude that when a dog alerts, the fact that the dog has been trained and certified is simply not enough to establish probable cause to search the interior of the vehicle and the person.³⁶

The Oregon Supreme Court concurred.

An alert by a properly trained drug-detection dog can provide probable cause to search. Whether such an alert does so in a particular case will depend on an individualized assessment of the totality of the circumstances known to police that bear on the dog's reliability in detecting drugs.³⁷

B. Certifications May Aid Reliability Determination.

In cases of alerts by trained police dogs (and involving bloodhounds and human remains detection dogs in particular) the issue is generally the reliability and relevance of the alerts.³⁸ But this task is complicated because there exists no standard threshold.³⁹

³⁵ *Harris v. State*, 2011 WL 1496470, *1, __ So.3d __ (Fla. 2011).

³⁶ *Id.* at *9; *accord*, *State v. Foster*, 350 Or. 161, 163, 252 P.3d 292 (2011).

³⁷ *State v. Helzer*, 350 Or. 153, 156, 252 P.3d 288 (2011). *See also* Jeffrey Weiner & Kimberly Homan, *Those Doggone Sniffs Are Often Wrong: The Fourth Amendment Has Gone To The Dogs*, THE CHAMPION (April 2006). *Contra*, *Jardines v. State*, 2011 WL 1405080, __ So.3d __ (Fla. 2011).

³⁸ *See generally*, cases cited in note 18, *supra*.

³⁹ *See, e.g.*, *United States v. Outlaw*, 134 F. Supp. 2d 807, 813 (W.D. Texas 2001) (“The possibility of error exists and in limited circumstances, the error may be of such magnitude that a dog alert is not sufficient to establish probable cause. For instance, it stretches the bound of jurisprudential imagination to believe that a positive alert by a untrained dog or by a dog with an extensive history of false positive alerts could be relied upon to establish probable cause without raising Fourth Amendment concerns”); and *United States v. \$10,700 in United States Currency*, 258 F.3d 215, 230 (3d Cir. 2001) (declining to determine the evidentiary weight to be accorded dog alerts

In response, some states have adopted laws requiring certification of dogs to eliminate challenges to probable cause. South Dakota requires certification (and annual re-certification) of dogs used in drug detection; police may not use a dog to assist in drug detection unless dog is certified.⁴⁰ Yet certification does not necessarily mean that dogs are reliable.⁴¹

Even when certification exists, courts have expressed some skepticism about reliability: not all alerts are equal. That is, an alert does not necessarily equal probable cause. In *Harris v. State*, the Florida court concluded that

when a dog alerts, the fact that the dog has been trained and certified is simply not enough to establish probable cause to search the interior of the vehicle and the person. We first note that there is no uniform standard in this state or nationwide for an acceptable level of training, testing, or certification for drug-detection dogs. In contrast to dual-purpose drug-detection dogs, which are apparently certified by FDLE, no such required certification exists in this state for dogs like Aldo, who is a single-purpose drug-detection dog.

In the absence of a uniform standard, the reliability of the dog cannot be established by demonstrating only that a canine is trained and certified. “[S]imply characterizing a dog as ‘trained’ and ‘certified’ imparts scant information about what the dog has been conditioned to do or not to do, or how successfully.” In other words, whether a dog has been sufficiently trained and certified must be evaluated on a case-by-case basis.⁴²

to currency because the government had not presented evidence concerning dog’s training or its degree of accuracy in detecting narcotics on currency).

⁴⁰ S.D. Codified Laws § 23-3-35.4(1).

⁴¹ *State v. Wright*, 2009 WL 2411298 (Ariz. Ct. App. 2009) (unreported) (certification of dog alone does not substantiate that the dog is able to discriminate between vehicles that contained illegal drugs and those that did not; certification process did not eliminate inadvertent or unconscious cuing by handler; reliability is still an issue for admissibility).

⁴² 2011 WL 1496470, *9, __ So.3d __ (Fla. 2011)(internal citations omitted). *Accord*, *State v. Foster*, 350 Or. 161, 163, 252 P.3d 292 (2011); *State v. Helzer*, 350 Or. 153, 156. 252 P.3d 288 (2011).

Three differing approaches to reliability were recognized by the South Dakota Supreme Court.⁴³

1. Courts deem a dog reliable solely because the evidence shows that the dog was trained and certified to detect controlled substances.
2. Courts consider a dog's training and certification to be *prima facie* evidence that the dog is reliable. Burden then shifts to the defense to produce evidence to challenge dog's reliability.
3. Courts examine a dog's records, along with evidence that the dog is trained and certified to be considered as factors in determining reliability.

It is not solely the dog's reliability that is brought to question, but also the handler's and, then, the reliability of the team.

A handler's reliability has been aptly analogized to admissibility of polygraph evidence because of the subjectivity of the handler's manipulation of the dog and interpretation of the dog's acts.⁴⁴ The lack, or paucity of a handler's documentation of her activity with her dog can make evaluation of the handler's reliability

An alert by a properly trained drug-detection dog can provide probable cause to search. Whether such an alert does so in a particular case will depend on an individualized assessment of the totality of the circumstances known to police that bear on the dog's reliability in detecting drugs. Those circumstances usually will include, but are not limited to, the dog's and its handler's training, certification, and performance in the field. The State has the burden, upon proper challenge by the defendant, to demonstrate that the dog's alert was sufficiently reliable to provide probable cause to search. *See also* Lewis Katz & Aaron Golembiewski, *Curbing The Dog: Extending The Protection of The Fourth Amendment to Police Drug Dogs*, 85 NEB. L. REV. 735, 757 (2007).

⁴³ *State v. Nguyen*, 2007 SD 4, ¶¶ 15-16, 726 N.W.2d 871.

⁴⁴ *See Jacobson v. \$55,900 in United States Currency*, 728 N.W.2d 510 (Minn. 2007); *United States v. Trayer*, 898 F.2d 805, 809 (C.A.D.C. 1990)("[W]e are mindful that less than scrupulously neutral procedures, which create at least the possibility of unconscious 'cuing,' may well jeopardize the reliability of dog sniffs"); *see also State v. Taylor*, 395 A.2d 505 (N.H. 1978); *State v. Cheatham*, 458 S.W.2d 336 (Mo. 1970); *State v. Green*, 26 So.2d 487 (La. 1946); *Buck v. State*, 138 P.2d 115 (OK Crim. App. 1943); *Copley v. State*, 281 S.W. 460 (Tenn. 1926).

problematic, if not impossible.

In jurisdictions where certification alone is not sufficient to establish a dog's reliability courts have looked to a variety of factors: the objectivity of the search in question; the qualifications of the particular handler; and the qualifications of the particular dog. With respect to the latter factor, courts have looked to the breed of the dog to see whether it is characterized by an acuteness of scent and power of discrimination.⁴⁵ They have examined the training of the particular dog to see whether it has been effectively taught to smell a target scent. And, most importantly, whether the whole of the dog's experience has demonstrated its reliability. Certification is encompassed within this last element which is a broader search for corroboration of the dog's alerts, but so too are the dog's documented error rate and independent testing.

D. Dogs And The Rules Of Evidence.

Courtroom testimony of the handler is restricted by rules of evidence governing competence. An expert is competent if possessed of the requisite knowledge, experience, skill, training or education in a relevant area of expertise.⁴⁶ Thus, with proper foundation, she may testify about her qualifications and that of the dog (e.g., that she trained the dog in question; that the dog was trained to alert; to what the dog was trained to alert; what the dog's history of searches has been). She may testify about what she observed about the dog's behavior during the search in question, including whether the dog alerted. But absent more specialized qualification, she may not testify about the meaning of the alert. Nor may she testify in a manner which purports to channel the dog's thoughts. Most handlers are not qualified to inform a jury of the purported difference between primary and residual odor, nor of a scientific basis of how dogs smell (chemical, biologic and neurologic processes).

V. Conclusion.

Scientists are paying more attention to learning the how and why of a dog's ability to smell; and about the composition of objects which trainers wish their dogs

⁴⁵ See, e.g., *Trejos v. State*, *supra*.

⁴⁶ See Rule 702, FED. R. EVID; WIS. STAT. § 907.02.

to detect. However, the use of dogs by police agencies and private contractors is accelerating at a rate faster than the research is being performed. This is, resultantly, a time when practitioners and judges ought proceed with caution. The temptation to generalize based on anecdote rather than rely upon scientific method is great because of the time which it takes to litigate each dog's qualifications on a case-by-case basis. But the inability to generalize is the necessary consequence of the employ of a unique dog in each case. Moreover, holding a dog's paws to the flame will, in short time, cause the handlers to strictly adhere to protocol and better document their dogs' performance. This will produce more accurate results and will ease a court's burden in assessing a dog's reliability in the long term.

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