

The Canine Identity Crisis



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RESEARCH ARTICLE

What's in a Name? Effect of Breed Perceptions & Labeling on Attractiveness, Adoptions & Length of Stay for Pit-Bull-Type Dogs

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RESEARCH ARTICLE

A canine identity crisis: Genetic breed heritage testing of shelter dogs

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Prior research has implicated **breed as factor in adoption**^{1,2,3}

Dogs identified as pit bulls having lower adoption success & higher rates of euthanasia

Yet breed assignment is typically based on **appearance** - which has been found to be an **inconsistent & unreliable means of identification**^{4,5}

¹(Posage, Bartlett, & Thomas, 1996) ²(Lepper, Kass, & Hart, 2002)

³(Diesel, Smith, & Pfeiffer, 2007) ⁴(Voith, Ingram, Mitsouras, & Irizarry, 2009) ⁵(Olson et al., 2015)

Study 1: Breed Perceptions



**Labrador
Retriever**



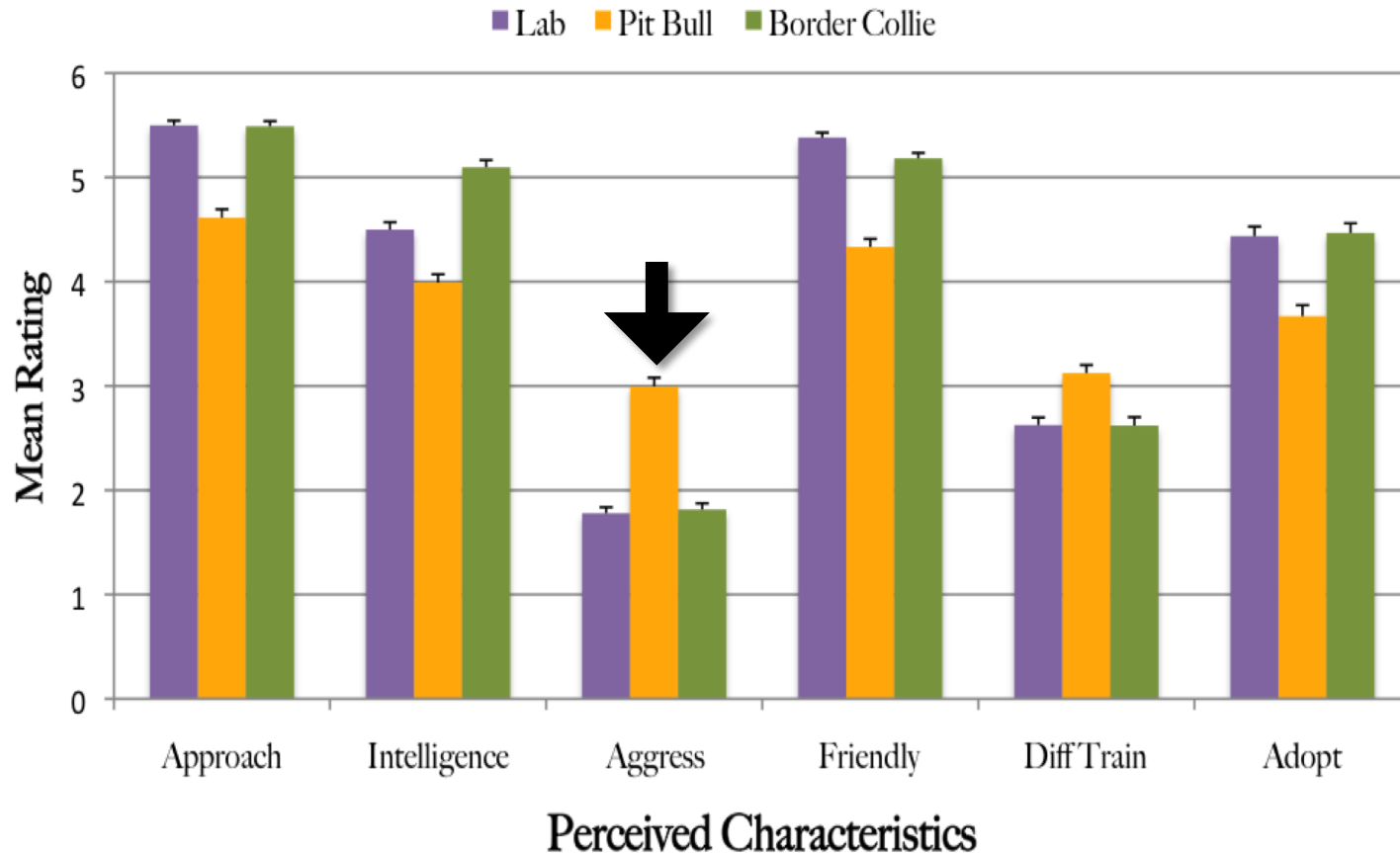
**Pit-bull-type
dog***



**Border
Collie**

Did participants view dog breeds differently?

Pit bull was perceived unfavorably in all behavioral & adoptability characteristics when compared to Lab & Border Collie



Rated **lowest** in friendliness, adoptability, approachability, intelligence & **highest** in aggressiveness & difficulty to train



What's a Lookalike?

We focused on adult dogs adopted from Arizona Animal Welfare League between 2011-2014 that were labeled as pit bull breeds

These dogs were matched to **lookalikes** = dogs that were physically similar in stature, head, coat color & length in photo

+/- 3 years (no puppies or seniors)

+/- 30% body weight

But labeled another breed by shelter staff

Study 2: Pit Bull & Lookalike Photos



Finding Out What Adopters Prefer

Questions: Approachability, intelligence, aggressiveness, friendliness, difficulty to train, adoptability = **attractiveness**

Participants: Potential adopters at Arizona Animal Welfare League

14 males, 25 females (74% Caucasian)

Age range: 18-75y ($m = 34.5y$)

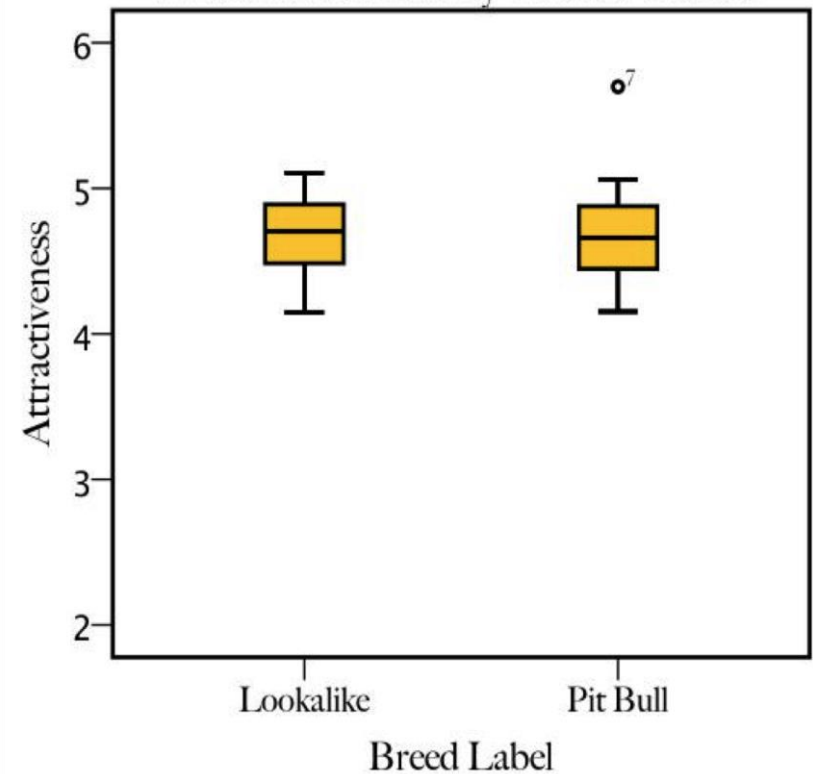
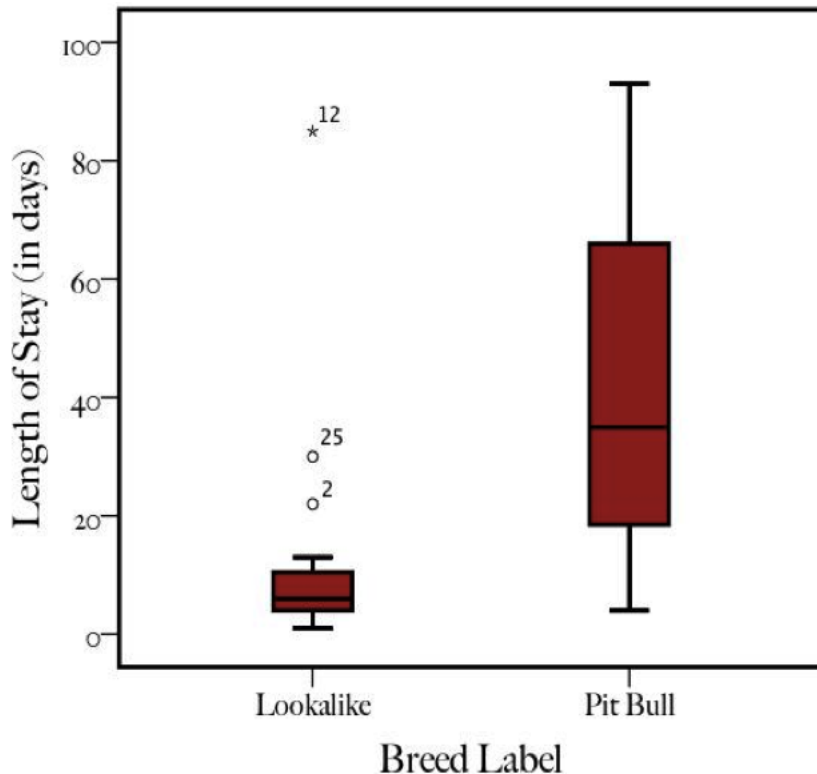
90% previously owned a dog

51% adopted before



Were pit bulls & lookalikes rated differently?

In photos, pit bulls & lookalikes did not differ in perceived attractiveness



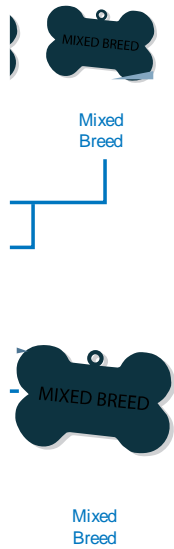
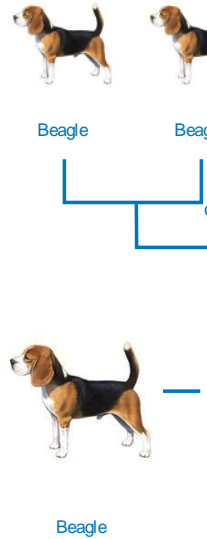
We designed our next studies to dig deeper into the actual breed identity of dogs in animal shelters

Genetic Canine Heritage Testing

May more accurately describe breeds present in today's shelter dogs

Allowing us to better infer influence of breed on outcomes

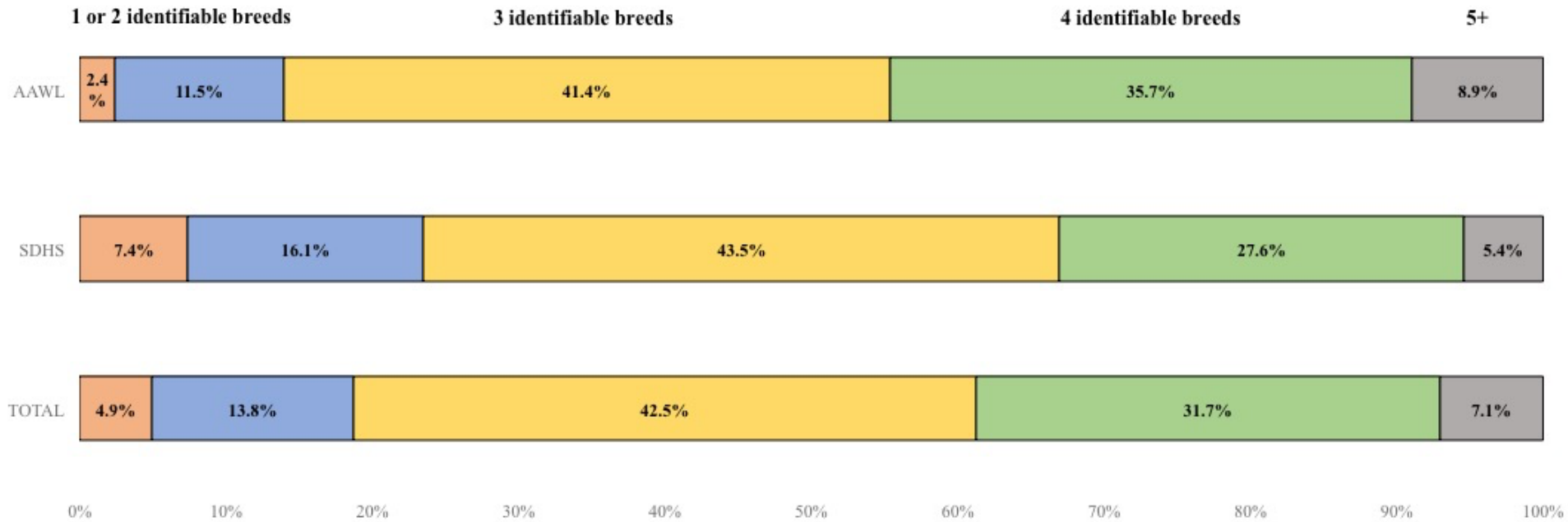
Wisdom Panel uses 321 single nucleotide polymorphisms (SNPs) to identify dog's 8 great-grandparents



+ 20,000 genes in dog genome & these SNPs have been identified as unique to certain breeds



ARIZONA ANIMAL
WELFARE LEAGUE & SPCA
ARIZONA'S OLDEST & LARGEST NO-KILL SHELTER



Proportion of dogs by number of identifiable breeds within breed heritage at Arizona Animal Welfare League & San Diego Humane Society

Top 5 Breeds

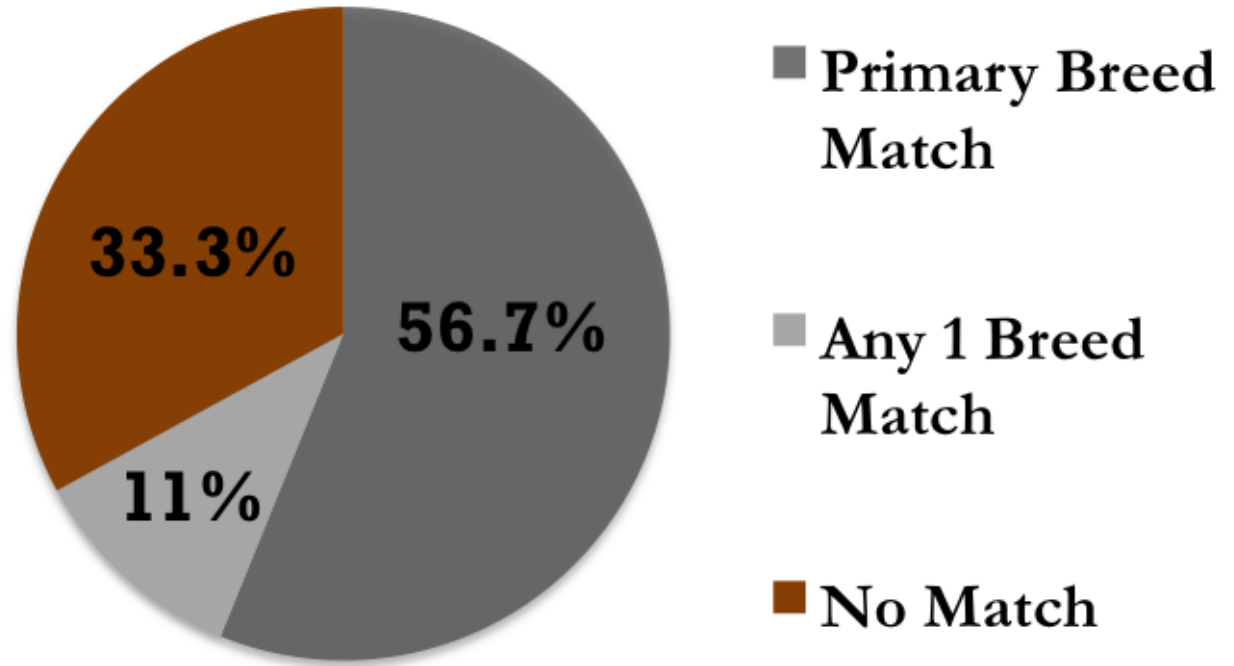
(% of Dogs with 1 GGP of that Breed)



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Visual Identification of Primary Breed

At San Diego Humane Society, we also collected data on their **match rate** – comparing visual identification of breed by shelter staff to results of DNA analysis

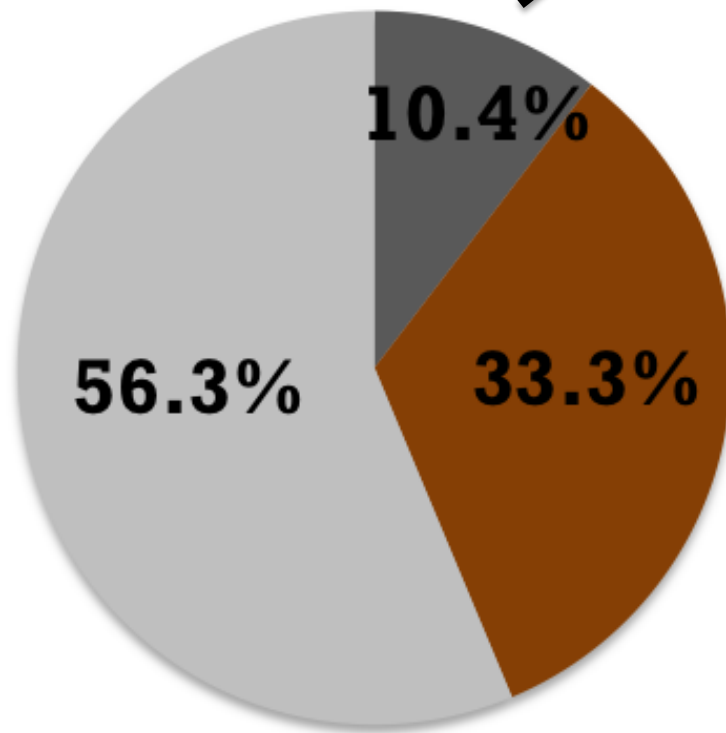


In over 2/3 of dogs, staff correctly identified **primary breed** or 1 breed in dog's heritage

Matching Both Primary & Secondary Breeds

Of 40 complete matches, less than half (44.4%) were correctly identified mixed breed dogs

Majority were knowing a purebred was a purebred



■ Complete Match
(Primary & Secondary)

■ No Match

■ Any Breed Match
(Primary or Another)



Shelter Dog Breed Identity

These dogs show range of
breed diversity with
125 breeds identified
at each shelter
with 91 breeds shared
between them

Less than 5% of dogs
sampled were purebreds

A large, brindle and black dog with its tongue hanging out, standing on grass. The dog is the central focus of the image, looking slightly to the left. Its fur is a mix of dark brown/black and lighter tan/brown patches. It has a black nose and a pink tongue. The background is a soft-focus green lawn.

Shelter Dog Breed Identity

Over 75% of dogs sampled
were more than 2 breeds –
with 1 breed most
often contributing only
1/3 to dog's heritage

Staff correctly identified 1
breed in 68% of dogs

Ability to correctly identify
> 1 breed fell to 10% with
56% of those dogs being
properly ID'd purebreds

Where Do We Go From Here?

Should we continue to use breed labeling when

- a) it does not adequately describe complexity of mixed breed dogs
- b) is likely incorrect in identification beyond 1 breed
- c) perpetuates beliefs about breed-specific behavior

Scott & Fuller (1965) demonstrated that mixed breed dogs can show range of physical diversity - **making premise of visual breed identification, at best, inherently complex &, at worst, untenable**

Breed differences do exist BUT large amount of within-breed variation too! **How these influences converge in behavior of mixed breed dogs is not well understood**

Parting Thoughts

Beyond whether breed labels help or hurt dogs in the shelter, shouldn't we be describing dogs in a way that is likely correct?



If we remove breed labels, we can **shift conversations toward simply describing the morphology of dogs & discussing their *individual* behavior**

Stop Stereotyping Dogs

Looking for a canine companion? That breed label won't tell you much.

BY CLIVE D.L. WYNNE AND LISA M. GUNTER

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