

How outdated perceptions have reshaped dog marketplace

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Abstract

Rates of household dog ownership in the United States have never been higher, according to the American Veterinary Medical Association, which has tracked this statistic since 1982.¹ Likewise, market research shows significant growth in the number of U.S. dogs, with 1 firm estimating the number in 2017 at 89.7 million, an increase of 24% since 2000.² This widely documented upturn in dog ownership is especially noteworthy in view of parallel decreases in number of dogs being produced in the United States by long-standing sources. This reduction affects both mixes and purebreds and is confirmed by multiple sources, including purebred registries, shelter statistics and breeder databases. Objectives of this study were to examine consumer perceptions and preferences regarding dog acquisition and identify how these trends and perceptions impact availability, sustainability, type and quality of pet dogs. The study confirmed high levels of dog ownership reported by other studies, assessed public's intention to acquire dogs in the future and identified preferences for several dog characteristics. The perception of dog overpopulation strongly influenced the type of dog preferred and where to acquire it. A majority of respondents was unaware of the large number of rescue dogs routinely imported into their area for adoption, a practice that keeps local supply and demand for pet dogs in equilibrium and obscures decreases in locally produced dogs.

Keywords: Breeds, overpopulation, consumers, shelters, rescues, importation, purebreds

Introduction

Given the popularity of dogs, the economic activity surrounding their acquisition and the size of the pet industry, which is estimated to surpass \$72 billion in 2018,³ little attention has been paid to the changing sources of dogs, nor the decline in many traditional sources of dogs available to consumers.⁴ These trends raise questions about sustainability of US dog ownership, at least from traditional sources.

Number, source and quality of pet dogs available in the US impacts a wide variety of stakeholders—pet businesses, animal professionals, hobbyists and pet owners alike. Many have livelihood stakes in the information. Some are deeply committed to animal health and welfare or breed preservation, whereas others simply have a personal interest in the source of their future dog. Evolution of sources, preferences and qualitative differences affect all stakeholders. In the US today, there are 4 major dog sources:

- Casual breeders producing puppies from family dogs, both mixes and purebreds;
- Hobbyists and sportsmen producing dogs with specific characteristics for work, canine sports and as pets, mostly purebreds;
- Commercial breeders providing pet dogs, mostly purebreds, for American consumers; and
- Animal rescues and shelters, placing strays and dogs that have been relinquished by their original owners, as well as dogs acquired from other shelters and rescues from within and outside of US.

Of the 4 sources listed above, the only source showing an increase in supply and in placements is the nonprofit shelter and rescue category.⁵ It should be acknowledged that in addition to importation, shelters have also increased placements by expanding the definition of adoptable to include dogs that were formerly excluded from adoption due to health or temperament issues.

High rates of neutering, restrictive dog breeding laws, economic downturns, the ease of international travel and development of the Internet have all affected composition of the dog marketplace and the overall decline of US dog breeding. However, these factors alone do not explain related shifts in

preferences for pet dog types and sources, or why the decades-long desire for purebreds has waned at a time when overall dog ownership has increased.

With all categories of dog breeding in the US on the decline and dog overpopulation solved in many but not all regions of the country, rescues and shelters have expanded their operations to fill the void. Thirty years ago, animal shelters in most regions of the country were filled with local dogs but shelters in many states today would not have enough dogs to remain viable without importing rescue dogs from regions where surplus dogs still exist.^{6,7} Today, rescue dog importation or humane relocation as its advocates call it, has become the dominant source of dogs in many regions of the country. Significantly, the public remains largely unaware of where local shelter and rescue dogs originate; they still perceive that dog overpopulation is a serious problem, a belief that influences where they choose to acquire a family dog.

There are no central databases or government oversight bodies that license or otherwise require shelters and rescues to be registered; however, estimates place the number of brick-and-mortar shelters at approximately 3,500 and rescues at 10,000 and growing. With the demand for dogs estimated at 8 million annually and anticipated to reach 9.2 million by 2036, some commentators assert that there simply are not enough shelter dogs in the US to meet demands.⁸

A constant stream of rescue dogs keeps supply and demand in equilibrium in many parts of the US, transforming humane societies into *de facto* pet stores. Many northern shelters now import the majority of their adoptable dogs—thousands of dogs each year—a practice that displaces local dog breeding.⁹ The unlimited supply of dogs available through rescue transport programs is sufficient to fill market demand, impacting not only casual breeding but careful breeding done to maintain and improve long-standing breeds. Genetic diversity has contracted, along with the steep decline in breed populations since the mid 1990s. Significant gene pool shrinkage has already occurred, threatening many purpose-bred dogs that have been created over many generations, even hundreds of years. Once gone, they cannot be replaced.

Foreign rescue dogs, especially from developing countries and territories that have street dog populations estimated in the millions, can easily meet the number of dogs required by the American public. The lack of veterinary care available in these countries, however, assures that imported dogs will harbor many diseases and parasites that are rarely found in the US.¹⁰ Moreover, many of the dogs being imported today are feral street dogs with little, if any, past veterinary care or socialization.

Purebred dogs represent a shrinking percentage of the total dog population, so it warrants asking whether consumers now prefer mixed breed dogs to purebreds. Likewise, increasing acquisition of older shelter and rescue dogs raises questions about the public's attitude toward acquiring dogs as puppies. Do today's families prefer to obtain older dogs that were previously owned rather than acquiring puppies and raising them as they have in the past? Notably, when respondents were asked what characteristics were important to them when considering acquiring a dog, predictability and purebred status were at the top of the list and acquiring puppies was important to a majority of survey respondents. In other words, the stated preferences of survey takers were often at odds with their actions as consumers.

There are innumerable reasons why preferences expressed by consumers could be at odds with their actual purchasing practices, but 1 factor that has not been adequately discussed in the research literature is the role of humane marketing campaigns produced by national animal welfare organizations and local humane societies and rescue groups.

For more than 30 years, local and national animal rights and welfare organizations have promoted legislative and marketing campaigns to end pet overpopulation, inhumane breeding practices and several other animal welfare problems. The campaigns have achieved great success, but their sensational approach has also triggered severe declines in the number of healthy, well-socialized dogs being produced by acceptable sources. The campaign messages stereotyped all dog breeding as harmful and reinforced an unreasonable concern over dog overpopulation, even as these problems were being resolved.

Today, rescue and shelter dog adoptions are often promoted using a type of *cause marketing* campaign that ties a product or goal to a worthwhile cause, while linking alternative choices to negative consequences. In the case of dog acquisition, the adoption of a rescue or shelter dog is marketed as the

most humane choice, as a choice that will prevent shelter dogs from being euthanized. Such campaigns assert that buying a puppy will harm a shelter dog's chance of finding a home, that adding a new non-rescue dog to the population will lead to a shelter dog's death. These campaign messages have been accepted by popular culture and are widely distributed in print and broadcast media and presented as news. Some have even appeared on billboards. Secondary messages convey that dog breeding is inhumane and that mixed breed dogs are healthier than purebreds.¹¹

Markets continually evolve in response to changing consumer demand. If the public no longer chooses dogs of specific breeds, prefers acquiring older dogs rather than puppies, or perceives that rescued shelter dogs are equally healthy and temperamentally as sound as those available from breeders or retail outlets, the market changes to reflect these choices. Likewise, if the satisfaction of acquiring a dog that they believe might otherwise face euthanasia is greater to an individual than getting one with characteristics they prefer, but faces no such peril, types of dogs available will shift in response.

The survey suggests that the public prefers puppies with predictable traits and purebreds over mixed-breed dogs, but often selects dogs that lack these qualities to prevent shelter dog euthanasia. Even if this perception is false, if consumers believe it to be true, the supply of purebreds and puppies from traditional sources will continue to decline, being replaced by dogs from national and international rescue channels.

The unanswered question is whether prospective dog owners whose choices are influenced by their perceptions of US dog overpopulation and other humane issues would continue to choose rescued shelter dogs over traditional American bred sources if they were aware that:

- Many rescues and shelters are importing dogs to meet local demand, not only from the states that still have surpluses, but from foreign breeders and the streets of foreign countries;
- The welfare of most imported dogs is not protected at the source or during transport;
- They often harbor infectious and zoonotic diseases and parasites, including lethal ones; and
- Avoiding US-bred purebreds and even mixed breed puppies threatens the future availability of a healthy source of American bred dogs, including purebreds.

Recognizing these supply chain changes is important so that long-standing as well as new sources of dogs can be evaluated for quality and sustainability. Significantly, the public remains largely unaware of these changes, believing in and making personal and policy decisions based on outdated facts.

Materials and methods

This study examined elements contributing to changes in the composition of the dog marketplace and dog ownership in the US. The objective was to examine consumer perceptions and preferences regarding dog acquisition and to identify how these trends and perceptions impact pets available to Americans now and in the future. Consumers were surveyed about their perceptions, preferences, and future plans for adding a dog to their family. The aim of this research was to examine these trends and assess their impact on preservation of breeds and sustainability of a healthy source of American-bred dogs.

An online survey was completed by 1,666 individuals, from which a sample of 1,000 respondents between the ages of 28 and 70 was selected who in aggregate are representative of the U.S. population by gender (46.3% men and 53.7% women), income and geographic region. The survey asked questions about current dog ownership, plans for future pet dog acquisition, consumer preferences for various characteristics (e.g. size, breed, sex), and consumer beliefs regarding dog overpopulation. Additional materials included data from government and institutional sources, purebred registries, media and open records searches. This research was conducted between January 2013 - February 2019.

Results

Findings

Background and General Attitudes of Respondents

Out of 1,000 respondents, 51% (507) currently owned at least 1 dog, whereas 49% (493) did not. Although a slight majority of all respondents currently owned a dog, a large majority of 64% (640) viewed dog ownership itself as important or very important. Of the dog owners, 58% (295) owned at least 1 purebred dog and 53% (269) at least 1 mixed-breed dog 11% (57) owned at least 1 purebred and 1 mixed-breed dog).

Purebred Dogs

Among current purebred dog owners (295), 41% have registered their most recently acquired purebred dog with a breed registry [e.g., American Kennel Club (AKC), United Kennel Club, Continental Kennel Club], 49% have not, and 10% of respondents were unsure. Excluding the 10% of dogs whose registry was unknown, 70% of those not registered were reportedly eligible. The remaining 30% were reportedly not eligible.

Sources of Currently Owned Dogs

Current owners were asked the source of their most recently acquired purebred and mixed-breed dog, separately. There were 16 options to choose from, including “other,” if a respondent’s source was not provided in the survey. The top 4 responses for purebred dog owners (295) were serious in-home breeder (56), casual in-home breeder (48), friend/relative/neighbor (44), or gift (42). Out of all responses, 116 purebred dogs (39%) came directly from breeders. The top 4 responses for mixed breed dog owners (269) were Animal Shelters (59), Friend/Relative/Neighbor (52), Stray (24), or “Other” (23). Overall, 35% (93) mixed breed dog owners obtained their dogs directly from rescues or shelters.

Anticipated acquisition of a new dog in the next 5 years

Overall, 38% (376) of all respondents anticipated acquiring a dog within the next 5 years. However, respondents who currently owned a dog were nearly 3 times as likely to anticipate acquiring another dog: 44% (342/778) of current dog owners versus 15% (34/222) of non-owners.

Important characteristics

Of the (376/1,000) respondents who anticipated acquiring a dog within the next 5 years, 68.35% (257) said they would actively pursue a purebred dog or puppy.

Health at time of acquisition

An overwhelming majority of all respondents, 863, considered health of the animal (health being at the time of acquisition and throughout his/her life) a high priority in their decision to acquire a new dog. Of these 863, the top response when asked where they would look for a new dog, was Animal Shelter (297), more than twice as many as the second highest response, “serious, in-home breeder” (143). Respondents who disagreed with the statement “It is okay to purchase dogs instead of adopting them from a rescue or shelter.” were even more likely to view an Animal Shelter as the best place to acquire a healthy dog over a serious, in-home breeder: 155 versus 24.

Predictable temperament (trainability, stability, affection toward the family, etc.) was considered a high priority when acquiring a new dog by 86% of respondents (861). Of these respondents, 33% (284) would look first at an animal shelter to acquire a new dog, whereas 17% (148) would go to a serious, in-home breeder, and 14% (121) would seek a new dog from a friend, relative, or neighbor. For 63% (630) of all respondents, finding a dog to meet a specific family need (e.g. being nonallergenic, getting along with current dog(s), living comfortably in an apartment) was a high priority in their decision making.

Of these 630 respondents, 31% (197) would look first in an animal shelter to find a dog to meet their specific need, whereas 18% (115) would seek a breeder, and 12% (75) a friend, relative, or neighbor.

If potential performance ability was a high priority (187), respondents believed that dogs from a breeder (40), friend, relative, or neighbor (29), or an animal shelter (27) were the top 3 sources that were most likely to meet these criteria. Of the other 16 possible responses (e.g. pet store, gift), none were selected by more than 13 respondents.

When all respondents were asked how important it was for them to acquire their next dog as a puppy, slightly more than half (502) said it was important or very important, whereas 28% (294) said it was not important or of no importance to acquire their next dog as a puppy. Of the 502 respondents who considered it important or very important to acquire their next dog as a puppy, 23% (114) would look first at a serious, in-home breeder, 20% (102) at an animal shelter, and 15% (77) from a friend, relative or neighbor. For respondents who believe that there is a surplus of dogs in the US, 23% (72) would look first at an animal shelter, 21% (66) at a serious, in-home breeder, and 15% (48) from a friend, relative or neighbor.

Beliefs

Dog surplus in the United States

All respondents were asked if they believed that there is a surplus of dogs in the US: 64% (637) answered yes, 10% (97) answered no and the remaining 27% were not sure. Respondents whose households who own at least one dog were more likely to believe there is a surplus of dogs in the US at 70%. Of the 637 respondents who believed that there is a surplus of dogs in the US, 56% (356) think the surplus of dogs is getting worse, 26% (165) think it is about the same, while 9% don't know or think it is improving (59 and 57 respectively).

Beliefs towards purchase of dogs

With the choices of strongly agree, agree, no opinion, disagree or strongly disagree, respondents were asked if it was "the okay to purchase dogs instead of adopting them from a rescue or shelter." Among all respondents, 34.6% agreed or strongly agreed with statement, 34.4% disagreed or strongly disagreed, and 31.0% had no opinion. Respondents who believed that there is a surplus of dogs in the US were more likely to disagree or strongly disagree with the statement (41%, 259), whereas respondents who didn't believe that there is a surplus of dogs in the US were more likely to agree (46%, 45). Demographics also played a role in respondents' views: female respondents were 28% likely to agree or strongly agree with the statement, and 41% likely to disagree or strongly disagree.

Attitudes towards importation and adoption of dogs from various sources

Most respondents (66.6%) were not aware that some animal shelters import dogs from other states or other countries. 44% of respondents (437) were supportive of importation of dogs from other states, 26% (260) were not.

When asked about importing dogs from other countries, only 16% of respondents (156) were supportive, while 61% (606) were not. Even of the 156 respondents who were supportive of importing dogs from foreign countries, only 41% (64) would adopt a dog from a foreign country rather than a local dog.

Discussion

The practice of keeping dogs as pets developed following the Industrial Revolution and became an ever-expanding and permanent part of American life. Today, US household dog ownership rates are among the highest in the world.¹² The primary sources of pet dogs throughout the 20th century were home-based breeders (both casual and purebred fanciers), and animal shelters. Between and following the world wars, a commercial sector sprang up to meet demand, which included pet dog breeders, wholesalers, transporters and retailers. In the 1980s, rescue networks organized primarily by AKC breed

clubs joined the dog marketplace, conscientiously rehoming dogs of their breed when they landed in animal shelters or other trouble. Toward the end of the 20th century and at the beginning of the 21st century, Internet sellers, online adoption groups like petfinder.com, and rescue relocation transport programs became active players in the dog marketplace. Registration records dating from 1884 from the AKC, the largest purebred registry in the US, provide a well-documented history of purebred dog ownership and current trends. Its records show nearly continuous growth from just under 5,000 purebred registrations at the beginning of the 20th century until 1992, when registrations peaked at 1.5 million and thereafter commenced a steep decline, although there has been a measured rebound in recent years.

Purebred dogs have long been a major component and indicator of the total pet dog population in the US, so the steep decline - nearly 70% since 1993 - reflected in AKC registration data should be noted by dog owners and pet industry professionals alike. It signifies a little noticed, but major change in the overall US dog marketplace. Many small and large scale breeders alike have quit producing purebred dogs and as this happens, gene pools contract and survival of many breeds is challenged. AKC registration data as well as state licensing data for commercial breeders in Pennsylvania and Missouri also confirm this remarkable shift.

Another important factor influencing dog population reductions is the increasing percentage of household dogs that are neutered in the United States. Alongside the uniquely high rates of dog ownership in 20th century America, was a huge surplus of unwanted dogs that were euthanized each year. Mid-century it was still commonplace for unaltered dogs to roam the streets and for families to allow their pets to reproduce. This changed with the growing availability and acceptance of neutering in the last half of the 20th century, as Americans accepted the idea that preventing unwanted litters was part of being a responsible pet owner. Slowly but steadily over more than 4 decades, numbers of dogs entering shelters began to decrease. Many articles refer to the 1970s as a turning point for shelter dog euthanasia. Shelter data covering the period confirm the trend.¹³

Campaigns to end euthanasia of shelter dogs have been enormously successful. Today, 85% of household dogs in the US have been neutered.¹⁴ Because of widespread neutering, other sources of dogs readily available in the past such as mixed-breed dogs acquired from family, friends, neighbors, and local animal shelters, are also declining. Animal welfare organizations report that euthanasia of shelter dogs has dropped by at least 80%, despite huge increases in the population of both human and household dogs over the same interval.¹⁵ Animal shelters in many parts of the country claim a live release rate of 90% or more; a rate, which in no kill parlance, means that no adoptable animals were euthanized.

Despite steady and conspicuous progress in reducing shelter dog populations and euthanasia, new and aggressive legislative pet overpopulation campaigns targeting breeders were launched in the late 1980s. Instead of traditional campaign messages designed to change pet owner behavior through education, the new campaigns used disparagement and shock (public pet executions). The campaigns introduced a new paradigm in which breeding itself, no matter how responsible or humane, was labeled as the problem and graphically linked to shelter dog deaths.¹⁶ These campaigns opposed all breeding until euthanasia of shelter dogs stopped and promoted the idea that breeding or buying a dog is tantamount to killing a shelter dog. "Don't breed or buy while shelter dogs die" became a campaign mantra, and is still prominent in popular culture today.¹⁷

Cause marketing campaigns to end dog overpopulation coupled with a lack of awareness about the status of shelter dog euthanasia and dog importation programs provide context for why so many prospective dog owners view shelters and rescues as the most ethical locations to get their next dog. Thirty-four percent of survey respondents thought purchasing a dog, rather than obtaining a dog from a rescue or shelter, is wrong.

News accounts suggest that the importation of foreign dogs is increasing. Data from the few states that collect such information as well as advertisements on importing rescue and shelter websites show that the number of puppies being imported is growing. Colorado statistics show that number of dogs that are 120 days old or less hovers right around 50%. This should concern animal welfare advocates; perhaps US shelters, rescues and foreign breeders are now producing rescue dogs for the US market. The US still has a very high rate of overall dog ownership, but the study showed that prospective dog owners

are confused about the differences among available sources of dogs. A significant number of respondents who indicated a desire for a specific breed and predictable traits, ideally a puppy, also indicated that they planned to get their next dog from a rescue or shelter. Their preferences and perceptions do not match the current dog marketplace. The vast majority of dogs in shelters are not purebred dogs or puppies.¹⁸

In addition to saving lives, dog relocation programs aim to provide relief to overburdened shelters so that they can use their resources to develop improvements such as public education and low-cost spay/neuter programs. If the number of surplus dogs produced at the source does not decrease as a result of the transport program, the net result will be little more than an unregulated pipeline of dogs, supplying rescue dogs to destination cities but without having to meet the regulatory requirements of retail and wholesale suppliers.

The public is not yet aware that the issue of homeless pet dogs has been solved in many regions of the US. A majority of our survey respondents still believe that there is a shelter dog surplus problem with the majority believing that the problem has not improved or is getting worse. A strong majority was also unaware that many of the dogs available at their local shelter or rescue group are not local animals, but from shelters and rescues from other states or even foreign countries. If current dog marketplace trends continue, demand may exceed supply from all but foreign sources.

Conclusion

Americans love dogs, but outdated perceptions about dog overpopulation and a lack of awareness about dog importation programs are quietly reshaping the dog marketplace and threatening the future availability of healthy puppies and well socialized dogs. Shelter and rescue data from Colorado Department of Agriculture (the best source of statewide rescue and shelter data), sheds light on effects dog relocation programs have on the marketplace. The number of dogs taken in by Colorado's shelters and rescues steadily increases. An uninformed observer might conclude that the number of surplus dogs in the state is increasing.¹⁹ In fact, out-of-state dogs are flowing into Colorado rescues and shelters at rates high enough to meet current demand and greatly increase earlier shelter population levels, which were in steep decline prior to initiation of importation. In 2017 alone, the number of imported dogs was 31,707.²⁰ That same year they adopted out 60,892 dogs, which was 30,232 more than they placed in 2000. The number of imported dogs and adoptions increase annually. Colorado's shelter data are uniquely robust. Most states provide little if any such information and many shelters do not publish data regarding animals they take in and place. Even though a given animal shelter may not share its data publicly, it is still collected for internal use. Having information about animal shelter intakes, adoptions and sources is essential for planning. It is especially helpful in estimating how many dogs can be imported and adopted out in a given region while keeping local supply and demand in equilibrium. Colorado provides the best example of how the current import-shelter model operates and shows how importation masks the fact that there are no longer enough local dogs to meet demand and that shelters are becoming the leading source of pet dogs in their communities. As Rhode Island state veterinarian Dr. Scott Marshall put it, "...There's some evidence that the rescue groups are a new model for the pet shop industry." In many instances he says we've supplanted pet shops, "...a well-regulated industry with a lot of state and federal regulations and shifted those animals into other channels with less oversight and a lot less transparency."²¹ The main reason this subject has not been thoroughly covered in the past is because of the lack of accessible, verifiable data. US shelters and rescues operate with very little oversight despite some being multi-million-dollar operations. There is no central database collecting and publishing shelter/rescue statistics on a nationwide basis. To make sense of the data, researchers have to extrapolate from key data sources, review numerous pieces of information and evaluate trends. Based on materials we have received through open records requests that show state-to-state shipments of dogs, import records maintained by states like Massachusetts and Connecticut and statistics published by a few key shelters, it is reasonable to estimate that no more than about 15 states still have surplus problems. Colorado's data are an excellent model for extrapolation of trends. Data from other states and from big city humane societies that publish their statistics show the same trends. Even though it is difficult it is to report these data with precision, trends are unmistakable.

If these trends continue Americans may someday find that carefully produced and socialized puppies are rarely available from US sources and that many of the breeds they grew up with and enjoyed in the past are no longer available. Instead they may discover that pet dog breeding has been outsourced to nonprofit institutions in this country and to foreign countries where veterinary care, concern for animal welfare, husbandry and breed preservation is decades behind the US or absent.

Acknowledgement

Authors acknowledge assistance of Michelle Kutzler and Angie Niles. Research supported by the National Animal Interest Alliance.

Conflict of Interest

Authors have no conflicts of interest to declare.

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