

Attitudes and Perceptions Regarding Pet Adoption

Joshua M. Frank, Ph.D., Executive Director

Foundation for Interdisciplinary Research and Education

Promoting Animal Welfare (FIREPAW)

Pamela Carlisle-Frank, Ph.D., President

Foundation for Interdisciplinary Research and Education

Promoting Animal Welfare (FIREPAW)

Abstract: One approach to addressing the problem of pet overpopulation in the U.S. is to encourage people to adopt their companion animals from nearby shelters rather than purchase their pets from for-profit sources. The question then becomes, "How do animal welfare professionals convince the general public to adopt?"

In order to answer this question animal welfare advocates must first determine the attitudes and beliefs of those who typically purchase animals to determine why they choose for-profit sources and why they do not choose adoption.

This paper will present current trends in pet overpopulation, the most common reasons people give for acquiring pets, and findings regarding purchasing versus adoption. This paper will then present the results of the present study revealing the most common attitudes of people regarding their choices to purchase from for-profit sources versus adopting from shelters or rescue workers.

Background

While it is clear that the numbers are high, it is difficult to obtain a precise figure on the number of companion animals abandoned and euthanized. Arkow (1994) extrapolated data from nine states to come up with a national estimate of 8.3 million animals sheltered and 5.7 million euthanized every year. On average, for the nine states, 7.6% of the total dog and cat population is sheltered every year and 5.2% is euthanized. The intake rate was found to be higher for dogs, but the euthanasia rates were similar. Arkow also concluded that the rate of animals sheltered is lower than that found in studies from the 1980's which report rates in the high double digits.

A more recent estimate using similar survey methodology comes out with a figure of 4.6 million dogs and cats euthanized a year or 16.8 animals per 1,000 Americans (Animal People, 2001). The annual survey uses rolling-three year data from various regions through 2000 and is based on jurisdictions that include 30.4% of the U.S. population. Although this number is slightly up from the prior year's estimate of 4.5 million, the death rate is lower than that found by Arkow in 1994 and considerably lower than that found in prior decades.

Rowan (1992) has also reported that the number of animals being euthanized is significantly down from previous decades from about 20% of the previously owned animal population to 5% (or from 13.5 million to between 5 and 6 million in actual values). Looking just at New York

City data from the late 1800's on, Zawistowski et al. (1998) indicate a peak in euthanasia rate per person at around the time of the depression, followed by a steep decline to about a tenth of the peak rate in the 1990's. The authors cite this as evidence of a general decline in euthanasia rates both per person and per animal sheltered. This conclusion is consistent with other studies, though the fact remains that millions of companion animals are still put to death in the U.S. each year.

These same authors also examined survey data on shelters nationwide. They found that there are an estimated 4,700 shelters in the United States that take in 100 or more animals a year. For the 22% responding in the latest survey (1995), about 45% of dogs came from animal control officers, 27% came from guardian relinquishment, and the remainder came from other or unknown sources. Approximately 26% of dogs were adopted, 16% were reclaimed by guardians, 55% were euthanized, and the remainder had unknown or other dispositions.

These numbers all suggest that there is a sizable dog and cat overpopulation problem in the United States (though it may have improved compared to prior decades). An alternative perspective on the problem is that it is a distribution problem rather than an overpopulation problem. This perspective places the emphasis on matching companion animals with the right homes rather than on the number of cats and dogs.

Why people acquire companion animals

Before exploring the motivations for adopting versus purchasing pets it is important to first examine some of the reasons people hold for acquiring companion animals.

For some companion animal guardians the animal-human bond is as strong as the bond with any other family member (Flynn, 2000). In fact, DeGroot (1984) argues that the emotional attachment many humans have for their pet not only equals, but actually transcends the emotional attachment they form with other humans.

At first glance, it may seem that the number of people who are strongly bonded with their pet is very high. Studies report a high percentage of companion animal guardians who state that the pet is a family member. For example, a survey by Friedmann et al. (1984) found that 88% of respondents agree with the statement, "The pet is a family member".

Hirschman (1994) also found a high percentage (80%) of pet guardians who consider their pets to be family members. This research also searched for "emergent themes" in the human-animal relationship. One theme that was particularly interesting relates to "wildness", where guardians seem to want some aspect of nature or wildness but not "too much wildness" in their animal. Animals perceived as "too wild" are often given up.

In a survey by Ory & Goldberg (1984), when pet guardians were asked how attached they were to their pet, 72.9% described themselves as "very attached" while 27.1% described themselves as "not very attached". These results are interesting in light of the fact that pet abandonment is likely to be closely tied to a low level of attachment.

In a survey by Salman & Salman (1983) in Australia, 46% of respondents gave "companionship" as the primary benefit of pet guardianship. Twenty-seven percent gave "security/protection" as the primary benefit, 10% said "pleasure", 5% said "affection/love". Other answers included "an interest", "teaches children", "something for family to share", "prestige", and "made new friends through dog" (all between 1% and 5% individually). In the same survey, most respondents reported they derived happiness and companionship from their dog, yet only half felt that it was like a close friend to them.

In a survey of people in the Netherlands done by Endenburg et al (1994), the most commonly cited reason for acquiring an animal was companionship (79%). This reason was followed by "used to it" (29%), social/attachment (20%), social/taking care of an animal (20%), social/child-rearing considerations (14%), usefulness (13%), companionship for other animal (13%), social/tactile contact (12%), and health reasons (12%). Respondents were allowed to select more than one answer on this survey, so numbers add up to more than 100%.

One common previous assumption as to why people acquire companion animals now seems unlikely. There is now little evidence that pet guardianship occurs as a "child substitute"--less than 9% of dogs and 14% of cats are owned by people who have no children (Beck, 1983).

Purchasing versus adoption

An important question for purposes of the present study is why people choose certain sources for acquiring their companion animals. One potential advantage of choosing to buy a purebred animal is that such a choice can reduce uncertainty in the animal's traits. A study by Hart & Hart (1984) attempted to explain thirteen traits by dog breed. The researchers used cluster analysis to create dog groupings and found that 88 % of the variation in traits could be predicted by four factors. However, it should be noted that what was being explained was not the *actual* behavior or traits of dogs. Rather, the cluster analysis explained expert opinion (veterinarians and trainers) regarding what traits are associated with what breeds. However, at the same time, perceived behavior does have some relevance, since perceptions of misbehavior are a major cause of dog relinquishment (Salman et al., 2000).

Hart et al. (1983) stated that the main advantage of selecting a purebred rather than a mixed breed as a family pet is that "one has more success in predicting what the dog will be like as an adult." This is true both of morphological traits and behavioral traits. The article documented some significant behavioral differences between dog breeds, at least as perceived by experts when asked to rank these traits.

Another reason why companion animal purchasers may choose to purchase their animal and seek out a specific breed, is that they desire a replacement for a prior pet. According to a survey by Messent (1984), after the death of a companion animal, 72% of the guardians who acquired a replacement animal purchased a dog or cat of the same breed. One explanation for this decision may be to cope with the loss of an animal. However, it could also be argued that some people will purchase the same breed simply because they were satisfied with the traits of that breed, just

as some people will purchase the same make of car repeatedly if they are satisfied with that car's features and quality.

There are potential disadvantages of adopting animals from shelters. For one thing such animals may have been strays. According to Salman & Salman (1983), dealing with animals that run off is more often a problem for guardians of dogs that had previously been strays.

Despite some apparent advantages of purchasing purebred animals rather than adopting from shelters or rescue workers, purebred animals are an inferior product (defined biologically rather than economically). Purebred animals are, by definition, in-bred populations that lack genetic variation and whose traits have been engineered in such a way as to cause health defects (Rollin, 1983). According to Preece & Chamberlain (1993) when comparing the qualities of purebred versus mixed-breed pets, "mutts make better pets, particularly if they are to be the companions of children." (pg. 237). The authors attribute part of the reason people choose a specific purebred dog as an extension of their own personality.

Though the desire to own a purebred animal may steer some consumers away from shelters, it is possible to get a purebred dog or cat from a shelter. According to Erhardt (2000), a quarter of the animals adopted out by shelters are purebred. Salman et al. (1998) found that 30% of the dogs turned in to shelters they studied were purebred.

According to some researchers, pet purchasers may not even fully know their own motivations, let alone all the facts about their purchase decision. For a psychotherapist's perspective on the effects of pet guardianship, Simon (1984) used case studies to show that there are important psychological consequences of such decisions and that people often do not consider the psychological impacts of pet guardianship. The author states, "What makes the decision to acquire a pet different from many other life decisions is that for the most part we are unaware of (and usually unable to predict) the psychological changes it will produce in our lives. In contrast with the decision to marry, or to have a child, or to choose a career, the decision to bring a pet into one's home seems utterly innocuous." (underline from original). Simon raises an important point that is relevant to pet abandonment. Frank & Carlisle-Frank (2001) have argued that there is a great deal of uncertainty regarding the consequences of pet guardianship and that this uncertainty can cause perceived costs to outweigh the perceived benefits, leading to abandonment of the animal. Many of these unpredicted costs may be psychological in nature. Simon contends that people often neglect to take the psychological impact of a pet on the entire family into consideration.

In a study of military communities by Catanzaro (1984), respondents were asked whether certain aspects of pet guardianship had more or less problems than expected. For every category except grooming, the problem was less severe than the average expectation (more people reported "less problems" than reported "more problems"). If problems are generally less than expected, it could be the case that many people who currently do not own pets could potentially be satisfied pet guardians. They may simply not own pets because they overestimate the costs of guardianship. But it should be noted that even if there were more positive surprises than negative surprises, there are still a fairly large percentage of people reporting more problems than expected. This

supports the theory that uncertainty in the costs and benefits of pet guardianship may be a cause of pet abandonment (Frank & Carlisle-Frank, 2001).

Other researchers also found that pet guardianship can have unanticipated results, including family conflict. Cain (1983) reports 60 % of respondents had disagreements with family members over their pets involving discipline, pet care, or the space used by their pets. In this same study, Cain found that of those who owned a pet, 49 % gave their primary reason as being pleasure and companionship. Eleven percent gave "rescue of an abandoned pet" as their reason. Other common reasons included "educational function for children" (11%), "replacement of a person or pet" (10%), "protection: environmental and personal" (10%), "gifts" (7%), "sports and breeding" (2%). In this study no mention was made of prestige or status as a reason for pet guardianship.

Attitudes about adoption versus purchasing

The present study surveyed random households and randomly selected registered dog guardians about their attitudes, past behaviors, and anticipated future behavior regarding adopting pets from local shelters versus purchasing animals from breeders and pet stores. A thorough search of the current literature elicited no previous studies of this nature.

Procedure/Sample

A total of 700 surveys were sent to registered dog guardians in Rensselaer and Albany Counties while 300 surveys were sent to random residents of those counties. Registered dog guardians were randomly selected from a list supplied by the New York State Department of Agriculture and Markets. The list contained a total of 27,989 registrations. The addresses for the 300 random residents were obtained from phone book listings for these same counties. The total response rate for all surveys was 39%, with a slightly higher response rate for surveys mailed to registered dog guardians.

Within the population of registered dog guardians, 150 households were randomly selected to receive an "adoption-biased" version of the survey. The question and cover letter for this survey were identical to those for the core population of random registered dog guardians. However, just before the questions about reasons for not adopting and willingness to adopt in the future, a paragraph was included that educated the respondents on the existence of an excess dog overpopulation and the benefit of adoption in addressing this problem. The questions on adoption (and introductory paragraph for the "biased" population) were placed near the end of the survey to minimize bias to other questions. This subpopulation was added to test how readily reported behavior and attitudes could be influenced by providing information about the value of adoption. It was hypothesized that many dog purchasers are simply unaware how changing their choice of dog source can reduce dog euthanasia and that an education program might be quite effective. Although caution must be exercised when interpreting actual future behavior from survey responses, the responses to this biased survey were used as an indication of how flexible attitudes to adoption may be when new information is provided.

Three questions were included on the survey concerning the level of costs and benefits relative to expectations. These responses were measured using a 5-point scale, ranging from the cost/benefit being "much higher than expected" to "much lower than expected". Costs were divided into two questions; one regarding monetary costs, and another regarding non-monetary costs (time, effort, and hassles of caring for the animal). The categories were not defined any further than this, therefore the precise definition of monetary and non-monetary costs was determined by the respondents. These questions were included because it was hypothesized that dog purchasers/adopters may perform some form of mental expected cost/benefit analysis prior to obtaining the animal, and abandonment may indicate that actual costs were higher than expected and/or actual benefits were lower than expected.

Significance levels for the difference between the proportions (frequencies) found in two populations were conducted using a z-test (as described in Anderson, Sweeney, & Williams, 1987). Testing for differences in means was done using an unpaired T-test assuming unequal variances. Tests used two tails unless otherwise noted.

Results

The distribution of dogs by source for the random and total survey population is shown below.

Table 1

SOURCE	Random Residents (n=50)	Total Population (n=324)
Other pet guardians	36.9%	27.1%
Shelters	25.0%	29.3%
Strays	3.6%	8.7%
Pet Breeders	26.2%	25.3%
Pet Stores	8.3%	9.7%

Survey respondents who have never purchased a pet from a shelter or rescuer and who paid money for their dog were asked about the reason they did not adopt their dog from a shelter. The extent that respondents indicate that they were unaware of shelter options or simply did not think about the shelter at the time they made their purchase was used as a proxy to estimate how much potential there is for shelters to increase adoptions through marketing efforts.

Of the respondents who had paid money for their dog and gotten their animal from breeders, pet stores, private guardians and other "non-rescue" sources, 38% reported that they would switch

to an animal shelter for their next dog if the price of animals from other sources went up. The graph below shows the price at which respondents reported they would switch sources. The median is at around \$500. Since we are looking at the price of a substitute, interpreting the graph economically, quantity increases as price goes up. Assuming regional dog guardians would respond the way the randomly selected respondents reported they would behave, a tax of \$500 would change buying behavior for approximately 19% of buyers who currently purchase pets from non-adoptive sources (i.e., purchasing from breeders, private guardians and pet stores).

Respondents who did not get their dog from a shelter or rescue worker and who did not get their dog for free were asked why they did not choose to get their dog from a shelter or rescue worker. The table below gives the responses to this question.

Why respondents who "bought" their dog chose not to adopt	Random Residents (n=30)	Total Population (n=132)
Wanted specific breeds/qualities	73.3%	67.6%
Visited a shelter but could not find type I wanted	13.3%	15.2%
Impulse decision	13.3%	15.2%
Aware of option but did not consider at time of purchase	10.0%	11.7%
Visiting a shelter is too depressing/unpleasant	6.6%	11.0%
Convenience	3.3%	4.8%
Don't want a used dog/concerned about quality of shelter dogs	6.6%	4.8%
Bad experience with shelters*	3.3%	2.8%
Dog would have probably been put to sleep*	0.0%	2.1%
Own litter*	0.0%	1.4%
Shelter dog too expensive*	3.3%	1.4%

It should be noted that the percentages add up to more than one hundred percent because respondents could include multiple answers. The asterisked response categories were paraphrased from handwritten responses in the "other" category. It should also be noted that one category on the questionnaire not shown here, "I was unaware of those options" received no responses. This indicates that shelter awareness is high which may be a significant change from prior decades.

By far the most common reason for not choosing a shelter was the desire to get specific breeds/qualities in a dog. Some respondents expanded on what they specifically were looking for, with the desire for puppies being cited about as frequently as the desire for a purebred dog. Often, both conditions were cited together (i.e., a puppy of a specific breed). A few respondents indicated that they had other requirements unrelated to a specific breed (such as, "a 40-50 pound

dog with black hair that does not shed", for example). Others specified they wanted to know the animal's history/lineage. A few respondents indicated that they had actually checked at a shelter for the type of dog they wanted. However, most of the respondents that indicated that they wanted specific breeds/qualities did not give any indication that they had attempted to visit a shelter and may not have been aware that shelters often have both purebred dogs and puppies available for adoption.

Respondents who did not purchase from a shelter or rescuer and who did not get their dog for free answered a free response question asking if anything could be done to change their mind and make them purchase from a shelter next time. About a third of these people said they would never buy from a shelter. The second most common response was a desire for specific breeds. About 28.5% of respondents indicated they either might or definitely would plan on purchasing from a shelter next time. Other responses included knowing the dog's history (either behavior or health), better advertising (some specifically suggested internet postings or creating lists for notification when specific types of dogs were available), better access, and not putting sick animals with healthy ones. Categorized responses are shown below:

Breakdown of response to whether anything could be done to change purchase decision (population is those who bought from for-profit sources and who responded to the question)

	Random Residents (n=27)	Total Population (n=124)
Never	44.4%	32.3%
If desired breed available	14.8%	18.0%
Nothing against shelter--may purchase there next time	14.8%	15.0%
Plan on purchasing from a shelter next time	14.8%	13.5%
If dog's history/health could be known	3.7%	6.0%
Better Selection	0.0%	3.8%
Would not get another dog	3.7%	3.8%
Better Advertising (internet/list for specific types)	0.0%	3.0%
Better Access	0.0%	1.5%
Don't put sick animals in with healthy ones	3.7%	1.5%
Lower price or free	0.0%	1.5%

Randomly selected segments of the population were sent biased surveys. One type of biased survey contained a paragraph about the implications for dog overpopulation of buying an animal from a shelter instead of from a for-profit source such as a breeder or pet store. The purpose of including these biased surveys was to determine whether they would significantly affect reported future behavior.

The table below shows the results for the survey that was biased to encourage adoption of an animal. As the table reveals, respondents with the adoption-biased survey were significantly more likely to report that they would probably go to a shelter for their next dog. Respondents to the biased version of the survey were also significantly less likely to report that they would definitely not go to a shelter for their next dog.

Effect of adding language promoting benefits of adoption on willingness to go to shelter

	Frequency in Adoption-Biased Population (n=61)	Frequency in Core Population of Registered Dog Guardians (n=121)	p-value (one-tail)
Percent who say they will definitely not go to shelter	8.2%	29.8%	<0.001
Percent who say they will probably go to a shelter next time	18.0%	8.3%	0.039

Perceived costs and benefits of adopting versus purchasing

Responses to the questions regarding actual costs and benefits of dog guardianship versus expectations indicated that both costs and benefits tended to be higher than expectations. Benefits in particular were usually higher than expected and rarely lower than expected. Therefore, if abandonment is sometimes motivated by a mismatch between actual costs/benefits versus expectations, it would more likely be a case of high costs than low benefits. The results also appear to contradict the common neoclassical economic assumption that purchase decisions are made rationally and with all available information. Instead, it appears that decisions are made with skewed information, since dog purchasers consistently underestimate both costs and benefits.

The unexpected costs and benefits of animal guardianship were split by the source (adoption vs. purchase from breeders) of the dog to see if costs/benefits relative to expectations varied by source. The most common source for adoption (shelters) and purchasing (breeders) are shown in Table 7. The data here contradicts the hypothesis that buying a dog from a breeder reduces uncertainty in the costs and benefits of guardianship. If anything, the costs and benefits vary more from expectations when dogs are from breeders. In addition, costs if anything, are slightly skewed higher and the benefits skewed lower among dogs from breeders. Each individual category of response was tested for significance, with the null hypothesis being that the two groups were the same in their response frequency for that category. In addition, the responses were scaled from 1 to 5 and a t-test comparing the means was performed. Three of the cost response frequencies were significant at the 5% level (displayed with an asterisk) and the t-test for differences in means was significant for both cost questions. In all of these cases, adopted dogs showed lower costs relative to expectations compared to pure-bred dogs.

Due to the nature of the questions, it is not known how much of this difference is from variance in actual costs/benefits between the two sources, and how much is from variance in expectations between the two sources.

Costs and Benefits vs. Expectations: Dogs from Shelters and Dogs from Breeders

SOURCE: SHELTERS (n=95)	Dollar Costs	Non-monetary Costs	Benefits
Much higher than expected	9.0%	4.5%	50.7%
Slightly higher than expected	10.4%	13.4%	16.4%
About what I expected	76.1%	80.6%	30.0%
Slightly lower than expected	1.5%	0.0%	3.0%
Much lower than expected	3.0%	1.5%	0.0%
SOURCE: BREEDERS (n=82)	Dollar Costs	Non-monetary Costs	Benefits
Much higher than expected	9.3%	16.0%	46.1%
Slightly higher than expected	26.7%	16.0%	10.5%
About what I expected	64.0%	65.3%	39.5%
Slightly lower than expected	0.0%	0.0%	2.6%
Much lower than expected	0.0%	2.7%	1.3%

P-values for between-group comparison by category	Dollar Costs	Non-monetary Costs	Benefits
Much higher than expected	0.945	0.012*	0.541
Slightly higher than expected	0.005*	0.627	0.246
About what I expected	0.078	0.021*	0.184
Slightly lower than expected	0.229	N/A	0.872
Much lower than expected	0.087	0.582	0.299
T-Test for Means: P-Value	0.018*	0.014*	0.371

Discussion

Before exploring the implications of the results it is important to first discuss the shortcomings of the present study. Caution should be used when interpreting the results because as with any survey, there may be an issue of response bias. Although the demographics of the respondents was generally representative of the demographics for the region, there may be a bias with regard to who chose to respond. Additionally, the responses may be regional-specific. While the results may reflect the attitudes of respondents in the region studied they are not necessarily representative of the entire country. In addition, for those questions that reported expected future behavior, it should be kept in mind that this may not be reflective of *actual* future behavior with regard to adopting from shelters or rescue workers.

Despite the potential shortcomings there are a number of important implications derived from the present study. The study examined the attitudes and behavior of people with regard to adopting companion animals versus purchasing their pets at a breeder or pet store. The results indicate that people tend to purchase dogs from pet stores and breeders primarily because they (a) are looking for a puppy or specific breed of dog, (b) have misperceptions of costs and benefits about purebred dogs that they believe cannot be fulfilled by adopting a shelter dog, and (c) either made an impulse decision to buy or didn't consider or think about visiting a shelter at the time of purchase.

Regarding the people who did not go to a shelter because they were looking for a specific breed of dog, it is not known for certain in most of these cases whether that breed would have been available at a shelter, nor is it known in most cases how much effort was put into searching for an adoptable dog of that breed. It may be the case that a search for specific breeds or traits at shelters or rescuers can be done with equal or lower search costs than a search among for-profit sources. However, what is known is that the perception, at least among these respondents, was that the dog traits they were looking for could more readily be found at a for-profit source (since they listed this as their reason for not adopting).

The results of this study do not indicate that purebred dogs have lower uncertainty in costs and benefits. One reason people purchase dogs from breeders is to reduce uncertainty in traits and because they believe this will lead to "higher quality" dogs. The results of the survey do not indicate support for the conclusion that there is reduced uncertainty or higher quality from purebred dogs. Unexpected benefits were actually lower and unexpected costs were higher (though the difference in benefits was not statistically significant) for dogs from breeders. Of course, it is possible that this difference (or lack of a difference) is due to the differences in overall expectations of guardians in the two populations. Without knowing the a priori expectations of these two groups, we cannot make any strong conclusions regarding the costs/benefits of shelter dogs versus breeder dogs. However, if uncertainty is defined as the difference between expectations and actual results, it is at least possible to conclude that buying a purebred dog does not appear to reduce the uncertainty in costs/benefits compared to adopting a shelter dog.

This finding is worthy of further study, perhaps on a national scale with a specific focus on this particular issue. If further research were done that accounts for differences in expectations and confirms that shelter dogs have no greater problems than purebred dogs, and these findings were brought to the public's attention, this could be a powerful tool in altering attitudes and long-term buying/adoption behavior. This is a particularly salient point in light of the other survey results indicating the desire for a purebred dog was among the most common reasons for not adopting from a shelter or rescue worker.

The results of this study also revealed some key reasons for understanding why people did not adopt their animals from a shelter. The implications of these results offer some useful information for improving adoption rates regarding why people purchase dogs from other sources. The results indicate that if shelters could better reach people looking for purebred dogs or puppies, they could greatly increase the number of adoptions. This could be done either by informing potential adopters of the presence at shelters of both puppies and purebred breeds or by addressing the underlying reason that some consumers seek these animals (i.e. addressing concerns about quality of mixed breeds and "used" dogs and pointing out the advantages of obtaining a mature dog over a puppy). Another approach mentioned by several respondents is for shelters to create a "waiting list" for specific breeds and to notify those on the list when such breeds arrive in the shelters. In addition to notifying those on the list, the availability of puppies and various breeds could be managed on a web site that is frequently updated, allowing people to easily check to see what is available.

Other important ways to increase adoption include addressing issues of selection, general quality concerns, and better marketing to the impulse buyer or the buyer who does not immediately think of going to the shelter. Selection issues can be addressed by partnering with other shelters to jointly list dogs and by increasing shelter space for dogs available to adopt. (The additional space would, of course, be filled by a longer delay before euthanizing an animal.) Perceptions of quality can, in many cases, be changed by simply improving the aesthetics of shelter spaces (visual, auditory and olfactory). Impulse buyers and those who would not normally think of the shelter at time of purchase can be reached by mobile adoption units and increased media presence in general. Additionally, urging those relinquishing animals to bring in any records they have of lineage, health, vaccines, etc. and supplying those records to potential adopters could also address issues of quality and desire for purebred dogs.

The results here indicate that financial incentives to promote adoption can also be effective on a significant segment of the population, though most buyers would not switch based on price changes alone. Of course, creating a tax on breeders and pet stores, proceeds of which could be used towards enhancing adoption and spay-neuter programs at shelters, would likely be difficult to pass and enforce. However, arguments that such a tax would be completely ineffective are simply incorrect. The results of this survey indicate that at least some shift towards adoption would result from such a tax.

In general, the reasons why people did not adopt, their responsiveness to financial incentives, and the response to the biased survey are all encouraging because they indicate the potential for changing the purchase behavior of many dog guardians who currently purchase their animals from for-profit sources.

References

Anderson, D., Sweeney, D. & Williams, T. 1987. *Statistics for Business and Economics*, West Publishing Company, St. Paul.

Animal People 2001. Latest U.S. data shows shelter killing holds steady at 4.5 million a year, July/August.

Arkow, P. 1994. A new look at pet overpopulation, *Anthrozoos*, 7(3): 202-205.

Beck, A. 1983. Animals in the city. In *New perspectives on our lives with companion animals*, eds. A. Katcher & A. Beck. Philadelphia: University of Pennsylvania Press.

Cain, A. 1983. A study of pets in the family system. In *New perspectives on our lives with companion animals*, eds. A. Katcher & A. Beck. Philadelphia: University of Pennsylvania Press.

Catanzaro, T. 1984. The human-animal bond in military communities. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

DeGroot, A. 1984. Preparing the veterinarian for dealing with the emotions of pet loss. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Ehrhardt, J. 2000. Pet adoption. American Humane Association publication: www.blountweb.com/petcare/adoption.htm.

Endenburg, N., Hart, H., & Bouw, J. 1994. Motives for acquiring companion animals. *Journal of Economic Psychology*, 15:191-206.

Flynn, C. 2000. Battered women and their animal companions: Symbolic interaction between human and non-human animals, *Society & Animals*, 8(2):99-127.

Frank, J. & Carlisle-Frank, P. 2001. Conflicting Attitudes and Social Dissonance: Why Mixed Messages Lead People to Abandon their Companion Animals, Conference Presentation, The Society for the Study of Social Problems, Anaheim, August 19.

Friedmann, E., Katcher, A., Eaton, M., & Berger, B. 1984. Pet ownership and psychological status. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Hart, B. & Hart, L. 1984. Selecting the best companion animal: Breed and gender-specific behavioral profiles. In *The pet connection: Its influence on our health and quality of life*, eds. R.

Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Hart, B., Murray, S., Hahs, M., Cruz, B. & Miller, M. 1983. Breed-specific behavioral profiles of dogs: Model for a quantitative analysis. In *New perspectives on our lives with companion animals*, eds. A. Katcher & A. Beck. Philadelphia: University of Pennsylvania Press.

Hirschman, E. 1994. Consumers and their animal companions. *Journal of Consumer Research*, 20: 616-632.

Messent, P. 1984. Correlates and effects of pet ownership. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Ory, M. & Goldberg, E. 1984. An epidemiological study of pet ownership in the community. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Preece, R. & Chamberlain, L. 1993. *Animal Welfare and Human Values*. Ontario: Wilfrid Laurier University Press.

Rowan, A. 1992. Shelters and pet overpopulation: A statistical black hole. *Anthrozoos*, 5(3): 140-143.

Salman, M. Hutchison, J. Ruch-Gallie, R., Kogan, L. New, J. Kass, P. & Scarlett, J. 2000. Behavioral Reasons for Relinquishment of Dogs and Cats to 12 Shelters. *Journal of Applied Animal Welfare Science*, 3(2), 93-106, 2000.

Salman, M., New, J., Scarlett, J., Kass, P., Ruch-Gallie, R., & Hetts, S. 1998. Human and animal factors related to the relinquishment of dogs and cats in 12 selected animal shelters in the United States. *Journal of Applied Animal Welfare Science*, 1(3): 207-226.

Salman, P. & Salman, I. 1983. Who owns who? Psychological research into the human-pet bond in Australia. In *New Perspectives on our lives with companion animals*, eds. A. Katcher & A. Beck. Philadelphia: University of Pennsylvania Press.

Simon, L. 1984. The pet trap: Negative effect of pet ownership on families and individuals. In *The pet connection: Its influence on our health and quality of life*, eds. R. Anderson, B. Hart, & L. Hart. Minneapolis: Center to Study Human-Animal Relationships and Environments.

Zawistowski, S., Morris, J., Salman, M., & Ruch-Gallie, R. 1998. Population dynamics, overpopulation, and the welfare of companion animals: New insights on old and new data. *Journal of Applied Animal Welfare Science*, 1(3): 193-206.