

**THE POST-CONVICTION REMEDY FOR PIT BULLS:
WHAT TODAY’S SCIENCE TELLS US ABOUT BREED-
SPECIFIC LEGISLATION**

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*In dealing with individuals, whether they are dogs or men, we need to remember that each is a unique collection (or population) of genetic traits, not a type representing a race.*¹

One of the first cases in the 1980s to address the constitutionality of regulating a dog breed as a means to regulate behavior, considering the dilemma in attempting to identify a dog by breed, chose the famous Justice Potter Stewart quote regarding pornography: “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it.”²

For years cities facing constitutional challenges fell to the “I know it when I see it” defense, and reasonably so, since at the time there was no way to confirm, deny, or scientifically test visual identification of a breed of dog based solely on the way it looked.³ Criminal courts faced a similar dilemma before the advancement of deoxyribonucleic acid (DNA) testing to identify the perpetrator of a crime, relying heavily on eyewitness identification.⁴

1. JOHN PAUL SCOTT & JOHN L. FULLER, GENETICS AND THE SOCIAL BEHAVIOR OF THE DOG 355 (1965).

2. *Hearn v. City of Overland Park*, 772 P.2d 758, 762 (Kan. 1989) (quoting *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964)).

3. *See Am. Dog Owners Ass’n v. City of Lynn*, 533 N.E.2d 642, 646 (Mass. 1989).

4. *State v. Henderson*, 27 A.3d 872, 877–78 (N.J. 2011).

Today, in both cases, studies repeatedly show that visual identification of a dog by breed is unreliable and that there is a troubling lack of reliability in eyewitness identifications in criminal cases.⁵ We now know that eyewitness misidentification is the leading cause of wrongful convictions across the country.⁶ Likewise, canine DNA testing has led to the exoneration of dogs once thought to be a certain breed and banned from a city.⁷ For dogs, the issue is larger than a single incident, as cities across the country prohibit dogs that appear to be a certain breed.⁸

Breed-specific legislation, or breed discriminatory legislation, is an ordinance, policy, or regulation that targets dogs based on their breed or appearance.⁹ The intent behind breed-specific legislation varies, but the assumption is that dogs of certain breeds behave dangerously and banning or regulating those breeds keeps the community safer.¹⁰ Currently, the targeted breed is a “pit bull.”¹¹

Today, veterinarians, animal behaviorists, and public safety epidemiologists who research “pit bull” issues, conclude that breed (or phenotype) is not the culprit of behavior it was once thought to be.¹² While subject matter experts moved on to recommending legislation and policy that addresses the environment, management, and supervision of dogs,¹³ court precedent on the constitutionality of breed-specific

5. *Id.*

6. *Id.* at 885 (quoting *State v. Delgado*, 902 A.2d 888, 895 (N.J. 2006)).

7. See Exhibits to *Amicus Curiae* Brief of the Humane Society of the United States in Support of Appellants-Petitioners & in Support of Reversal Ex. F, at 1, *Dias v. City of Denver*, 567 F.3d 1169 (10th Cir. 2009) (No. 08-1132); David Clouston, *DNA Testing in Salina Saves Pet*, ASSOCIATED PRESS, Sept. 11, 2009.

8. Dana M. Campbell, *Pit Bull Bans: The State of Breed-Specific Legislation*, 26 GPSOLO, no. 5, 2009, at 36, 38. See also, KAREN DELISE, *THE PIT BULL PLACEBO: THE MEDIA, THE MYTHS AND POLITICS OF CANINE AGGRESSION* 103 (2007); Ledy Vankavage & Joan Schaffner, *Ordinances Targeting Reckless Owners and Damaged Dogs: Is Canine Profiling Effective?*, in *A LAWYER'S GUIDE TO DANGEROUS DOG ISSUES* 8 (Joan E. Schaffner ed., 2009).

9. *Breed-Specific Legislation*, AM. SOC'Y FOR PREVENTION CRUELTY ANIMALS, <http://www.aspc.org/animal-cruelty/dog-fighting/what-breed-specific-legislation> (last visited Oct. 10, 2016).

10. Campbell, *supra* note 8, at 37.

11. *Id.*

12. See generally Plaintiff's Response to Defendants' Motion for Summary Judgment & Recitation of Legal Authority in Support Ex. 2, at 2, *Dias v. City of Denver*, No. 1:07-cv-00722 (D. Colo. 2010), ECF No. 100-2, 2010 U.S. Dist. LEXIS 103814 [hereinafter *Lockwood Report*] (explaining that characteristics of the dog, the owner's behavior toward the dog, and the “supervision and restraint of the animal and actions of the victim” are culprits of dog behavior).

13. See Gary J. Patronek et al., *Co-Occurrence of Potentially Preventable Factors in 256 Dog Bite-Related Fatalities in the United States (2000–2009)*, 243 J. AM. VETERINARY MED. ASS'N 1726, 1731 (2013).

legislation largely remains based on the knowledge we had about dogs thirty years ago.¹⁴

In the past, courts have considered it a well-known fact that pit bulls are unpredictable, vicious creatures owned only by dog fighters, drug dealers, and gang members.¹⁵ This Article examines the pseudo-science used in the past, the science we have today, and how “pit bulls” are among the more popular breeds adopted from animal shelters safely living in communities nationwide, yet are targeted with specific legislation in many municipalities.¹⁶

Distinguished from criminal eyewitness identification cases, this Article looks at the breed-specific legislation issue in terms of the entire breed being convicted on eyewitness testimony, not on a case-by-case basis like we see in criminal cases. Because breed-specific legislation targets an entire population of family pets based on breed, this Article argues for a better examination of the reliability of breed identification and the science used to uphold the constitutionality of the legislation.

I. HISTORY

In 1945, doctors Scott and Fuller embarked on a thirteen year study of canines to answer the question, “What does heredity do to behavior?”¹⁷ Since publication in 1965, the world has changed, science and technology have evolved, and so has our understanding of canine behavior.

What has not changed is the basic conclusion of the study: canine behavior is complex and involves not one single factor, but several factors including environment, socialization, and inheritable factors.¹⁸ The breed of the parents, specifically in a mixed-breed dog, is not a good predictor of behavior of the offspring.¹⁹

Despite the research from 1965 indicating the complexity of dog behavior and the loose correlation to breed, legislation targeting specific breeds of dogs as a means to regulate behavior hit a fever pitch in the

14. See discussion *infra* Section I.A.

15. *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *26 (Ohio Ct. App. Mar. 3, 2006) (citing *State v. Anderson*, 566 N.E.2d 1224, 1228 (Ohio 1991)).

16. BANFIELD PET HOSP., STATE OF PET HEALTH 2016 REPORT 7 (2016) (taking data from 2.5 million dogs in their hospitals, and listing the “pit bull” as the fifth most popular dog breed seen at Banfield hospitals in forty-two states); Kristen Seymour, *Top Dogs Across America: 10 Most Popular Breeds by State*, VET STREET (Mar. 26, 2012), <http://www.vetstreet.com/our-pet-experts/top-dogs-across-america-10-most-popular-breeds-by-state> (finding the American Pit Bull Terrier was a top three breed in twenty-eight states).

17. SCOTT & FULLER, *supra* note 1, at 3.

18. Robert John Simpson et al., *Rethinking Dog Breed Identification in Veterinary Practice*, 241 J. AM. VETERINARY MED. ASS'N 1163, 1163 (2012).

19. *Id.*

1980s.²⁰ Around 1987 a swell of magazines and news media investigating dog fighting, and dog attacks, zeroed in on “pit bulls,”²¹ with one feature article having called pit bull dogs “time bombs on legs.”²² The opening line of the article read like an ominous impetus to the apocalypse:

Fire burst from its open mouth, its eyes glowed with a smouldering [sic] glare, its muzzle and hackles and dewlap were outlined in flickering flame. Never in the delirious dream of a disordered brain could anything more savage, more appalling, more hellish, be conceived than that dark form and savage face.²³

In response, over the next year, cities went on to convict the entire breed of dog commonly referred to as “pit bulls” as inherently vicious.²⁴ Cities like Overland Park, Kansas, Denver, Colorado, and the entire state of Ohio enacted breed-specific ordinances and legislation that regulated or banned the “savage” pit bull.²⁵ To keep the fear going, immediately following the passage of Denver’s ban on pit bulls, one television news reporter staged multiple dog fights in a four-part series called *Blood Sport*, where the station aired footage of dog fighting training and the actual fights.²⁶ The criminal investigation into the dog fight revealed the news reporter staged, recorded, and was present for the dog fights, and was subsequently convicted of dogfighting, conspiracy to commit dogfighting, and accessory to dogfighting—all for a headline to bolster the fear of a breed of dog.²⁷

Understandably, families who had pet dogs that looked like pit bulls, but played with their kids and slept in their beds, mounted constitutional challenges against cities claiming the ordinances convicted their dog of an assumed behavior based on these headlines and violated their Fourteenth Amendment right to procedural due process, substantive due process, were overly vague, and violated the Equal Protection Clause of

20. See Ann L. Schiavone, *Barking up the Wrong Tree: Regulating Fear, Not Risk*, 22 ANIMAL L. 9, 10 (2015) (first citing David Brand, *Time Bombs on Legs: Violence-Prone Owners Are Turning Pit Bulls into Killers*, TIME, July 27, 1987, at 60, 60; and then citing E.M. Swift, Cover, *Beware of This Dog*, SPORTS ILLUSTRATED, July 27, 1987).

21. Brand, *supra* note 20, at 60; E.M. Swift, *supra* note 20.

22. Brand, *supra* note 20, at 60.

23. *Id.* (quoting ARTHUR CONAN DOYLE, THE HOUND OF THE BASKERVILLES 223 (1902)).

24. See Schiavone, *supra* note 20, at 22.

25. See, e.g., Colo. Dog Fanciers, Inc. v. City of Denver, 820 P.2d 644, 646 (Colo. 1991) (quoting DENVER, COLO., REV. MUN. CODE tit. 8, art. II, div. 3, § 8-55(a) (2016)); Hearn v. City of Overland Park, 772 P.2d 758, 760 (Kan. 1989); State v. Anderson, 566 N.E.2d 1224, 1226 (Ohio 1991); Schiavone, *supra* note 20, at 11–12.

26. People v. Bergen, 883 P.2d 532, 536 (Colo. App. 1994).

27. *Id.* at 535–37.

the Constitution.²⁸

A. Constitutional Challenges

The four general characteristics of a family's constitutional challenge to a city's breed-specific legislation are the (1) definition of the breed, (2) procedures for identifying and challenging the designation of the breed by the city, (3) ownership restrictions imposed, and (4) penalties for violating the law.²⁹

For purposes of this Article, the constitutional challenges of vagueness and substantive due process are examined.

1. Void for Vagueness

Vague laws fail to provide notice of what acts are unlawful and thus may trap the innocent.³⁰ In order to prevent arbitrary and discretionary enforcement, laws must provide explicit standards of enforcement.³¹ However, there is no requirement that the language be mathematically precise.³² All that is required is that the people to whom the statute is addressed will be placed on notice as to what the law forbids.³³ Laws are generally challenged as vague "as applied" or "facial."³⁴ When a plaintiff seeks facial review of a statute because it is incapable of valid application, they must demonstrate that the law is impermissibly vague in all of its applications and is vague as written.³⁵ If a plaintiff seeks an as-applied challenge, they must demonstrate that the statute, though constitutionally written, is vague as it applies to them.³⁶ There is some dispute as to which challenge is most appropriate for breed-specific legislation cases, and generally what the legal differences are between the two vagueness

28. See, e.g., *Colo. Dog Fanciers, Inc.*, 820 P.2d at 647; *Hearn*, 772 P.2d at 759–60; *Anderson*, 566 N.E.2d at 1225–26.

29. Joan E. Schaffner, *The Constitutionality of Breed-Specific Legislation: A Summary*, in A LAWYER'S GUIDE TO DANGEROUS DOG ISSUES 26 (Joan E. Schaffner ed., 2009) (citing Cynthia A. Mcneely & Sarah A. Lindquist, *Dangerous Dog Laws: Failing to Give Man's Best Friend a Fair Shake at Justice*, 3 J. ANIMAL L. 99, 112 (2007)).

30. *Grayned v. City of Rockford*, 408 U.S. 102, 108 (1972) (citing *Papachristou v. City of Jacksonville*, 405 U.S. 156, 162 (1972)).

31. *Id.* (citing *Papachristou*, 405 U.S. at 162).

32. *Id.* at 110.

33. *Id.* at 108.

34. Alex Kreit, *Making Sense of Facial and As-Applied Challenges*, 18 WM. & MARY BILL RTS. J. 657, 657 (2010).

35. *Dias v. City of Denver*, 567 F.3d 1169, 1180 (10th Cir. 2009) (quoting *Village of Hoffman Estates v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489, 497 (1982)).

36. *Tex. Workers' Comp. Comm'n v. Garcia*, 893 S.W.2d 504, 518 (Tex. 1995) (citing *Broadrick v. Oklahoma*, 413 U.S. 601, 610 (1973)).

challenges.³⁷ Nevertheless, most breed-specific legislation cases are argued as facial challenges.³⁸

In *Vanater v. Village of South Point*, the court held that whether a dog was covered by the breed-specific ordinance was a matter of evidence rather than constitutional law and concluded that the ordinance was not unconstitutionally vague despite its lack of mathematical certainty.³⁹ This was echoed in *American Dog Owners Ass'n v. City of Lynn* where the court noted there was no scientific means by blood, enzyme, or otherwise to determine whether a dog belongs to a particular breed, at that time.⁴⁰ The trial court found that the officers of the City used conflicting, subjective standards to determine what dogs should be defined as “pit bulls” under the ordinances.⁴¹ The poorly written ordinance in *Lynn* was revised several times before and during the litigation, with the Massachusetts Supreme Judicial Court ultimately holding, “Unlike an ordinance which generally prohibits the keeping of a ‘vicious dog,’ enforcement of which involves questions of fact whether the particular dog is vicious or known by its owner to be vicious,” the breed-specific ordinance in question relies “on the subjective understanding of . . . officers of the appearance of an ill-defined ‘breed,’ leav[ing] dog owners to guess” at the prohibited appearance, breed, or conduct.⁴²

After *Lynn*, cities began writing ordinances with three unique breeds listed as “pit bulls”: American Staffordshire Terrier, Staffordshire Bull Terrier, and American Pit Bull Terrier.⁴³ In *American Dog Owners Ass'n*

37. Kreit, *supra* note 34, at 671–72.

38. See *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1243 (S.D. Ohio 1990) (challenging a local breed-specific ordinance as facially vague); *Am. Dog Owners Ass'n v. Dade County*, 728 F. Supp. 1533, 1538, 1540–41 (S.D. Fla. 1989) (holding a breed-specific legislation was not facially vague for failure to provide notice because it covered a specific breed and breeds that were commonly referred to as pit bulls); *Am. Dog Owners Ass'n v. City of Lynn*, 533 N.E.2d 642, 646 (Mass. 1989) (discussing the facial vagueness of a breed-specific ordinance because it lacked a more ascertainable standard for enforcement or a definition of the breed pit bull).

39. 717 F. Supp. at 1244 (first citing *Dandridge v. Williams*, 397 U.S. 471, 485 (1970); and then citing *Grayned v. City of Rockford*, 408 U.S. 102, 110 (1972)).

40. 533 N.E.2d at 646.

41. *Id.*

42. *Id.* at 647.

43. See *Am. Dog Owners Ass'n v. Dade County*, 728 F. Supp. at 1535 (finding local ordinance encompassed the characteristics from the three breeds recognized by the AKC and UKC: American Staffordshire Terrier, Staffordshire Bull Terrier, and American Pit Bull Terrier); *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *6–7 (Ohio Ct. App. Mar. 3, 2006), *rev'd*, *City of Toledo v. Tellings*, 871 N.E.2d 1152 (Ohio 2007) (finding ordinance definition of a vicious dog to be any breed commonly known as a pit bull, which included American Staffordshire Terriers and American Pit Bull Terriers at the time the decision was

v. Dade County, the court settled on breed standards being descriptions of the ideal phenotype or physical appearance of a dog and that the American Kennel Club (AKC) breed “standards at issue describe the pit bull dog” (or rather the American Staffordshire Terrier or Staffordshire Bull Terrier) “as well as words can do.”⁴⁴ The court claimed that with little effort, “an interested person can utilize the standards in the Ordinance to identify the breed of a particular dog.”⁴⁵ The court also noted the problems of identification came primarily from mixed-breed dogs.⁴⁶

The issue of mixed-breed dogs is troublesome for ordinances targeting a specific “breed” of dog. Especially troublesome, which will be addressed later in the Article, is the large percentage of the United States dog population that is not purebred (approximately forty-six percent).⁴⁷ More recently, the *City of Toledo v. Tellings* appellate court found it particularly troubling that depending on the zealotry of the municipality, criminal charges could be brought on “whether the jaw of a dog is ‘massive’ enough or the chest is muscular enough . . . to be designated a ‘pit bull,’ rather than” one of the more than ten other AKC recognized breeds that have those physical traits such as a Bulldog, Boxer, or Bullmastiff.⁴⁸ While prior courts have indicated that persons could easily discern that they owned a pit bull, the *Tellings* court held “we respectfully suggest that, some fifteen to twenty years later, with the greater number of a variety of breeds and mixed breeds, this no longer holds true.”⁴⁹ The time that has passed between the original constitutional challenges to breed-specific legislation comes up as a common theme as the issue is reexamined today.

2. Substantive Due Process

A statute or law is generally found to be consistent with due process if it is rationally related to a governmental interest, end, or objective.⁵⁰ The test under rational basis does not need to be written in a less

published).

44. 728 F. Supp. at 1537.

45. *Id.*

46. *Id.* at 1536 n.3.

47. AM. VETERINARY MED. ASS'N, U.S. PET OWNERSHIP & DEMOGRAPHICS SOURCEBOOK 18 fig.1-13 (2012).

48. 2006 Ohio App. LEXIS 884, at *35.

49. *Id.* at *35 (footnote omitted).

50. *Id.* at *22 (first citing *Desenco, Inc. v. Akron*, 706 N.E.2d 323, 333 (Ohio 1999); and then citing *Benjamin v. Columbus*, 146 N.E.2d 854, 860 (Ohio 1957)).

restrictive manner, but rather should be written reasonably.⁵¹ Courts of all levels have consistently and universally held that the government does not violate the substantive due process clause by regulating dog ownership through its exercise of its police power.⁵² Throughout the last thirty years, some courts have held that pit bull dogs are a unique public health hazard, and cities regulating is rationally related to public health and safety.⁵³

However, in 2010, the United States District Court for the District of Colorado in *Dias v. City of Denver* found that “a reasonable trier of fact may find that . . . there exists no rational basis for a breed specific ordinance” because of developments in the study of breeds, aggression, and misuse of statistics in previous breed-specific legislation cases.⁵⁴ It seems that this is where the evolution of case law is taking the substantive due process issue.

The *Dias* ruling, coupled with all the advancements in health, science, and technology, for this Article, two comparative issues with regard to the legality, procedure, and policy surrounding breed-specific legislation come to mind: we no longer are relegated to relying on eye-witness testimony in criminal trials when we can test for human DNA,⁵⁵ and we should not rely on the appearance of a dog if the true intent is to protect the public from the behavior of a dog. This Article attempts to both address those issues and examine the evidence traditionally relied upon for the assertion that “pit bulls” are uniquely dangerous as compared to other breeds of dogs and should be specifically regulated.

II. MEET THE BREEDS™

With the most sincere irony of a breed “specific” ordinance, “pit bull” is actually not a *specific* breed of dog, but rather what the public has come to know as a type of dog.⁵⁶ Most breed-specific laws use “pit bull” as a common name encompassing several distinct breeds including: American Staffordshire Terriers, Staffordshire Bull Terriers, American Pit Bull Terriers and, in some cases, Bull Terriers, Cane Corsos, Dogo

51. *See id.* at *21–22.

52. *Bess v. Bracken County Fiscal Court*, 210 S.W.3d 177, 180 (Ky. Ct. App. 2006) (first citing *Nicchia v. New York*, 254 U.S. 228, 230 (1920); and then citing *Sentell v. New Orleans & C.R. Co.*, 166 U.S. 698, 704 (1897)).

53. *See Hearn v. City of Overland Park*, 772 P.2d 758, 765 (Kan. 1989).

54. 2010 U.S. Dist. LEXIS 103814, at *19–20 (D. Colo. 2010) (denying summary judgment).

55. *United States v. Jakobetz*, 747 F. Supp. 250, 263 (D. Vt. 1990).

56. *Campbell*, *supra* note 8, at 38.

Argentinos, and Perro de Presa Canarios.⁵⁷ Breed-specific ordinances often contain further confusing language targeting: “any dog *displaying the majority of physical traits* of any one (1) or more of the above breeds.”⁵⁸

In *Greenwood v. City of North Salt Lake*, the court relied on the AKC and United Kennel Club (UKC) breed standard as a descriptor of “physical characteristics” for all dogs, purebred or mixed breed, even though the dogs outlined were all separate and distinct breeds.⁵⁹ In *Dade County*, the three breeds outlined were American Staffordshire Terrier, Staffordshire Bull Terrier, and American Pit Bull Terrier, yet the ordinance defined the breed of dog not according to genotype, bloodline, or pedigree, but according to physical characteristics.⁶⁰ This is important, because defining solely by physical characteristics makes the ordinance less *breed* specific, and more *looks* specific. This finding is bolstered by testimony by Lucas County Dog Warden Tom Skeldon in the *Tellings* appellate case where “Skeldon acknowledged that even if a dog was half pit bull, if it did not ‘look like a pit bull,’ the owner would not be charged” with violating the ordinance.⁶¹ Conversely, if it did look like a pit bull the owner would be charged.⁶² No definitive description of a “pit bull” was presented and the warden also confirmed that there is really no way to tell if a dog is or is not a pit bull—that determination is made by a deputy’s subjective judgment regardless of the parentage or behavior of the dog.⁶³ While cities argue breed-specific legislation is a regulation of “dangerous” dogs, the individual dog’s behavior, personality, and history are all considered irrelevant next to its appearance.⁶⁴

To withstand a vagueness challenge, historically an ordinance had to outline specific breeds recognized by kennel clubs so that owners were on notice of what conduct is prohibited.⁶⁵ The AKC registers the American Staffordshire Terrier and the Staffordshire Bull Terrier breeds,

57. *Id.*; Vankavage & Schaffner, *supra* note 8, at 8; see DELISE, *supra* note 8, at 103.

58. DENVER, COLO., REV. MUN. CODE tit. 8, art. II, div. 3, § 8-55(b)(2) (2016) (emphasis added).

59. 817 P.2d 816, 819 (Utah Ct. App. 1991).

60. *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1535 (S.D. Fla. 1989).

61. *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *13 (Ohio Ct. App. Mar. 3, 2006).

62. *Id.*

63. *Id.*

64. See Simpson et al., *supra* note 18, at 1164.

65. Jeannette Cox, *Ordinances Targeting Pit Bull Dogs Must Be Drafted Carefully*, LOC. GOV’T L. (Sch. of Gov’t, The Univ. of N.C. Chapel Hill, Chapel Hill, N.C.), Nov. 2004, at 3, <http://sogpubs.unc.edu/electronicversions/pdfs/lglb106.pdf>.

while the UKC registers the American Pit Bull Terrier breed.⁶⁶ Examining the breed standard for each of the above breeds with breed-specific legislation in mind, particularly breed-specific court precedents, several issues start to emerge.

A. *Why These Three Distinct Breeds?*

“Until the early 19th century, the Bulldog used for bullbaiting in England was more active and longer-legged than the Bulldog breed as we know it today. It is thought that the cross of this older Bulldog and a . . . terrier breed created the [American] Staffordshire Terrier”⁶⁷ Originally called the Bull-and-Terrier Dog, Half and Half, or Pit Dog, when bullbaiting was outlawed in England, Bull-and-Terrier owners tested their dogs’ fighting abilities against each other and common-day dog fighting was born.⁶⁸ The Bull-and-Terrier evolved to be called a “Pit Bull Terrier” for the working dog often involved in dog fights,⁶⁹ and “Staffordshire Terrier” for breeding lines and pet dogs.⁷⁰ In an effort to compete in the confirmation show ring, the “Staffordshire Terrier” breed fanciers applied to be registered with the AKC.⁷¹ The registration was accepted in 1936, but any American Pit Bull Terrier still involved with dog fighting could not be registered.⁷² When accepted for AKC registration, the name changed to American Staffordshire Terrier to reflect the heavier American type and to distinguish the American Staffordshire Terrier and much smaller Staffordshire Bull Terrier,⁷³ which had evolved to work in the coal mines of England, as separate breeds.⁷⁴ For many years, the American Staffordshire Terrier and the

66. *Meet the American Staffordshire Terrier*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/american-staffordshire-terrier/detail/> (last visited Oct. 10, 2016); *Meet the Staffordshire Bull Terrier*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/staffordshire-bull-terrier/detail/> (last visited Oct. 10, 2016); *American Pit Bull Terrier*, UNITED KENNEL CLUB, <http://www.ukcdogs.com/Web.nsf/Breeds/Terrier/AmericanPitBullTerrier> (last visited Oct. 10, 2016).

67. *American Kennel Club & Cat Fanciers’ Association Celebrate All-American Dogs & Cats for 4th of July*, AM. KENNEL CLUB (June 29, 2009), <http://www.akc.org/press-center/press-releases/american-kennel-club-cat-fanciers-association-celebrate-all-american-d/>.

68. See DIETER FLEIG, *FIGHTING DOG BREEDS 135* (William Charlton trans., T.F.H. Publ’ns 1996) (1995).

69. *American Pit Bull Terrier*, *supra* note 66.

70. *Meet the American Staffordshire Terrier*, *supra* note 66.

71. FLEIG, *supra* note 68, at 138–39.

72. *Id.*

73. *Meet the American Staffordshire Terrier*, *supra* note 66; *Meet the Staffordshire Bull Terrier*, *supra* note 66.

74. BRONWEN DICKEY, *PIT BULL: THE BATTLE OVER AN AMERICAN ICON* 63 (2016).

American Pit Bull Terrier could be duly registered between both the AKC and the UKC, respectfully.⁷⁵

As society began to view dog fighting as unconscionable, and later unlawful, the UKC, which had taken the American Pit Bull Terriers not registered to the AKC, condemned dog fighting and would not register fighting dogs.⁷⁶ Many assume the American Dog Breeders Association (ADBA) was then established because the UKC did not support the use of American Pit Bull Terriers in the fighting pit.⁷⁷

Summarizing this tricky tale of over one hundred years of mixing and creating breeds, the breeding lines of the original Bull-and-Terrier were narrowed down by the creation of the American Staffordshire Terrier in the AKC in 1936, and further narrowed by the completely different smaller, coal-mining dog, the Staffordshire Bull Terrier.⁷⁸ The failure of the UKC to register fighting dogs in the 1970s created a splinter breeding line of American Pit Bull Terriers and the creation of the ADBA.⁷⁹ The name change to American Staffordshire Terrier and the split between the ADBA and the UKC changed the landscape for the dogs, making the three distinct breeds we see today.⁸⁰ Through all of this, policymakers contend that these three breeds maintain inherent characteristics, both behavioral and physical, that make them dangerous to society.⁸¹ In the twentieth century, courts heard and confirmed this assumption.⁸² Below are a few of the breed considerations taken by the courts, an account of the testimonies heard, and an exploration into mixed-breed dogs and inheritable traits.

B. “*I Know It When I See It.*”

Courts have held that kennel club breed standards for appearance are the best way to determine whether a targeted dog falls under the auspices of a breed-specific ordinance.⁸³ Despite this language in a time of hundreds of thousands of mixed-breed shelter dog adoptions,⁸⁴ courts

75. FLEIG, *supra* note 68, at 142.

76. *See id.* at 135.

77. *See id.* at 200.

78. *See id.* at 135, 138–39.

79. *See id.* at 200.

80. *See* Victoria L. Voith et al., *Comparison of Visual and DNA Breed Identification of Dogs and Inter-Observer Reliability*, 3 AM. J. SOC. RES. 17, 18 (2013) [hereinafter *Comparison of Visual and DNA Breed Identification*].

81. *See Breed-Specific Legislation, supra* note 9.

82. *Id.*

83. *See* Am. Dog Owners Ass’n v. Dade County, 728 F. Supp. 1533, 1535 (S.D. Fla. 1989).

84. *See* PETFINDER, <https://www.petfinder.com/> (last visited Oct. 10, 2016). “Home of

have found that ordinances which define “pit bull” by using recognized purebred standards provide sufficient specifics for the term to survive a vagueness challenge.⁸⁵ Although breed-specific ordinances rely on AKC breed standards, the AKC opposes breed bans and the use of AKC standards as a means to identify dangerous dogs.⁸⁶ Margaret Poindexter, AKC General Counsel, has said, “Breed standards are intended to serve as the written ideal of a dog which breeders can aspire to, not a benchmark for defining dangerous dogs.”⁸⁷

1. *The Coat*

The American Staffordshire Terrier’s “short coat can be any color, and either solid colored, parti-colored, or patched.”⁸⁸ The Staffordshire Bull Terrier is a smooth-coated dog and comes in six color varieties: solid

250,000 adoptable pets” on one given day. *Id.*

85. See *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. at 1540 (citing *Village of Hoffman Estates v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489, 502 (1982)); *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1244 (S.D. Ohio 1990) (citing *Dandridge v. Williams*, 397 U.S. 471, 485 (1970)) (discussing that the definition of pit bulls which identifies specific breeds provides enough guidance to vets and others and allows dog owners to easily reference published standards and dog guide books to see if the law covers their dog and from this discussion the court concludes that this standard provides enough certainty); *Holt v. City of Maumelle*, 817 S.W.2d 208, 210–11 (Ark. 1991); *Colo. Dog Fanciers, Inc. v. City of Denver*, 820 P.2d 644, 652 (Colo. 1991); *State v. Peters*, 534 So. 2d 760, 766 (Fla. Dist. Ct. App. 1988); *Am. Dog Owners Ass’n v. City of Des Moines*, 469 N.W.2d 416, 418 (Iowa 1991) (“[T]he ordinance refer[s] to particular breeds of dog. The record shows that the determination of a dog’s breed can be done according to objective standards, although there are limits on the precision of such classifications [T]hese subsections place appropriate limits on the discretion of enforcement personnel; no basic policy matters are delegated to enforcement personnel, and there is no significant danger of ‘ad hoc and subjective’ determinations of ‘arbitrary and discriminatory application.’” (quoting *Grayned v. City of Rockford*, 408 U.S. 102, 108–09 (1972))); *Hearn v. City of Overland Park*, 772 P.2d 758, 763 (Kan. 1989) (concluding that although referencing specific breeds is not a perfect standard, it does provide enough guidance); *Greenwood v. City of North Salt Lake*, 817 P.2d 816, 820 (Utah Ct. App. 1991) (citing *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. at 1538–42); *Am. Dog Owners Ass’n v. City of Yakima*, 777 P.2d 1046, 1048 (Wash. 1989) (concluding that identifying specific breeds in the ordinance and using the professional standards and illustrations for these breeds provides an adequate standard and survives the challenge); *Dog Fed’n of Wis., Inc. v. City of South Milwaukee*, 504 N.W.2d 375, 378 (Wis. Ct. App. 1993) (quoting AMERICAN KENNEL CLUB, *DOGS 5* (1991), as reprinted in *Glossary: Breeds*, AM. KENNEL CLUB, <http://www.akc.org/about/glossary/> (last visited Oct. 10, 2016)).

86. AM. KENNEL CLUB, CANINE LEGISLATION POSITION STATEMENT: “DANGEROUS DOG” CONTROL LEGISLATION, <http://www.akc.org/government-relations/position-statements/follow-“Dangerous-Dog”-Control-Legislation>” hyperlink).

87. Press Release, Am. Kennel Club, AKC and Dog Owners Win Ruling Granting a Trial to Challenge Constitutionality of Denver Breed Ban (May 28, 2009), <http://www.akc.org/press-center/press-releases/akc-and-dog-owners-win-ruling-granting-a-trial-to-challenge-constituti/>.

88. *Meet the American Staffordshire Terrier*, *supra* note 66.

red, fawn, white, black, blue, or brindle.⁸⁹ The American Pit Bull Terrier is a short-coated dog that comes in all colors and color patterns except merle.⁹⁰ Out of the forty-four breeds just in the AKC that have a short coat, five, including the American Staffordshire Terrier, can be *any* color.⁹¹ And if the American Staffordshire Terrier can be any color, it stands to reason that a mixed-breed dog of any color with short hair could possibly be mixed with any forty-three other breeds with short coats—not necessarily mixed with American Staffordshire Terrier. Today, due to advancements in canine DNA testing for breed, which will be explored later in this Article, we are able to understand the intricacies of what makes a dog appear different than its known breed mixes.⁹²

Dr. Angela Hughes, veterinarian and geneticist, gave an example of a dog that looked like a black Labrador Retriever whose DNA came back as being a Golden Retriever mix.⁹³ The first thing she pointed out is that the longer, golden coat can be lost in one single generation of breeding.⁹⁴ Additionally, Golden Retrievers carry a black gene.⁹⁵ You do not see the black gene in the golden coat because the golden (or “yellow”) gene blocks the black gene.⁹⁶ However, you will see the black gene in their nose, eye rims, and the pads of their feet.⁹⁷ Interestingly, the golden gene that blocks the black gene is recessive.⁹⁸ So as soon as an owner breeds a Golden Retriever with a dog that does not have the same golden gene nor the longer hair, the owner is likely to have a black dog with a short coat.⁹⁹ And that is one of the best explanations for why, for the American Staffordshire Terrier and the Staffordshire Bull Terrier, being any coat color is problematic for visual breed identification, particularly for mixed-breed dogs.¹⁰⁰

Someone could have a black short-haired dog identified by a city as a “pit bull” (remember, American Staffordshire Terriers and Staffordshire Bull Terriers can be both black and short haired as Dr.

89. *Meet the Staffordshire Bull Terrier*, *supra* note 66.

90. *American Pit Bull Terrier*, *supra* note 66.

91. Katie Barnett, AKC Dog Characteristics (Oct. 10, 2016) (unpublished table) (on file with author); *Meet the American Staffordshire Terrier*, *supra* note 66.

92. Edie Lau, *Dog Breed Genetic Tests Put to the Test*, VETERINARY INFO. NETWORK NEWS SERVICE (July 10, 2012), <http://news.vin.com/vinnews.aspx?articleId=23206>.

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. Lau, *supra* note 92.

98. *Id.*

99. *Id.*

100. *Id.*

Hughes gives in the example above)¹⁰¹ who actually has generations of purebred Golden Retriever ancestry, but was perhaps bred with a black, short-haired, blocky headed dog like a Rottweiler, and now the owner has a dog that looks like an American Staffordshire Terrier mix and is identified as such by a city's animal control officer. This is where the city ordinances that contain the language targeting "any dog *displaying the majority of physical traits* of any one (1) or more of the above breeds" becomes a question of overinclusion or underinclusion.¹⁰²

2. A Body of Power and Strength

Physically, the American Staffordshire Terrier "is often identified by his stocky body and strong, powerful head."¹⁰³ Court cases examining the constitutionality of breed-specific ordinances rely on the specific trait of power, athleticism, and strength.¹⁰⁴ Twenty-four breeds use the word "powerful" to describe the body including the Irish Red, White Setter, and Golden Retriever.¹⁰⁵ The Alaskan Malamute is described as having "great strength and endurance,"¹⁰⁶ the Plott Hound is described as "powerful" and "well-muscled,"¹⁰⁷ and the Bullmastiff, Mastiff, and Neapolitan Mastiff are all described as muscular and powerful.¹⁰⁸ The

101. *Id.*

102. DENVER, COLO., REV. MUN. CODE tit. 8, art. II, div. 3, § 8-55(b)(2) (2016) (emphasis added).

103. *Meet the American Staffordshire Terrier*, *supra* note 66.

104. *See* Am. Canine Found. v. City of Aurora, 618 F. Supp. 2d 1271, 1274 (D. Colo. 2009); Vanater v. Village of South Point, 717 F. Supp. 1236, 1243 (S.D. Ohio 1990); Colo. Dog Fanciers, Inc. v. City of Denver, 820 P.2d 644, 652 (Colo. 1991); Hearn v. City of Overland Park, 772 P.2d 758, 763 (Kan. 1989) ("The appearance of these dogs typifies strength and athleticism." (quoting Memorandum Opinion, Hearn v. City of Overland Park, No. 87C-9734 (Dist. Ct. Johnson Cty. 1989))); Singer v. City of Cincinnati, 566 N.E.2d 190, 192 (Ohio Ct. App. 1990).

105. *See* AM. KENNEL CLUB, OFFICIAL STANDARD FOR THE IRISH RED AND WHITE SETTER 1 (2007), <http://www.akc.org/dog-breeds/irish-red-and-white-setter/> (follow "Breed Standard" hyperlink); AM. KENNEL CLUB, OFFICIAL STANDARD FOR THE GOLDEN RETRIEVER 1 (1990), <http://www.akc.org/dog-breeds/golden-retriever/> (follow "Breed Standard" hyperlink); *Dog Breeds*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/> (last visited Oct. 10, 2016).

106. *Meet the Alaskan Malamute*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/alaskan-malamute/detail/> (last visited Oct. 10, 2016).

107. AM. KENNEL CLUB, OFFICIAL STANDARD OF THE PLOTT 1 (1998), <http://www.akc.org/dog-breeds/plott/> (follow "Breed Standard" hyperlink).

108. AM. KENNEL CLUB, OFFICIAL STANDARD OF THE BULLMASTIFF 1 (1992), <http://www.akc.org/dog-breeds/bullmastiff/> (follow "Breed Standard" hyperlink); AM. KENNEL CLUB, OFFICIAL STANDARD OF THE MASTIFF 1-2 (1991), <http://www.akc.org/dog-breeds/mastiff/> (follow "Breed Standard" hyperlink); AM. KENNEL CLUB, OFFICIAL STANDARD OF THE NEAPOLITAN MASTIFF 1-3 (2004), <http://www.akc.org/dog-breeds/neapolitan-mastiff/> (follow "Breed Standard" hyperlink).

Staffordshire Bull Terrier, often defined as a “pit bull,” should be of “great strength for his size, and although muscular, should be active and agile.”¹⁰⁹

The Boxer is known as the “well-conditioned middleweight athlete of dogdom,”¹¹⁰ known for “standing up on its hind legs and batting its opponent.”¹¹¹ It also currently ranks as one of the most popular dogs in the United States according to the AKC registration statistics.¹¹² The Cane Corso’s breed standard outlines it as a “large and athletic breed” that needs plenty of exercise, along with the Greyhound, Plott Hound, Dogo Argentino, Wirehaired Vizsla, Standard Schnauzer, and Portuguese Water Dog.¹¹³ The Irish Wolfhound is known as a “superb athlete and an endurance runner,”¹¹⁴ similar to the Pharaoh Hound which is recommended to be kept in a fenced yard because of its extreme athleticism and keenness to hunt and chase small animals.¹¹⁵ It is unclear from reading through court opinions what makes the power, athleticism, and strength of an American Staffordshire Terrier or Staffordshire Bull Terrier more dangerous than any of the aforementioned breeds.¹¹⁶

109. AM. KENNEL CLUB, OFFICIAL STANDARD OF THE STAFFORDSHIRE BULL TERRIER 1 (1990), <http://www.akc.org/dog-breeds/staffordshire-bull-terrier/> (follow “Breed Standard” hyperlink).

110. *Meet the Boxer—A Unique Breed*, AM. BOXER CLUB, <http://americanboxerclub.org/unique.html> (last visited Oct. 10, 2016).

111. *About Boxers*, BOXER BLVD., <http://www.boxerblvd.com/new-page-3/> (last visited Oct. 10, 2016).

112. Stephen Smith, *Most Popular Dog Breeds in America*, AM. KENNEL CLUB (Feb. 22, 2016), <http://www.akc.org/news/the-most-popular-dog-breeds-in-america/>.

113. *Cane Corso Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/cane-corso/care/> (last visited Oct. 10, 2016); *see Greyhound Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/greyhound/care/> (last visited Oct. 10, 2016); *Plott Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/plott/care/> (last visited Oct. 10, 2016); *Dogo Argentino Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/dogo-argentino/care/> (last visited Oct. 10, 2016); *Wirehaired Vizsla Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/wirehaired-vizsla/care/> (last visited Oct. 10, 2016); *Standard Schnauzer Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/standard-schnauzer/care/> (last visited Oct. 10, 2016); *Portuguese Water Dog Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/portuguese-water-dog/care/> (last visited Oct. 10, 2016).

114. *AKC Meet the Breeds: Irish Wolfhound*, MARTHA STEWART, <http://www.marthastewart.com/265087/akc-meet-the-breeds-irish-wolfhound> (last visited Oct. 10, 2016).

115. *Pharaoh Hound Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/pharaoh-hound/care/> (last visited Oct. 10, 2016).

116. *See* Am. Canine Found. v. City of Aurora, 618 F. Supp. 2d 1271, 1274 (D. Colo. 2009); Vanater v. Village of South Point, 717 F. Supp. 1236, 1243 (S.D. Ohio 1990); Colo. Dog Fanciers, Inc. v. City of Denver, 820 P.2d 644, 652 (Colo. 1991); Hearn v. City of Overland Park, 772 P.2d 758, 763 (Kan. 1989); Singer v. City of Cincinnati, 566 N.E.2d 190, 192 (Ohio Ct. App. 1990).

3. Uniqueness

Here is what is so remarkable about grouping breed traits like coat length, color, and muscular or powerful appearance that can apply to twenty breeds or more, and exponentially, any other breed mixed with those breeds. In *Vanater*, the court found that it is not the appearance that poses the high risk of danger, but appearance “is an indicator of the Pit Bull’s *ability* to perform in an unreasonably dangerous manner.”¹¹⁷ This statement is perplexing, but the court elaborated:

Pit bulls have the following *distinctive* behavioral characteristics: a) grasping strength, b) climbing and hanging ability, c) weight pulling ability, d) a history of [fighting], e) a history of [a catch and kill] instinct, f) the ability to be extremely destructive and aggressive, g) highly tolerant of pain, h) great biting strength, i) undying tenacity and courage and they are highly unpredictable.¹¹⁸

With the same breath of saying these traits are “distinctive” to the pit bull, the court immediately qualifies it by saying, “While these traits, tendencies, or abilities are *not unique to Pit Bulls exclusively*, Pit Bulls will have these [behavioral] instincts and phenotypical [appearance] characteristics [that] . . . may appear without warning or provocation.”¹¹⁹ Deduced from this holding is that both pit bull appearance and behavior is undetectable, but we know it when we see it.

C. Behavioral Traits

Vanater is not the only case to come to such definitive conclusions about these three distinct breeds.¹²⁰ In *Hearn v. City of Overland Park*, the Kansas Supreme Court relied on the opinion from the county district court, which stated in part that “[p]it bull dogs are different from other dogs. . . . They can climb trees, they have extremely strong jaws and biting power, and they tend to clamp onto something and not let go.”¹²¹ Because of these perceived behavior traits, the district court concluded that pit bull dogs are thus distinguishable from other breeds of dogs and upheld the multiple constitutional challenges brought against the City.¹²² A close examination of how the court came to this conclusion shows that there is little scientific fact in the above statement and court opinion.

117. *Vanater*, 717 F. Supp. at 1240.

118. *Id.* (emphasis added).

119. *Id.* at 1240–41 (emphasis added).

120. *See Vanater*, 717 F. Supp. at 1243.

121. 772 P.2d 758, 763 (Kan. 1989) (quoting Memorandum Opinion, *supra* note 104).

122. *Id.* (quoting Memorandum Opinion, *supra* note 104).

1. Climbing

In *Hearn*, the City's expert Dr. Donald Clifford testified that he was not aware of any other breed that could climb trees.¹²³ A simple *Google* search shows several dogs of different breeds or appearance climbing trees, including a Golden Retriever climbing a tree.¹²⁴ The Black and Tan Coonhound was specifically bred to trail and tree raccoons, and the breed standard warns that they should be walked on a leash or in a fenced yard because of their instincts to chase and tree small animals, along with the Treeing Walker Coonhound.¹²⁵ Later in the *Hearn* case, a City of Overland Park Animal Control Officer testified that most any dog can jump a fence, maybe only a smaller breed would have a difficult time.¹²⁶ The officer testified that in her experience any medium to large dog could jump a fence and that climbing or jumping a fence is not unusual for a dog to be able to do.¹²⁷

2. Extraordinary Biting Power

Dr. Donald Clifford testified in *Hearn* that pit bulls have a more punishing bite than other breeds of dogs, but provided no statistical data to the stated fact.¹²⁸ When asked for data, Dr. Clifford stated there is "no statistical information in the literature relative to their bite as far as I know."¹²⁹ The court was presented with data from the City of Overland Park, for the entire history of bite records maintained by the City, which included one incident on June 8, 1987, when a young boy frightened a pit bull dog.¹³⁰ The child was not taken to the hospital and the witness testified the dog "bit him, released, and ran off."¹³¹ The supervisor of Overland Park Animal Control subsequently testified that in 1986 a child was attacked by a Cocker Spaniel that required extensive plastic surgery,

123. Transcript of Proceedings at 387, *Hearn*, No. 87C-9734 (Dist. Ct. Johnson Cty. 1989).

124. See Suzie Mortimore, *Tree Climbing Golden Retriever*, YOUTUBE (May 16, 2010), <https://www.youtube.com/watch?v=Q6d6SBafu44>.

125. *Black and Tan Coonhound*, AM. KENNEL CLUB, <http://www.akc.org/kids-corner/games-activities/dog-jigsaw-puzzles/hound-group/black-and-tan-coonhound/> (last visited Oct. 10, 2016); *Black and Tan Coonhound Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/black-and-tan-coonhound/care/> (last visited Oct. 10, 2016); *Treeing Walker Coonhound Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/treeing-walker-coonhound/care/> (last visited Oct. 10, 2016).

126. Transcript of Proceedings, *supra* note 123, at 595–596.

127. *Id.*

128. *Id.* at 29.

129. *Id.* at 30.

130. *Id.* at 203.

131. Transcript of Proceedings, *supra* note 123, at 203.

and in 1987 there was a severe mauling by a German Shepherd dog that required the victim to seek hospitalization and multiple stitches.¹³² Later that year, there was a mauling by an Alaskan Malamute that required the victim's scalp to be reattached with over sixty stitches.¹³³ In both *Hearn* and *Tellings*, both the City and the plaintiff/defendant's experts agreed that "[t]he testing of dog bite strength has never been done, and would be difficult if not impossible to perform."¹³⁴ Not only that, but in *Hearn*, the court heard testimony that in one single year, there were two dog attacks in the city that required victim hospitalization by a German Shepherd dog and an Alaskan Malamute, yet chose to single out pit bull dogs in its ordinance.¹³⁵

3. *Attacking Without Warning*

The county district court in *Hearn* found that pit bull dogs were unique in their unpredictability, or that they attacked without warning.¹³⁶ However, a closer look at the expert testimony shows that the only documents relied upon were newspaper articles reporting attacks by pit bulls that occurred without warning.¹³⁷ After discussion on the expert's understanding of peer-review, replicable studies, and data collection, the question was then asked:

PLAINTIFF: Have you or anyone performed control experiments and been able to replicate the results on the supposition that pit bull dogs attack without warning?

CITY EXPERT/DR. CLIFFORD: No, I haven't conducted any research in that area.¹³⁸

Similarly, in *Tellings*, although Dr. Dale Wright testified that pit bulls have some sort of mechanism that "makes [them] unpredictable and they give off no warning 'signals,' he acknowledged that he had done no studies, and had no scientific data, proof, or other evidence in support of his theory."¹³⁹ Other experts agreed that all dogs give warning signals,

132. *Id.* at 546.

133. *Id.*

134. *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *8–9 (Ohio Ct. App. Mar. 3, 2006), *rev'd*, *City of Toledo v. Tellings*, 871 N.E.2d 1152 (Ohio 2007); *see* Transcript of Proceedings, *supra* note 123, at 29–30.

135. Transcript of Proceedings, *supra* note 123, at 546.

136. *See Hearn v. City of Overland Park*, 772 P.2d 758, 765 (Kan. 1989) (discussing the findings of the county district court).

137. Transcript of Proceedings, *supra* note 123, at 30.

138. *Id.* at 469.

139. *Tellings*, 2006 Ohio App. LEXIS 884, at *13.

but those signals may be ignored or unrecognized by people.¹⁴⁰

Hearing that a dog attacks without warning or is unpredictable is a scary presumption for policymakers. “[L]ack of predictability predictably causes anxiety, which, unlike true fear, is always caused by uncertainty.”¹⁴¹ To say a breed of dog is unpredictable hits on the uncertainty of having dogs of that breed in a community, and causes fear for everyone. But a close analysis of where that uncertainty and fear came from clearly shows that there is no science behind the statement, no research has been done on the issue, and there is no proof to support the theory. It seems that often breed-specific legislation is not about facts, but rather a feeling, as one city councilwoman said.¹⁴²

4. Aggression

Aggression is a complex behavior that is explored later in this Article. This subsection simply explores the relatedness of aggression as a breed-specific trait used to uphold the constitutionality of breed-specific legislation. The experts in the *Tellings* appellate case agreed that a dog could in fact be bred for aggression.¹⁴³ However, many experts testified that because genetic transmission of behavior traits involved so many factors, it would be incredibly difficult to actually breed for aggression.¹⁴⁴ The example given was “just as a litter of ten greyhounds bred from two faster running parent[s] [may] produce only one faster running pup[py], a litter of pit bulls from two aggressive parent dogs was likely to produce only one [puppy] with a more aggressive temperament.”¹⁴⁵

The county district court in *Hearn* found that “pit bull dogs are both more aggressive and destructive than other dogs,” based on testimony by Dr. Donald Clifford in a study on aggression that he performed on dogs and stuffed animals.¹⁴⁶ Dr. Clifford drew the conclusion by stating that pit bulls (no parameters of which purebred breeds were examined, meaning it could be the American Staffordshire Terrier, Staffordshire Bull Terrier, or American Pit Bull Terrier, or any mixed-breed dog

140. *Id.* at *13–14.

141. GAVIN DE BECKER, FEAR LESS: REAL TRUTH ABOUT RISK, SAFETY, AND SECURITY IN A TIME OF TERRORISM 42 (2002).

142. Jaclyn Allen, *Aurora Debating, Voting on Whether to Repeal or Retain City’s Pit Bull Ban*, 7 News DENVER (Oct. 23, 2014, 9:02 PM), <http://www.thedenverchannel.com/news/politics/aurora-debating-voting-on-pit-bull-ban>.

143. *See Tellings*, 2006 Ohio App. LEXIS 884, at *6.

144. *Id.*

145. *Id.*

146. *Hearn*, 772 P.2d at 765 (discussing the findings of the county district court); Transcript of Proceedings, *supra* note 123, at 424.

assumed to be mixed with one of those breeds) compared to other breeds of dogs (again, no parameters on breeds, sizes, breed groups, or control groups) were more aggressive toward stuffed animals than other breeds of dogs and would damage “stuffed toys.”¹⁴⁷

A more recent and more scientific study, compared to that of Dr. Clifford’s stuffed toy analysis, involved the behavior of over 350 dogs and concluded that there was no significant variation of aggressiveness observed between any of the breed groups studied.¹⁴⁸ It also found that “environmental factors could mask or even enhance breed differences.”¹⁴⁹ For instance, dogs of all different breeds who spend most of their time living with the family in the house may be more similar to other breeds than of a dog of the same breed living outside.¹⁵⁰ Additionally, a separate genetics study involving dogs with specific behavioral characteristics found only a small correlation between genes known to influence the nervous system or behavior and certain types of behavior.¹⁵¹ Finally, a study on the genes related to the neurotransmitter systems in canine brains revealed that risk of aggression is likely a complex issue of environmental, gene *communication*, and hormones.¹⁵²

5. Dog Fighting

The “pit bull” history of dog fighting has been relevant to breed-specific challenges, particularly when discussing a breed’s presumed dangerous behavior.¹⁵³ As a cautionary tale, the American Staffordshire Terrier and Staffordshire Bull Terrier are not the only AKC breed to have a history in fighting.¹⁵⁴ After the Civil War, the Boston Terrier was developed as a fighting dog.¹⁵⁵ Some records show the Boston Terrier and Boxer as being one in the same breed, bred exclusively for fighting, then

147. Transcript of Proceedings, *supra* note 123, at 424–25.

148. Erika Mirkó et al., *Preliminary Analysis of an Adjective-Based Dog Personality Questionnaire Developed to Measure Some Aspects of Personality in the Domestic Dog (Canis familiaris)*, 138 APP. ANIMAL BEHAV. SCI. 88, 90, 92 (2012).

149. *Id.* at 97.

150. *Id.*

151. Kevin Chase et al., *Genetic Mapping of Fixed Phenotypes: Disease Frequency as a Breed Characteristic*, J. HEREDITY, Nov./Dec. 2009, at S37, S38.

152. Schiavone, *supra* note 20, at 46–47 (citing Jørn Våge et al., *Association of Dopamine- and Serotonin-Related Genes with Canine Aggression*, 9 GENES, BRAIN & BEHAV. 372, 373 (2010)).

153. Transcript of Proceedings, *supra* note 123, at 31–32.

154. *Congratulations on Your New Boston Terrier!*, BOS. TERRIER CLUB AM., INC. (The Bos. Terrier Club of Am., Graham, Wash.), 2009, at 1, <http://cdn.akc.org/BostonTerrier-club-flier.pdf>.

155. *Id.*

bred to their current disparate sizes later in the breeding line.¹⁵⁶ The English Bulldog, one of the most popular breeds according to AKC registration statistics, was both ferocious and courageous, almost insensitive to pain, and was originally developed for bull baiting and later bred for dog fighting.¹⁵⁷ When dog fighting became illegal in England, the fierce characteristics were bred out within a few generations and the English Bulldog we know today became the lumbering pet in households nationwide.¹⁵⁸ Yet very few cities consider the English Bulldog's ferocious, fighting past when enacting breed-specific legislation.¹⁵⁹ That indicates that policymakers may be able to understand and accept that characteristics can be bred out of a purebred line within a few generations, but selectively apply it to the pit bull dog breeds.

The history of the Mastiff and its ties to fighting is recognized as far back as 55 B.C. when Caesar brought the Mastiff back to Rome where the breed took part in bull baiting, lion fighting, and fights with human gladiators.¹⁶⁰ The Dogue de Bordeaux was used for fighting in the South

156. See MIKE HOMAN, A COMPLETE HISTORY OF FIGHTING DOGS 139, 180, 184 (1999) (explaining how the Boxer breed was indistinguishable from the Staffordshire Bull Terrier in the nineteenth century and how the Boston Terrier is believed to have derived from Bull Terriers and Bulldogs, both of which were bred for fighting).

157. *About Bulldogs*, BULLDOG CLUB AM., <http://www.bulldogclubofamerica.org/bulldog> (last visited Oct. 10, 2016).

158. *A Bulldog!*, BULLDOG CLUB AM. (The Bulldog Club of Am., Florissant, Mo.), 2010, at 1, <http://cdn.akc.org/Bulldog-club-flier.pdf>. There are a few bulldog breeds recognized in common lexicon, English Bulldog and the larger, taller American Bulldog. The AKC registers what most of us consider English Bulldog as "Bulldog" and the UKC registers what we refer to as an American Bulldog as "American Bulldog." The UKC breed standard distinguishes between the two breeds:

Bulldogs in England were originally working dogs that drove and caught cattle and guarded their masters' property. The breed's strength, courage, and familiarity with livestock led to its popularity in the brutal sport of bull baiting. When this sport was outlawed in England, the original type of Bulldog disappeared from Britain and was replaced with the shorter, stockier, less athletic dog we now know as the English Bulldog. The original Bulldog, however, was preserved by working class immigrants who brought their working dogs with them to the American South. Small farmers and ranchers used this all-around working dog for many tasks. By the end of World War II, however, the breed was almost extinct. Mr. John D. Johnson, a returning war veteran, decided to resurrect this breed. Along with Alan Scott and several other breeders, Johnson began carefully to breed American Bulldogs.

American Bulldog, UNITED KENNEL CLUB, <http://www.ukcdogs.com/Web.nsf/Breeds/GuardianDog/AmericanBulldog10012009> (last updated Oct. 1, 2009).

159. See JANIS BRADLEY, ANIMALS & SOC'Y INST., DOG BITES: PROBLEMS AND SOLUTIONS 10 (2014), <http://www.nationalcanineresearchcouncil.com/sites/default/files/Dog-Bites-Problems-and-Solutions-2nd-Edition.pdf>; *Position Statement on Breed-Specific Legislation*, AM. SOC'Y FOR PREVENTION CRUELTY ANIMALS, <http://www.aspc.org/about-us/aspc-policy-and-position-statements/position-statement-breed-specific-legislation> (last visited Oct. 10, 2016).

160. CESAR MILLAN, CESAR'S WAY: THE NATURAL, EVERYDAY GUIDE TO

of France¹⁶¹ and the Bull Terrier was a cross between today's American Staffordshire Terrier and Dalmatian to make a snow white show dog that remained able to prove its worth in the fighting ring if challenged.¹⁶² The Dogo Argentino and Fila Brasileiro were dual purpose breeds developed for hunting, herding, and fighting.¹⁶³ The Tosa Inu was developed for dog fighting in Japan and the Boxer was bred for dog fighting in the nineteenth century.¹⁶⁴

From the research, many different breeds were developed for what today's society considers "violent" purposes.¹⁶⁵ Pit Bull dog fighting seems to be arbitrarily singled-out by cities and subsequently the courts, with no examination on why this past purpose is unique compared to bear hunting or fighting human gladiators.

6. *Gameness*

In *Hearn*, the City's expert testified that there is no breed of dog other than the "pit bull" that is game.¹⁶⁶ It should be noted that neither the American Staffordshire Terrier nor the Staffordshire Bull Terrier breed standard says anything about gameness, and the American Pit Bull Terrier only mentions gameness in the history section of the development breed, mentioning how it combines the courage of the bulldog and the gameness of a terrier.¹⁶⁷ There is really only one breed that is "game" according to the AKC—the Irish Terrier.¹⁶⁸

Gameness as a behavior trait sounds intimidating. As a human characteristic, society tends to appreciate and respect someone who is game, it is something to aspire to, someone having the spirit or will to do something.¹⁶⁹ In dogs, it can also be an aspiration, but taken literally, only for the American Working Terrier Association—which awards a

UNDERSTANDING & CORRECTING COMMON DOG PROBLEMS 179 (2006).

161. See HOMAN, *supra* note 156, at 12–13.

162. See HOMAN, *supra* note 156, at 142; *History*, STAFFORDSHIRE TERRIER CLUB AM., <http://www.amstaff.org/history.html> (last visited Oct. 10, 2016).

163. See FLEIG, *supra* note 68, at 190–91.

164. *Id.*; *Meet the Boxer*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/boxer/detail/> (last visited Oct. 10, 2016).

165. FLEIG, *supra* note 68, 190–91.

166. Transcript of Proceedings, *supra* note 123, at 401, 407.

167. *American Pit Bull Terrier*, *supra* note 66; see *Meet the American Staffordshire Terrier*, *supra* note 66; *Meet the Staffordshire Bull Terrier*, *supra* note 66.

168. AM. KENNEL CLUB, OFFICIAL STANDARD OF THE IRISH TERRIER 2 (1968), <http://www.akc.org/dog-breeds/irish-terrier/> (follow "Breed Standard" hyperlink) ("[The Irish Terrier] is good tempered, spirited, and game.").

169. *Game*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/game> (last visited Oct. 10, 2016).

Gameness Certificate to dogs who can travel a thirty foot earth and reach the quarry within thirty seconds.¹⁷⁰ The dog must then work the quarry, continuously for a full sixty seconds, meaning digging continuously for the target.¹⁷¹ It is doubtful that this is the kind of inherent breed characteristic that *Hearn* or subsequent cases is relying on in declaring gameness as unique to the breed.

Otherwise, gameness is an adjective, not a recognized and studied behavioral trait.¹⁷² Some experts even disagree on what gameness actually is.¹⁷³ Experts in *Tellings* opined that gameness is another word for carrying out trained tasks, “despite injury, distraction, or frustration” and is desirable in dogs that have been trained to be search and rescue dogs, military dogs, police dogs, and service dogs.¹⁷⁴ All experts in *Tellings* agreed that a good example of gameness is “just as some greyhounds exhibit more willingness to chase [a] ‘rabbit’ than others, some pit bulls have more ‘gameness’ than others.”¹⁷⁵ In *Vanater*, the court found that while gameness is not a “totally clear concept,” it is clear that the gameness of pit bulls makes them uniquely dangerous.¹⁷⁶ An assumed behavior trait that sets apart a breed of dogs from others, but is not a clear concept and is more of an adjective than a scientifically proven behavior, but nonetheless makes a dog uniquely dangerous is flawed logic. This logic and subsequent holding in *Vanater* has been relied upon to uphold constitutional challenges to breed-specific legislation for over twenty years.¹⁷⁷

170. *AWTA Certificates*, AM. WORKING TERRIER ASS’N, <http://www.awta.org/awards/certificates/> (last visited Oct. 10, 2016).

171. *Id.* Breeds recognized by the American Working Terrier Association are limited to small terriers like the Australian, Bedlington, Border, Cairn, Cesky, Dandie Dinmont, Fell, Fox, Glen of Imaal, Jack Russell, Jagd, Lakeland, Norwich, Norfolk, Patterdale, Scottish, Sealyham, Skye, Welsh, West Highland White terriers, and Dachshunds for den hunting, and any AKC or UKC terrier for above earth hunting. *About Us*, AM. WORKING TERRIER ASS’N, <http://www.awta.org/about-us/> (last visited Oct. 10, 2016).

172. *See City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *11 (Ohio Ct. App. Mar. 3, 2006).

173. *Id.*

174. *Id.* at *8–9, *11.

175. *Id.* at *11.

176. *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1240 (S.D. Ohio 1990).

177. *See Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1542 (S.D. Fla. 1989) (quoting *Vanater*, 717 F. Supp. at 1244); *Colo. Dog Fanciers, Inc. v. City of Denver*, 820 P.2d 644, 652–53 (Colo. 1991); *Singer v. City of Cincinnati*, 566 N.E.2d 190, 192 (Ohio Ct. App. 1990). *But see Dias v. City of Denver*, 567 F.3d 1196, 1183 n.12 (10th Cir. 2009) (stating that breed-specific ordinances are rational as a matter of law when a local municipality develops a record to show why it believe the ordinance was necessary to protect the safety of its residents).

7. *Stranger Danger*

The problem with parceling out breed descriptors that caution certain breeds around strangers or children is that every breed can bite, chase, or attack small children, and most AKC breeds were originally developed for guarding the family or flock against strangers or hunting other animals.¹⁷⁸ The Polish Lowland Sheepdog “may be suspicious of strangers,” and they are not the only breed that has this trait.¹⁷⁹ The Cesky Terrier, Akita, Black Russian Terrier, Dogue de Bordeaux, Tibetan Mastiff, Giant Schnauzer, Doberman Pinscher, and Rottweiler all exhibit behaviors of being territorial, guarded, or suspicious of strangers.¹⁸⁰ The Australian Cattle Dog is “wary of strangers[;] the breed bonds closely to its family, though the owner[s] must establish themselves as the pack leaders.”¹⁸¹

Nearly every single one of the over two hundred AKC breeds comes with a warning about supervising the dog around children¹⁸²—as it should. In fifteen years, more than 1.2 million children under the age of ten years old were reported injured by dog bites.¹⁸³ So while this Article is examining behaviors within breeds, this fact is reiterated to drive home

178. *Hunting Group*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/groups/sporting/> (last visited Oct. 10, 2016); *Working Group*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/groups/working/> (last visited Oct. 10, 2016).

179. *Meet the Polish Lowland Sheepdog*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/polish-lowland-sheepdog/detail/> (last visited Oct. 10, 2016).

180. *Meet the Cesky Terrier*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/cesky-terrier/detail/> (last visited Oct. 10, 2016); *Meet the Akita*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/akita/detail/> (last visited Oct. 10, 2016); *Meet the Black Russian Terrier*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/black-russian-terrier/detail/> (last visited Oct. 10, 2016); *Meet the Dogue de Bordeaux*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/dogue-de-bordeaux/detail/> (last visited Oct. 10, 2016); *Meet the Tibetan Mastiff*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/tibetan-mastiff/detail/> (last visited Oct. 10, 2016); *Meet the Giant Schnauzer*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/giant-schnauzer/detail/> (last visited Oct. 10, 2016); *Meet the Doberman Pinscher*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/doberman-pinscher/detail/> (last visited Oct. 10, 2016); *Meet the Rottweiler*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/rottweiler/detail/> (last visited Oct. 10, 2016).

181. *Australian Cattle Dog Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/australian-cattle-dog/care/> (last visited Oct. 10, 2016).

182. *Be a Responsible Dog Owner*, AM. KENNEL CLUB, <http://www.akc.org/dog-owners/responsible-dog-ownership/> (last visited Oct. 10, 2016).

183. *20 Leading Causes of Nonfatal Injury, United States*, CENTERS FOR DISEASE CONTROL & PREVENTION, <http://webappa.cdc.gov/sasweb/ncipc/nfilead2001.html> (from sex field select “Both Sexes” dropdown; from disposition field select “All Cases” dropdown; from number of causes field select “Top 20” dropdown; from year(s) of report field select “2001” and “2014” dropdowns; from intent of injury field select “All Injuries” dropdown; from display options field select “Standard Output” dropdown; follow “Submit Request” hyperlink) (last visited Oct. 10, 2016).

the importance of supervising all dogs and children. The Bouvier des Flandres, along with the Akita, Anatolian Shepherd, Miniature Bull Terrier, and Peruvian Inca Orchid, must “always be supervised around children and other animals”;¹⁸⁴ The Parson Russell Terrier “does not tolerate rough handling from toddlers”;¹⁸⁵ and the American Kennel Club flat out says “experts do not recommend [the] Neapolitan Mastiff for . . . families with young children.”¹⁸⁶ The *Tellings* appellate court outlined expert testimony that “most fatal attacks on children could be attributed to lack of parental supervision, rather than inherently vicious dogs.”¹⁸⁷ Later in the Article, this will be explored in depth with the most recent dog bite related fatality study.

All the above breed traits sound negative, yet we live with all of these breeds of dogs and all their mixes in our communities every day. Interestingly, courts rarely, if ever, address the behavior traits actually outlined in the breed standard for which they rely so heavily on for appearance.¹⁸⁸ The dog fanciers, founders, and breeders of American Staffordshire Terrier call the breed a “people-oriented dog that thrives when he is made part of the family and given a job to do.”¹⁸⁹ The Staffordshire Bull Terrier is “extremely courageous and obedient, highly intelligent and affectionate with a sense of humor. This, coupled with its affection for its friends, and children in particular, its off-duty quietness and trustworthy stability, makes it a foremost all-purpose dog.”¹⁹⁰

All of this information should be taken with a grain of salt. There are retrievers that refuse to retrieve and play fetch, and Collies that do not herd.¹⁹¹ The Mastiff of 55 B.C. looks nothing like the Mastiff of 1810,

184. *Bouvier des Flandres Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/bouvier-des-flandres/care/> (last visited Oct. 10, 2016); *see Akita Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/akita/care/> (last visited Oct. 10, 2016); *Anatolian Shepherd Dog Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/anatolian-shepherd-dog/care/> (last visited Oct. 10, 2016); *The Miniature Bull Terrier*, MINIATURE BULL TERRIER CLUB AM. (The Miniature Bull Terrier Club of Am., Graham, Wash.), 2009, at 1, <http://cdn.akc.org/MiniatureBullTerrier-club-flier.pdf>; *Peruvian Inca Orchid Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/peruvian-inca-orchid/care/> (last visited Oct. 10, 2016).

185. *Parson Russell Terrier Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/parson-russell-terrier/care/> (last visited Oct. 10, 2016).

186. *Neapolitan Mastiff Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/neapolitan-mastiff/care/> (last visited Oct. 10, 2016).

187. *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *13 (Ohio Ct. App. Mar. 3, 2006).

188. *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1241 (S.D. Ohio 1990).

189. *Meet the American Staffordshire Terrier*, *supra* note 66.

190. *Staffordshire Bull Terrier Care*, AM. KENNEL CLUB, <http://www.akc.org/dog-breeds/staffordshire-bull-terrier/care/> (last visited Oct. 10, 2016).

191. *Tellings*, 2006 Ohio App. LEXIS 884, at *10.

and neither looks like the Mastiff of today.¹⁹² The short, compact, Staffordshire Bull Terrier of today is dwarfed in comparison to the longer haired, taller, narrow-snouted Staffordshire Bull Terrier of 1906.¹⁹³

We see variations of this behavior within each of these breed classes, as well as dogs mixed with these breeds.¹⁹⁴ Studies have shown that as humans have stopped breeding dogs for their function or purpose and started breeding for appearance or temperament, these once assumed to be breed-specific behaviors are diminishing.¹⁹⁵ And if you are keeping track, two of the most popular dogs in the United States according to AKC registration statistics are short-haired, muscular dogs with block heads, originally developed for dog fighting: the Bulldog and the Boxer.¹⁹⁶

D. Pseudo-Science

As stated in the beginning, science and technology have evolved significantly in the last century. Much of the information outlined below was not available to experts or courts in the 1980s and 1990s.¹⁹⁷ What was around, though, was the scientific method. The scientific method—“a method of procedure that has characterized natural science . . . consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses”—has been around since the seventeenth century.¹⁹⁸

In *Hearn*, Dr. Clifford gives his opinion that pit bull dogs possess a catch and kill instinct, that pit bulls possess a behavior trait of gameness that no other breed possesses, and that pit bull dogs attack with a unique savageness and unpredictability, all due to his research on pit bulls—all making it into the record and opinion by the Kansas Supreme Court.¹⁹⁹ Each time, the follow-up question by the plaintiffs was how those experiments were formed and if those same experiments were conducted on other breeds of dogs (to form the opinion that only pit bulls possess this instinct).²⁰⁰ The answer each time was no, he did not conduct the

192. Homan, *supra* note 156, at 10, 24.

193. Fleig, *supra* note 68, at 138; *Meet the Staffordshire Bull Terrier*, *supra* note 66.

194. Fleig, *supra* note 68, at 190.

195. See Mirkó et al., *supra* note 148, at 89.

196. Smith, *supra* note 112.

197. Transcript of Proceedings, *supra* note 123, at 401–24.

198. *Scientific Method*, OXFORD DICTIONARIES, http://www.oxforddictionaries.com/us/definition/american_english/scientific-method (last visited Oct. 10, 2016).

199. Transcript of Proceedings, *supra* note 123, at 401, 406–07, 423–24; see *Hearn*, 772 P.2d at 765 (discussing the findings of the county district court).

200. Transcript of Proceedings, *supra* note 123, at 401–24.

same experiment on other breeds of dogs, only pit bulls.²⁰¹ These “experiments” that reported that pit bulls behaved differently than other breeds of dogs were never conducted on other breeds of dogs, yet were used for a measurement for pit bulls being unique compared to other breeds of dogs and to uphold the constitutionality of a breed-specific ordinance.²⁰²

1. “Experts”

For most people, the only way to tap the vast pools of scientific knowledge is to rely on the advice of experts—people who are capable of synthesizing information from at least one field and making it comprehensible to a lay audience. Generally, this method is preferable to getting your opinions from people who know as little as you do about a subject. Even when there is widespread agreement, there will still be dissenters who make their case with impressively manipulated statistics.²⁰³ Dog bite related fatality statistics are often misused in policymaking and previous court decisions, so much so that it lead one researcher to issue a report on the misuse of the data.²⁰⁴ The research for this Article returned broad consensus within the scientific community on the relevant scientific issues of breed traits, dog bites, dog management, danger and risk, and breed identification.²⁰⁵

Most often, courts relied upon Animal Control Officers as experts in the risks of dogs and breeds of dogs in their cities through anecdotal stories, and in other cases Mayors, City Managers, and Public Information Officers.²⁰⁶

The City of Aurora banned pit bulls (which was undefined), American Bulldogs, Dogo Argentinos, Perro de Presa Canarios, Ca de Bous, Tosa Inu, Cane Corso, Fila Brasileiro, “or any dog displaying the majority of physical traits of any one (1) or more of the above breeds.”²⁰⁷ In *American Canine Foundation v. City of Aurora*, the court relied heavily on the opinions of the City’s Public Information Officer to present, second-hand, what the city council was presented with in

201. *Id.*

202. *Id.* at 401, 406–07, 423–24.

203. DANIEL GARDNER, *THE SCIENCE OF FEAR* 105 (2009).

204. J. Thomas, *Dog Attack Statistics: A Primer*, STOP BSL, [https://stopbsl.org/for the record/scientific-studies/](https://stopbsl.org/for-the-record/scientific-studies/) (last visited Oct. 10, 2016).

205. *See* Mirkó et al., *supra* note 148, at 97.

206. *Am. Canine Found. v. City of Aurora*, 618 F. Supp. 2d 1271, 1279 (D. Colo. 2009); *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1239–40, 1243 (S.D. Ohio 1990); *Greenwood v. City of North Salt Lake*, 817 P.2d 816, 821 (Utah Ct. App. 1991).

207. *Am. Canine Found.*, 618 F. Supp. 2d. at 1273.

evidence from *residents*, when enacting the breed ban.²⁰⁸ The court also relied on animal control officer testimony that pit bulls attack without warning—entirely by stories from officers—a claim that had not and still has not been studied scientifically.²⁰⁹ The court stated that the City’s finding that all the above restricted breeds were stronger than other dog breeds and gave no warning signals before attacking was ample evidence to establish a rational relationship to protecting the health and safety of the residents:

This evidence was primarily demonstrated through the testimony of Cheryl Conway, public relations specialist for the City of Aurora animal control division . . . Her testimony about the evidence presented to the City Council from Aurora animal care and others supports Aurora’s findings . . . and also supports a finding that the restricted breeds are more aggressive than other animals.²¹⁰

Relying on testimony from residents given at a city council meeting as evidence to uphold the constitutionality of any piece of legislation seems misguided. Particularly when residents are lay people and often have their own biases.

“[P]sychologists have discovered [a] cognitive bias,” called confirmation bias, “that suggests that, in some circumstances, the blind can actually lead the blind indefinitely.”²¹¹ Confirmation bias can be “powerful,” but establishing it is incredibly simple.²¹² Once we have formed a view on a subject, “we embrace information that supports that view while ignoring, rejecting, or harshly scrutinizing information that casts doubt on it.”²¹³ Once a belief is established, such as a certain breed of dog being inherently more dangerous, our brains will seek to confirm it.²¹⁴

The *Vanater* case²¹⁵ is a perfect example of how confirmation bias can play out in court cases, as well as how breed-specific legislation usually comes to be enacted. The breed-specific legislation in the Village of South Point was proposed because the Mayor had become concerned about the danger posed by pit bulls through media reports and calls from

208. *Id.* at 1274.

209. *Id.*

210. *Id.* at 1279. It should be noted that since the case was upheld, Aurora repealed its breed-specific prohibition on all breeds except the “pit bull.” AURORA, COLO., CODE OF ORDINANCES ch. 14, art. 2, div. 2, § 14-75(a) (2016).

211. GARDNER, *supra* note 203, at 110.

212. *Id.*

213. *Id.*

214. *See id.*

215. *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1236 (S.D. Ohio 1990).

concerned citizens.²¹⁶ The media reports were of attacks by pit bulls on citizens in neighboring cities, but no attacks were ever reported in the Village of South Point.²¹⁷ The Mayor determined, through callers who said they saw pit bulls in their neighborhood, not law enforcement, veterinarians, or animal control officers, that there were approximately six to seven pit bulls in the Village.²¹⁸ The court was careful to note that the breed identification was made over the phone, not confirmed by anyone and had nothing to do with the definition of pit bulls drafted in the breed-specific ordinance.²¹⁹ The Mayor proposed the ordinance and many citizens spoke at the city council meeting, much like in *Aurora*.²²⁰ “No scientific evidence or expert testimony regarding what a Pit Bull is or whether it is inherently more vicious . . . was offered or addressed in these hearings.”²²¹ By contrast, the Police Chief testified that “neither he nor any of his staff members had training in identifying dogs and explained that there is no such known training available to educate law enforcement” on breeds of dogs.²²² The Police Chief went on to explain that he had “no expertise in identifying certain dog breeds or confirming whether they would or would not violate the Ordinance as ‘Pit Bulls.’”²²³ The court noted that “Pit Bulls vary in their size, shape and color,” and that the Village’s own experts had been wrong in their identification of dog breeds.²²⁴

In its holding, finding the ordinance is rationally related to protecting the safety of the public, the *Vanater* court found that pit bulls pose a special threat based on their appearance and traits that are “unique to the breed.”²²⁵ The court buttresses its finding by holding, “While this description is not true of every Pit Bull, the Court must defer to the legislature’s consideration of the conflicting positions . . . [and] *should not substitute its judgment for the reasoned findings and decision of the Village of South Point Council.*”²²⁶ Remember, the council met with no expert witnesses and heard no scientific evidence—the court held it should not substitute its judgment for the confirmation bias citizens

216. *Id.* at 1239.

217. *Id.*

218. *Id.* at 1240.

219. *Id.*

220. *Am. Canine Found. v. City of Aurora*, 618 F. Supp. 2d 1271, 1275 (D. Colo. 2009); *Vanater*, 717 F. Supp. at 1240.

221. *Vanater*, 717 F. Supp. at 1240.

222. *Id.*

223. *Id.*

224. *Id.*

225. *Id.* at 1243.

226. *Vanater*, 717 F. Supp. at 1243 (emphasis added).

reiterated when they spoke at the council meeting about media reports of a dog attack in another city.²²⁷ The court used this reasoning to uphold the substantive due process challenge, concluding the enactment of the ordinance was “based on verifiable factors and was a reasonable preventative response and solution to a dangerous and possibly tragic situation.”²²⁸ The *Dade County* and *Singer v. Cincinnati* courts cited this case in upholding the breed-specific legislation constitutional challenges in each respective case.²²⁹

2. The Media

Perception bias is also a recognized cognitive bias that can affect anyone, including well-educated animal professionals.²³⁰ In a study on dog breed identification where animal welfare professionals were the primary participants, researchers briefly discussed that even the simplest things such as “[t]he frequency with which people are exposed to the names of specific breeds of dogs and their perception of the population of specific breeds” could influence the prediction of breed by the participants.²³¹

Referenced in the introduction, and still true today, if you read the newspaper, every dog that bites seems to be a “pit bull.”²³² After a few years of investigating media reports of dog bites, there is no longer a lingering evidence of bias—it is obvious. In December of 2008, an Arizona woman was killed by two dogs identified by authorities as Labrador Retrievers.²³³ Only one local newspaper published an article

227. *See id.* at 1240, 1243.

228. *Id.* at 1243.

229. *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1542 (S.D. Fla. 1989) (quoting *Vanater*, 717 F. Supp. at 1244); *Singer v. City of Cincinnati*, 566 N.E.2d 190, 191 (Ohio Ct. App. 1990) (citing *Vanater*, 717 F. Supp. at 1244).

230. *See Comparison of Visual and DNA Breed Identification, supra* note 80, at 24 (first citing Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, 80 PSYCHOL. REV. 237, 241–42 (1973); then citing Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1124, 1130 (1974); then citing E. Stephan & G. Kiell, *Decision Processes in Professional Investors: Does Expertise Moderate Judgmental Biases?*, in PROCEEDINGS OF THE 29TH EUROPEAN MARKETING ACADEMY ANNUAL CONFERENCE 416–20 (2000); and then citing Daniel Kahneman, *Don’t Blink! The Hazards of Confidence*, N.Y. TIMES MAG. (Oct. 19, 2011), <http://www.nytimes.com/2011/10/23/magazine/dont-blink-the-hazards-of-confidence.html>).

231. *Id.*

232. *See, e.g., Media Bias, Breed Bias*, THE DOG PRESS, <http://www.thedogpress.com/Columns/Media-Bias-DogBites-067.asp> (last visited Oct. 10, 2016).

233. CMTY. ORIENTED POLICING SERVS., U.S. DEP’T OF JUSTICE, THE PROBLEM OF DOG-RELATED INCIDENTS AND ENCOUNTERS 19 (2011), <http://www.nationalcanineresearchcouncil.com/sites/default/files/The-Problem-of-Dog-Related-Incidents-and-Encounters-2011.pdf>.

following the discovery of her body.²³⁴ That same month, a California man was attacked and killed by one or two dogs that the media identified as his grandson's pit bulls.²³⁵ This incident was reported by "at least 285 media outlets, both nationally (in 47 states) and internationally (in eight other countries)."²³⁶ "One dog was later reported to be a mastiff-pit bull mix."²³⁷ This imbalance in reporting affects public perception of "pit bulls" and can often skew statistics and data and encourage perception bias toward pit bulls:

Disproportionate coverage in the news media . . . has effects on readers and viewers. When . . . a professor at Hunter College . . . interviewed women in New York City about their fears of crime, they frequently responded with the phrase "I saw it in the news." The interviewees identified the news media as both the source of their fears and the reason they believed those fears were valid. Asked in a national poll why they believe the country has a serious crime problem, 76 percent of people cited stories they had seen in the media[,] [with] [o]nly 22 percent cit[ing] personal experience.²³⁸

The American Automobile Association (AAA) reported a startling figure in 1997: road rage incidents rose more than fifty percent between 1990 and 1996.²³⁹ But the dramatic number was derived from the number of traffic accidents that involved major violence in 1990 (1,129) compared to 1996 (1,800).²⁴⁰ The AAA attributed those deaths directly to "angry or impatient" drivers, sparking several news stories about a growing epidemic of road rage.²⁴¹ Research found that the AAA actually derived their data "from newspaper, police, and insurance reports."²⁴² The more talk there was about road rage, the more likely the news was to report on it.²⁴³ The more talk in the news of road rage, and the more likely

234. *Id.*

235. *Id.*

236. *Id.*

237. NAT'L CANINE RESEARCH COUNCIL, *THE PIT BULL PAPARAZZI* (2008) (on file with author) (National Canine Research Council is the only organization that tracks media reports of dog bites and follows up on breed identification through Animal Control reports, police reports, animal shelter breed identification, necropsy and pathology reports and subsequent media reporting of each attack. The quoted document contains media reporting from 2008).

238. BARRY GLASSNER, *THE CULTURE OF FEAR*, at xxi (1999) (citing ESTHER MADRIZ, *NOTHING BAD HAPPENS TO GOOD GIRLS: FEAR OF CRIME IN WOMEN'S LIVES* 113 (1997)).

239. Jason Vest & Warren Cohen, *Road Rage: Tailgating, Giving the Finger, Outright Violence—Americans Grow More Likely to Take Out Their Frustrations on Other Drivers*, U.S. NEWS & WORLD REP., June 2, 1997, at 24, 24.

240. Patrick O'Driscoll, *In Hot Pursuit of Road Rage*, USA TODAY, Dec. 9, 1997, at 3A.

241. Vest & Cohen, *supra* note 239, at 24.

242. GLASSNER, *supra* note 238, at 5.

243. *Id.*

police officers and insurance agents are to be aware of road rage as a cause of death and classify a death as road rage; incidents they would have classified differently in the past.²⁴⁴

If animal welfare professionals are subject to perception bias, and law enforcement officers are demonstrating perception bias in reporting writing with road rage incidents, it stands to reason that perception bias could be rampant in dog bite reporting and anecdotal stories about dog related encounters, all of which make it into testimony in cases challenging the constitutionality of breed-specific legislation.²⁴⁵

3. *Public Perception and Police Power*

Along with media reports, another common misassociation with pit bull dogs is that they are only in the homes of the miscreants of society.²⁴⁶ Jeff Norgrove, of the City of Sterling Heights Neighborhood Stabilization Committee confirmed the sentiment by saying, “We have inner city people who bought homes here . . . They don’t need to bring their pit bulls here [too].”²⁴⁷ Important to breed-specific legislation, is that the inherent dangerousness of an entire breed has been erected as a smokescreen for the true motivation behind such legislation. In *Tellings*, the appellate court outlined the basis for the pit bull ban enacted in Toledo, Ohio: “Breed-specific laws were enacted because, in the past, courts and legislatures considered it to be a ‘well-known fact’ that pit bulls are ‘unpredictable,’ ‘vicious’ creatures owned only by ‘drug dealers, dog fighters, gang members,’ or other undesirable members of society.”²⁴⁸ The Ohio Supreme Court took the case on appeal and deduced from the testimony that pit bulls create a “serious danger to the safety of citizens” because pit bulls are “found largely in urban settings where there are crowded living conditions.”²⁴⁹

In fact, in *Tellings*, the Supreme Court of Ohio relied more heavily on Dog Warden Tom Skeldon’s testimony than that of the expert

244. *Id.* (first citing Vest & Cohen, *supra* note 239, at 24; and then citing O’Driscoll, *supra* note 240, at 3A); see also Jane Hall, *Newsmagazines Spread Across TV’s Table*, L.A. TIMES (Sept. 30, 1997), <http://articles.latimes.com/1997/sep/30/entertainment/ca-37565>.

245. See, e.g., *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1239–40 (S.D. Ohio 1990).

246. *Pitbulls: Everything You Need to Know*, BEST FRIENDS, <http://bestfriends.org/resources/pitbulls-everything-you-need-know> (last visited Oct. 10, 2016).

247. Lana Mini, *Sterling Heights Officials to Examine Vicious Dog Laws*, SOURCE (June 17, 2010) (omission in original), http://www.sourcenewspapers.com/articles/2010/06/17/news/doc4c1a21c421048364455745.txt?utm_source=twitterfeed&utm_medium=twitter.

248. *City of Toledo v. Tellings*, 2006 Ohio App. LEXIS 884, at *26 (Ohio Ct. App. Mar. 3, 2006) (citing *State v. Anderson*, 566 N.E.2d 1224, 1227–28 (Ohio 1991)).

249. *City of Toledo v. Tellings*, 871 N.E.2d 1152, 1157 (Ohio 2007).

witnesses, citing among other things, pit bulls have been frequently shot during drug raids because they are encountered more frequently in drug raids than any other breed of dog and that officers fire their weapons in the line of duty at pit bulls more often than other breeds of dogs and thus pit bulls pose a serious danger to the safety of citizens.²⁵⁰ The absence of the science and expert testimony in the lower court did not go overlooked by Justice O'Connor who concurred in judgment:

The statistics offered at trial in this case may support a correlation between pit bulls and the frequency and severity of injuries they cause to people in urban settings, but they do not establish the conclusion that pit bulls must necessarily pose a danger

. . . .

. . . Because the danger posed by vicious dogs and pit bulls arises from the owner's failure to safely control the animal, rational legislation should focus on the owner of the dog rather than the specific breed that is owned.²⁵¹

Toledo Dog Warden Tom Skeldon resigned just before the State of Ohio repealed its statewide breed-specific statute that had been challenged in the *Tellings* case.²⁵² In a response to the repeal, Skeldon reiterated his testimony in the *Tellings* case, stating pit bulls were the dog of choice for gang members and the state statute that named pit bulls specifically as a dangerous dog gave police officers a way to question their owners:

“Locally, Toledo has a real problem with gangs, and [police] used to use that law to help control the streets of Toledo,” he said. “It used to be if someone was out walking two or three ‘pit bulls,’ they were inviting the police to shake them down. Now, they can walk 10 ‘pit bulls’ and the police can’t stop them because they don’t have probable cause. You can hide drugs, but it’s pretty hard to hide a ‘pit bull.’”²⁵³

Researching this Article, it seems the breed of dog consistently masquerades as a means to control the behavior of humans.²⁵⁴ As this Article discusses below, studies show human behavior is more indicative of dangerous dog behavior than the breed of the dog, but when enacting

250. *Id.*

251. *Id.* at 1159 (O'Connor, J., concurring).

252. J.C. Reindl, *Skeldon Resigns; Lucas County Dog Warden's Last Work Day is Dec. 31*, BLADE (Nov. 20, 2009), <http://www.toledoblade.com/local/2009/11/20/Skeldon-resigns-Lucas-County-dog-warden-s-last-work-day-is-Dec-31.html>.

253. Jim Provance & Tanya Irwin, *House Axes 25-Year-Old 'Pit Bull' Law*, BLADE (Feb. 9, 2012) (alteration in original), <http://www.toledoblade.com/State/2012/02/09/House-axes-25-year-old-pit-bull-law.html>.

254. *See id.*

breed-specific legislation, the breed of dog is used as a proxy to regulate canine behavior.²⁵⁵ Likewise, illicit human behavior was at the root of the Ohio statute, yet they used the breed of dog as a proxy to regulate the human behavior.²⁵⁶

4. *The AVMA Study*

Throughout the twentieth century breed-specific cases, there was one document that remained constant: the American Veterinary Medical Association (AVMA) study that seemingly showed “pit bulls” represented a disproportionate number of dogs involved in fatal attacks on people.²⁵⁷ The first study was published in 1996,²⁵⁸ the second in 1997,²⁵⁹ and the final study used the earlier data to gather a complete list for the years of 1979–1998.²⁶⁰ The most interesting part of the studies is that the data was collected entirely from media reports and those media reports were relied upon as complete and entirely accurate.²⁶¹

The results of the comprehensive study published in 2000 have been analyzed and discussed quite honestly by the researchers involved in publication—both in subsequent scientific journals and court cases.²⁶² One researcher provided an expert witness report that read,

The oft cited [Centers for Disease Control (CDC)] and AVMA reports tracking the rare instances of fatal attacks make several key points that usually go unmentioned in the use of the data in these studies that render this data meaningless in drawing epidemiological conclusions As a coauthor of most of these reports, I feel it necessary to address the misuse of this data.²⁶³

The report goes on to address the fact that fatal dog attacks are rarer than deaths by bee stings, West Nile virus, and lightning strikes and

255. See *infra* notes 259–86 and accompanying text.

256. Provance & Irwin, *supra* note 253.

257. J. Sacks et al., *Breeds of Dogs Involved in Fatal Human Attacks in the United States Between 1979 and 1998*, 217 J. AM. VETERINARY MED. ASS'N 836, 839 (2000) [hereinafter *Breeds of Dogs*]. See also Randall Lockwood et al., *Dog-Bite-Related Fatalities—United States, 1995–1996*, 46 MORBIDITY & MORTALITY WKLY. REP., 463, 463–67 (1997); J. Sacks et al., *Fatal Dog Attacks, 1989–1994*, 97 PEDIATRICS 891, 893 (1996) [hereinafter *Fatal Dog Attacks*].

258. See *Fatal Dog Attacks*, *supra* note 257, at 893.

259. See Lockwood et al., *supra* note 257.

260. See *Breeds of Dogs*, *supra* note 257, at 837.

261. Patronek et al., *supra*, note 13, at 1726.

262. See *Dias v. City of Denver*, 567 F.3d 1169, 1183 (10th Cir. 2009) (discussing an instance in which dog owners felt breed-specific legislation against pit bulls was wrongfully placed).

263. *Lockwood Report*, *supra* note 12, at 2.

statistically, if a city wanted to legislate against each cause of mortality at the same rate of the risk of dog attacks it “would be required to ban bees, bathtubs, ladders, swimming pools, guns, knives and many other instruments related to one or more deaths.”²⁶⁴ It also includes that “epidemiological extrapolations must be based on populations that are representative of the populations at risk. Fatal attacks represent a unique intersection of multiple problems related to dog bite epidemiology. Bites are the result of many factors,” and “represent a unique ‘perfect storm’ of negative factors.”²⁶⁵

Cities have historically misused this data to enact breed-specific legislation, so much so that the journal and authors of the study issued a formal letter warning: “the data contained within [the CDC] report cannot be used to infer any breed-specific risk for dog bite fatalities (e.g., neither pit bull type dogs nor Rottweilers can be said to be more ‘dangerous’ than any other breed based on the contents of this report).”²⁶⁶ The *Dias* court relied on this fact to conclude that there may be no rational basis for a breed-specific ordinance.²⁶⁷

Other than the fact that the studies were based on information taken solely from media reports, the data was published in a manner that combined both mixed-breed dogs and purebred dogs.²⁶⁸ The Rottweiler and mixed-breed dog that was identified as being a Rottweiler-cross was labeled “Rottweiler.”²⁶⁹ Similarly, an American Staffordshire Terrier, Staffordshire Bull Terrier, American Pit Bull Terrier, or a mixed-breed dog with any of those three breeds assumed to be in its ancestry was simply labeled “pit bull.”²⁷⁰ Today, a more comprehensive approach has been taken to study dog bite related fatalities that courts have yet to consider.²⁷¹

In the most recent dog bite related fatality study, where the scientific method was used and will be discussed later in the Article, “single dog incidents (148 incidents), on the basis of the strict definition (exact match), breed descriptors in media reports” did not match “32 of 148

264. *Id.*

265. *Id.*

266. *Id.*

267. *Dias v. City of Denver*, 2010 U.S. Dist. LEXIS 103814, at *20 (D. Colo. 2010) (finding genuine issue of material fact to be decided and denying summary judgment).

268. *See Breeds of Dogs*, *supra* note 257, at 837–38.

269. *Comparison of Visual and DNA Breed Identification*, *supra* note 80, at 19–20 tbl.1 (displaying different mixed-breeds of dogs).

270. *See id.* at 18 (discussing how dogs with common ancestry are assumed to be pit bulls).

271. *Patronek et al.*, *supra* note 13, at 1732.

(21.6%) dogs,” and “animal control or local law enforcement assessment of breed differed from the media account for 45 of 129 (34.9%) dogs.”²⁷²

“[T]he hallmark of pseudo-scientists is the tendency to clip newspaper reports, collect hearsay, and cite other pseudoscience books.”²⁷³ In pseudo-science, the emphasis “is not on meaningful, controlled, repeatable scientific experiments,” but instead “on unverifiable eyewitness testimony, stories . . . , hearsay, rumor, and dubious anecdotes.”²⁷⁴ Each of these hallmarks have been explored for this Article and appear frequently in court precedent addressing the constitutionality of breed-specific legislation.²⁷⁵

5. *De Minimis*

Whether it is the extreme rarity of the event of a dog attack, the uncertainty of when “man’s best friend” could suddenly turn on man, or the primal fear of being hunted, the threat of a dog attack can evoke fear in the public and policymakers. That fear coupled with the complexity of dog behavior is a nexus for panic policymaking.²⁷⁶ Trying to find a single vector solution for something that is rare and has a lot to do with human behavior is a solid impetus for breed-specific legislation.

Policymakers often rely on calculating risk to analyze the impact of legislation, programs, or funding thereof.²⁷⁷ Reconciling fear and statistics to calculate risk is not always as easy as it sounds. For instance, the National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children ran a report over a one year period in 1999.²⁷⁸ The report found an estimated 797,500 people under the age of eighteen went missing for a variety of reasons in the one year period.²⁷⁹ The ultimate fear for a parent is the abduction of a child resulting in murder or the child completely vanishing.²⁸⁰ According to the report, this happens to about fifty teens and children per year in the United States.²⁸¹ There were approximately seventy million Americans under the age of eighteen in

272. *Id.* at 1731.

273. DICKEY, *supra* note 74, at 188.

274. *Id.*

275. See *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1243 (S.D. Ohio 1990); *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1538, 1540–41 (S.D. Fla. 1989); *Am. Dog Owners Ass’n v. City of Lynn*, 533 N.E.2d 642, 646 (Mass. 1989).

276. See generally Schiavone, *supra* note 20, at 56–72 (discussing the history of dangerous dog panics and the foundations of policy behind breed-specific legislation).

277. See GARDNER, *supra* note 203, at 243–44.

278. *Id.* at 185.

279. *Id.*

280. *Id.* at 187.

281. *Id.*

1999, thus the risk of being abducted by a stranger and killed or not returned is .00007%.²⁸²

“Risk regulators use a term called [de minimis] to describe a risk so small it can be treated as if it were zero.”²⁸³ What qualifies as de minimis can vary as much as one in ten thousand or other thresholds, but one-in-a-million chance is certainly de minimis.²⁸⁴ “In 2003, the number of . . . children fourteen and younger who drowned in a swimming pool was 285” (285/70,000,000), which is more than 2.5 times more likely to happen than being abducted by a stranger.²⁸⁵ In the most recent ten year study on dog bite related fatalities, there was an average of twenty-five dog bite related fatalities annually, in a country with a “human population of approximately 295.5 million and an annual dog population of approximately 68.8 million.”²⁸⁶ Mathematically, this is about .38 fatal bites for every one million dogs in the United States and .087 fatal bites for every person in the United States, or put another way, de minimis or zero.²⁸⁷

6. “Pit Bulls” Make Up a Small Percentage of the Entire Dog Population

Courts have taken judicial notice that a very small percentage of the United States’ dog population are “pit bulls.”²⁸⁸ In *Dias*, the City’s expert testified that “pit bulls” make up no more than two to nine percent of the canine population.²⁸⁹ That oft-cited low number usually comes from the registration statistics of the AKC American Staffordshire Terrier relative to the entire dog population.²⁹⁰ It rarely includes the AKC registration statistics of the Staffordshire Bull Terrier or the UKC registration statistics of the American Pit Bull Terrier, or any data on mixed-breed dogs, yet those breeds are outlined as “pit bulls” in city ordinances and were grouped together as one breed for dog bite statistics in the AVMA

282. GARDNER, *supra* note 203, at 187.

283. *Id.*

284. *Id.*

285. *Id.* at 186.

286. Patronek et al., *supra* note 13, at 1729.

287. *Id.*

288. *Dias v. City of Denver*, 2010 U.S. Dist. LEXIS 103814, at *19–20 (D. Colo. 2010) (first citing *Am. Canine Found.*, 618 F. Supp. 2d 1271; then citing *Najjar v. Ashcroft*, 257 F.3d 1262, 1283 (11th Cir. 2001); then citing *Tal v. Hogan*, 453 F.3d 1244, 1264 (10th Cir. 2006); and then citing *Tal*, 453 F.3d at 1264).

289. *Id.* at *12.

290. See Defendants’ Motion for Summary Judgment & Recitation of Legal Authority in Support Ex. A-2, at 2, *Dias v. City of Denver*, No. 1:07-cv-00722 (D. Colo. 2010), ECF No. 94-2, 2010 U.S. Dist. LEXIS 103814 [hereinafter *Beck Report*].

study.²⁹¹

Today, estimates show that pit bull dogs (American Staffordshire Terrier, Staffordshire Bull Terrier, American Pit Bull Terrier, and mixes identified as pit bulls) are among the more popular breeds in the country.²⁹² In ten years, the ADBA registered over 700,000 American Pit Bull Terriers and the AKC registered more than 25,000 American Staffordshire Terriers and Staffordshire Bull Terriers, and that does not take into account the UKC American Pit Bull Terrier registration numbers.²⁹³ A simple search on *Petfinder*, the largest shelter dog adoption website, on one single day returned a total of over 20,000 “Pit Bull Terrier” dogs listed,²⁹⁴ over 5000 American Staffordshire Terriers,²⁹⁵ and 1500 Staffordshire Bull Terriers.²⁹⁶ The most popular dog breed identified on *Petfinder* was the Labrador Retriever,²⁹⁷ which returned a total of 24,000 dogs listed, only a few thousand more than the Pit Bull Terrier.²⁹⁸ In *Dias*, the City’s expert concluded that pit bulls were exponentially dangerous because given the small percentage of pit bulls

291. See *Breeds of Dogs*, *supra* note 257, at 838–39.

292. BANFIELD PET HOSP., *supra*, note 16, at 7. This is by no means scientific, but certainly demonstrates that it is highly unlikely that “pit bulls” only make up nine percent of the dogs in the country.

293. DICKEY, *supra* note 74, at 10; Karen Delise, *Imprudent Use of Unreliable Dog Bite Tabulations and Unpublished Sources*, 255 ANNALS SURGERY e11, e11 (2012). The UKC is the second largest breed registry in the United States, with 250,000 registrations annually. The American Pit Bull Terrier ranked as the second most registered breed with the UKC from 2005 through 2010, but no raw data has been released. Delise, *supra*.

294. Search Results for Adoptable Pit Bull Terrier Dogs Across the United States, Canada, and Mexico, PETFINDER, <https://www.petfinder.com> (search location field for “Denver, CO”; then select “Dog” under type field; then search breed field for “Pit Bull Terrier”; then follow “Find Pets” hyperlink; then select “Anywhere” under distance field located under additional search filters) (last visited Oct. 10, 2016) [hereinafter Search Results for Adoptable Pit Bull Terrier Dogs].

295. Search Results for Adoptable American Staffordshire Terrier Dogs Across the United States, Canada, and Mexico, PETFINDER, <https://www.petfinder.com> (search location field for “Denver, CO”; then select “Dog” under type field; then search breed field for “American Staffordshire Terrier”; then follow “Find Pets” hyperlink; then select “Anywhere” under distance field located under additional search filters) (last visited Oct. 10, 2016).

296. Search Results for Adoptable Staffordshire Bull Terrier Dogs Across the United States, Canada, and Mexico, PETFINDER, <https://www.petfinder.com> (search location field for “Denver, CO”; then select “Dog” under type field; then search breed field for “Staffordshire Bull Terrier”; then follow “Find Pets” hyperlink; then select “Anywhere” under distance field located under additional search filters) (last visited Oct. 10, 2016).

297. *Dog Breeds Available for Adoption on Petfinder*, PETFINDER, <http://www.petfinder.com/breeds/dog> (last visited Oct. 10, 2016). The Labrador Retriever has been noted as the most popular breed in America by the AKC for the last three years. Smith, *supra* note 112.

298. Search Results for Adoptable Pit Bull Terrier Dogs, *supra* note 294.

in the country, they accounted for a significant number of bites.²⁹⁹ Looking deeper into the data, that does not appear to be true. Through historical evidence and statistical analysis, the plaintiff's experts in *Dias* note, and any reasonable analysis would conclude, that the more popular a dog breed is, the more frequent the incident of bites by that breed.³⁰⁰

E. Today's Science

Since the height of pit bull hysteria in 1987, our basic scientific understanding of the world has evolved. Scientists have made tremendous advancements in science here on Earth and even in our solar system. We cloned the first mammal,³⁰¹ we mapped the human genome,³⁰² we can now map a driving route from a satellite that communicates with our mobile phone,³⁰³ and we have a probe driving around Mars.³⁰⁴ As such, we have moved from relying solely on media reports for our knowledge on dog bites to studying individual cases of canine aggression and studying the genetics and the brain function of dogs generally.³⁰⁵

Fatal dog bites have been extremely rare in history relative to the number of dogs in society and the human population.³⁰⁶ It is an incredibly

299. *Beck Report*, *supra* note 290, at 2.

300. *Dias v. City of Denver*, 2010 U.S. Dist. LEXIS 103814, at *14 (D. Colo. 2010).

301. *The History of Cloning*, LEARN.GENETICS, <http://learn.genetics.utah.edu/content/cloning/clonezone> (last visited Oct. 10, 2016) (noting Dolly the Sheep was the first mammal carried to term created through somatic cell nuclear transfer in 1996).

302. *The Human Genome Project Completion: Frequently Asked Questions*, NAT'L HUM. GENOME RES. INST., <http://www.genome.gov/11006943/human-genome-project-completion-frequently-asked> (last updated Oct. 30, 2010). *See also* Laurie Scudder & Lauri R. Graham, *20 Years of Healthcare Advances*, MEDSCAPE, <http://www.medscape.com/features/slideshow/20th-anniversary> (follow "Right Arrow" icon until reaching "3 of 23") (last visited Oct. 10, 2016). Dr. Busis noted,

It's increasingly apparent that the old model of one gene mutation, one phenotype is overly simplistic. Many gene mutations manifest as different phenotypes even in the same family. Many phenotypes can be due to more than one gene mutation. As we aim to advance our knowledge of the etiology of neurologic disease, understand how genes and the environment interact to cause neurologic diseases, and develop treatments for currently untreatable conditions, we need to sequence the genomes of many patients with neurologic diseases, compare them to individuals without those diseases, and perform in depth clinical-genomic correlations.

Id.

303. *Our History in Depth*, GOOGLE, <http://www.google.com/about/company/history/> (last visited Oct. 10, 2016).

304. *Mars Exploration Rovers: Mission Timeline*, NASA MARS EXPLORATION, <http://mars.nasa.gov/mer/mission/timeline.html> (last visited Oct. 10, 2016).

305. Jørn Våge et al., *Differential Gene Expression in Brain Tissues of Aggressive and Non-Aggressive Dogs*, BMC VETERINARY RES., June 16, 2010, at 1, 2, 4, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2898780/>.

306. Karen Overall & Molly Love, *Dog Bites to Humans—Demography, Epidemiology,*

simple-minded approach to believe that we can calculate risk of canine aggression and dog bites by tallying the breeds of dogs involved in dog bite related fatalities reported to the news media.

1. Dog Bite Related Fatalities

Immediately following the publication of the above referenced and often cited AVMA study, researchers embarked on a ten-year researching period to examine dog bite related fatalities on the basis of data from sources that were “more complete, verifiable, and accurate” than media reports used in above referenced studies.³⁰⁷ While the dog bite related fatalities “were *identified* from media reports, . . . detailed histories were compiled on the basis of reports from homicide detectives, animal control reports, and interviews with investigators” for coding and descriptive analysis.³⁰⁸ Demonstrating the contrast between the earlier dog bite related fatality study, in this 2013 study, the “primary source of the data was law enforcement agencies,” and was usually the primary investigator

who interviewed witnesses, performed a detailed examination of the scene, compiled case reports, and obtained an in-depth narrative account of the investigation

. . . .

The status of a dog in a household was differentiated as either a resident dog or family dog. A resident dog was a dog, whether confined within the dwelling or otherwise, whose owners isolated them from regular, positive human interactions. A family dog was a dog whose owners kept them in or near the home and also integrated them into the family unit, so that the dogs learned appropriate behavior through interaction with humans on a regular basis in positive and humane ways.

Evidence that an owner allowed the dog to be a danger to others (e.g., previous bite incidents and running at large) was classified as mismanagement. A history of neglect by the owner included instances of dogs not given access to shelter, food, water, or shade and dogs with untreated medical conditions.³⁰⁹

Upon completion, the study showed interesting results, none of which had to do with the breed of the dog involved in the dog bite related fatality.³¹⁰ The weight of most dogs involved was between 50 and 100

Injury, and Risk, 218 J. AM. VETERINARY MED. ASS'N 1923, 1923, 1925–26 (2001).

307. Patronek et al., *supra* note 13, at 1727.

308. *Id.* at 1728, 1730 tbl.1 (emphasis added).

309. *Id.* at 1727–28.

310. *Id.* at 1730, 1731 tbl.3, 1732.

pounds, and over eighty-seven of all 256 fatalities involved male dogs.³¹¹ Most cases (84.4%) involved dogs that were not spayed or neutered, and

[a]mong the 195 [dog bite related fatalities] involving resident dogs, their owners had failed to have the dogs neutered in 182 (93.3%) cases. Among the 40 [dog bite related fatalities] involving family dogs, the owners had failed to have the dogs neutered in 24 (60%). . . .

. . . .

. . . Over three-quarters of cases (195/256 [76.2%]) involved dogs kept by their owners as resident dogs rather than as family dogs.³¹²

Finally, in eighty-seven percent of all dog bite related fatalities, the owner was not present at the time of the incident.³¹³

At the conclusion of the study, the most striking finding for researchers

was the co-occurrence of multiple factors potentially under the control of dog owners: isolation of dogs from positive family interaction and other human contact; mismanagement of dogs by owners; abuse or neglect of dogs by owners; dogs left unsupervised with a child or vulnerable adult who may be unfamiliar to the dog; and maintenance of dogs in an environment where they are trapped, neglected, and isolated and have little control over either the environment or choice of behavior.³¹⁴

2. Breed Specific or Behavior Specific?

Dogs show considerable variation in the way they look, whether it is breed or mix of breeds, region of origin, or primary function.³¹⁵ Those genetics and behavior are caused by long periods of human selection.³¹⁶ Only in the last few decades have we started to study the behavior differences between modern day breeds. In one such study, scientists took thirty-one different breeds of dogs and over 13,000 individual dogs.³¹⁷ The study was a standardized test for four behavior traits: playfulness, curiosity/fearlessness, sociability, and aggression.³¹⁸ It is worth noting that other studies have found those specific traits to be stable or static and

311. *Id.* at 1730.

312. Patronek et al., *supra* note 13, at 1730, 1732.

313. *Id.* at 1729–30, 1731 tbl.3.

314. *Id.* at 1732.

315. Kenth Svartberg, *Breed -Typical Behavior in Dogs—Historical Remnants or Recent Constructs*, 96 APPLIED ANIMAL BEHAV. SCI. 293, 294, 306 (2006).

316. *Id.* at 295.

317. *Id.*

318. *Id.*

therefore valid for research purposes.³¹⁹ No relationships between breed-characteristic behavior and function in the breeds' origins were found.³²⁰ Instead, there were more correlations between different dog breeds and use of the dogs or breeding lines either as pets, working dogs, or conformation show dogs, which suggest that human selection in the very recent past has affected breed-typical behavior more than simple genetics.³²¹ Meaning, regardless of the original purpose of a breed, such as dog fighting, as has been previously discussed, recent research shows that there is more of a correlation in how the dog is used (e.g., as a pet, a working dog, or a show dog) than the way it looks.³²²

Another similar examination between the same breeds of dogs and their maintenance or function by one researcher found within the United States that Border Collies have an innate ability to “show eye,” or to herd, but this genetic trait can be selected against in breeding.³²³ Border Collies used to work sheep show eye, but this trait has been bred out of Border Collies used in the AKC show ring.³²⁴ Moreover, “[a]cross the globe, show golden retrievers vary so much in size, shape, and color that a novice may not recognize them as the same breed.”³²⁵

Breed-specific ordinances make the presumption that the behavioral traits are dominated by genetics, not by environment, even though there is no clear scientific basis for this presumption.³²⁶ Further, the ordinance assumes that the transmission of those behavioral traits is so strongly linked to physical markers that a “more than half” or “predominant” breed in mixed-breed dogs can determine the dangerousness of an animal.³²⁷

3. DNA for Breed Identification

Since the domestication of the dog over 14,000 years ago, it has “become one of the most phenotypically diverse mammalian species,” having the widest variety of “shapes, sizes, and temperaments.”³²⁸

319. *Id.*

320. Svartberg, *supra* note 315, at 306.

321. *Id.* at 310.

322. *Id.* at 310.

323. RAYMOND COPPINGER ET AL., DOGS: A STARTLING NEW UNDERSTANDING OF CANINE ORIGIN, BEHAVIOR, AND EVOLUTION 19–20 (2001).

324. *Id.*

325. Plaintiff's Response to Defendants' Motion for Summary Judgment & Recitation of Legal Authority in Support Ex. 4, at 3, *Dias v. City of Denver*, No. 1:07-cv-00722 (D. Colo. 2010), ECF No. 100-4, 2010 U.S. Dist. LEXIS 103814.

326. *See* Svartberg, *supra* note 315, at 306, 310.

327. *See, e.g., Hearn v. City of Overland Park*, 772 P.2d 758, 760 (Kan. 1989).

328. Thomas J. Nicholas et al., *The Genome Architecture of Segmental Duplications and*

Studies on canine genetics date back to as early as 1957, when scientists opined on genes affecting coat color in dogs.³²⁹

For many years, and throughout court cases involving breed identification and breed-specific legislation, the subjective “guesstimate” on dog breeds and predominant breeds within mixed-breed dogs was all shelters, veterinarians, and animal control had to use.³³⁰ Reliability was questionable and accuracy was impossible to scientifically test.³³¹ Today, experts use DNA testing to help us gauge the accuracy of those guesstimates and the results only demonstrate how truly unreliable breed identification is for dogs that may be assumed to be purebred as well as mixed-bred.³³²

“A number of enabling resources for canine genomics have recently become available,” providing “important foundations for delimiting patterns of population structure among breeds.”³³³ These resources provide medical insight into inherited diseases in dogs, ocular anomalies, body size, muscle mass, and even the ancestry of mixed-breed dogs.³³⁴ The quest for this knowledge prompted scientists to also research the genetics involved in physical identification of mixed-breed dogs and begin developing a canine DNA database for breed identification.³³⁵ Still in its infancy, canine DNA for breed identification has seen admittance in court from both defendant dog owners and cities seeking to enforce breed-specific ordinances.³³⁶ This, all despite the Mars Veterinary

Associated Copy Number Variants in Dogs, 19 GENOME RES. 491, 491 (2009), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2661811/pdf/491.pdf>.

329. S.M. Schmutz & T.G. Berryere, *Genes Affecting Coat Colour and Pattern in Domestic Dogs: A Review*, 38 INT’L SOC’Y FOR ANIMAL GENETICS, ANIMAL GENETICS 539, 539 (2007).

330. Katie B. Barnett, *Breed Discriminatory Legislation: How DNA Will Remedy the Unfairness*, 4 J. ANIMAL L. & ETHICS 161, 161 (2011) (first citing BELLE PLAINE, IOWA, MUNICIPAL CODE § 4-60-3 (2016); and then citing DENVER, COLO., REV. MUN. CODE tit. 8, art. II, div. 3, § 8-55 (2016)).

331. *See, e.g.*, *Am. Dog Owners Ass’n v. City of Lynn*, 533 N.E.2d at 647.

332. Lau, *supra* note 92.

333. Nicholas et al., *supra* note 328, at 491.

334. *Id.*

335. Lisa Rodier, *Mixed Messages: Can DNA Tests Really Reveal the Origin of Your Mixed-Breed Dog?*, WHOLE DOG J., June 2009, at 4, 4.

336. *See State v. Lee*, 257 P.3d 799, 804–05, 808 (Kan. Ct. App. 2011). The state filed a continuance so it could obtain DNA testing to determine the dog’s breed. *Id.* at 804. Upon the results of the DNA test, the court admitted the DNA report without expert testimony as to its validity and reliability, but did accept veterinarian testimony as to the reports validity. *Id.* at 808. As a preliminary matter, the information in the report did not support a finding that the dog falls outside the purview of the ordinance. *Id.* The ordinance prohibited dogs that have “the appearance and characteristics of being predominantly of the breeds of Staffordshire bull terrier, American pit bull terrier, American Staffordshire terrier, or any combination of any of these breeds.” *Id.* at 809 (quoting KAN. CITY, KAN., MUNICIPAL ORDINANCE § 7-130(a)(4)).

Company who sells the commercialized DNA test stating that the test is used to “identify the breed history of a dog and no other purpose is authorized or permitted.”³³⁷

As one veterinarian said of DNA testing for dogs, “[T]he technique doesn’t recognize a bulldog by finding the genes that give it a snub nose, beefy head and squat stature.”³³⁸ Yet, those specific physical traits are what law enforcement is looking for when enforcing breed-specific legislation.³³⁹ In practice, the human brain likes to put two purebred dogs together to form a mixed-breed dog, when in reality, most mixed-breed dogs are generational “mutts.”³⁴⁰ As Dr. Hughes says, “[W]hen you talk about 9 percent giant schnauzer and 14 percent German shepherd, we can’t figure it out,” she said of human thinking when it comes to breeds.³⁴¹ “Genetic testing is a significant improvement over visual identification.”³⁴²

III. BREED IDENTIFICATION

Everything that goes into making the physical appearance of a dog is more complicated than we originally thought. When Scott and Fuller studied the genetic traits for mixed-breed dogs and took a Spitz (which has a pointed muzzle, erect ears, short coat, and curled tail)³⁴³ and bred it to a Cocker Spaniel (broad, deep muzzle, long feathered ears, silky flat,

(2011) (current version at KAN. CITY, KAN., MUNICIPAL ORDINANCE § 7-219(a)(4) (2016)). Although the report stated that the dog was a mix of breeds, the analysis specifically detected the breeds of American Staffordshire Terrier, Bull Terrier, and Bulldog. *Lee*, 257 P.3d at 808. To that end, the report indicates that although the dog matched strongly to American Staffordshire Terrier and Bull Terrier, the strongest breed signature match was American Staffordshire Terrier. *Id.*; see also Clouston, *supra* note 7 (discussing how DNA testing of a dog revealed it was predominantly a Bernese Mountain Dog as opposed to being predominantly a pit bull); Brent Toellner, *Niko Returns Home*, KC DOG BLOG (Feb. 13, 2008, 6:30 AM), <http://btoellner.typepad.com/kcdogblog/2008/02/niko-returns-ho.html>.

337. *FAQs*, WISDOM PANEL, http://www.wisdompanel.com/why_test_your_dog/faqs/ (last visited Oct. 10, 2016) (follow “Can regulatory/animal control officials use the Wisdom Panel to determine whether breeds are legislated or banned in a particular community?” hyperlink).

338. Lau, *supra* note 92.

339. See generally *Garcia v. Village of Tijeras*, 767 P.2d 355, 358 (N.M. Ct. App. 1988) (“Several witnesses testified that they could recognize an American Pit Bull Terrier by its physical characteristics. We believe this evidence supports a determination that the breed American Pit Bull Terrier is a breed of dog recognized by its physical appearance.”).

340. Lau, *supra* note 92.

341. *Id.*

342. *Id.*

343. AM. KENNEL CLUB, OFFICIAL STANDARD FOR THE BASENJI 1 (1990), <http://www.akc.org/dog-breeds/basenji/> (follow “Breed Standard” hyperlink).

or wavy coat)³⁴⁴ the puppies appeared nothing like either parent and instead appeared to be more predominantly Labrador Retriever mix.³⁴⁵ Even as recently as 2009, researchers recognized that “many parts of the canine genome [were] still hidden.”³⁴⁶ This means “a mixed-breed dog could be a mix of three or four breeds but have few traits evident from one or more of these breeds.”³⁴⁷

In a city with breed-specific legislation, “if a citizen is found in possession of what city officials identify as a [prohibited] breed, the dog is typically seized and impounded by the city.”³⁴⁸ The breed identification made by animal control officers is “used as the primary evidence in [municipal] court cases or administrative hearing to enforce the ordinance.”³⁴⁹ Most states either do not have express provisions requiring training or reserve the animal control officer training to the municipality.³⁵⁰

The county district court in *Hearn* noted that mixed-breed dogs will make up a small amount of cases where it may be “impossible to determine whether or not a certain dog falls under the regulations of the ordinance,” but a “few questionable cases will not cause a finding of . . . an ordinance” being unconstitutionally vague.³⁵¹ However, over twenty-five years later, we now know that nearly half of the dog population is mixed-breed dogs.³⁵²

Breed identification is used in animal shelters, veterinary clinics, and in public regulations.³⁵³ Most dogs in animal shelters “arrive without a known pedigree.”³⁵⁴ Staff members are forced to subjectively

344. AM. KENNEL CLUB, OFFICIAL STANDARD FOR THE COCKER SPANIEL 1–2 (1992), <http://www.akc.org/dog-breeds/cocker-spaniel/> (follow “Breed Standard” hyperlink).

345. See SCOTT & FULLER, *supra* note 1, at 326–55, illus. *Breeding Stock (Basenjis) and F₁ Hybrids*.

346. Barnett, *supra* note 330, at 165.

347. Rodier, *supra* note 335, at 8.

348. Barnett, *supra* note 330, at 161.

349. Sabrina DeeFabritiis, *Fido’s Fallacy*, 9 ALBANY GOV’T. L. REV. 168, 175 (2016).

350. See, e.g., ARIZ. REV. STAT. ANN. § 9-499.04 (2008); ARIZ. REV. STAT. ANN. § 11-1007 (2012); OHIO REV. CODE ANN. § 1717.06 (West 2009); S.C. CODE ANN. § 47-3-320 (Supp. 2015).

351. *Hearn v. City of Overland Park*, 772 P.2d 758, 763 (Kan. 1989) (quoting Memorandum Opinion, *supra* note 104).

352. AM. VETERINARY MED. ASS’N, *supra* note 47, at 18 fig.1-13.

353. See Simpson et al., *supra* note 18, at 1163; Kimberly L. Olson et al., Pit Bull Identification in Animal Shelters (poster paper, University of Florida & Michigan State University), <http://www.maddiesfund.org/assets/documents/Resource%20Library/Incorrect%20Breed%20Identification%20Study%20Poster.pdf> (last visited Oct. 10, 2016).

354. Pit Bull Identification in Animal Shelters, *supra* note 353.

categorize those dogs “based on appearance alone.”³⁵⁵ In one veterinarian’s experience, “most medium to large size dogs with straight, short/medium length brown hair” are identified as “German shepherds or shepherd mixes, dogs with a black spot on their tongues are designated Chow mixes, and most . . . stocky, broad headed, small eared dogs with . . . short hair . . . are [identified as] pit-bulls or pit-bull mixes.”³⁵⁶

A. 2012 University of Florida Study

This study focused solely on identifying dogs thought to be “pit bull” mixes.³⁵⁷ Keeping in mind that for local ordinances, “pit bull” typically includes three distinct breeds: American Staffordshire Terrier, Staffordshire Bull Terrier, and American Pit Bull Terrier.³⁵⁸ For this study, “pit bull” indicated a dog that revealed DNA markers for American Staffordshire Terrier or Staffordshire Bull Terrier.³⁵⁹

A total of 120 dogs were subject to the study, with sixteen different professional observers, in four different animal shelters.³⁶⁰ A “true pit bull” was confirmed if a dog had twenty-five percent genetic makeup of American Staffordshire Terrier or Staffordshire Bull Terrier.³⁶¹ Most municipal ordinances require a dog to be “predominantly” pit bull or to have a majority of physical characteristics to fall under the auspices of a breed-specific ordinance.³⁶² In this study the genetic predominance could be any breed or breeds.³⁶³ “Shelter staff identified 55 . . . of the 120 dogs to be pit bull[s]” with results showing only thirty-six percent of those dogs actually had twenty-five percent American Staffordshire Terrier or Staffordshire Bull Terrier in their genetic ancestry.³⁶⁴

“DNA analysis failed to confirm pit bull . . . breeds in the pedigree in more than half of the dogs identified as pit bulls by shelter staff,” and one in every two dogs “labeled pit bulls by shelter staff lacked DNA breed signatures for [either] pit bull . . . type breed[.]”³⁶⁵ More interesting is that animal welfare professionals who identified dog breeds on a day to day

355. *Id.*

356. Victoria L. Voith, *Shelter Medicine: A Comparison of Visual and DNA Identification of Breeds of Dogs*, PROC. ANN. AM. VETERINARY MED. ASS’N CONVENTION, July 11–14, 2009, at 1 [hereinafter *Shelter Medicine*].

357. Pit Bull Identification in Animal Shelters, *supra* note 353.

358. *Id.*

359. *Id.*

360. *Id.*

361. *Id.*

362. *See, e.g.,* Hearn v. City of Overland Park, 772 P.2d 758, 760 (Kan. 1989).

363. *See* Pit Bull Identification in Animal Shelters, *supra* note 353.

364. *Id.*

365. *Id.*

basis as a part of their profession had varied accuracy in breed assignment ranging from one staff member identifying with thirty-three percent accuracy.³⁶⁶ But not a single staff member in any of the four shelters labeled a dog breed at higher than seventy-five percent accuracy³⁶⁷—as was claimed in *Dade County*, where one officer testified that “his trained officers [were] able to correctly identify pit bulls 90 to 95% of the time,” despite there being no method, scientific or otherwise, to verify those identifications or even verify that seemingly random percentage.³⁶⁸ In that case, experts on both sides “testified that they ha[d] been wrong in their identification of pit bulls, by varying percentages,” again, with no method at the time to verify to what degree they had been wrong.³⁶⁹

The agreement value, or kappa value in the University of Florida study, was rated poor to fair (0.093–0.324).³⁷⁰ “The importance of rater reliability lies in the fact that it represents the extent to which the data collected in the study are correct representations of the variables measured.”³⁷¹ In scientific terms, “any kappa below 0.60 indicates inadequate agreement among the raters.”³⁷²

B. Follow-Up Study

A follow-up to the 2012 University of Florida Study was conducted on over 5000 targeted dog experts.³⁷³ Those who completed the survey offered their subjective breed identification for dogs in a series of photographs.³⁷⁴

DNA breed signatures for 100 shelter dogs were developed using single nucleotide polymorphism genotypes (Mars Wisdom Panel), followed by a Bayesian generative model to infer each dog’s heritage.

366. *Id.*

367. *Id.*

368. *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1537 (S.D. Fla. 1989).

369. *Id.* at 1536.

370. Pit Bull Identification in Animal Shelters, *supra* note 353.

371. Mary L. McHugh, *Interrater Reliability: The Kappa Statistic*, 22 *BIOCHEMIA MEDICA* 276–82 (2012), reprinted in Mary L. McHugh, *Interrater Reliability: The Kappa Statistic*, *BIOCHEMIA MEDICA*, <http://www.biochemia-medica.com/2012/22/276> (last visited Oct. 10, 2016).

372. *Id.*

373. See Kathleen C. Croy et al., Abstract, *What Kind of Dog Is that? Accuracy of Dog Breed Assessment by Canine Stakeholders*, in 5TH ANNUAL MADDIE’S SHELTER MEDICINE CONFERENCE (2012), <https://vetmed-maddie.sites.medinfo.ufl.edu/files/2012/05/2012-Croy-Maddies-Shelter-Medicine-Conference-Abstract.pdf> (last visited Oct. 10, 2016) (conducting a study that asked over 5,000 individuals who were classified as dog experts to identify the breed of dogs depicted in various photographs); see also Kimberly L. Olson et al., *Inconsistent Identification of Pit Bull-Type Dogs by Shelter Staff*, 206 *VETERINARY J.* 197, 197–202 (2015).

374. Croy et al., *supra* note 373.

Self-identified “dog-experts,” including breeders, exhibitors, trainers, groomers, behaviorists, rescuers, shelter staff, veterinarians, and veterinary technicians were recruited to complete an anonymous Internet survey in which they selected the most likely breed from a drop-down menu for 20 randomly selected dogs depicted in photographs. Breed identification was considered correct if a breed representing at least 25% of a dog’s genetic makeup was selected. . . .

Respondents correctly identified a prominent breed an average of 27% of the time. Each of the dogs had an average of 53 different predominant breeds selected. No one correctly identified a breed for 6% of the dogs, and 22% of the dogs had the correct breed chosen less than 1% of the time. Only 15% of the dogs were correctly identified more than 70% of the time.³⁷⁵

C. Voith Studies

1. 2009 Study

Dr. Victoria Voith and a team of veterinarians and a geneticist compared “breed identification by [animal] adoption agencies with identification by DNA analysis in 20 dogs” who had no known pedigree or parentage.³⁷⁶ The dogs were “adopted from 17 different locations” and sixteen of the twenty dogs were identified by the adoption agencies by a specific or predominant breed.³⁷⁷ Of those sixteen dogs identified by predominant breed, four dogs were also identified by DNA as having those breeds, making the agreement between subjective visual identification and DNA only twenty-five percent.³⁷⁸ Yet in three of the four dogs where there was agreement between visual and DNA identification, the common breed was only identified at a 12.5% level— or the great grandparent level.³⁷⁹

2. 2013 Study

The study took a slightly different approach and instead compared the visual breed identification of dogs by dog professionals to DNA, and then to each other, measuring how often dog professionals agreed with

375. *Id.*

376. Victoria L. Voith et al., Abstract, *Comparison of Adoption Agency Breed Identification and DNA Breed Identification of Dogs*, 12 J. APPLIED ANIMAL WELFARE SCI. 253 (2009).

377. *Id.*

378. Victoria L. Voith et al., *Comparison of Adoption Agency Breed Identification and DNA Breed Identification of Dogs*, 12 J. APPLIED ANIMAL WELFARE SCI. 253, 259–60 (2009) [hereinafter *Comparison of Breed Identification*].

379. *Id.* at 260.

each other.³⁸⁰ Twenty dogs were observed by over 900 participants engaged in dog related professions.³⁸¹ The questions presented to the participants were much more detailed than simply asking what their best guess was on the breed of dog.³⁸² The questions included whether the participant thought the dog was a purebred, if so, what breed, if not, what is the most predominant breed, what is the second most predominant breed, or if it is a mixed-breed dog beyond two predominant breeds.³⁸³ Ten percent of the participants were dog show breeders or judges, 67% of the participants were animal control employees (35% kennel workers, 19% field officers, and 13% supervisors), and 10% were veterinarians.³⁸⁴ This study also asked participants if they were in charge of assigning breed identities for record keeping purposes.³⁸⁵ Forty percent of the AKC kennel workers, twenty-four percent of the field officers, and sixteen percent of the supervisors were in charge of breed assignment.³⁸⁶ Although the study did not break down the accuracy of breed identification per profession, the accuracy for those professions whose job it is to assign breed labels to dogs varied from zero percent accuracy for eight of the twenty dogs to only as high as seventy-two percent for the identification of one dog.³⁸⁷ Among all the professions, the agreement level on the predominant breed of dog of the mixed-breed dogs was low—a kappa value at .23, similar to what was observed in the Florida study.³⁸⁸

D. Toledo Blade

In March of 2012, five years after the *Tellings* decision, the *Toledo Blade* commissioned DNA tests on six pit bulls that were impounded in the Lucas County Dog Warden's pound.³⁸⁹ Although only six dogs were

380. *Comparison of Visual and DNA Breed Identification*, *supra* note 80, at 18.

381. *Id.* at 18, 20.

382. *See id.* at 20.

383. *Id.* at 20, 22. It should be noted that videos of the same twenty dogs used in the 2009 survey were also used in this expanded survey in 2013. *Id.* at 19.

384. *Comparison of Visual and DNA Breed Identification*, *supra* note 80, at 21 tbl.2.

385. *Id.* at 19.

386. *Id.* at 21 tbl.2.

387. *Id.* at 25 tbl.7.

388. *Comparison of Visual and DNA Breed Identification*, *supra* note 80, at 22; *see* Pit Bull Identification in Animal Shelters, *supra* note 353.

389. Tanya Irwin, *Mistaken Identity: Many Shelter Dogs Mislabeled 'Pit Bulls'*, BLADE (Mar. 18, 2012, 6:25 PM), <http://www.toledoblade.com/local/2012/03/18/Many-shelter-dogs-mislabeled-pit-bulls.html>. The dogs were transferred from that pound to the Humane Society of Lucas County and then to the Lucas County Pit Crew, a pit bull rescue group. *Id.*

tested, half of the dogs had no “pit” breed in the DNA result.³⁹⁰ The dogs found to have no pit bull breed had Boxer, Scottish Terrier, Chinook, American Bulldog, American Eskimo Dog, and Bullmastiff.³⁹¹ Two of the six dogs had some American Staffordshire Terrier, one being predominantly Catahoula Leopard Dog crossed with several breeds including the American Staffordshire Terrier, and the other being American Staffordshire Terrier crossed with five other breeds.³⁹² Only one of the six dogs turned out to be over fifty percent (i.e., predominantly) American Staffordshire Terrier, and even then, he was also mixed with Staffordshire Bull Terrier and Miniature Schnauzer.³⁹³ While this study has no scientific basis other than the scientific method of DNA testing, it shows that only five years after the Ohio Supreme Court held that “the commonly available knowledge of dog breeds typically acquired by potential dog owners or otherwise possessed by veterinarians or breeders are sufficient to inform a dog owner as to whether he owns a dog commonly known as a pit bull dog,”³⁹⁴ science now tells us it is not as reliable as dog wardens once touted in the very city where the identification came under fire.³⁹⁵

Several additional studies comparing DNA to visual dog breed identification have been done over the last five years with largely similar results.³⁹⁶ For the most recent scientific dog bite related fatality study, “breed status was assigned for dogs involved in only 45 of 256 (17.6%) of [dog bite related fatalities] from documented pedigree, parentage information, or DNA test results.”³⁹⁷ Researchers even went so far as to assign breed status “on the basis of concordance among media breed descriptor, animal control breed descriptor, and the veterinarian-assigned

390. *Id.*

391. *Id.*

392. *Id.*

393. Irwin, *supra* note 389.

394. *City of Toledo v. Tellings*, 871 N.E.2d 1152, 1158 (Ohio 2007) (quoting *State v. Anderson*, 566 N.E.2d 1224, 1228 (Ohio 1991)).

395. *See* Irwin, *supra* note 389.

396. *See id.*; Emily Weiss, *Bully This—The Results Are In . . .*, AM. SOC’Y FOR PREVENTION CRUELTY ANIMALS PROF.: BLOG (Sept. 26, 2013), <http://www.aspcapro.org/blog/2013/09/25/bully-this%E2%80%94results-are-in%E2%80%A6>. A small group of dogs were studied for length of stay based on DNA or breed identification. Weiss, *supra*. The Richmond Society for the Prevention of Cruelty to Animals staff

visually identifi[ed] dogs likely to have Staffordshire terrier, American Staffordshire terrier or American bulldog as at least 25% of their breed make-up. Out of the 91 dogs, only 4 dogs had none of these breeds in their DNA, and 57% had one of those three breeds as the primary breed.

Id.

397. Patronek et al., *supra* note 13, at 1732.

breed from a photograph.”³⁹⁸ The forty-five incidents where breed could be identified involved twenty different kennel club recognized dog breeds, including two mixed-breed dogs where the breed of the parents was known.³⁹⁹

As a result of today’s science and the inherent unreliability of visual breed identification, some animal shelters have now stopped labeling dogs by breed completely.⁴⁰⁰

In upholding constitutional challenges to breed specific ordinances, courts have relied heavily on the idea that it is easy for an owner to know if their dog falls within the targeted breeds.⁴⁰¹ Given the most up to date research on the unreliability of animal welfare professionals identification of breeds,⁴⁰² there is room to consider that the courts’ earlier reasoning no longer holds true. Today, the courts have an opportunity to consider the changing science on breed identification, just as they have done with eyewitness identification.⁴⁰³

IV. EYEWITNESS IDENTIFICATION

“The issue of mistaken eyewitness identification” in criminal cases “and the increased risk of cross-racial eyewitness identification is a serious problem in the United States.”⁴⁰⁴ Similar to the science on breed-specific legislation and breed identification, with “[t]hirty years of social science research and the [now] available information on more than 200 wrongfully convicted persons exonerated through DNA evidence,” we now have a wealth of information to make better courtroom procedure decisions, legislation on witness testimony, and public policy

398. *Id.*

399. *Id.*

400. See Kristen Auerbach, *More Animal Shelters Remove Breed Labels: Is Software Catching Up?*, ANIMAL FARM FOUND. (Apr. 19, 2016), <https://animalfarmfoundation.wordpress.com/2016/04/19/breed-labels-software/> (listing Dallas Animal Services; Orange County Animal Services; Fairfax County Animal Services; and Austin Animal Center, as shelters that have removed breed labels); Corbin Carson, *Arizona Dog Shelter to Remove Breed Labels on Adoptable Pets*, KTAR NEWS (Mar. 28, 2016, 5:00 AM), <http://ktar.com/story/985608/arizona-dog-shelter-remove-breed-labels-adoption-pitbulls/>; *Dog Shelter to Remove Breed Labels on Adoptable Pets*, LIFE WITH DOGS (Mar. 28, 2016), <http://www.lifewithdogs.tv/2016/03/dog-shelter-to-remove-breed-labels-on-adoptable-pets/>.

401. See *State v. Anderson*, 566 N.E.2d 1224, 1227 (Ohio 1991).

402. See *Pit Bull Identification in Animal Shelters*, *supra* note 353; see also Croy et al., *supra* note 373; *Comparison of Breed Identification*, *supra* note 378, at 261–62; *Comparison of Visual and DNA Breed Identification*, *supra* note 80, at 24.

403. See *State v. Henderson*, 27 A.3d 872, 928 (N.J. 2011).

404. STEPHEN J. SALTZBURG, AM. BAR ASS’N, CRIMINAL JUSTICE SECTION, NO. 104D, REPORT TO THE HOUSE OF DELEGATES 2 (2008).

recommendations.⁴⁰⁵

A. Today's Science

In the [over thirty] years since the United States Supreme Court announced a test for the admission of eyewitness identification evidence . . . a vast body of scientific research about human memory has emerged. That body of work casts doubt on some commonly held views relating to memory. It also calls into question the vitality of the current legal framework for analyzing the reliability of eyewitness identifications.⁴⁰⁶

As the understanding and science behind identification evolves, courts have begun admitting testimony from experts in the field of human perception and memory, particularly the government's identification process.⁴⁰⁷ Specifically, experts routinely testify addressing

(1) show-up identification procedures and how they can influence a witness' accuracy, (2) a comparison between the show-up and other identification procedures, (3) the tendency of a witness to focus on a weapon, (4) the lack of correlation between witness confidence in identification and the accuracy of that identification, (5) the effect of exposure to multiple witnesses, (6) the effect of hair covering on eyewitness recognition ability, (7) the phenomena of confidence malleability (i.e., the effect of post-event information on a witness' confidence in the accuracy of an identification), (8) time delay on identification, (9) the effect of post-event suggesting, and (10) cross-racial identification.⁴⁰⁸

By comparing eyewitness identification to visual breed identification, several similarities became apparent. The most remarkable was both had over twenty years of science between when the courts had originally discussed the issues and the science we have today.⁴⁰⁹ For

405. *Id.*

406. *Henderson*, 27 A.3d at 877 (citing *Manson v. Brathwaite*, 432 U.S. 98, 110 (1977)).

407. *United States v. Brownlee*, 454 F.3d 131, 136 (3d Cir. 2006) (citing *United States v. Downing*, 753 F.2d 1224, 1226 (3d Cir. 1985)).

408. *Id.* 136–37. Expert testimony regarding cross-racial identification, the effects of hair covering, weapons focus, and exposure to multiple witnesses was admitted after a *Daubert* hearing, but the district court refused to allow expert testimony as to the other categories. *Id.* at 137; *see, e.g.*, *Benn v. United States*, 978 A.2d 1257, 1288–89 (D.C. Cir. 2009); *United States v. Smith*, 621 F. Supp. 2d 1207, 1216 (M.D. Ala. 2009); *Brown v. State*, No. 5098, 2006 Alas. App. LEXIS 122, at *45–48 (Alaska Ct. App. Aug. 2, 2006); *State v. Chapple*, 660 P.2d 1208, 1220–21 (Ariz. 1983) (en banc).

409. Notable cases regarding the reliability and accuracy of eyewitness identification and visual breed identification date back to the 1970s and 1980s. *See, e.g.*, *Manson*, 432 U.S. at 110 (quoting *Brathwaite v. Manson*, 527 F.2d 363, 372 (2d Cir. 1975)) (discussing the reliability of eyewitness identification procedure); *see also* *Vanater v. Village of South Point*,

purposes of this Article the focus is on the issues of (1) cross-racial identification, (2) memory, (3) jury expertise on eyewitness identification, and (4) DNA testing for confirmation or exoneration.

1. Cross-Racial Identification

“Research results vary but they show a generally consistent pattern” of difficulty when “[p]ersons of one racial group” distinguish “among individual faces of persons in another group” compared to the faces of persons in their own racial group.⁴¹⁰

Approximately three-quarters of the more than 200 wrongful convictions in the United States overturned through DNA testing resulted from eyewitness misidentifications. Of that 77 percent, where race is known, 48 percent of the cases involved cross-racial eyewitness identifications.

...

... “The best explanation seems to be that people make more mistakes on a cross-racial identification for a number of reasons, including, but not limited to, the amount of contact with persons from other racial groups, the amount of attention paid to other-race persons, and time spent encoding features that are less useful in discriminating people from other groups.”⁴¹¹

“A meta-analysis . . . , involving thirty-nine studies and nearly 5,000 identifications, confirmed” that witnesses had trouble identifying people outside of their own race.⁴¹²

Traditional trial protections of suppression hearings, voir dire, cross-examination of witnesses, closing arguments, and jury instructions on the credibility of witnesses and evaluation of eyewitness testimony have not been shown to adequately address the special recognition impairments often present in cross-racial eyewitness identifications.⁴¹³ The remedy for the disparate cross-racial identification is not yet apparent beyond what is stated above. This Article has established that people are poor at identifying dogs. The fact that people are unreliable at identifying our

717 F. Supp. 1236, 1240–41 (S.D. Ohio 1990) (considering the accuracy and reliability of visual breed identification); *Am. Dog Owners Ass’n v. Dade County*, 728 F. Supp. 1533, 1537 (S.D. Fla. 1989).

410. SALTZBURG, *supra* note 404, at 2.

411. *Id.* at 6, 10 (quoting ELIZABETH F. LOFTUS ET AL., *EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL* 105 (4th ed. 2007)).

412. *Henderson*, 27 A.3d at 907 (citing Christian A. Meissner & John C. Brigham, *Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Meta-Analytic Review*, 7 *PSYCHOL. PUB. POL’Y & L.* 3, 21–22 (2001)).

413. *Id.* at 915, 928.

own species only furthers the argument that humans identifying dog breeds is inherently unreliable.

2. *Memory*

A significant problem in criminal cases that is just now being recognized by the scientific community and the courts is “unconscious transference.”⁴¹⁴ This occurs when “an eyewitness is familiar with the suspect from some event other than the crime” (perhaps, for example, because both occasionally use the same subway station), “does not recall why he knows the suspect, and therefore assumes that he knows the suspect because the suspect is the perpetrator.”⁴¹⁵

Similar to the transference issue is “retrofitting.”⁴¹⁶ The defendant’s expert in *State v. Guilbert* testified about the three phases of memory, giving the example that “when, following the event, the subject discusses the observation with someone else or sees a photograph of the person in the newspaper[,] the subject may incorporate the information into his or her memory and come to believe that the information actually was obtained at an earlier time.”⁴¹⁷ In *State v. Henderson*, the court relied on a Special Master report to advise the court on the emerging research and conclusions in eyewitness misidentification.⁴¹⁸ Outlining the stages of memory, the Special Master observed that “at each of those stages [of memory], the information ultimately offered as ‘memory’ can be distorted, contaminated and even falsely imagined.”⁴¹⁹ The witness does not perceive events like a “videotape,” but rather constructs a memory based on “bits of information . . . and what seems plausible.”⁴²⁰

This is especially relevant to the breed-specific discussion when considering the impact of media on our biases, laypersons’ testimony to city councils, and animal control officers and professionals testifying to experiences or behaviors that are not commonly observed or scientifically proven, like an entire breed of dog possessing the specific behavior trait of “attacking without warning.”⁴²¹

414. BRIAN L. CUTLER, EYEWITNESS TESTIMONY: CHALLENGING YOUR OPPONENT’S WITNESSES 21 (2002).

415. *Id.* at 22.

416. 49 A.3d 705, 715 (Conn. 2012).

417. *Id.*

418. 27 A.3d at 877.

419. *Id.* at 894 (quoting ELIZABETH F. LOFTUS ET AL., EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL 11 (2d ed. 1996)).

420. *Id.* (quoting LOFTUS, *supra* note 419, at 11).

421. *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1240–41 (S.D. Ohio 1990).

3. Juror Scientific Illiteracy

What was found to be problematic in *United States v. Brownlee* was that “jurors seldom enter a courtroom with the knowledge that eyewitness identifications are unreliable.”⁴²² In fact,

[u]sing survey questionnaires and mock-jury studies, experts have attempted to discern what lay people understand, and what information about perception and memory are beyond the . . . average juror. Based on those studies, the Special Master found “that laypersons are largely unfamiliar” with scientific findings and “often hold beliefs to the contrary [of those findings].”⁴²³

And while for jurors “there is almost *nothing more convincing* than a live human being who takes the stand, points a finger at the defendant, and says, ‘That’s the one,’”⁴²⁴ back in the 1980s, in cases involving breed identification, there was almost nothing more convincing than an animal control officer getting up and saying, “I know it when I see it.”⁴²⁵

In *Commonwealth v. Walker*, appellant added that “cross-examination is not an effective tool to educate jurors regarding the potential inaccuracy of witness identification. This is especially true . . . when witnesses, although mistaken, sincerely believe what they say is true.”⁴²⁶

In *Guilbert*, the Supreme Court of Connecticut recognized that science had changed in just thirteen years, and agreed that the time had come to overrule the previous holding in which the average juror knew about the factors affecting the reliability of eyewitness identification.⁴²⁷

Most courts have remedied this by giving specific jury instructions and allowing expert testimony regarding the unreliability of eyewitnesses,⁴²⁸ but three states, Nebraska, Louisiana, and Kansas, still

422. 454 F.3d 131, 142 (3d Cir. 2006) (quoting Rudolf Koch, Note, *Process v. Outcome: The Proper Role of Corroborative Evidence in Due Process Analysis of Eyewitness Identification Testimony*, 88 CORNELL L. REV. 1097, 1099 n.7 (2003)); see also *Guilbert*, 49 A.3d at 731.

423. *Henderson*, 27 A.3d at 910.

424. *Id.* at 889 (quoting *Watkins v. Sowders*, 449 U.S. 341, 352 (1981) (Brennan, J., dissenting)) (alteration in original) (emphasis in original).

425. See generally *Garcia v. Village of Tijeras*, 767 P.2d 355, 358 (N.M. Ct. App. 1988) (“Several witnesses testified that they could recognize an American Pit Bull Terrier by its physical characteristics. We believe this evidence supports a determination that the breed American Pit Bull Terrier is a breed of dog recognized by its physical appearance.”).

426. 92 A.3d 766, 774 (Pa. 2014) (citing *State v. Clopten*, 223 P.3d 1103, 1110 (Utah 2009)).

427. *Guilbert*, 49 A.3d at 722, 731 (quoting *Henderson*, 27 A.3d at 916).

428. *Walker*, 92 A.3d at 775; see Christian Sheehan, Note, *Making the Jurors the “Experts”*: *The Case for Eyewitness Identification Jury Instructions*, 52 B.C. L. REV. 651,

prohibit such testimony because the potential for harm outweighs the probative value.⁴²⁹

B. Identification and DNA

As shown in the breed identification studies above, animal control officers are imperfect and misidentify dog breeds. Similar to canine DNA to prove misidentification by officers, we rely on science to lead us in identification procedures and external variables that are tied to an increased risk of *misidentification* in criminal cases.⁴³⁰

The Innocence Project—a national organization dedicated to exonerating wrongfully convicted persons through DNA testing—has exonerated 344 innocently convicted persons to date.⁴³¹ In half of these cases, “eyewitness testimony was not corroborated by confessions, forensic science, or informants.”⁴³² In “thirty-six percent of the defendants convicted were misidentified by more than one eyewitness,”⁴³³ and it is estimated that “approximately 7,500 of every 1.5 million annual convictions for serious offenses may be based on misidentification.”⁴³⁴

“[L]ab studies have shown that eyewitness confidence can be influenced by factors unrelated to a witness’ actual memory of a relevant event,” and “DNA exoneration cases buttress the lab results.”⁴³⁵ The opposition to eyewitness identification reform has various complaints, but primarily “that misidentification statistics gleaned from more than 200 nationwide DNA exonerations are insufficient to conclude that a serious problem exists; . . . that exculpatory DNA evidence does not necessarily prove a defendant is innocent; and that DNA exonerations only remind us that the criminal justice system is imperfect.”⁴³⁶

654 (2011).

429. *Walker*, 92 A.3d at 775, 789 (quoting PA. R. EVID. 403).

430. *See Henderson*, 27 A.3d at 895.

431. THE INNOCENCE PROJECT, *DNA Exonerations in the United States*, <http://www.innocenceproject.org/dna-exonerations-in-the-united-states/> (last visited Oct. 10, 2016).

432. *Henderson*, 27 A.3d at 886 (citing *Eyewitness Misidentification*, INNOCENCE PROJECT, <http://www.innocenceproject.org/causes/eyewitness-misidentification/> (last visited Oct. 10, 2016)).

433. *Id.* (citing BRANDON L. GARRETT, *CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG* 50 (2011)).

434. *Id.* (quoting *State v. Romero*, 922 A.2d 693, 701 (N.J. 2007)).

435. *Id.* at 889 (citing Amy Bradfield Douglass & Nancy Steblay, *Memory Distortion in Eyewitnesses: A Meta-Analysis of the Post-Identification Feedback Effect*, 20 *APPLIED COGNITIVE PSYCHOL.* 859, 864–65 (2006)).

436. *Id.*

Conversely, the court in *Henderson* found that those opposed to reform use a “broad-brush approach” that “glosses over the consistency and importance of the comprehensive scientific research that is discussed in the record” to “prove that the possibility of mistaken identification is real, and the consequences severe.”⁴³⁷

The methods and techniques used to extract and analyze canine DNA are the same as those used to extract and analyze human DNA.⁴³⁸ Nearly all state, federal, and appellate courts have admitted human DNA as evidence, and many have admitted animal DNA as well.⁴³⁹ Dog owners cited to be in violation of a breed-specific ordinance are slowly coming to understand an alternative method for breed identification,⁴⁴⁰ but the cost of the test, along with finding an expert to testify, in conjunction with finding legal representation, can be difficult.⁴⁴¹

C. Post-Conviction Remedies

Making use of new science after a defendant has been convicted is not easy, particularly in cases where DNA evidence was collected, but the technology for actually testing the DNA was not yet available.⁴⁴² That is exactly what happened in *Newton v. City of New York*, where the victim was assaulted, raped, and robbed.⁴⁴³ The victim and store clerk identified Newton from a photo array and later identified Newton in an in-person line up.⁴⁴⁴ The rape kit was collected, but not tested prior to Newton’s trial.⁴⁴⁵ In New York, the state legislature enacted a statute after Newton’s conviction which “permit[ed] a defendant to seek testing of DNA

437. *Henderson*, 27 A.3d at 889.

438. Melissa Kidder, Comment, *Human DNA v. Non-Human DNA: A Look at the General Admissibility of Non-Human DNA in the Courts*, 35 OHIO N.U. L. REV. 397, 416 (2009) (citing Brandt G. Cassidy & Robert A. Gonzales, *DNA Testing in Animal Forensics*, 69 J. WILDLIFE MGMT. 1454, 1457 (2005)).

439. See PAUL C. GIANNELLI ET AL., SCIENTIFIC EVIDENCE 120 (2012) (first citing John T. Sylvester & John H. Stafford, *Judicial Acceptance of DNA Profiling*, 60 F.B.I. L. ENFORCEMENT BULL. 26, 27–28, 31 (1991); then citing *People v. White*, 621 N.Y.S.2d 728, 731 (App. Div. 1995); and then citing *State v. Brown*, 470 N.W.2d 30, 32 (Iowa 1991)); see also *State v. Bogan*, 905 P.2d 515, 520 (Ariz. Ct. App. 1995) (ruling that testing on plant DNA was admissible); *People v. Slover*, 791 N.E.2d 568, 569–70, 573 (Ill. App. Ct. 2003) (affirming an order releasing cat hairs for DNA testing to the doctor who performed DNA testing on canine hairs); *Commonwealth v. Treiber*, 874 A.2d 26, 29, 31 (Pa. 2005) (allowing canine DNA to be used against a defendant in the murder of his daughter).

440. Vankavage & Schaffner, *supra* note 8, at 12.

441. See *id.* at 12–13.

442. See *Newton v. City of New York*, 779 F.3d 140, 142–43 (2d Cir. 2015).

443. *Id.*

444. *Id.* at 142.

445. *Id.* at 142–43.

evidence in order to vacate his conviction” if “there exist[ed] a reasonable probability that the verdict would have been more favorable to the defendant” had a DNA test been conducted and the evidence been admitted.⁴⁴⁶

The next logical legal question would be, does an incarcerated person not have a right to, or liberty interest in, accessing DNA that could exonerate him? In a substantive due process challenge, the United States Supreme Court declined to hold that defendants had a “freestanding substantive due process right to DNA evidence,” as it would expand and “embroil” federal courts in questions of state statutes and state-based policy.⁴⁴⁷ If the Court took this position, in the most extreme case, a court holding could require DNA evidence to be held by cities and states in evidence indefinitely.

So the fundamental adequacy of post-conviction relief procedures specific to DNA evidence access does not have to be “flawless or that defendants are granted unfettered access to the DNA evidence,” only that there must be a system in place for accessing the evidence that does not “transgress any recognized principle of fundamental fairness in operation.”⁴⁴⁸

The same standard should be held for breed identification. Some would argue that procedural due process under the Fourteenth Amendment guarantees that dog owners have an opportunity to challenge the breed identification made by a city.⁴⁴⁹ That claim notwithstanding, there is no system in place, other than the democratic system for legislation, to ensure that courts take into account the new science and technology that has found that there is no fairness in operation of breed-specific ordinances.⁴⁵⁰

V. THE POST-CONVICTION REMEDY FOR PIT BULLS

The politics of fear could not propagate without the cultural climate surrounding dogs. Politicians cannot create fear from thin air.

Nor do they monopolize the deployment of fear; panics about health or security can just as easily begin on the Internet or through the efforts of an advocacy group In an era where the ethos of “there is no

446. *Id.* at 143 (quoting N.Y. CRIM. PROC. LAW § 440.30(1–a)(a)(1) (McKinney 2014 & Supp. 2016)).

447. *Newton*, 779 F.3d at 147 (citing *Dist. Attorney’s Office v. Osborne*, 557 U.S. 52, 72–74 (2009)).

448. *Id.* at 148 (quoting *Medina v. California*, 505 U.S. 437, 445, 448 (1992)).

449. Schaffner, *supra* note 29, at 34–35.

450. *Id.* at 36 (quoting *City of Toledo v. Tellings*, 871 N.E.2d 1152, 1159 (Ohio 2007)).

alternative” prevails, there is little need for an omnipotent state to remind us of our lack of power.⁴⁵¹

“[F]ear started with the discovery that animals respond by instinct and conditioning”⁴⁵² People, with the same fear apparatus as animals, feed fear through verbal communication.⁴⁵³

As soon as we hear about a danger, however remote, we tend to see it as a personal threat, especially if the danger is exaggerated to begin with.

. . . .

Once a person has learned to fear something, he may always feel fear associated with that experience. But unlike [animals], we humans can fear events we have only read or heard about, and so we worry about [events or] disasters we may never experience.⁴⁵⁴

This is demonstrated by the heavy reliance on sensationalized newspaper articles about pit bull dogs,⁴⁵⁵ and layperson testimony in city council meetings being used to enact breed-specific legislation,⁴⁵⁶ as well as to support the constitutionality of those ordinances when challenged.⁴⁵⁷

Laypersons are not always to blame for the failings of breed-specific ordinances. “An identification procedure that is both unnecessarily suggestive and creates a substantial risk of misidentification violates due process.”⁴⁵⁸ But unnecessary suggestiveness alone does not require the actual exclusion of the evidence, so long as there are “‘sufficient aspects of reliability,’ for reliability is the ‘linchpin in determining the admissibility of identification testimony.’”⁴⁵⁹

There is currently no standard for the reliability of an animal control officer’s breed identification to enforce a breed-specific ordinance.⁴⁶⁰ Today, it is up to the dog owner to hire an attorney or represent himself to refute the identification and the trier of fact, usually an administrative hearing officer or municipal court judge, to determine the accuracy of either identification, with most cities containing a rebuttable presumption

451. FRANK FUREDI, *POLITICS OF FEAR: BEYOND LEFT AND RIGHT* 132 (2005).

452. MARC SIEGEL, *FALSE ALARM: THE TRUTH ABOUT THE EPIDEMIC OF FEAR 2* (2005).

453. *Id.*

454. *Id.* at 2, 25.

455. Vankavage & Schaffner, *supra* note 8, at 7; *see also* Brand, *supra* note 20, at 60.

456. Vanater v. Village of South Point, 717 F. Supp. 1236, 1240 (S.D. Ohio 1990).

457. *Id.* at 1240, 1242.

458. United States v. Brownlee, 454 F.3d 131, 137 (3d Cir. 2006) (citing *Manson v. Brathwaite*, 432 U.S. 98, 107 (1977)).

459. *Brownlee*, 454 F.3d at 139 (quoting *Manson*, 432 U.S. at 114).

460. *See* DeeFabritiis, *supra* note 349, at 175–76; Schaffner, *supra* note 29, at 26.

that a city's identification of a dog is correct.⁴⁶¹ The only option for testing reliability of a city's identification or burden of proof is to challenge the identification in court.⁴⁶² The science in both cases, whether it is a breed-specific ordinance or years of social science experiments and exonerations of convicted criminals—what we as humans visually perceive has been shown to be highly unreliable.⁴⁶³

The first “post-conviction remedy” we have seen is that breed-specific legislation is declining throughout the country.⁴⁶⁴ Cities are choosing to not enact breed-specific prohibitions,⁴⁶⁵ or are repealing the ordinances.⁴⁶⁶ Most people today live in a city without breed-specific legislation, with ninety-eight percent of cities having breed-neutral, behavior-based ordinances.⁴⁶⁷ However, we are still left with the court precedents relying on outdated information and pseudo-science to support claims of constitutionality.⁴⁶⁸ It seems that while cities across the country are failing to pass new breed-specific legislation, it can be troublesome for strongholds with legal precedent to adapt to the changing science.⁴⁶⁹ Moreover, many cities with breed bans have determined that the ban is ineffective in protecting the public from dog attacks, and is

461. Jonathan R. Shulan, Note, *Animal Law—When Dogs Bite: A Fair, Effective, and Comprehensive Solution to the Contemporary Problem of Dog Attacks*, 32 U. ARK. LITTLE ROCK L. REV. 259, 263–64 (2010) (citing Safia Gray Hussain, Comment, *Attacking the Dog-Bite Epidemic: Why Breed-Specific Legislation Won't Solve the Dangerous Dog Dilemma*, 74 FORDHAM L. REV., 2847, 2855–56, 2861 (2006)); see, e.g., ALMA, MICH., CODE OF ORDINANCES § 10-58 (2014); KEARNEY, MO., MUNICIPAL CODE § 205.195(A)(7) (2016).

462. See Schaffner, *supra* note 29, at 26.

463. See *State v. Henderson*, 27 A.3d 872, 877–78 (N.J. 2011); see also *DecFabritiis*, *supra* note 349, at 175–76; *Shelter Medicine*, *supra* note 356, at 2–3.

464. *Breed-Specific Legislation on the Decline*, NAT'L CANINE RES. COUNCIL (June 25, 2014), <http://www.nationalcanineresearchcouncil.com/news/breed-specific-legislation-decline>.

465. *Id.*

466. *Id.*

467. The 2015 United States Census showed over nineteen thousand incorporated places or cities in the country. *Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2015*, U.S. CENSUS BUREAU, <http://www.census.gov/popest/data/cities/totals/2015/index.html> (follow “Incorporated Places: 2010 to 2015” hyperlink; then follow “All States” hyperlink) (last visited Oct. 10, 2016). Various sites list the total number of cities with breed specific legislation; this author found the breed-specific legislation map at *Animal Farm Foundation, Inc.* to be the most accurate with 368 cities banning pit bull type dogs. *Breed Specific Legislation Map*, ANIMAL FARM FOUND., INC., <http://www.animalfarmfoundation.org/pages/BSL-Map> (last visited Oct. 10, 2016).

468. See, e.g., *Vanater v. Village of South Point*, 717 F. Supp. 1236, 1243 (S.D. Ohio 1990).

469. Schaffner, *supra* note 29, at 30 (first citing *City of Toledo v. Tellings*, 871 N.E.2d 1152, 1158 (Ohio 2007); and then citing *Vanater*, 717 F. Supp. at 1247); NAT'L CANINE RES. COUNCIL, *supra* note 464.

problematic to enforce by field officers.⁴⁷⁰

The second remedy, for those still living in cities with breed-specific legislation, is to mount a constitutional challenge using the more up to date science referred to in this Article and *Dias*. It would seem that the issue has so much more to do with human behavior than any kind of canine behavior.⁴⁷¹ In the interest of protecting the liberty for those who live in cities with breed-specific legislation, this Article suggests that breed-specific ordinances are no longer based on “well-settled law,” as many of the cases would suggest.⁴⁷²

CONCLUSION

Science today tells us breed is not predictive of behavior, and breed identification itself is unreliable. When compared to the pseudo-science of the 1980s that was used to demonstrate breed-specific dangerousness to uphold the constitutionality of breed-specific legislation—a court today could reasonably conclude that breed-specific legislation is no longer rationally related to any governmental purpose and is vague in all its applications.⁴⁷³

470. CITY ATTORNEY’S OFFICE, CITY OF TOPEKA, PROPOSED ORDINANCE ON ANIMAL CRUELTY AND DANGEROUS DOGS 3 (outlining that the breed-specific ordinance was wholly ineffective in reducing the number of dog bites); Vankavage & Schaffner, *supra* note 8, at 2, 18.

471. Schiavone, *supra* note 20, at 15 (positing that heuristics, or a short cut to find an answer for a complex question, explains why local governments treat the danger of dogs differently than other dangers, such as falling down stairs or choking, which statistically are far more dangerous). This fear or availability and affect heuristic is a studied human psychological response that can be seen in panic policymaking related to breed-specific legislation, “leading us to neglect the true probability of the risk and overestimate the danger.” *Id.* at 71.

472. *See Dias v. City of Denver*, 2010 U.S. Dist. LEXIS 103814, *19–20 (D. Colo. 2010).

473. *Id.*