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Conditioning Shelter Dogs to Sit

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Human contact in the shelter may lessen effects of change in environment and smooth transition into a home. Training can increase a dog's interaction with people in a shelter environment. Experiments were conducted to determine how rapidly shelter dogs learn to sit, if the dogs can retain sitting behavior over time, and if sitting transfers to novel locations and people. Two experiments trained shelter dogs ($n = 21$) to sit when a stranger approached over a 10-trial session. Food and a verbal cue or a clicker reinforced the sit. The experiments measured latency to sit for each trial. Latency to sit decreased significantly over trials. Another experiment included reinforcement given to dogs ($n = 20$) on a noncontingent basis or for sitting. Five days of the experiment (condition training) were in the same room with the same experimenter. The last 4 days (testing) varied by both experimenter and location (familiar or strange). Results indicate that short training sessions are effective for teaching shelter dogs to sit, that dogs can retain sitting behavior over 2 days, and that training transfers to novel people and situations.

There are approximately 52 million companion dogs in the United States. Each year an estimated 4 million of these dogs are surrendered to animal shelters (Coppinger & Zuccotti, 1999; Patronek & Rowan, 1995). The result is a large number of dogs in facilities awaiting the possibility of a new home. Because of time and space constraints, many of these healthy dogs will never leave the shelter, as more than 50% of dogs surrendered to U.S. animal shelters will be euthanized (Coppinger & Zuccotti, 1999; Patronek & Rowan, 1995). Fortunately, more than 2 million people a year find their new dog at a shelter.

While at the shelter, dogs experience kennel life, an experience typified by confined spaces, frequent barking, and minimal human contact. Shelter dogs learn to respond to humans in an aroused state because their daily interactions with humans—kennel cleaning, feeding time, daily walks, and interaction with the public

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(Sternberg, 2002; Wells & Hepper, 1992)—are times of high arousal for the shelter dogs. Socialization and training may minimize the adverse impact of the shelter and make dogs more adoptable. If dogs could gain experience exhibiting desired behavior in situations similar to the family home and away from the normal daily shelter environment, then they would appear more attractive to potential owners.

There have been numerous studies investigating the effect of human contact on dogs in the shelter environment (Hennessy, Davis, Williams, Mellott, & Douglas, 1997; Hennessy et al., 2002; Hennessy, Voith, Mazzei, Buttram, Miller, & Linden, 2001; Hennessy, Williams, Miller, Douglas, & Voith, 1998) with proposals about how to minimize or mitigate the stressful effects of the shelter (reviewed by Wells, 2004). There is considerable evidence that human contact (petting) may alleviate stress in dogs in home and shelter environments (Fuller, 1967; Hennessy et al., 1997; Hennessy et al., 2002; Hennessy et al., 2001; Hennessy et al., 1998; Lynch & McCarthy, 1967). These researchers and others have used, or recommended the use of, basic conditioning techniques to decrease stress in shelter dogs, to improve their behavior in the shelter, and to help integrate these dogs successfully into permanent homes (Marston & Bennett, 2003; Pryor, Parsons, Ganley, & Lyon, 2002; Sternberg, 2002; Tuber, Miller, Caris, Haler, Linden, & Hennessy, 1999; Wells, 2004).

To facilitate this conditioning, many shelter facilities now have training programs on site and professional trainers on staff, as well as behavior programs, some of which are managed by certified, applied animal behaviorists. In addition, training programs designed for the shelter environment lacking a professional trainer have been developed (Pryor et al., 2002; Sternberg, 1998, 2002). However, because of funding and time constraints, shelter staff often have difficulty completing tasks beyond caring for the animals' physical well-being. In addition, shelter staff may perceive training as an enormous daily time commitment, whether training dogs or volunteers. Because the shelter staff is not convinced that the time investment is worthwhile or that it will yield sufficient results, training is often overlooked. To examine the feasibility of training in a shelter environment, we conducted three experiments:

1. To determine the speed with which shelter dogs learn to sit.
2. To determine if training is retained over time in the shelter environment.
3. To examine if sitting is a behavior that can be transferred to novel environments and novel people.

MATERIALS AND METHOD

Facility and Subjects

The Knox County Humane Society in Galesburg, Illinois was used as the source of sheltered animals. The shelter is in a town of 36,000 in rural Illinois, operates

animal control for the city, and is an open admission facility. Approximately 1,000 dogs enter the facility each year. Dogs held in the shelter are housed in individual kennels in two rows, with three larger cages on one side and eight smaller cages in the other row. The smaller kennels are 6 feet high by 3 ft 8 in. wide by 6 feet 2 in. deep, and the larger kennels are 6 feet high by 4 feet 2 in. deep and 6 feet 3 in. wide. Each kennel consists of a wire front, sides, concrete floor, and one tiled wall. The dog's view from the front of the cage is of a concrete alley—where the public may walk—and the other row of cages. The cages are cleaned every morning and the dogs are fed in the mornings and afternoons. Dogs admitted to the shelter are held for 3 to 5 days to allow time to be claimed by owners. During this time, they are assessed for health and temperament (Sternberg, 2002; Weiss, 2002). If both of these indicators are good (and if space allows), a dog is neutered (unless the dog has already been neutered), given vaccinations (DHPP, rabies), fitted with a buckle collar, and made available for adoption. Typically, dogs in the adoption program are kept until they are adopted.

Subject animals were healthy and approved for adoption. In all cases, the subjects selected were neutered, adult dogs who appeared to be greater than 12 months in age as determined by dentition, with a weight greater than 40 lbs. Subjects were a mix of breeds (often unidentifiable) with no known ownership history. All dogs were in the shelter at least 5 days.

Real life room. This room is an area of the shelter furnished to mimic a home environment. It contains comfortable furniture and is a quiet, novel environment separated from the noise of the kennel and visual contact with conspecifics (Sternberg, 2002; Tuber et al., 1999).

Experimenters. The first two experiments were carried out as part of a laboratory in an undergraduate animal behavior course at Knox College.

Experiments

Experiment 1. The purpose of this study was to determine the amount of time required to train dogs to sit when approached by a stranger. The dogs were trained indoors and out of sight of one another. During the training trials, one group member acted as the "handler," holding the dog's leash. Another group member acted as a "stranger" for the 10-trial session. The stranger approached from out of sight and stopped approximately 3 feet in front of the dog. There was no verbal command given. The third student was the "timer/recorder," who stood at least 10 feet away. The recorder started the stopwatch when the stranger stopped in front of the dog and stopped the stopwatch only when the dog sat. If the dog almost sat and was rewarded (see later), this did not count as a sit; the stop-

watch was not stopped. The recorder recorded the latency to sit (60 sec maximum if no sit) for each trial.

The reinforcement sequence used by the stranger was adapted from an animal behavior laboratory developed by Gillie and Waring (2003). Once the stranger stopped in front of the dog:

1. The dog sat or started to sit.
2. The stranger said "good dog!" and petted the dog.
3. The stranger treated the dog with a small piece of Pupperoni® (Del Monte Foods Co., San Francisco, CA; Gillie & Waring, 2003).

If the dog's hindquarters lowered even slightly, it was reinforced; each slight lowering of the hindquarters was rewarded during a trial. A trial ended when the hindquarters touched the floor or when 60 sec was reached. After each trial, the stranger left the room for 30 sec. This procedure was performed 10 times and then the dog was returned to the kennel. After a 1-hr waiting period, the students repeated the 10-trial session with the same dog; the former recorder was the new stranger.

Experiment 2. This experiment attempted to determine how well the behavior of sitting when approached by a stranger would be retained over a 2-day period. We also tested the hypothesis that using a clicker in addition to a food reward would lead to faster learning and stronger retention of the learned behavior than a verbal cue paired with a food reward.

Six dogs were assigned to the verbal treatment and six to the clicker treatment. The dogs were selected randomly. The procedure was very similar to that used in the first experiment; however, the dogs were outside. There were 2 testing days held 2 days apart; a different group of students tested the dogs on each day. Each dog received 10 trials on each testing day. The sequence for a verbal trial was as follows:

1. The dog sat.
2. The stranger said "good dog!"
3. The stranger gave the dog a treat.

The sequence for a clicker trial was as follows:

1. The dog sat.
2. The stranger clicked (no speaking allowed).
3. The stranger gave the dog a treat.

If the dog did not sit within 1 min, the trial ended, and the stranger moved out of sight for 30 sec. If the dog did not sit within 60 sec by the second trial, the stranger was instructed to "lure" him for a few trials by moving a treat over his head, so that when he looked up, his head went back and his hindquarters went down. This was necessary for two clicker dogs on both days (same dogs), and one verbal dog on Day 1 only. The student experimenters were blind to the hypothesis for the experiment (clicker vs. verbal).

Experiment 3. The goal of the third study was to determine the change in the duration of time spent sitting by trained and untrained dogs during 15-min trials over a 5-day period. We also wanted to determine if the sitting behavior would transfer to unfamiliar trainers and unfamiliar locations. This study is an adaptation of an experiment described by Tuber et al. (1999) with puppies. A single student performed all trials except those testing the dogs' behavior with a new trainer. All the dogs were mixed breeds and arrived at the shelter as strays. Weights of the dogs ranged from 40 to 85 lbs. The dogs were randomly assigned to each group.

Training took place away from the kennels in the "real life" room. Ten dogs were in the experimental treatment; these dogs received a food reward each time the dog sat during the 15-min trial period. An additional 10 dogs were in the noncontingent reinforcement group; these dogs were reinforced at 20-sec intervals regardless of their behavior. All dogs were trained individually and there was one trial per day.

Following the 5 days of training, nine dogs from the experimental treatment (one was adopted) received four different types of testing sessions.

1. The trainer and the room were the same as during training.
2. The dog experienced the same trainer in a different room.
3. The trainer was unfamiliar, but the training room was the same.
4. Both the trainer and the room were unfamiliar.

Dogs received all four 15-min testing sessions in random order, one session per day over the 4 days following the training sessions.

RESULTS

Experiment 1

The average latency to sit (Figure 1, Table 1) declined significantly over the first 10 trials, repeated measures analysis of variance (ANOVA); $F(9, 72) = 5.56$, $p < .001$. In addition, mean sit latency in the second session (Figure 2, Table 2) was less than half the latency of the first, paired t test; $t(8) = 2.77$, $p = .02$. All the dogs were able to sit in less than 60 sec during both sessions. Latency to sit was

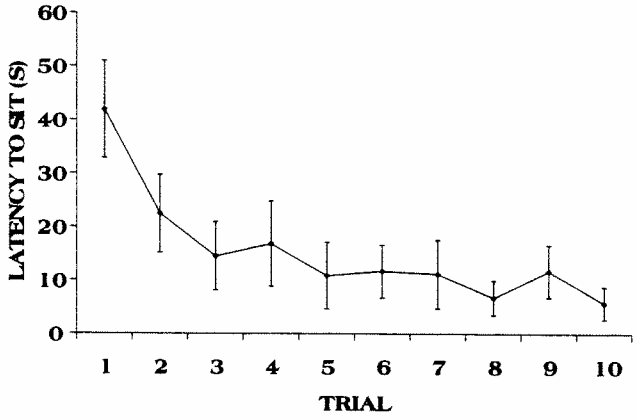

FIGURE 1 Latency to sit by trial ($n = 9$). Shelter dogs were approached by a stranger and allowed 60 sec to sit after the stranger stopped in front of the dog. The dogs were rewarded with verbal praise and a food reward on sitting. Error bars represent ± *SE*.

TABLE 1
Sit Latency in Seconds—Session 1

Dog/ Gender	*Trial*									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Buster/M	60	16	0	6	2	0	2	1	1	0
Lilly/F	60	7	3	2	2	2	2	1	30	2
Lesa/F	60	60	60	60	60	42	19	14	43	29
Lillian/F	6	4	4	3	2	2	1	2	3	1
Zoe/F	60	19	27	58	12	29	60	30	13	8
Daisy/F	8	60	12	5	2	2	1	2	1.4	1
Blackie/M	60	16.8	3	3.7	5.56	17.2	10.6	4	4.5	4.3
Lucky/M	60	13	18.6	9.3	4.4	8	4.4	3.3	4.7	1.8
Lady/F	3	6.2	2.9	4.3	7.6	2.6	0.1	3.1	4.7	4.4
M	41.89	22.44	14.50	16.81	10.84	11.64	11.12	6.71	11.70	5.72
SD	27.20	21.90	19.26	24.01	18.74	14.85	19.33	9.60	14.84	9.07

Note. M = male; F = female.

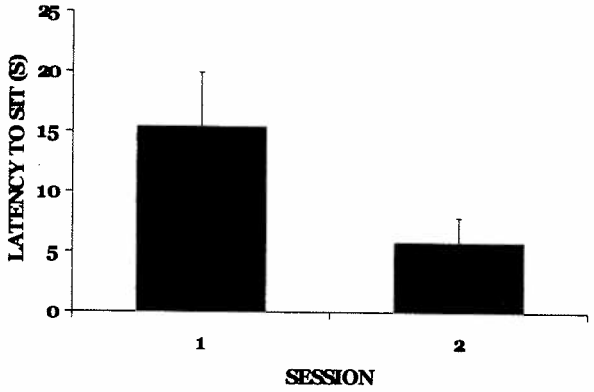

FIGURE 2 Change in mean sitting latencies for shelter dogs ($n = 9$). Dogs participated in two consecutive 10-trial training sessions, separated by 1 hr. Dogs were required to sit when a stranger stopped in front of them and rewarded as described in Figure 1. Error bars represent + *SE*.

TABLE 2
Sit Latency in Seconds—Session 2

Dog/Gender	*Trial*									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Buster/M	5	3	2	3	2	2	2	2	2	2
Lilly/F	7	8	4	3	3	2	2	3	2	2
Lesa/F	30	12	16	20	21	34	7	7	7	60
Lillian/F	7	7	4	3	2	4	5	13	19	20
Zoe/F	7	3	2	2	2	2	2	2	2	11
Daisy/F	1	1	1	1	1	1	2	1	1	1
Blackie/M	2.5	1.6	1.3	1.4	1.1	2.1	0.5	1.6	0.5	1.2
Lucky/M	1.2	26	3.4	4	4.4	4.3	8	4.2	13.4	4.5
Lady/F	4	4.6	2	2	3	3.1	1.1	1.5	0.7	2
M	7.19	7.36	3.97	4.38	4.39	6.06	3.29	3.92	5.29	11.52
SD	8.89	7.82	4.65	5.93	6.32	10.53	2.70	3.87	6.63	19.24

Note. M = male; F = female.

compared for males and females the first trial and the last trial for both sessions, and there was no difference (t test, all p values *ns*).

Experiment 2

There was no significant difference between the two treatments (clicker, verbal) on the first day of testing (Figure 3, Tables 3 & 4) two-way repeated measures ANOVA, $F(1, 10) = .545$, $p = .48$. There was a significant decrease in the latency to sit over trials, $F(9, 90) = 2.039$, $p = .04$, and there was no significant interaction between treatment and trial, $F(9, 90) = 1.216$, $p = .30$. The groups did not significantly differ on the first trial of Day 1, independent samples t test; $t(10) = 2.228$, $p = .19$. However, when performance on the last trial on Day 1 was compared with performance on the first trial of Day 2 (2 days later), there was a difference in retention between the two groups. When the performance between the first trial of Day 2 and the last trial of Day 1 are compared, there is no significant difference in performance; the verbally reinforced dogs yielded no significant difference, paired t test; $t(5) = .410$, $p = .35$. Thus, the verbal group showed good retention of the learned behavior.

This was not the case for the clicker-trained dogs, as there was a significant difference in the performance of the clicker group between the last trial of Day 1 and the first trial of Day 2, $t(4) = 2.122$, $p = .05$ (one dog was adopted between days 1 and 2; hence, the drop in sample size), indicating that these dogs did not retain the sitting behavior.

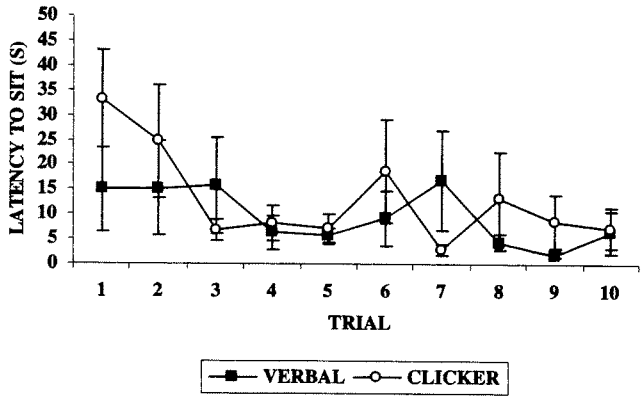

FIGURE 3 The change in mean latency to sit for a stranger by trial and treatment on the first training day. Closed squares = dogs received a verbal cue along with a food reward ($N = 6$); open circles = dogs received a clicker cue plus a food reward ($N = 6$). Error bars represent + *SE*.

TABLE 3
Sit Latency in Seconds for Dogs Trained Using a Verbal Cue

Dog/ Gender	*Day*	*Trial* 1	2	3	4	5	6	7	8	9	10
Baby/F	1	55.4	60	60	6.94	8.75	13.44	33.03	10.03	2.47	2.69
	2	4.96	0	3.05	1.06	0.5	0	0.56	1.57	1.65	1
BabyBop	1	20.79	21.09	3.5	4.25	2.53	1.91	0	0.75	1	0.66
/F	2	5.96	2.89	0	1.19	1.69	1.47	0.59	0	0	1.55
Marnie/F	1	5.5	2.88	2.19	2.59	1.63	1.63	1.22	3.21	1.91	2.41
	2	4.3	1.09	11.22	0.56	1.03	0.78	0.43	0.37	4.25	1
Max/M	1	1.23	2.99	26.2	23.1	10.93	35.05	5.6	8.79	3.89	4.6
	2	4.06	2	1.44	1.07	0.78	1.06	1.01	2.07	16.05	1.32
Roxy/F	1	4.3	3.43	1.28	0.37	8.66	2.36	1.12	1.48	1.48	0.12
	2	4.35	17.6	3.4	4.48	1.29	1.02	1.5	1.37	1.98	1.86
Thalia/F	1	2.59	1.32	1.43	1.01	1.12	0.82	60	2.45	0.76	28.47
	2	4.06	2	1.44	1.07	0.78	1.06	1.01	2.07	16.05	1.32
M	1	14.97	15.29	15.77	6.38	5.60	9.20	16.83	4.45	1.92	6.49
	2	4.62	4.26	3.43	1.57	1.01	0.90	0.85	1.24	6.66	1.34
SD	1	21.04	23.12	23.73	8.53	4.31	13.52	24.60	3.95	1.15	10.88
	2	0.74	6.61	4.01	1.44	0.43	0.50	0.40	0.87	7.40	0.33

Note. F = female; M = male.

In addition, there was a significant difference between the two treatment groups on the second day of testing, $F(1, 9) = 4.952$, $p = .05$ (Figure 4). This difference appeared to be due to the verbal group remaining at a low latency over all 10 trials, but the clicker group performed inconsistently. All the dogs were able to sit in less than 60 sec on both days. Latency to sit was compared for males and females the first trial and the last trial for both sessions, and there was no difference (t test, all p values *ns*).

Experiment 3

There was no difference between the two groups on the first day of testing, $t(18) = .603$, $p = .554$. There was a clear effect of reinforcement regime during the training stage. Experimental dogs spent a significantly higher proportion of time sitting during trials, $F(1, 18) = 14.810$, $p = .001$, repeated measures ANOVA on arcsine square root transformed data (Figure 5, Table 5). Unlike the noncontingent reinforcement group dogs, their sitting time increased over trials (Figure 6), producing a significant Day × Treatment interaction effect, $F(4, 72) = 4.652$, $p = .002$. There were no significant differences in sitting behavior

TABLE 4
Sit Latency in Seconds for Dogs Trained Using a Clicker

Dog/ Gender	Day	Trial 1	2	3	4	5	6	7	8	9	10
Toby/M	1	14.68	1	0.6	1.01	0.95	0.7	0.82	0.59	2.83	2.05
	2	2.13	0	0	1.1	0	0.32	0	1.68	0.35	1.09
T-Bone/M	1	60	60	16	26	3	41	1	60	1	NR
	2	27.57	1.12	60	2.31	8.13	12.03	24.91	54.76	32.29	3.78
Heather/F	1	41.94	16.27	7.5	1.6	10.27	4.59	6.37	2.92	2.93	6.93
	2	2.66	1.12	1.06	2.88	4.75	0	3.12	1.25	3.44	1.93
Junior/M	1	2	2	3	8	20	60	1	8	35	3
	2	45.34	14.56	34.75	7.88	2.06	9.91	39.56	29.41	10.38	15.38
Brigitte/F	1	60	60	10	5	5	3	6	4	3	27
	2	60	60	17.36	52.67	3.24	60	35.62	30.53	54.78	26.16
Chaplin/M	1	21	9	4	8	4	3	2	4	7	4
	2[a]	—	—	—	—	—	—	—	—	—	—
M	1	33.27	24.71	6.85	8.27	7.20	18.72	2.87	13.25	8.23	8.60
	2	27.54	15.36	22.63	13.37	3.63	16.45	20.64	23.53	20.25	9.67
SD	1	24.41	27.88	5.59	9.19	7.00	25.37	2.61	23.02	13.07	10.45
	2	25.67	25.67	25.24	22.15	3.05	24.95	18.26	22.54	22.99	10.87

Note. M = male; F = female; NR = no record.
[a]Chaplin was adopted before data for the second day of trials could be collected.

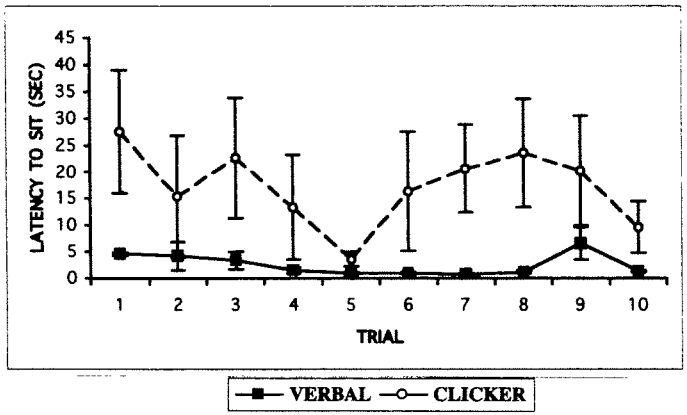

FIGURE 4 The change in mean latency to sit for a stranger by trial and treatment 2 days later. Closed squares = dogs that received a verbal cue along with a food reward ($N = 6$); open circles = dogs received a clicker cue plus a food reward ($N = 5$). Error bars represent + *SE*.

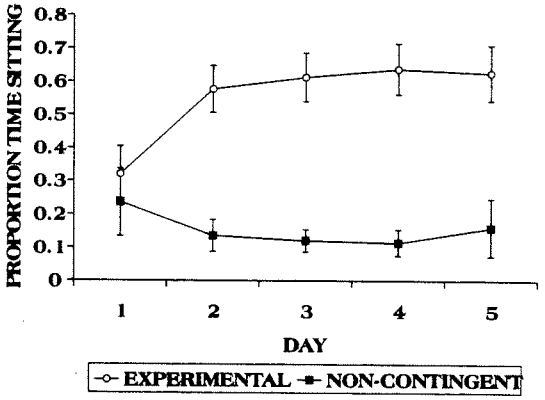

FIGURE 5 Change in the mean percentage of trial time shelter dogs spent sitting by day and treatment. Experimental dogs were reinforced whenever they sat during the daily 15-min trials ($N = 10$); the noncontingent reinforcement group was rewarded every 20 sec regardless of their behavior ($N = 10$). Error bars represent + *SE*.

TABLE 5
Treatment Effect on Proportion of Time Spent Sitting

Dog	Treatment	Day 1	2	3	4	5
1	Experimental	.50	.74	.85	.90	.91
2	Experimental	.24	.64	.64	.72	.77
3	Experimental	.00	.58	.78	.84	.86
4	Experimental	.74	.82	.73	.76	.32
5	Experimental	.64	.71	.78	.76	.81
6	Experimental	.64	.70	.72	.71	.73
7	Experimental	.22	.40	.60	.60	.61
8	Experimental	.15	.67	.48	.51	.66
9	Experimental	.00	.00	.00	.00	.00
10	Experimental	.07	.51	.55	.58	.59
11	Noncontingent	.70	.33	.15	.28	.10
12	Noncontingent	.00	.00	.00	.00	.00
13	Noncontingent	.29	.31	.27	.21	.11
14	Noncontingent	.04	.00	.03	.02	.00
15	Noncontingent	.00	.00	.08	.13	.00
16	Noncontingent	.00	.01	.08	.00	.00
17	Noncontingent	.40	.02	.05	.009	.01
18	Noncontingent	.00	.09	.03	.20	.14
19	Noncontingent	.92	.19	.18	.37	.93
20	Noncontingent	.008	.41	.34	.11	.31

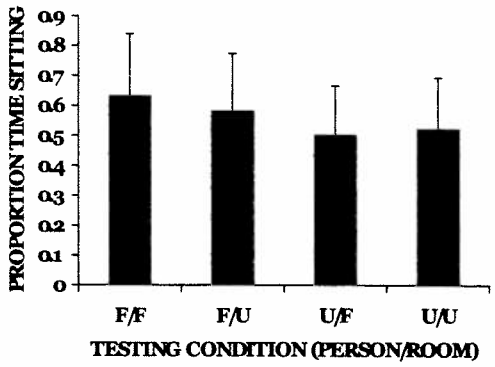

FIGURE 6 Proportion of time trained dogs ($N = 9$) spent sitting during 15-min trials. F/F = familiar trainer/familiar room; F/U = familiar trainer/unfamiliar room; U/F = unfamiliar trainer/familiar room; U/U = unfamiliar trainer/unfamiliar room. Error bars represent + *SE*.

TABLE 6
Effects of Familiar/Unfamiliar Contexts on Proportion of Time Spent Sitting

	Persons/Room			
Dog	*F/F*	*F/U*	*U/F*	*U/U*
1	.84	.71	.01	.33
2	.95	.84	.89	.88
3	.72	.77	.58	.60
4	.92	.86	.95	.92
5	.14	.16	.26	.10
6	.90	.74	.87	.96
7	.46	.49	.36	.36
8	.00	.00	.00	.00
9	.73	.61	.60	.55

Note. F/F = familiar trainer/familiar room; F/U = familiar trainer/unfamiliar room; U/F = unfamiliar trainer/familiar room; U/U = unfamiliar trainer/unfamiliar room.

among the four testing conditions $F(3, 24) = 1.302$, $p = .297$, repeated measures ANOVA on arcsine square root transformed data (Figure 6, Table 6).

DISCUSSION

These experiments were conducted to determine the feasibility of training in the shelter environment. All the dogs in these studies were trained to sit. Our experiments indicate that dogs can be trained rapidly (in less than 30 min) to respond appropriately to a potential adopter. We were able to determine that training leads to an increase in sitting both as a decrease in the mean latency to sit and as an increase in the total time spent sitting. During the course of our studies, these trained dogs continued to exhibit this behavior, as long as the behavior was reinforced, regardless of the person or location.

It appears that minimal training (10 to 15 min a day) by novice trainers can increase the amount and speed at which sitting is performed by shelter dogs. Dogs are able to retain the learned skill for at least 1 day without training, and another study at the same site suggests that 5 min of training every other day is sufficient for a dog to learn and maintain these behaviors (R. R. Castillo, personal communication, September 5, 2004). Taken together, these results suggest that the dogs are able both to retain the acquired skill after a short delay and to generalize to a new stranger—another potential owner. This is important in a shelter environment, as it is unlikely that a particular dog's trainer will become the dog's owner. The next step would be to determine whether the dog will retain the same level of skill over a longer period (over a few days or a week) and whether the dog will generalize to a new stranger or strangers over such a long delay. The average time between arrival and adoption for this shelter is 14.3 days. Thus, if a dog can maintain a good skill level for at least a week, then weekly training sessions may be sufficient for the purposes of this shelter.

It seems as if the combination of the verbal cue with a food reward is more salient to shelter dogs than the clicker cue with food. More research is needed to determine if the differences observed in verbally trained and clicker-trained dogs are due to (a) the limited supply of verbal reinforcement available in the shelter, (b) a negative association (startle) with the clicker, (c) incomplete conditioning of the dogs to the clicker, or (d) other factors. Whatever the reason, these results suggest that clicker training might not be a productive avenue, at least for the type of short-term training done initially by untrained volunteers in a shelter setting.

In response to the results of these experiments, a policy was instituted at the shelter requiring all shelter staff and volunteers to wait for a dog to sit to (a) exit from a kennel, (b) exit from the shelter (to the outside), and (c) when a person approached the dog (particularly to receive contact; i.e., petting). All shelter staff and volunteers went to training sessions where they were advised of the new policy and

trained on how to teach a dog to sit using positive reinforcement (Miller, 2001; Sternberg, 1998). No physical compulsion was used. Our studies indicate that simple training techniques incorporated into daily routines and implemented in a shelter-wide program correlate with an increase in the rate of adoption as well as a decrease in the rate of euthanasia of dogs admitted to the shelter.

In addition to possible effects on outcome, training appears to affect other behaviors. 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. Similar results were seen in the canine socialization and training program at the National Institutes of Health (Adams, Navarro, Hutchingson, & Weed, 2004). Objective measures are needed to confirm these observations in a shelter environment.

Potential adopters react favorably to a dog sitting at the front of the kennel (Wells & Hepper, 1992). At the shelter, the training regime is explained to visitors on entering the facility, and those viewing dogs are able to see the training. The visitors appear favorably impressed by the facility and the animals and are enthusiastic about helping a dog to follow the rules. It is possible that their impressions are based on their perception of the dogs being trained, rather than the training that the dogs actually demonstrate. This question represents an interesting avenue for further investigation.

By using the training regime to initiate a conversation, shelter staff members are able to educate new owners about humane training methods and environmentally based rewards. As part of this dialogue, realistic expectations for the new relationship may be established and the shelter can be identified as a resource for training and behavior. Cultivation and support of this new human–dog relationship may be the key to keeping a dog in the home.

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