

REHABILITATING CANINES IN ANIMAL SHELTERS TO REDUCE
EUTHANASIA RATES

By

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Abstract

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This paper explores the topic of training canines in animal shelters with positive behavior traits in order to increase canine adoptability and reduce euthanasia in animal shelters. Many of the challenges animal shelters face such as funding, lack of staffing and overcrowding are all known factors resulting in the use of euthanasia. Euthanasia has become a control method to the problems animal shelters face rather than an act of mercy to relieve suffering, as euthanasia is defined. By training canines with positive behavior traits in animal shelters, adoption rates can be increased and euthanasia rates can be decreased, saving many canines.

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Introduction

Canine euthanasia can serve many purposes. Canine euthanasia can be used to end the suffering of canines as a result of incurable medical issues and old age. For many, this is a pet owner's last act of selfless love to their faithful canine companion.

Euthanasia can also be used as a form of population control, to remedy overcrowding in animal shelters, as a solution to lack of funds to care for the canines adequately in the shelters, and as a solution to canines with negative behavioral traits such as signs of aggression, chewing, unruliness, lack of house-training and other undesirable behavioral issues. This paper will explore the reasons for relinquishment of canines to animal shelters, factors that contribute to the use of canine euthanasia and whether basic canine training can reduce the use of euthanasia by reducing the canine relinquishment rates and increasing adoptability. The research questions for this paper are as follows:

Does research show that negative behavior traits can be reduced for canines in animal shelters?

Does evidence show that if canines are trained with positive behavioral patterns, this will decrease euthanasia rates?

Does research show that training canines with positive behavior traits can have a positive impact on canine adoption rates?

Animal shelters and the employees face many challenges such as shelter funding, training and employee skill levels. When animal shelters reach maximum capacity, the shelters are left with very few options to address this dilemma. With limited funding,

shelters must use this money to maintain the operations of the facility, feed the canines, and provide necessary medical treatment as well as other basic needs. Shelters often rely on volunteers to help provide for the basic needs of the canines and to maintain the facilities. Paid employees often receive low wages. As animal shelters and the employees face many challenges, do these challenges factor in on which canines are the most “adoptable” and which canines should be euthanized?

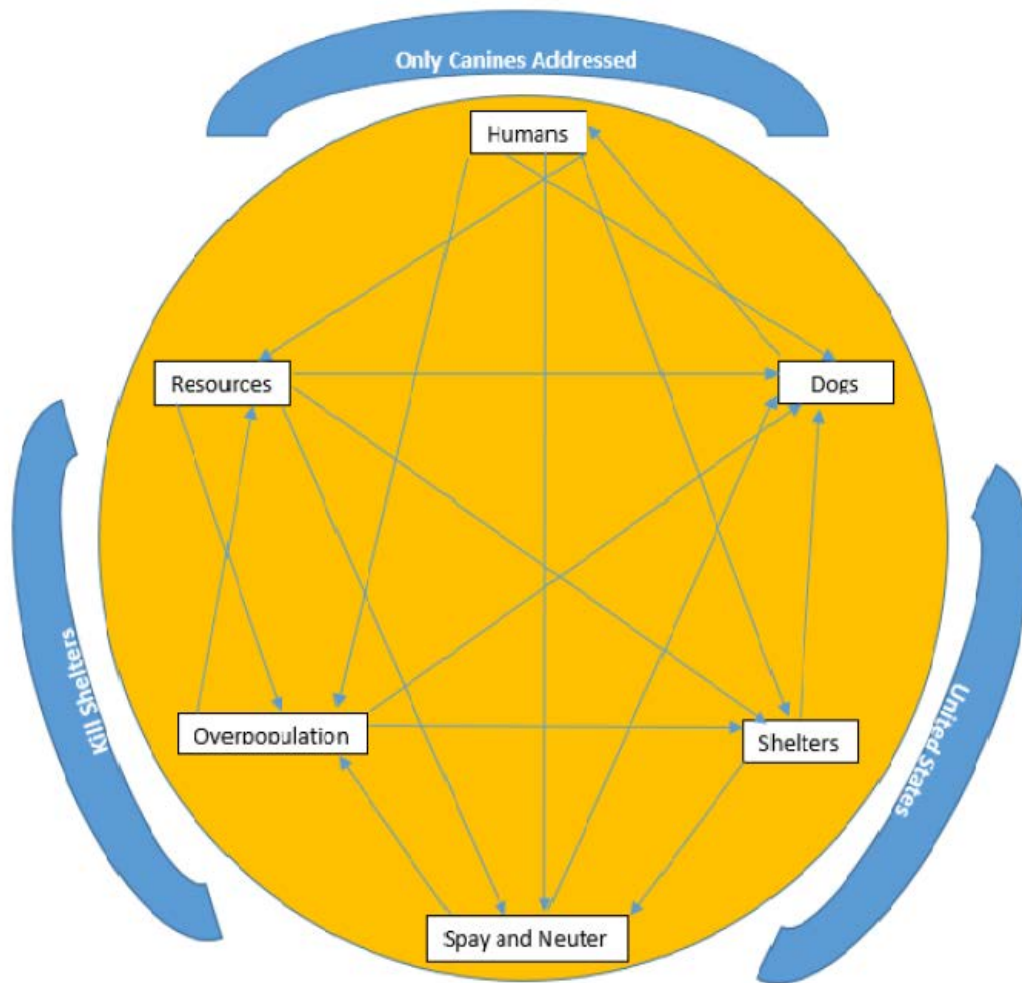


Figure 1. Connection Circle
(Author Created Diagram)

Figure 1 illustrates some of the variables and boundaries associated with animal shelters and euthanasia that will be addressed in this paper. Within the figure, the connection circle boundaries are limited to canines in kill shelters within the United States. The inner circle is a visual illustration of how each variable impacts other variables within the system. Each variable contributes either positively or negatively to the euthanasia rates of canines in animal shelters throughout the United States.

Canine rehabilitation has some positive implications. Some studies have indicated that by training canines while in shelters, the canines develop skills and exhibit behaviors that make them more “adoptable” or marketable to potential adopters. Barriers to canine rehabilitation include funding and time. Training is thought to be very time-consuming and shelter staffing is often limited. If canine shelters could successfully implement a training program into their facilities, it is suspected that euthanasia rates from overpopulation and undesirable behavioral traits could be reduced.

To determine whether or not research indicates that negative behavior traits can be reduced for canines in animal shelters and to determine if euthanasia rates can be decreased and have a positive impact on canine adoption rates by training canines with positive behavioral patterns, this research will be conducted via a literature review. Theories, policies and qualitative research will be reviewed. The scope of this literature review will consist of journals, case studies, government regulations and reputable online public websites of various reputable organizations. The discipline will be focused on animal welfare for shelters in the United States, specifically canine euthanasia and animal shelters. The literature will be critically analyzed to identify various similar and

opposing arguments in order to conclude whether there is enough evidence to support or reject the notion that through training, canine euthanasia can be decreased in animal shelters and have a positive impact on canine adoption rates.

To delve into the issue of canine rehabilitation, it is necessary to give a brief overview of the functions of typical animal shelters, which will be discussed in the next section.

Canines and Animal Shelters

Animal shelters provide public services through-out the United States. Some animal shelters, animal control facilities and/or rescues, are no-kill facilities, while others practice euthanasia in their facilities. Some shelters partner with other agencies in their efforts to place misplaced canines in homes, often referred to as “homing” or “rehoming”, while others do not partner with other agencies. Regardless, animal shelters provide necessary public services which aim to provide good, loving homes to millions of displaced canines. In figure 2, the yellow loop indicates that as the dog population increases, more dogs are relinquished to the shelters. The shelters spay and neuter the dogs (the green loop), which are then available for adoption. The spaying and neutering helps to decrease the dog population by preventing future dog litters. The red balancing loop indicates inability of the shelters to adopt dogs out, for various reasons such as a lack of funding, lost dogs not being reunited with their owners and delays in adoption rates to name a few. This results in an increase in the euthanasia rate, which decreases the dog population.

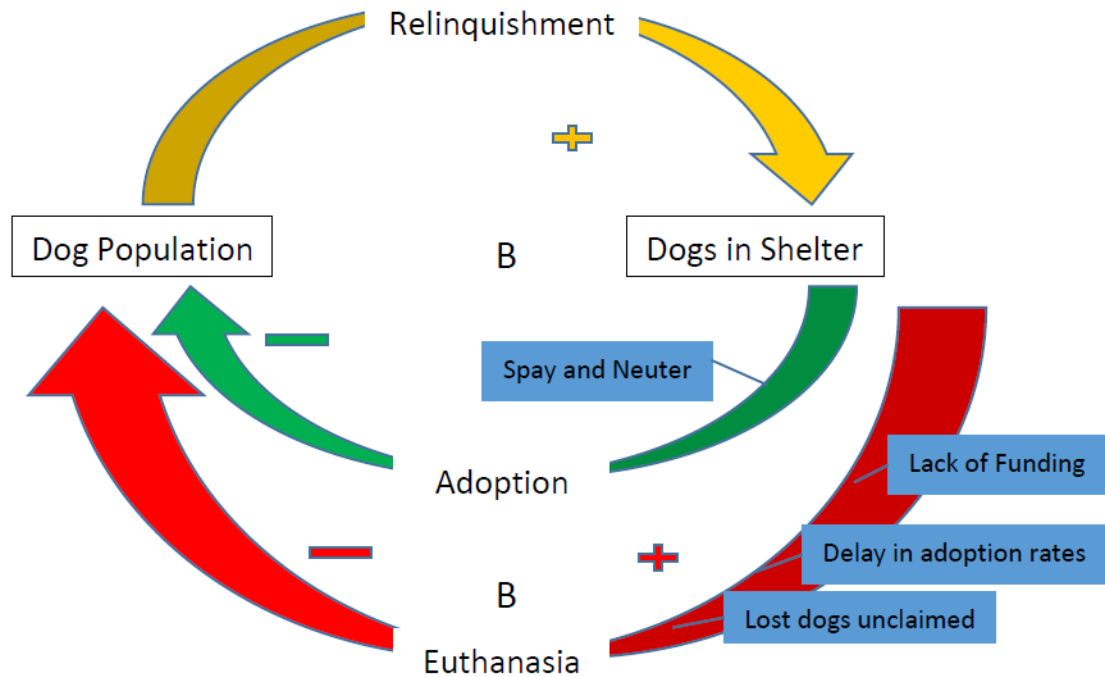


Figure 2. Causal Loop Diagram
(Author Created Diagram)

According to the ASPCA, approximately 1.4 million canines are adopted each year from animal shelters. And, approximately 542,000 canines that enter animal shelters as strays are reunited to their human companions (ASPCA, “Pet Statistics,” n.d.). The ASPCA estimates that 35 percent of canines that enter shelters are adopted, while approximately 31 percent are euthanized and 26 percent of canines who end up in animal shelters as strays are able to be reunited with their human companions. Additional information from the ASPCA about animal shelters in the United States include:

- Approximately 7.6 million companion animals enter animal shelters nationwide every year. Of those, approximately 3.9 million are dogs and 3.4 million are cats.

- Each year, approximately 2.7 million animals are euthanized (1.2 million dogs and 1.4 million cats).
- Approximately 2.7 million shelter animals are adopted each year (1.4 million dogs and 1.3 million cats).
- About 649,000 animals who enter shelters as strays are returned to their owners. Of those, 542,000 are dogs and only 100,000 are cats.
- Of the dogs entering shelters, approximately 35% are adopted, 31% are euthanized and 26% of dogs who came in as strays are returned to their owner.
- About twice as many animals enter shelters as strays compared to the number that are relinquished by their owners.
- There are about 13,600 community animal shelters nationwide that are independent; there is no national organization monitoring these shelters. The terms “humane society” and “SPCA” are generic; shelters using those names are not part of the ASPCA or the Humane Society of the United States. Currently, no government institution or animal organization is responsible for tabulating national statistics for the animal protection movement. These are national estimates; the figures may vary from state to state.
(ASPCA, “Pet Statistics,” n.d., **Facts about U.S. Animal Shelters**).

Euthanasia

Definitions of euthanasia can vary, however most of them specify that euthanasia is a form of relief for the human or animal’s benefit or health. The specific definition of euthanasia from Medilexicon states that euthanasia is, “The intentional putting to death of a person with an incurable or painful disease intended as an act of mercy.” (Medilexicon, “Euthanasia Definition,” n.d.). The definition of euthanasia from the Merriam-Webster dictionary is as follows, “The act or practice of killing or permitting the death of

hopelessly sick or injured individuals (as persons or domestic animals) in a relatively painless way for reasons of mercy” (Merriam-Webster, “Full Definition of Euthanasia,” n.d.). Many other definitions of euthanasia convey similar sentiments of relieving the pain of a suffering individual or domestic animal. They refer to euthanasia as an act performed for the benefit of the animal or human and so on. Euthanasia can be viewed as the last act of love and compassion that a canine owner can give to his or her canine companion. A short article written by C. Weber conveys this sentiment. As an example, a black Labrador named Chance found a loving home with a woman named Sheri after being abandoned by his previous owners. Chance survived heartworm treatment and later developed an inoperable tumor in his neck. Sheri and Chance’s loving veterinary staff made Chance as comfortable as possible until Sheri felt it was time to set Chance free from the discomforts and limitations of his poor health. As Chance loved the outdoors, Sheri and the veterinary staff arranged for the euthanasia experience to take place outdoors, on a blanket, on a beautiful sunny day (Weber, 2014). The article describes the beautiful experience that took place. In this case, euthanasia served the noble purpose, as it was intended to do.

Population control, overcrowding, negative behavioral traits and inconvenience, however, do not constitute suffering or pain, and do not align with the definition or concept of euthanasia. Yet, every day, thousands of canines are “euthanized” for these very reasons. According to an article written by D. Verdon, “Behavior problems remain a leading cause of relinquishment to shelters, humane societies and veterinary practices” (Verdon, 2003, 24). The article goes on to cite Dr. Gary Patronek, director of the Center

for Animals and Public Policy at Tufts University, as noting that an overall trend of euthanasia has declined, however national estimates indicate that in excess of five million animals are still euthanized each year (Verdon, 2003).

The No-Kill movement is a movement focused on eliminating the use of euthanasia for reasons mentioned above such as population control, overcrowding, undesirable behavioral traits and inconvenience. Many believe the no-kill movement takes preventing euthanasia to an extreme, one which sacrifices public safety and can bring inhumane treatment to animals suffering with incurable medical conditions. To the contrary, however, the No Kill Advocacy Center claims that the no-kill movement aims to save all **healthy** and **treatable** animals from euthanasia (No Kill Advocacy Center, “Compassionate Animal Sheltering,” n.d.). Further, according to the No-Kill Advocacy Center, “Since the No Kill philosophy does not mandate that truly vicious dogs and irremediably ill/injured animals be adopted, it is consistent with public health and safety” (No Kill Advocacy Center, “Public Safety,” n.d.). From this perspective, the no-kill movement aims to bring euthanasia back to its true definition of ending a terminally ill or suffering canine’s life as an act of compassion and mercy. Further, the No Kill Advocacy Center claims that 95% to 99% of shelter animals are both healthy and treatable (No Kill Advocacy Center, “Sheltering at a Glance,” n.d.). This implies an acknowledgement that the no-kill movement does not disqualify the use of euthanasia in its entirety. Figure 3 depicts the no-kill equation, which is a group of programs and services recommended for shelters, developed by the No Kill Advocacy Center.

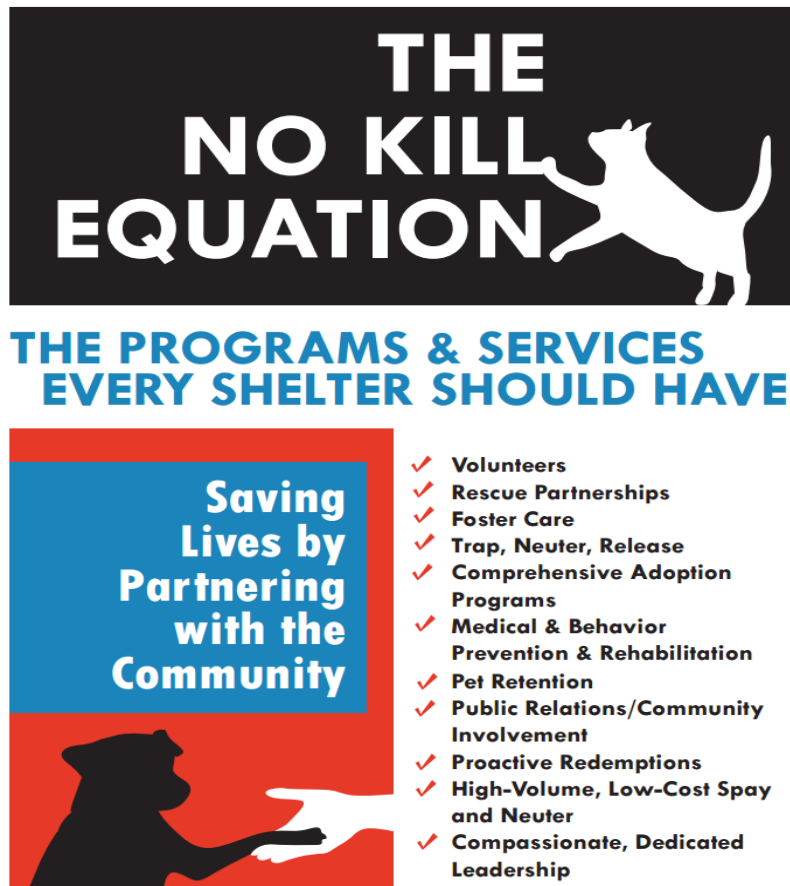


Figure 3. The No-Kill Equation
 (No Kill Advocacy Center, “The No Kill Equation,” n.d.,
 How Does Your Community’s Shelter Measure Up?, pg 8)

Euthanasia statistics are hard to come by, estimates can be made, at best.

According to the American Society for the Prevention of Cruelty to Animals (ASPCA), there are not any government regulations requiring the tracking of euthanasia. According to the ASPCA website, “There are about 13,600 community animal shelters nationwide that are independent; there is no national organization monitoring these shelters. The terms “humane society” and “SPCA” are generic; shelters using those names are not part of the ASPCA or the Humane Society of the United States. Currently, no government

institution or animal organization is responsible for tabulating national statistics for the animal protection movement.” (ASPCA, “Pet Statistics,” n.d.). With that being said, attempts have been made to start keeping better track of euthanasia statistics in the United States, to the best extent possible. According to the ASPCA, it is estimated that approximately 7.6 million companion animals in the United States end up in animal shelters each year and of that 7.6 million, it is estimated that 3.9 million are canines (ASPCA, “Pet Statistics,” n.d.). And, every year, it is estimated that 2.7 million animals are euthanized, of which 1.2 million are canines (ASPCA, “Pet Statistics,” n.d.). As mentioned previously, euthanasia estimates have declined in recent years, however, the numbers are still staggering. Additional information about pet overpopulation in the United States from the ASPCA include:

- It is impossible to determine how many stray dogs and cats live in the United States; estimates for cats alone range up to 70 million.
- The average number of litters a fertile cat produces is one to two a year; the average number of kittens is four to six per litter.
- The average number of litters a fertile dog produces is one a year; the average number of puppies is four to six.
- Owned cats and dogs generally live longer, healthier lives than strays.
- Many strays are lost pets who were not kept properly indoors or provided with identification.
- Only 10% of the animals received by shelters have been spayed or neutered, while 83% of pet dogs and 91% of pet cats are spayed or neutered.
- The cost of spaying or neutering a pet is less than the cost of raising puppies or kittens for a year.
(ASPCA, “Pet Statistics,” n.d., **Facts about Pet Overpopulation in the U.S.**)

The Humane Society of the United States estimates are very similar to the ASPCA's estimates. Based on information from the National Council on Pet Population Study and Policy, The Humane Society of the United States estimates that six to eight million cats and dogs end up in animal shelters every year, and of that, it is estimated that 2.7 million dogs and cats in animal shelters are euthanized, which would otherwise have been considered adoptable (The Humane Society of the United States, "Pets by the Numbers," n.d.). The Humane Society of the United States, however, estimates that there are approximately 3,500 animal shelters in the United States, as opposed to 13,600 shelters estimated by the ASPCA. As can be seen, some estimates between organizations vary significantly, while other estimates tend to support each other. With euthanasia estimates in the millions, which only include the boundaries of the United States, canine euthanasia is an issue worthy of serious consideration. According to the Humane Society of the United States, additional shelter and adoption estimates in the United States for 2012 to 2013 are as follows:

- Number of animal shelters 3,500
- Number of cats and dogs entering shelters each year 6 to 8 million
- Percentage of purebred dogs in shelters 25 percent
- Number of cats and dogs adopted from shelters each year 3 to 4 million
- Number of adoptable cats and dogs euthanized in shelters each year 2.7 million
- Percentage of shelter dogs reclaimed by their owners 30 percent
- Percentage of shelter cats reclaimed by owners 2 to 5 percent

- There is no central data reporting system for U.S. animal shelters and rescues. These estimates are based on information provided by the (former) National Council on Pet Population Study and Policy.
- Just as the U.S. has come a long way over the last few decades in terms of increased pet ownership, it's also progressed in terms of euthanasia. The number of dogs and cats euthanized each year in shelters has decreased, from 12–20 million to an estimated 3–4 million. However, there's still work to do: An estimated 2.7 million healthy shelter pets are not adopted each year, and only about 30 percent of pets in homes come from shelters or rescues.
(The Humane Society of the United States, “Pets by the Numbers,” n.d., U.S. Shelter and Adoption Estimates for 2012-2013).

As canine relinquishment is a major contributor to euthanasia, issues associated with canine relinquishment will now be visited.

Relinquishment

Canines are relinquished to animal shelters for a variety of reasons. Often, relinquishment is associated with negative behavior traits such as canine aggression, chewing, difficulty house training and other negative behaviors. However, according to the National Council on Pet Population Study and Policy, the top reasons for canine relinquishment are:

1. Moving
2. Landlord issues
3. Cost of pet maintenance
4. No time for pet
5. Inadequate facilities
6. Too many pets in home
7. Pet illness (es)
8. Personal problems
9. Biting
10. No homes for littermates (**Fiala, 2003**)

This implies that many canines are not relinquished as a result of negative behavioral traits (biting, for instance, is ranked as the second to last reason on the top ten list), rather canines are often relinquished for various reasons, not directly related to canine behavior at all. One positive implication of this finding is that many of the canines relinquished have not displayed an inability to learn positive behavior traits. Another positive implication of this finding is that the majority of the canines did not display negative behaviors. Others, however, have an opposing view, one of which is that behavioral issues are a leading cause of relinquishment to shelters, as cited previously, by D. Verdon, the executive editor of DVM Magazine. And yet, the ASPCA states that according to the American Humane Association, 29 percent of canines are most commonly relinquished to shelters or given away to other sources because pet-owners are not permitted to have canines where they live, 10% do not have enough time to devote to their canine companions, 10% of pet-owners give up their canines because of divorce and/or death and 10% give up their dogs because of behavioral issues (ASPCA, "Pet Statistics," n.d.). Regardless of whether behavioral issues fall in the top ten reasons for relinquishment or not, one conclusion that can be made is that behavioral issues among canines is a substantial issue to consider and should not be disregarded.

Salman et al. conducted a study which looked at behavioral reasons for canines and felines being relinquished to twelve different shelters. The study indicated that behavioral issues which lead to relinquishment were more common if more than one canine resided in the residence or if a cat also resided in the residence with the canine. Further, during this study, participants reported the majority of the canines being

relinquished for behavioral issues were acquired from an animal shelter (Salman et al., 2000). Table 1 identifies the top ten behavior reasons for relinquishment. The behavioral column addresses relinquishment strictly as a result of behavioral issues. The mixed column sites the behavioral reasons as one of the reasons for relinquishment; other reasons not associated with behavior were also identified in the study and included in the mixed category:

Table 1. Top 10 Behavioral Reasons for Behavioral and Mixed Categories of Relinquishments of 1,984 Dogs to 12 U.S. Animal Shelters ^a

<u>Behavioral Reasons</u> ^b	<u>Percent</u>	<u>Mixed Categories</u> ^c	<u>Percent</u>
Bites	22.2	Soils house	18.5
Aggressive toward people	17.4	Destructive outside	12.6
Escapes	16.4	Aggressive toward people	12.1
Destructive inside	15.3	Escapes	11.6
Destructive outside	15.3	Too active	11.4
Problems between new pet and other pets	12.9	Needs too much attention	10.9
Aggressive toward animals	11.3	Vocalizes too much	10.7
Soils house	9.5	Bites	9.7
Vocalizes too much	7.7	Destructive inside	9.7
		Disobedient	9.0

^a Presented as a reason and percentage of relinquishments in that category in which reason was listed. ^b $n=379$. ^c $n=422$.

(Salman et al., 2000)

An assumption can be made based on this information that if shelters were able to successfully implement a program to train canines with positive behavioral traits, then the number of canines returned to animal shelters could be reduced. Positive implications include more space in the shelters for other canines which can lead to less overcrowding and result in a reduction in euthanasia. An important balance to training canines with positive behavioral traits is training their human companions. Human education is an

essential factor to reducing relinquishment and training canines with positive behavioral traits. As such, human education will be visited next.

Human Education

Canine behavior is often difficult for pet owners to understand. Many behavioral traits displayed by canines are natural behaviors in the canine animal kingdom. However, when mixing the canine world and the human world together, an understanding of that behavior is necessary. When one considers that approximately 70 to 80 million canines in the United States belong to pet-owners and approximately 37 to 47 percent of all households in the United States own a canine (ASPCA, “Pet Statistics,” n.d.), the importance of human education is magnified substantially. Human education about canine behavior is an important element in pet owners retaining the canines they adopt from shelters. The following list from The Humane Society of the United States provides estimates on pet-ownership in the United States for 2012:

- | | |
|--|--------------|
| • Number of owned dogs | 83.3 million |
| • Percentage of households that own at least one dog | 47 percent |
| • Percentage of owners with one dog | 70 percent |
| • Percentage of owners with two dogs | 20 percent |
| • Percentage of owners with three or more dogs | 10 percent |
| • Average number of owned dogs per household | 1.47 |
| • Percentage of owned dogs who were adopted from animal shelters | 20 percent |

- Average annual amount spent by dog owners on routine veterinary visits \$231
 - Percentage of owned dogs who are spayed or neutered 83 percent
 - Proportion of male to female owned dogs Even
- (ASPCA, “Pets by the Numbers,” n.d., U.S. Pet-Ownership Estimates from the APPA for 2012).**

Further, the ASPCA, through their access to the Animal Pet Products Association (APPA), estimates that approximately 29% of dogs and cats are adopted from shelters and rescues, while 28% are estimated to be purchased from breeders (ASPCA, “Pet Statistics,” n.d.). The Humane Society of the United States credits the APPA for the following statistics for 2012, which estimate that 47 percent of households in the United States own at least one canine. Approximately 70 percent of pet-owners own one dog, approximately 20 percent of pet-owners own two dogs and approximately 10 percent of canine owners own three or more dogs (The Humane Society of the United States, “Pets by the Numbers,” n.d.). With estimates like these, humane education on canine behavior and caring for one’s canine is worthy of serious consideration. A pet owner may feel the need to modify this behavior, but may not know how. The following list provides information about pet ownership in the United States according to the ASPCA:

- It's estimated that 70-80 million dogs and 74-96 million cats are owned in the United States. Approximately 37-47% of all households in the United States have a dog, and 30-37% have a cat. (Source: APPA)
- According to the American Veterinary Medical Association, approximately 40% of pet owners learned about their pet through word of mouth.
- The majority of pets are obtained from acquaintances and family members. 28% of dogs are purchased from breeders, and 29% of cats and dogs are adopted from shelters and rescues.

- More than 35% of cats are acquired as strays. (Source: APPA)
- According to the American Humane Association, the most common reasons why people relinquish or give away their dogs is because their place of residence does not allow pets (29%), not enough time, divorce/death and behavior issues (10% each). The most common reasons for cats are that they were not allowed in the residence (21%) and allergies (11%).
(ASPCA, “Pet Statistics,” n.d., Facts about Pet Ownership in the U.S.)

Similar studies were compared between a small, private, behavior-only veterinary practice and a large, institutional behavior practice where an attempt was made to address canine dominance-associated aggression (DA) by canine behavior modification techniques. Upon initial consultation with the participants, it was found that many of the dominance-associated aggressions were triggered by pet owner behaviors, in ignorance. The pet owners were educated with a better understanding of why the canines reacted with dominance-aggression and were provided with techniques to help in modifying the canine’s negative behaviors. Further, this study addressed Attention Addiction (AA) in canines, as a secondary condition. According to the study, pet owners often engage in over-stimulating the canines by petting and/or talking to the canines excessively. The canines become dependent on this behavior and in an attempt to gain the pet owner’s attention, the canines display undesirable characteristics such as, “nudging, licking, clawing, even biting.” (Cameron, 1997, 267). It was noted in the journal and is relevant to note here that in addition to the dominance-associated aggression, several secondary diagnoses were relevant, which included, attention addiction (as noted above), fear aggression, territorial aggression and an intraspecific aggression factor (Cameron, 1997). One item of interest is that the studies indicated mixed breeds were “underrepresented.”

This is attributed to the probability that pet owners of pure bred canines are more willing to spend the money to take the pure bred canine to a pet therapist. It is noted that this is not a significant factor and that mixed breeds responded just as well to the behavior modification techniques as the pure bred canines did. To summarize the results, the studies concluded that canines with DA are considered to be in a very high risk category as candidates for euthanasia, if the DA is left untreated. However, per the findings, “Fortunately, both studies demonstrate that therapy for DA is quite successful and can probably save a significant number of dogs’ lives.” (Cameron, 1997, 273).

There is a strong indication that if canine owners can be educated with basic behavior modification techniques, this education can reduce the relinquishment rate of canines to shelters, and reduce the canine euthanasia rates.

Another study, administered in the United Kingdom, analyzed the training techniques of positive reinforcement vs. punishment by pet owners when training their canines. The study noted that the training style may affect the success of canine retention in the pet owner’s home. This is important because there is evidence to indicate that punishment based training techniques (hitting, yelling) can lead to anxiety in the canine, furthering undesirable behavior traits. This can hinder the canine-human bond between the canine and the canine’s owner and could lead to relinquishment of the canine. According to the study, there are many theories about canine discipline and studies have had mixed reviews. The key relevant differences in the study referenced currently are that training techniques by the pet owners are analyzed rather than the techniques of a professional canine trainer. As most pet owners do not have the knowledge a

professional dog trainer has, it is important to recognize that most people adopting shelter dogs, also, do not have the knowledge a professional dog trainer has. The other characteristic that this study focused on was the methods of training used: positive reinforcement (reward), negative reinforcement (punishment) or a miscellaneous technique that did not involve punishment or reward. According to the study, often, these elements are not considered. The results of this study indicate that training using punishment is less effective than training using positive reinforcement. Positive reinforcement was found to be more effective. Further, as stated earlier, the study identified that negative reinforcement could lead to canine relinquishment and euthanasia (Hiby, et al, 2004)

Table 2 comes from a study put together by Salman et al. which correlates the type and amount of training that relinquished canines had been exposed to in each of the relinquishment categories; was the canine relinquished for behavioral reasons, a mix of behavioral and non-behavioral reasons or strictly non-behavioral issues:

Table 2. Frequency and Proportion of Type of Training of Dogs Relinquished to 12 U.S. Animal Shelters, Stratified by Relinquishment Category

	<i>Behavioral^a</i>		<i>Mixed^b</i>		<i>Nonbehavioral^c</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
I or another family member taught the dog some basic commands ^d						
No	140	36.9	158	37.4	345	29.2
Yes	216	57.0	255	60.4	765	64.7
No answer	23	6.1	9	2.1	73	6.2
The dog already knew some basic commands when I got it ^d						
No	287	75.7	356	84.4	971	82.1
Yes	69	18.2	54	12.8	136	11.5
No answer	23	6.1	12	2.8	76	6.4
I or another family member took the dog to obedience classes						
No	334	88.1	390	92.4	1,065	90.0
Yes	22	5.8	20	4.7	42	3.6
No answer	23	6.1	12	2.8	76	6.4
A professional trainer trained the dog for me						
No	348	91.8	406	96.2	1,093	92.4
Yes	8	2.1	3	0.7	14	1.2
No answer	23	6.1	13	3.1	76	6.4
I or another family member had individual obedience instruction						
No	346	91.3	401	95.0	1,096	92.6
Yes	10	2.6	8	1.9	11	0.9
No answer	23	6.1	13	3.1	76	6.4
Dog has not been taught basic commands						
No	264	69.7	293	69.4	855	72.3
Yes	92	24.3	117	27.7	255	21.6
No answer	23	6.1	12	2.8	73	6.2

^a*n*=379. ^b*n*=422. ^c*n*=1,183. ^dThe 3 x 2 contingency table was statistically significant (Salman et al., 2000)

The information in this figure implies that there is a strong correlation between the absence of training invested in the canines and the relinquishment categories. This study concludes that pet owner education and a training program for canines while in the shelters may contribute to a reduction in relinquishment of canines back into the shelter system. Further pet owner education includes that pet owners should be aware that adding an additional pet into their home will change the dynamics. This could change the behaviors of the canine currently in the home, as well as the newly acquired canine. Further, bringing a canine into the home where a feline is present may also complicate the dynamics of the behaviors displayed by the animals in the home. With all this being said, another conclusion in this study is that chances of relinquishing a canine to the shelter based on behavioral reasons can be reduced if there is only one pet in the house. (Salman et al., 2000). Trainability of canines in shelters is believed to be a key element in reducing euthanasia rates, which leads to the next topic.

Trainability of Canines in Shelters

Shelters often have issues with a lack of funding, a lack of time and a lack of sufficient staff to implement an in-depth training program for canines within the shelter. This is important because many dogs may have the ability to be trained, however, a lack of funding, time and staffing can prohibit the opportunity for the canine to be trained. This may decrease the opportunity for adoption and increase the risk of euthanasia. A study conducted at an animal shelter in Galesburg, Illinois aimed to determine whether shelter dogs could be trained to sit and how quickly the shelter dogs could be trained to

sit. Further, this study tested the ability of the shelter dogs to retain this training in foreign settings as well as with strangers, as this is a crucial aspect for a shelter dog that will hopefully be adopted into a new home, with a new pet owner(s). The specific research is aimed to:

1. “determine the speed with which shelter dogs learn to sit.”
2. “determine if training is retained over time in the shelter environment.”
3. “examine if sitting is a behavior that can be transferred to novel environments and novel people.” (Thorn et al, 2006, 26).

This is important because if evidence shows that canines in a shelter can be trained to sit quickly, with minimal time demands, and by regular staff and volunteers (without a professional trainer), then it may be feasible for animal shelters to implement a training program into their routine.

To summarize the findings of this study, canines in shelters, trained by shelter staff (lacking the skills of a professional dog trainer), proved to be trainable to sit very quickly. The study was able to determine that training decreased the response time it took for the shelter dogs to sit upon receiving the command and the training also increased the duration of time the canines spent sitting. (Thorn et al, 2006). The evidence of this study indicates the time required to train a canine to sit in a shelter is as little as 10 to 15 minutes a day. It is also noted that another study conducted at the same shelter indicated as little as, “5 minutes of training every other day is sufficient for a dog to learn and maintain these behaviors.” This was conveyed to the interviewer by R. R. Castillo via personal communication in September, 2004. (Thorn et al, 2006, 37).

The study notes that upon completion of the experiments, the shelter adopted a policy which incorporated positive reinforcement training, similar to the training conducted in the experiment. Additional benefits reported to the experimenters from the shelter staff are as follows, “Staff and volunteers have reported decreases in barking, fewer animals exhibiting stress behaviors (spinning, pacing, and lunging at visitors), and less jumping on the cage. Instead, when people approach the kennel, the dog comes to the front of the kennel and sits. Staff and volunteers find these dogs are easier to handle.” (Thorn et al, 2006, 38). The final observation to discuss is that the findings in this study, according to the authors, correlate with an increase in the adoption rates and a decrease in the euthanasia rates of the canines at this shelter (Thorn et al, 2006).

As previously addressed, funding has historically been a barrier to training canines in animal shelters and will be discussed next.

Funding

Funding is a serious and relevant issue for many shelters. Funding presents many challenges when shelters commonly rely on volunteers, donations, fundraising, and/or minimal funding from local government agencies to provide for the basic needs of the animals housed in these facilities, as well as covering the expenses of operating costs of the facilities. As a result of concerns that facilities housing animals were not providing adequate, and humane care, Senate Bill 1785 (SB 1785) was passed in 1998, which was aimed to address how animal shelters, animal control agencies and humane societies should function (Balcom, 2000). By implementing Senate Bill 1785, it was hoped to

refocus shelter efforts on adoption and reunification of canines to their owners (Hayden, 1998). A case study, by S. Balcom, addresses the funding complexities that arose within the animal housing communities, in the State of California, when Senate Bill 1785 was passed. One of the key elements of Senate Bill 1785 mandated animal holding facilities to increase the holding time of animals, depending on certain criteria. What the bill did not take into consideration was the increased cost to the facilities affected by this bill. An assumption was made that the longer holding times would generate revenues by increasing the adoption rates and increasing the owner to pet reunion rates. Further, it would reduce the costs associated with euthanasia. However, once Senate Bill 1785 was enacted, this did not prove to generate the funds needed to support the longer animal holding requirements (Balcom, 2000). As a result of the new holding requirement, an outcry from animal care facilities was heard. Several shelters that had contracts with different cities began to cancel or threatened to cancel the contracts because of their inability to comply with the new laws imposed by Senate Bill 1785. Shelters simply could not afford to meet the demands of, “a longer 5-day holding period, a release-to-rescue-group requirement, mandatory lost and found efforts, various animal care and housing provisions, record keeping requirements, and changes to the anti-cruelty provisions of the penal code.” (Balcom, 2000, 9-10). Although Senate Bill 1785 was meant to improve animal care and humane treatment for animals in holding facilities, the bill failed to address certain issues which actually lead to euthanasia. One issue pointed out in Balcom’s case study is that overcrowding with aggressive, non-adoptable dogs, such as aggressive pit bulls, were still required to be held for a minimum time

requirement. It was believed that this tied up precious kennel space that could have been used for “adoptable” canines. Healthcare for animals that may be treatable, but are contagious to other animals is another issue, especially for shelters, animal control agencies and humane societies that may not have quarantine areas available. Senate Bill 1785 implemented the requirements, however, did not provide any of the funds necessary for animal holding facilities such as shelters to conform to the law successfully.

Assembly Bill 1482 was later passed to provide relief to entities unable to comply with the requirements of Senate Bill 1785. Assembly Bill 1482 provided a time extension for those facilities to figure out how to acquire the funding to be able to comply. (Balcom, 2000). As can be seen, one of the root issues that shelters, animal control agencies and humane societies faced was funding, which is an ever-present issue. The longer holding times and requirements to release animals to rescue groups (the facilities would not be permitted to charge the rescue groups for the animals turned over to them), furthered this burden.

A common factor in many of the studies is the inability of many shelters to offer training due to a lack of available funding. This poses a viable concern to those overseeing shelters. Making sure a canine’s immediate needs such as food and medical care are provided are at the top of the priority list. Ensuring the financial obligations for rent, utilities and other necessities can be met are also high priorities. So, with limited funds, how can training programs be successfully implemented? According to Thorn et al, 2006, training can be incorporated into part of the shelter workers/volunteers regular routine. As they approach a kennel, clean the kennel, and perform routine tasks, the

workers/volunteers can provide positive reinforcement for the canine's demonstration of desired behavior. This requires a minimal amount of time and studies have indicated this approach to be successful. (Thorn et al, 2006).

The No-Kill Advocacy Center provides an alternative view to the funding issues many shelters face. By shelters partnering with communities, the No-Kill Advocacy Center takes the view that many of the costs can be absorbed to minimize the financial burden to the shelters. By relying on volunteers rather than paid personnel, expenses to shelters can be reduced. Private philanthropy can mitigate costs. In addition, from the No-Kill Advocacy Center's perspective, maximizing the use of foster homes and rescue groups can shift the financial burden of caring for animals in shelters from the tax-paying citizens to the private philanthropists and other organizations (The No-Kill Advocacy Center, "We Can't Afford It," n.d.). Through these avenues, the No Kill Advocacy Center indicates euthanasia rates do decrease. The No-Kill Advocacy Center takes it a step further to suggest that funding is not the culprit for the challenges animal shelters face, rather the leadership commitment to address issues through other means besides euthanasia is the underlying problem (The No-Kill Advocacy Center, "We Can't Afford It," n.d.). According to the No Kill Advocacy Center, one national study that looked at the per capita funding for animal control and save rates found there was not a correlation between the two variables, as can be seen in Figure 4. Further, the No Kill Advocacy Center points out that, "One community has seen killing rates increase over 30% despite one of the best funded shelters in the nation. Another has caused death rates to drop by 50% despite cutting costs. In other words, the difference between those shelters that

succeeded and those that failed was not the size of the budget, but the programmatic effort of its leadership.” (The No Kill Advocacy Center, “We Can’t Afford It,” n.d.).

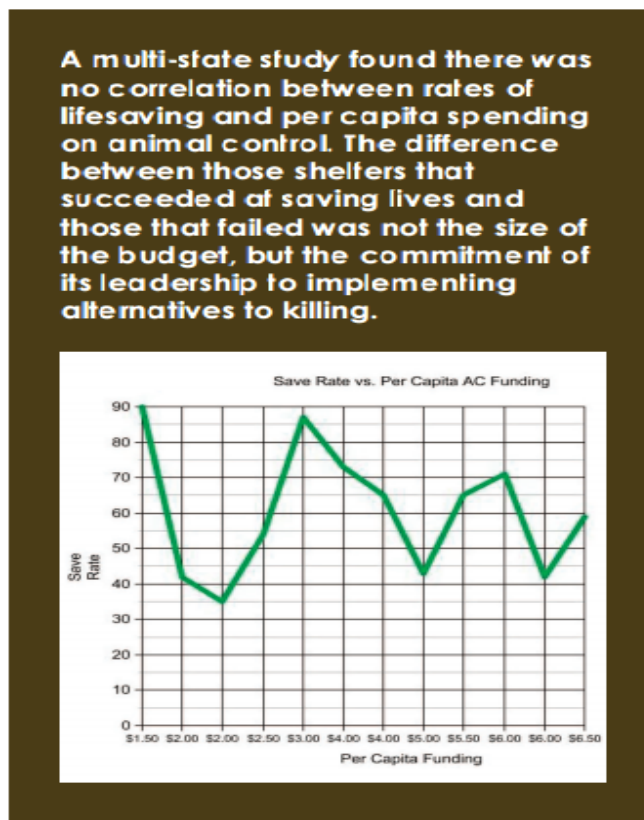


Figure 4. Saving Rates vs. Per Capita AC Funding
(The No-Kill Advocacy Ceneter, “Economic Costs of No Kill,” n.d., Dollar and Sense, pg 6)

The No Kill Advocacy Center proposes that by utilizing the no kill equation, as seen in Figure 3, shelters can shift costs to partnering organizations, implement programs such as behavior prevention and rehabilitation, thus significantly increasing adoption rates and reducing to nearly eliminating euthanasia.

Canine training performed by inmates is one example of an animal shelter and local agency partnership worthy of mentioning. The Humane Society of Huron Valley

has partnered with the Women's Huron Valley Correctional Facility through the correctional facility's work program to train women inmates to foster dogs for a ten week period. In this time, the dogs reside with the inmates they are assigned to, typically two inmates. Upon completion of the ten week training period, the dogs receive a certificate from the American Kennel Club. This certificate certifies the dogs are trained in certain areas such as walking on a leash, they are able to be groomed, they are house-trained and they respond to basic commands (basic commands are not identified) (Trenkner et al, 2011).

Conclusion

Animal shelters provide vital services to communities all over the United States. Human companions can reclaim their beloved lost canines when they are separated, they can acquire a new canine companion as an addition to their family unit and they can relinquish their beloved canines when they are no longer able to provide for them. When humans and their canine companions do not blend well because the canine demonstrates undesirable behavior traits, animal shelters are commonly the place where the canines end up.

Animal shelters face many challenges such as funding, limited staffing and overcrowding of canines. Animal shelters often resort to euthanasia as a means to an end for these issues.

The challenges animal shelters face are part of a large system. To address all the challenges animal shelters face, one would need to delve into the system and address the root causes, identify leverage points and take a systems thinking approach to improving the functionality of animal shelters. As illustrated in Figure 5, dogs can end up in shelters for a variety of reasons, such as an owner's financial constraints, living circumstances, health issues, or because of the dog's misbehavior, to name a few. The dogs remain in the shelters until they are either adopted or euthanized. The inability of the shelters to adopt dogs out for reasons such as a slow rate of adoptions, lack of funding and lost dogs that have not been reclaimed, results in euthanasia. Sometimes, when dogs are adopted, they are returned to the shelters because they are deemed to be "too much work" or

“untrainable” (The red balancing loop). Once again, the dogs will either be adopted or euthanized. The green balancing loop indicates the decrease in dog population at the shelter as dogs are adopted, which then opens up room in the shelter for new dogs. As dogs enter the shelter, they are spayed or neutered prior to being adopted out. Spaying and neutering decreases the potential for unwanted dogs being relinquished to the shelters, which is indicated by the purple balancing loop. The blue balancing loop indicates the decrease in shelter population as a result of euthanasia.

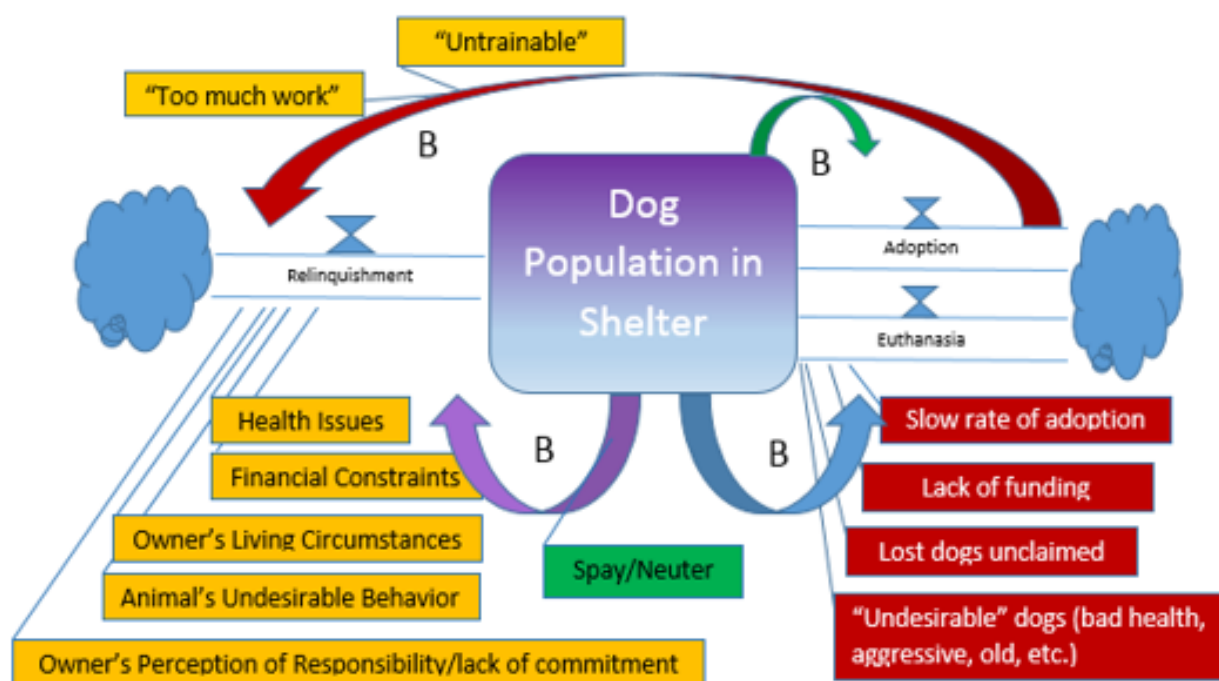


Figure 5. Stock and Flows Diagram
(Author Created Diagram)

The No Kill Advocacy Center has attempted to address this system with their No-Kill Equation. According to the No Kill Advocacy Center, “No Kill is a humane, sustainable, cost-effective model that works hand in hand with public health and safety, while

fulfilling a fiscal responsibility to taxpayers.” (The No-Kill Advocacy Center, “A Sustainable Model,” n.d.). Opposing views insist that relying on volunteers, relinquishing animals to rescue groups and other aspects of the No-Kill Equation simply are not enough to sustain all the demands that animal shelters face. As this is a complex topic and requires further research, the issues for this paper have been limited to examining the correlation of rehabilitating canines with positive behavioral traits to reduce euthanasia and increase adoptability.

Although the trends indicate that euthanasia has declined in recent years, estimates indicate that millions of animals, specifically canines, are still euthanized annually. While there are many conflicting opinions as to whether or not behavioral issues are ranked in the top ten reasons for canine relinquishment, it is clear that negative behavioral traits are a significant barrier to canine retention with their human companions.

Evidence shows that human education, funding and training programs are all contributing factors to successfully training canines with positive behavioral traits. Evidence indicates that educating human companions about canine behavior can help to curb dominance-associated aggression as well as negative behaviors associated with attention addiction. Further, positive reinforcement training techniques rather than punishment training techniques were suspected to reduce anxiety in canines, which can lead canines to exhibit negative behavioral traits.

The research in this paper does suggest that negative behavior traits can be reduced from canines in animal shelters. Further, the research in this paper does indicate

that if canines are trained with positive behavioral patterns, euthanasia rates will decrease and have a positive impact on canine adoption rates.

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