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The Bond That Never Developed: Adoption and Relinquishment of Dogs in a Rescue Shelter

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This study carried out a survey in an Italian shelter to analyze adoptions resulting in the rejection of the newly adopted dog. The results of this study show that the number of dogs adopted and returned was stable during the study, that more females than males were adopted, and that males were more likely to be returned. Almost all the dogs were returned because of behavioral problems, and most were more than 6 months of age. Some dogs were returned more than once, with 20% of the people who adopted the same dog at different times reporting the same behavioral problem. Having a house with a yard, a garden, or a terrace appeared to be important for better management of the dog and influenced the length of adoption. Half of the adopters had

previous experience as caregiver for a dog; compared to adopters who had no previous experience, however, they returned their companion animal after a shorter period and because of behavioral reasons. Understanding why adopters return their dogs to shelters is an important step toward attempting to minimize relinquishments and, thus, optimize adoptions.

Throughout the world, dogs, cats, rodents, and birds with the special label of "companion animals" enter households as part of the family. Dogs are considered one of the most popular and common companion animals for different reasons: They are playful companions to humans and express love and affection through their extraordinary nonverbal communication (Beck & Katcher, 2003; Clifton, 1993; Miller & Lago, 1990). Almost all parents view companion animals as capable of teaching their children care and responsibility (Melson, 2001; Swift, 1996). Dogs facilitate human social interactions and improve relationships, communication, and mood (Adell-Bath, Krook, Sandqvist, & Skantze, 1979; Hutton, 1985; Messent, 1994). "Service" dogs have a "social significance" for many different people (Allen & Blascovich, 1996; Hart, 1990; Mader, Hart, & Bergin, 1989). Many studies have explored the positive therapeutic role of dogs in nursing home settings and in a wide range of situations (Fine, 2000).

Usually, a strong relationship develops between dogs and their caregivers, but the maintenance of this bond is not an obvious consequence; many events can jeopardize its success and length. Multiple factors can interfere with the bond between dogs and humans. Sometimes people lack time or money, or they simply are not ready for, nor aware of, the responsibilities of owning a companion animal; again, dogs may not meet the keepers' expectations. Lifestyle changes, or family or health problems may force people to give up their dogs (Arkow & Dow, 1984; Case, 1987; Patronek, Glickman, Beck, McCabe, & Ecker, 1996; Rowan & Williams, 1987). At other times, the reason is linked directly to the dog and the dog's behavior. Inappropriate elimination, hyperactivity, unwanted chewing, aggressiveness, and separation anxiety can eventually overshadow any benefits, deteriorating the relationship so badly that the care for the dog becomes intolerable for the caregiver (Patronek et al., 1996).

Once the bond is broken, the dog may end up on the street or may be taken directly to a shelter. According to statistics from U.S. animal shelters, millions of dogs are surrendered to these facilities every year (Haupt, Utter Honig, & Reisner, 1996; Kidd, Kidd, & George, 1992). To delineate the issue of the companion animal surplus in the United States, the National Council on Pet Population Study and Policy coordinated three studies: The National Household Survey, The Regional Shelter Survey, and the Shelter Statistic Study (Salman et al., 1998). The Regional Shelter Survey was specifically addressed to characterize the relinquishment of dogs and cats, their owners, and the reasons for relinquishment. This survey in-

volved 12 shelters in four regions of the United States. Between February 1995 and April 1996, a total of 3,772 interviews with owners were completed and analyzed, allowing a first evaluation of both human (housing issues, expectation, lifestyles) and animal (medical–health issues, aggressive behavior, soiling, problems with other companion animals, destructive behavior, excessive barking) factors related to the relinquishment of companion animals (New et al., 2000; Salman et al., 1998, 2000; Scarlett, Salman, New, & Kass, 1999). In addition, unfortunately, many dogs adopted in public shelters are returned by their new caregivers: Bailey, Hetherington, and Sellors (1997) found that in 1995 at the Blue Cross Centre at Burford, England, 12.7% of the adopted dogs were returned.

Italy's National Law 281, enacted in 1991 (Legge Quadro, 1991), regulates shelters and abandoned dogs. This law established that captured and sheltered dogs cannot be euthanized unless they are infected with untreatable or contagious diseases or are dangerous to people and other animals. Because of the prohibition against euthanizing animals, each year the number of dogs living in the shelters increases, and adoptions do not counterbalance the situation.

However, there are no accurate figures on the number of animals housed in rescue shelters, adopted, deliberately abandoned by caregivers, or returned to shelters. In 2001, the National League for the Defense of Dogs (*Lega Nazionale per la Difesa del Cane*) owned 65 rescue shelters that hosted 16,000 dogs and placed 5,000 dogs in new homes. The National Agency for the Protection of Animals (*Ente Nazionale Protezione Animali*) owned 57 rescue shelters housing about 11,400 dogs and had an adoption rate of 34%.

The aim of this study was to understand why the adoption process occasionally fails and results in dogs being returned to the shelter. An analysis of the reasons why dogs adopted from the shelter were returned and a study of what influenced adopters' decision to leave their companion animals were conducted to investigate whether this was due to problems linked to the dogs or to the adopters' personal reasons. The study was carried out in a public shelter located in Northern Italy.

METHOD

The public shelter, located in Milan, Italy, is run by the veterinary service of the Local Sanitary Agency (ASL). The shelter houses stray dogs found or captured in the local territory, dogs handed over by their owners, and dogs taken away from their keepers by the police because of ill treatment. During working hours, people can walk freely around the shelter and look at the dogs. The staff is not formally instructed to help and advise prospective adopters in their choice, and—as the shelter is short-staffed—the visitors are not followed around. Adopters are given a card with vaccinations and basic behavioral information about the dog. Other than photocopying the adopter's ID card, shelter personnel

have no legal means of checking on personal data, and likewise have no legal means of denying adoption. Shelter policy is to spay females prior to adoption but not to neuter males. When the animal turnover in the shelter is very high, it is possible that some females are not spayed before adoption.

In a 6-year period (January 1996 through December 2001), people who returned their dogs to the ASL shelter were asked to fill out a questionnaire (see the Appendix) providing information about their reason for adopting a dog, the criteria they had followed when choosing the dog, and the reason for the return. The questionnaire also included multiple-choice questions aimed at describing the adoptive family's lifestyle and the dog's behavior and habits.

During the 6-year period, 3,281 dogs were available for adoption at the shelter, 2,830 (86.3%) were adopted, and 431 (15.2%) were then returned. Only 307 people (71.2%) who returned a dog to the shelter agreed to fill out the questionnaire. However, some participants did not answer all the questions, so some questionnaires are missing data. Relinquishments with no information related to a variable were excluded from the analysis for that specific variable.

At first, the whole sample was considered to have a general view of the adoption reality at the ASL shelter. Data were then rearranged into categories for statistical analysis. Different groups of adoptive keepers were considered on the basis of the reason for adoption, the criteria followed when choosing the dog, and the reason for relinquishment.

Chi-square tests were used to compare the proportion distribution of categorical variables (sex, age, breed, number of people in the family, type of housing, and past experience) between groups. Analyses of variance (ANOVAs) were carried out on the length of adoption and on the length of the dogs' stay at the shelter before being adopted.

RESULTS

Shelter Demographics

As Figure 1 shows, both the number of dogs available for adoption and the number of dogs adopted decreased slightly over the years, but the number of returned dogs was constant during the study period. Considering the entire 6-year period (Figure 2), there was a significant difference, $\chi^2(1, N = 3,281) = 51.99, p < .0001$, between the male and the female populations available for adoption, and this difference remained constant through the years. Despite this difference, in proportion, significantly more females, $\chi^2(1, N = 2,830) = 8.823, p < .01$, were adopted and significantly more males, $\chi^2(1, N = 431) = 9.029, p < .01$, were returned. The neuter status of the dogs is not reported because it was largely unknown from the questionnaire.

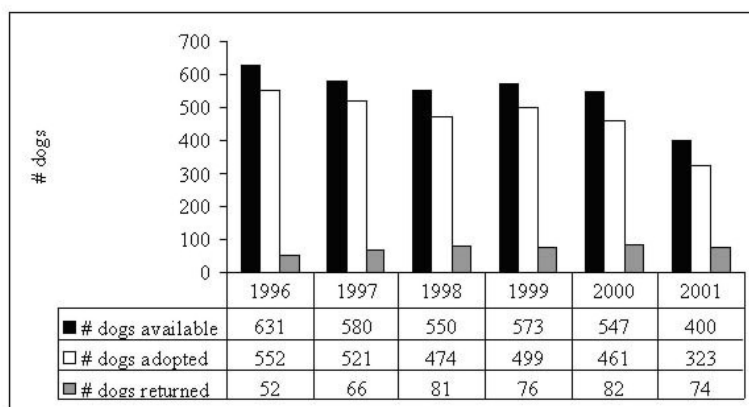


FIGURE 1 Number of dogs available at the shelter, adopted, and then returned over the years.

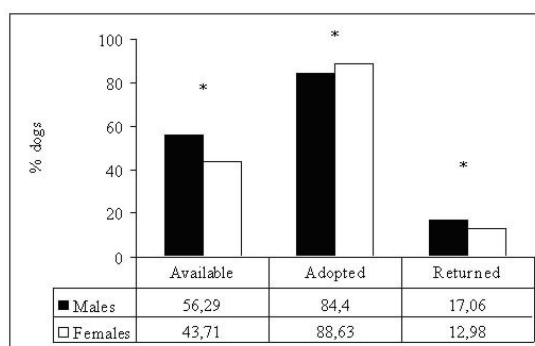


FIGURE 2 Percentage of male and female dogs available at the shelter, adopted, and then returned over the whole 6-year period.

Returned Dogs

Table 1 shows a summary of the characteristics of the dogs adopted and then returned to the shelter. Of these dogs, 7% were returned more than once, mainly for their misbehavior. When the same dog was adopted several times, 20% of the people reported the same behavioral problem.

The ANOVA showed that the time the dogs spent at the shelter before being adopted did not relate to the reasons for relinquishment. On the other hand, age and breed of the animals influenced the probability of their being adopted and, therefore, the length of time spent at the shelter before being adopted. In particular, purebred dogs stayed at the shelter significantly longer than did mixed breeds (20

TABLE 1
Characteristics of Returned Dogs

<i>Characteristics</i>	<i>%</i>
Breed	
Mixed breed	74
Pure breed	26
Sex	
Males	61
Females	39
Age	
Puppies (younger than 6 months)	23
Young (6 months to 2 years)	60
Adults (older than 2 years)	17

and 15 days, respectively), $F(1, 304) = 5.021, p < .05$; adult dogs waited for adoption longer than did juveniles and puppies (25, 16, and 10 days, respectively), $F(2, 289) = 12.972, p < .0001$.

The Adopters

The majority of the adopters were family groups; 29.5% were couples, and 15.6% were single. Most of the people who adopted a dog lived in an apartment. Only 22.6% lived in a house with outdoor space available. About half of the adopters (59.6%) had previous experience with dogs.

People decided to adopt a dog and then returned the dog to the shelter for many different reasons, which we combined into larger classes for further evaluation. Love for animals (44%) and the need for company (22%) were the reasons most frequently reported for the adoption. Reasons for relinquishment most often reported included the following: (a) 39%—dog's misbehavior, such as excessive barking, hyperactivity, inappropriate eliminative behavior, house damage, intolerance of other companion animals, or disobedience; (b) 15%—aggressiveness; and (c) 40%—management problems, no time, small house, personal or family problems such as divorce, conflict about companion animals, and veterinary care (Tables 2 and 3).

The reasons for adoption differed significantly according to the family status of the adopter, $\chi^2(4, N = 195) = 10.232, p < .05$. In particular, singles decided to have a dog to keep them company; mainly, a generic love for animals motivated couples and family groups. The age of the dog significantly influenced the motivation for returning the animal, $\chi^2(2, N = 286) = 9.607, p < .01$: Adopters gave up young and adult dogs mostly for behavioral problems (56.7% and 61.2%, respectively) but returned puppies mostly for difficulties in managing them (63.6%).

The Adoptions

The length of adoption ranged from a few hours to about 9 months ($M = 33.8$ days), but 40.7% of the people returned the dog within a week. Half of adopters who returned the dog within 7 days attributed their decision to the dog's behavioral problems: aggressiveness (15%); other companion animals' intolerance (11%); and other behaviors such as digging, barking, disobedience, or soiling (24%). Although such short-term behavior does not necessarily reflect the dog's

TABLE 2
Classes of Motivations for the Adoption

<i>Class</i>	<i>%</i>	<i>Motivations</i>	<i>n</i>	<i>%</i>
Love for animals	44	Love for animals	119	38.8
		Good deed	16	5.2
Need of company	22	Company	61	19.7
		As a present	7	2.3
For the child	7.2	For child education	22	7.2
Previous experiences	11.1	Death or escape of the other dog	12	3.9
		Positive experiences with other dogs	12	3.9
		Company to other animals	10	3.3
Guarding	3.3	Custody and guarding	10	3.3
No answer	12.4	No answer	38	12.4

TABLE 3
Classes of Reasons for Relinquishment

<i>Class</i>	<i>%</i>	<i>Reasons</i>	<i>n</i>	<i>%</i>
Behavioral problems	38.8	Vocalizes too much	7	2.3
		Hyperactive/stereotypies	23	7.4
		Destructive/soils house	22	7.1
		Escapes	10	3.2
		Disobedient	29	9.4
		Problems with other pets	29	9.4
Aggressiveness	14.9	Aggressive towards people	46	14.9
Human health	5.5	Allergy	17	5.5
Management problems	34.0	Animal medical issue	8	2.6
		No time for pets	27	8.8
		Personal or family reasons	45	14.6
		Family members—Pet conflict	11	3.5
		Small house	11	3.6
		No apparent owner	3	0.9
House regulation	4.5	Apartment block regulation	14	4.5
No answer	2.3	No answer	7	2.3

real temperament, the answers of these “casual” adopters hint at the need for intervention regarding dogs’ behaviors during the transition time in shelters. However, we decided to focus further analyses on only the subsample of dogs kept longer than a week.

The length of the adoption was not related to the reasons for adoption, the criteria followed when choosing the dog, or to the reasons for relinquishment. None of these factors significantly influenced the duration of the new bond. A relation between adoption length and housing condition emerged: People living in apartments kept the dog for a significantly shorter period of time than those living in a house where open space was available ($M = 50$ and 70 days, respectively) $F(1, 174) = 4.287, p < .05$. It is worth noting that in Italy no law prohibits people from keeping companion animals in their apartments. When adopters claim that apartment block regulation is the reason for returning their dogs, probably they are referring to the need to maintain good relationships with their neighbors.

Previous experience as a caregiver for a dog also influenced the adoption. Significantly, adopters with previous experience returned the dog more because of dog-related problems than because of personal problems, $\chi^2(1, N = 291) = 5.191, p < .05$; 39% returned the dogs in less than a week ($M = 2.6$ days).

Moreover, the comparison between M s showed that the length of adoption depended also on the dogs’ breed and age, $F(2, 169) = 6.768, p < .05$, but not on their sex. In particular, post hoc analyses demonstrated that purebred adult dogs were kept for a longer period of time than were mixed-breed adults ($M = 100$ and 5 days, respectively) $F(1, 30) = 9.662, p < .01$. Purebred adult dogs were kept in their families longer than were purebred young dogs and puppies, $M = 100$ days and $M = 40$ days, respectively; adult versus young: $F(1, 40) = 9.268, p < .05$; adults versus puppies: $F(1, 19) = 4.789, p < .05$.

DISCUSSION

In Italy, no institution so far has tried to provide a general view of the adoption process and the relinquishment issue. To our knowledge, this study is the first attempt to describe the adoption process in Italy and the first step toward understanding the companion animal surplus in Italy. The study reached two main conclusions:

1. The number of dogs returned to the shelter did not decrease over the years.
2. Dogs had been adopted first for generic reasons, then returned mainly for problems related to their behavior.

The high percentage of dogs returned after adoption more than once suggests that they should not be offered for adoption again unless their temperament and

behavior are assessed and, if possible, a treatment program is initiated to modify their unacceptable behavior. A percentage of dogs cannot be adopted in "as is" condition; therefore, because inexperienced people cannot solve the behavioral problems easily, these dogs should not be put up for adoption.

Confirming this is the high percentage of adopters who relinquished their dogs within 7 days of adoption. These casual keepers did not give the animal or themselves a chance to adapt to the new situation. They then can be considered unwilling or unable to take on responsibilities for the dog's behavior.

Salman et al. (2000) found that owners relinquishing a dog for behavioral reasons only are more likely to have acquired the dog from a shelter. Similarly, Rowan and Williams (1987) and Arkow (1985) pointed out that about 20% of the relinquishments were related to behavioral problems. Houpt et al. (1996) found a range from 25% to 70%; Salman et al. (1998) reported 46.4% of relinquishments were due to undesirable behavior; and Wells and Hepper (2000) reported that up to 89.7% of returns were due to dogs' misbehavior.

An important point addressed by the Regional Shelter Survey is the lack of caregiver knowledge about dog basic husbandry and behavior (New et al., 2000; Scarlett et al., 1999). Misconceptions about dogs' behavior are likely to leave owners unprepared for normal canine behavior and limit their ability to distinguish between normal and problem behavior: 18% of owners were not aware of behavioral differences between breeds, 43% of owners did not know that female dogs experience estrous twice per year, and 53% of people surrendering their dogs believed that animals misbehave out of spite (Salman et al., 1998; Scarlett et al., 1999).

Contrary to Salman et al. (1998), males in our shelter were returned more often than were females, and it can be hypothesized that adopters faced more difficulties in managing males because males tend to be more independent and show less-appreciated aspects such as intermale aggression, sexual problems, and straying tendencies (Wells & Hepper, 2000). Being sexually intact, as are all males in our study, is associated with a significantly increased risk of relinquishment (Patronek et al., 1996).

Another interesting result is that previous experience of owning a dog did not influence the adoption positively. In particular, experience did not help in facing the dog's behavioral problems. People with previous experience somehow appeared to be less tolerant of behavioral problems. Possibly, experienced adopters know how much more it will take to train the dog appropriately and decide not to waste any more time on what they consider to be a hopeless cause. An alternative explanation—based on experience with their previous dog—might be that they have more rigid sets of expectations about how a dog should act and did not understand why the adopted dog showed behavioral problems. Consequently, having no clue to the problem, they had no interest in working on the solution.

Having a house with outdoor space appeared to be important for better management of the dog, and it positively influenced the length of adoption. With the dog

living outdoors, some behavioral problems might be more tolerable to people because they are not sharing their living space with the dog. Moreover, having outdoor space usually freed the keepers from having to walk the dog. However, the presence of other companion animals living in the same household is likely to be a risk factor for relinquishment (Salman et al., 2000).

Young dogs were returned mainly for behavioral reasons. Perhaps these dogs were returned more often because they were no longer puppies; thus, they were not excused for making the trouble and mess for which puppies are normally forgiven. Arkow and Dow (1984) concluded too that 64% of all dogs obtained as puppies in the United States were disposed of by their keepers within a year of acquisition. However, participation in an obedience class and training may have been helpful in getting over the problem and thus reduced the risk of relinquishment (Patronek et al., 1996).

CONCLUSIONS

The results of this research indicate that the adoption of dogs housed in shelters is a complex process during which many factors related both to humans and animals can determine a frustrating failure. Because the knowledge deficit and false expectations are important risk factors for relinquishment of an adopted dog, a prospective keeper should ask for help in selecting a companion animal. The previously trained shelter staff, the veterinarian, or people with knowledge and experience in dog evaluation could help in choosing a dog who not only appeals to the adopter because the dog looks cute, but who also will fit into the adopter's lifestyle.

During the adoption process, future keepers should be interviewed carefully about their expectations and their knowledge of dog behavior and biology: If attitudes are unclear and expectations unrealistic, adoption should be postponed until the adopters acquire a clear and realistic understanding of how to be a responsible caregiver to a companion animal. The high percentage of people returning a dog within 1 week of adoption suggests that many of the adopters are not aware of the work involved with caring for a dog and should not be allowed to adopt one. The shelter staff should also point out to prospective caregivers housing and human health issues, lifetime commitment, animal health, and normal dog behavior. Testing the temperament of the animals within the shelter, dog training classes, follow-up care, and a behavior helpline might be useful in the early identification of undesirable behaviors and in offering solutions that pet keepers can understand and easily use to keep companion animals in their new homes (Ledger, 1997; Ledger & Baxter, 1997a, 1997b; Mondelli, Montanari, Prato Previde, & Valsecchi, 2003; Sternberg, 2002; Valsecchi, Mondelli, Montanari, & Prato Previde, 2002; UFAW, 1998; van der Borg, Netto, & Planta, 1991).

Despite the efforts that have been made in Italy in past years through campaigns to make people aware of the existence of sheltered dogs, to promote adoption, and to emphasize the role animals can have in the life of people, the number of dogs abandoned in shelters has not decreased. This means that we have a long way to go before reaching the point in which the public has the mature and responsible concept of the dog–owner relationship necessary to create a better, stronger, and more lasting bond between dogs and their owners.

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REFERENCES

- Adell-Bath, M., Krook, A., Sandqvist, G., & Skantze, K. (1979). *Do we need a dog? A study of dogs' social significance to men*. Gothenburg, Sweden: University of Gothenburg Press.
- Allen, K., & Blascovich, J. (1996). The value of service dogs for people with severe ambulatory disabilities: A randomized controlled trial. *Journal of the American Medical Association*, 275, 1001–1006.
- Arkow, P. S. (1985). The humane society and the human–companion bond: Reflections on the broken bond. *Veterinary Clinics of North America: Small Animal Practice*, 15, 455–466.
- Arkow, P. S., & Dow, S. (1984). The ties that do not bind: A study of the human–animal bonds that fail. In R. K. Anderson, B. L. Hart, & L. A. Hart (Eds.), *The pet connection* (pp. 348–354). Minneapolis: University of Minnesota Press.
- Bailey, G. P., Hetherington, J. D., & Sellors, J. (1997). Survey to measure the success of rescue dog placement at a re-homing center where a full behavioral service is offered. *ISAZ Newsletter* 13, 10–12.
- Beck, A. M., & Katcher, A. H. (2003). Future directions in human–animal bond research. *American Behavioral Scientist*, 47, 79–93.
- Case, D. B. (1987). Dog ownership: A complete web. *Psychological Report*, 60, 247–257.
- Clifton, M. (1993). Dogs for people who can't live without them. *Animal People*, 2, 1–5.
- Fine, A. (2000). *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice*. San Diego, CA: Academic.
- Hart, L. A. (1990). Pets, veterinarians and clients: Communication and benefits. In I. H. Burger (Ed.), *Pet, benefits and practice* (pp. 36–43). London: BVA.

- Houpt, K. A., Utter Honig, S., & Reisner, I. R. (1996). Breaking the human-companion animal bond. *Journal of the American Veterinary Medical Association*, 208, 1653-1659.
- Hutton, J. S. (1985). A study of companion animals in foster families: Perceptions of therapeutic values. In IEMT (Ed.), *The human-pet relationship* (pp. 64-70). Vienna, Austria: Institut für interdisziplinäre Erforschung der Mensch-Tier-beziehung.
- Kidd, A. H., Kidd, R. M., & George, C. C. (1992). Successful and unsuccessful pet adoptions. *Psychological Report*, 70, 547-561.
- Ledger, R. A. (1997). Understanding owner-dog compatibility. *Veterinary International*, 9(2), 17-23.
- Ledger, R. A., & Baxter, M. R. (1997a, April) *Assessing owner attitudes to dog behavior: A case for owner-dog matching*. Paper presented at the first International Conference on Veterinary Behavioral Medicine, Birmingham, England.
- Ledger, R. A., & Baxter, M. R. (1997b, April). *The development of a validated test to assess the temperament of dogs in a rescue shelter*. Paper presented at the first International Conference on Veterinary Behavioral Medicine, Birmingham, England.
- Legge Quadro 14 Agosto 1991, n. 281.
- Mader, B., Hart, L. A., & Bergin, B. (1989). Social acknowledgements for children with disabilities: Effects of service dogs. *Child Development*, 60, 1529-1534.
- Melson, G. F. (2001). *Why the wild things are: Animals in the lives of children*. Cambridge, MA: Harvard University Press.
- Messent, P. R. (1994). Correlates and effects of pet ownership. In R. K. Anderson, B. L. Hart, & L. A. Hart (Eds.), *The pet connection* (pp. 331-340). Minneapolis: University of Minnesota Press.
- Miller, M., & Lago, D. (1990). Observed pet-owner in-home interaction: Species differences and association with the pet relationship scale. *Anthrozoös*, 4, 49-54.
- Mondelli, F., Montanari, S., Prato Previde, E., & Valsecchi, P. (2004). Temperament evaluation of dogs housed in an Italian rescue shelter as a tool to increase the adoption success. *Animal Welfare*, 13, Supplement S251.
- New, J. G., Salman, M. D., King, M., Scarlett, J. M., Kass, P. H., & Hutchinson, J. (2000). Characteristics of shelter-relinquished animals and their owners compared with animals and their owners in U.S. pet-owning households. *Journal of Applied Animal Welfare Science*, 3, 179-201.
- Patronek, G. J., Glickman, L. T., Beck, A. M., McCabe, G. P., & Ecker, C. (1996). Risk factors for relinquishment of dogs to an animal shelter. *Journal of the American Veterinary Medical Association*, 209, 572-581.
- Rowan, A. N., & Williams, J. (1987). The success of companion animal management programs: A review. *Anthrozoös*, 1, 110-122.
- Salman, M. D., Hutchinson, J., Ruch-Gallie, R., Kogan, L., New, J. G., Kass, P. H., et al. (2000). Behavioral reasons for relinquishment of dogs and cats to 12 shelters. *Journal of Applied Animal Welfare Science*, 3, 93-106.
- Salman, M. D., New, J. G., Scarlett, J. M., Kass, P. H., Ruch-Gallie, R., & Hetts, S. (1998). Human and animal factors related to the relinquishment of dogs and cats in 12 selected shelters in the United States. *Journal of Applied Animal Welfare Science*, 1, 207-226.
- Scarlett, J. M., Salman, M. D., New, J. G., & Kass, P. H. (1999). Reasons for relinquishment of companion animals in U.S. animal shelters: Selected health and personal issues. *Journal of Applied Animal Welfare Science*, 2, 41-57.
- Sternberg, S. (2002). *Great dog adoptions: A guide for shelters*. Alameda, CA: Latham Foundation.
- Swift, W. B. (1996, May/June). What pets teach kids. *Animals*, 10-13.
- UFAW. (1998). *Assessing dog temperament* (Video). Wheathampstead, England: Author.
- Valsecchi, P., Mondelli, F., Montanari, S., & Prato Previde, E. (2002, August). *Dogs' behavior in two different Italian shelters: Environmental influence on behavior*. Paper presented at the 36th International Congress of the International Society for Applied Ethology, Egmond aan Zee, The Netherlands.

- van der Borg, J. A. M., Netto, W. J., & Planta, D. J. U. (1991). Behavioral testing of dogs in animal shelters to predict problem behavior. *Applied Animal Behavior Science*, 32, 237–251.
- Wells, D. L., & Hepper, P. G. (2000). Prevalence of behavior problems reported by owners of dogs purchased from an animal rescue shelter. *Applied Animal Behavior Science*, 69, 55–65.

APPENDIX

Relinquishment Questionnaire

1. Dog No. _____ Cage No. _____
 2. Breed _____ Coat _____ Hair _____
 3. Age _____
 4. Sex _____
 5. Date of entering the shelter _____
 6. Date of adoption _____
 7. Date of relinquishment _____
-
1. Why did you decide to adopt a dog? _____
 2. Why did you choose this particular dog? _____
 3. Had you ever had experience with other dogs? No ☐ Yes ☐
 4. Do you have other companion animals? No ☐ Yes ☐
 If yes, what animal? _____
 What behavior did the dog show toward these other animals? _____

Environment

1. What kind of city/town and neighborhood do you live in? _____
2. What type of housing do you live in? _____

Family

1. How many people are there in your family (sex, age, job)? _____

Dog's habits and training

1. Had you ever had experience training other dogs? No ☐ Yes ☐
2. Did you train the dog? No ☐ Yes ☐
3. Which commands (such as "sit, stay, down, come here," and name) did the dog know and how did he or she respond? "How was the dog kept?"
 - (a) The dog normally lived outdoors. ☐
 - (b) The dog lived indoors with free exit to the outside. ☐
 without free exit to the outside. ☐
 - (c) The dog was always walked on a leash. ☐
 - (d) The dog was taken to a park to run and play. ☐
 - (e) The dog was left free to wander. ☐
 - (f) The dog played with ☐ or without ☐ objects at home ☐ or outside. ☐

Dog's behavior

1. Why did you decide to return the dog? _____
2. Where did the dog sleep? _____
3. How long did you leave the dog home alone? _____
4. Did the dog cause problems when left home alone? No ☐ Yes ☐
5. If yes, what problems (barking, being destructive, dirtying the house, digging, scratching)? _____
6. Did the dog run away when free? No ☐ Yes ☐
7. Did the dog try to avoid being cuddled? No ☐ Yes ☐
8. Did the dog refuse constrictions such as a muzzle? No ☐ Yes ☐
9. Did the dog ever urinate when excited? No ☐ Yes ☐
10. Could you catch the dog when free? No ☐ Yes ☐
11. Did the dog let you take food away from him or her? No ☐ Yes ☐
12. Did the dog let you take a bone away from him or her? No ☐ Yes ☐
13. Did the dog let you take a toy away from him or her? No ☐ Yes ☐
14. Did the dog ever rebel against you or other people? No ☐ Yes ☐
15. Did you ever punish the dog? No ☐ Yes ☐
16. Did the dog ever try to bite? No ☐ Yes ☐
If yes, strangers ☐ or family members ☐
17. Did the dog guard the property? No ☐ Yes ☐
18. Did the dog show intolerance toward children? No ☐ Yes ☐
19. Did the dog ever have fights with other dogs? No ☐ Yes ☐
20. Did the dog ever chase prey? No ☐ Yes ☐
21. Did the dog ever chase joggers? No ☐ Yes ☐
22. Did the dog ever chase vehicles? No ☐ Yes ☐
23. Did the dog sexually mount people ☐ or objects ☐