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THE ROLE OF POLICE DOGS AS COMPANIONS AND WORKING PARTNERS^{1,2}

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Summary.—Written responses to a questionnaire by 255 officers who used canines in police work were assessed. Almost all officers frequently played with, talked to, petted, and brushed their dogs and believed the dogs benefitted their health and well-being. Officers whose dogs slept indoors, often in the same bedroom, generally said they loved their dogs and they described their dogs as calm rather than active, as indicated by a multiple correspondence analysis. These 96 officers more than the 154 officers whose dogs slept outdoors or in kennels also planned to remain in canine work. Although departments often assumed responsibility for purchasing the dogs, the more experienced officers usually were involved in the final selection of dogs (logistic regression: $p < .0001$). Compared with 94 officers not involved in selecting their dogs, 106 officers with a specific role in selecting their dogs planned to stay in canine work, as shown by a multiple correspondence analysis. They believed the dogs had saved their lives ($p < .01$). Over-all, officers reported spending 4.1 hr. on-duty and 2.9 hr. off-duty per week training their dogs, and also played with them for 6.5 hr. per week, assuring a regular pattern of exercise for the officers. Virtually all officers valued canine service and believed the dogs enhanced the department's effectiveness. This study showed that both close companionship with the dog and involvement in selecting the dog were associated both with satisfaction with the dog and with working as a canine officer.

Dogs who assist individuals with various disabilities, such as service dogs and hearing dogs, exert socializing effects that alter the person's interactions in the community at large and enhance their psychological well-being (Hart, Hart, & Bergin, 1987; Eddy, Hart, & Boltz, 1988; Mader, Hart, & Bergin, 1989; Hart, Zasloff, & Benfatto, 1996). Whether similar socializing

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effects occur for police officers who use dogs in their work has not been investigated systematically. U.S. National Park Service rangers who use dogs for law enforcement and rescue have been perceived by visitors as more friendly and approachable than rangers without dogs (Light, 1984). Not only dogs, but also horses, create positive social opportunities in a law enforcement setting (Lawrence, 1985).

The current study was undertaken to assess the relationship of officers with their canines at home and in the work place. Police officers who work with canines spend their off-duty time at home with them, having them as constant, supportive companions and spending time with them in play and extra training. Owners of police canines usually spend more of their waking hours with their dogs than they spend with other family members (Meehan, 1994). Police dogs in California generally live in the officers' homes (Los Angeles Police Department, 1992) and are considered as members of the family (Roman, 1992). As an indication of the involvement and self-selection that sometimes occurs, some canine officers even make a large economic investment in the purchase of their dogs. Since these dogs at home may serve as companion animals or pets, it is possible that they may also provide a healthful source of social support and protection against stress or loneliness in the work place. For example, new guide dog owners commonly find their lives most changed by the dog increasing the owner's confidence and self-esteem (Sanders, 1999). In another study, when individuals rated their service dogs on social facilitation, an affectionate relationship, and social support, the results were significantly correlated with the self-perceived health of the individuals (Lane, McNicholas, & Collis, 1998). The quality of the relationship and satisfaction with the dog were greater among those individuals who themselves initiated the idea of getting a service dog.

In one study of new pet owners, written self-reports over a period of 10 months showed that adoption of a companion dog was associated with increased exercise for the owner as well as improved psychological health and fewer minor health problems in dog owners, when compared with people without a dog or with a cat (Serpell, 1991). During regular walks, a dog is an important companion and serves as both a recipient and topic of conversation (Rogers, Hart, & Boltz, 1993). Both Siegel (1993), working with elderly people, and Angulo (1993), working with people with AIDS, have noted that companion dogs can help to buffer stress; in their proposed model, when life stress increases, owning a dog reduces the influence of the stressful life event on the human companion.

Being a police officer is a highly stressful career. As one example, shift work, which is common for officers, has been described as an intense stressor (Violanti & Aron, 1995). Many officers use exercise as a way to cope with the stress (Alexander & Walker, 1994). In various studies of police offi-

cers, exercise has been associated with job longevity (Seagram & Stark-Adamec, 1992), fewer psychosomatic symptoms (Burke, 1994), reduced stress (Kirkcaldy, 1993), less job burnout, and higher feeling of personal accomplishment, happiness, and life satisfaction (Stearns & Moore, 1993). Officers, however, tend to decrease their regular exercise over the course of their careers (Burke, 1989); a successful incentive such as a canine that would motivate officers to exercise could improve their health.

The use of dogs in police work resembles their use by people with disabilities in that the dog contributes additional sensory and motor abilities to the person. Although dogs' abilities to distinguish odors of individuals have some limits (Brisbin & Austad, 1991; Austad & Brisbin, 1993), police canines clearly possess superior olfactory skills (Settle, Sommerville, McCormick, & Broom, 1994). Managers in law enforcement appreciate that the canines also add a source of less-than-lethal force that may be more convincing than a weapon (*Quintanilla v. City of Downey*, 1996), even exerting a deterrent effect (Los Angeles Police Department, 1992; Sierpina, 1995). Many sheriff's and police departments in North America, including the Royal Canadian Mounted Police, maintain police dog units for their deterrent effect as well as search efficiency (Chapman, 1990). In the United States, police-dog teams are being integrated into many community policing programs. The trained police dogs are viewed by experts as a leading biological detection and deterrent system for law enforcement (Bryson, 1996) that can apparently enhance both the officer's capacity and perceived ability to conduct police work.

Police officers face a range of situations in the workplace that can cause stress and anxiety. A large published literature reports the demographic, stress-related disease profile of police officers, sources of stress, and disease risk factors (Williams, Petratis, Baechele, Ryschon, Campain, & Sketch, 1987; Dubrow, Burnett, Gute, & Brockert, 1988; Lester, Carey, Tracey, Trenchgrove, & Sullivan, 1988). The ostensible purposes of training and using police dogs are more effective law enforcement, apprehension of criminals, deterrent against crime, and safety of the officer. This study, however, concerns the possible socializing effects with the general public and companionship for the officer that could reduce stress in the work place. Police officers who use canines were surveyed concerning their experiences relating to their dogs in the work place and at home. The purpose was to characterize these officers and to identify favorable and detrimental effects associated with canine work. It was hypothesized that (1) close companionship with the dog would be associated with satisfaction with the dog in the work place, (2) involvement in the dog's selection working would be associated with satisfaction with the dog and the job, and (3) working with a dog would increase exercise for the officers.

METHOD

Subjects

In the fall of 1992, all police ($N=385$) and sheriffs' ($N=58$) departments in California were contacted by mail to request their participation in a confidential survey of police officers with canines. A total of 159 departments (35.9%) responded, including 103 departments in which officers were working with canines (64.8% of those responding). Among their 12,543 officers, these departments reported a total of 375 officer-canine teams in operation, or 3.0% of their officers.

Procedure

A required limitation of the study was the necessity to assure the confidentiality of all officers' responses and their departmental locations. Questionnaires were returned unidentified as to the specific department or geographic area they represented. Thus, it was not possible to compare canine use in urban, suburban, and rural areas.

Each responding department with one or more officer-canine patrol teams authorized its canine officers to participate. Questionnaires for the 375 canine officers were mailed to the participating departments with canine teams. By December 1992, 265 canine officers had completed and returned questionnaires (70.1% of the 375 canine officers in participating departments). Ten teams focusing on detecting narcotics, accelerants, explosives, criminal evidence, or search and rescue were excluded from analyses, since these teams do not participate in routine patrolling assignments.

The subjects were 255 police officers (94.9% male). As no differences were found in responses from men and women, their data were combined. The mean age of participants was 34.1 yr. ($SD=5.9$). The officers had mean totals of 10.2 ($SD=5.4$) yr. of service as a peace officer and 3.4 yr. ($SD=2.9$) of patrol experience with canines. Most (70.7%) had previous working experience with another police canine. The mean age of the dogs was 5.2 ($SD=2.1$) yr., and they had been in service for a mean of 2.3 yr. Most dogs (85.5%) were German Shepherds; most dogs (98.0%) were males.

Questionnaire and Statistical Analyses

The questionnaire included questions on basic demographic information, including the officer's age, sex, length of time as a peace officer, length of time as a canine officer, and length of time with the current dog. Concerning their companionship with canines at home, officers were asked to rate on a 3-point scale the amount of extra work required of a canine officer, the hours spent per week playing with the dog, whether they talked to the dog, whether they petted the dog, the frequency of brushing the dog per week, whether they described the dog when not working as active or

spirited, calm or relaxed, or other, whether or not they loved, respected, or were sometimes afraid of the dog, whether the dog had saved the officer's life, and the dog's sleeping location. Officers were asked to rate on a 4-point scale the importance of these functions as applied to the relationship with the dog: good for the family, health, and exercise. Regarding departmental management of the canine, officers were asked to estimate on-duty and off-duty hours per month of training, the average hours of overtime per week, whether overtime was increased due to the canine unit, whether they were involved in selecting the dog, who purchased the dog, and the number of calls per month in which the canine was used. (Typical uses of canines occur in response to specific requests or assignments for the canine unit, termed

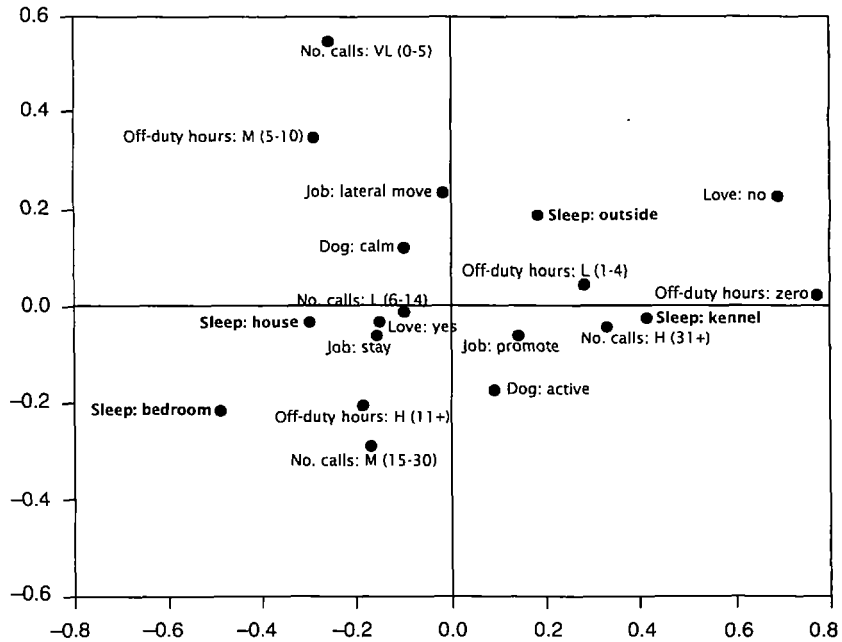


Fig. 1. Multiple correspondence analysis based on the sleeping location of the dog

Variable	Labels, Categories
Sleeping location	sleep: outside, kennel, bedroom, house
Dog description	dog: calm, active
Off-duty training hours/month	most off-duty hours, 11+; some off-duty hours, 5-10, few off-duty hours, 1-4; no off-duty hours
Love dog	love: yes, no
Canine calls/month	most dog calls, 31+; many dog calls, 15-30; some dog calls, 6-14; few dog calls, 0-5
Job plans for future	job: promote, move up, move, lateral move, stay, remain in canine work

Note.—Categories that tend to occur together are plotted along the same ray emanating from the origin.

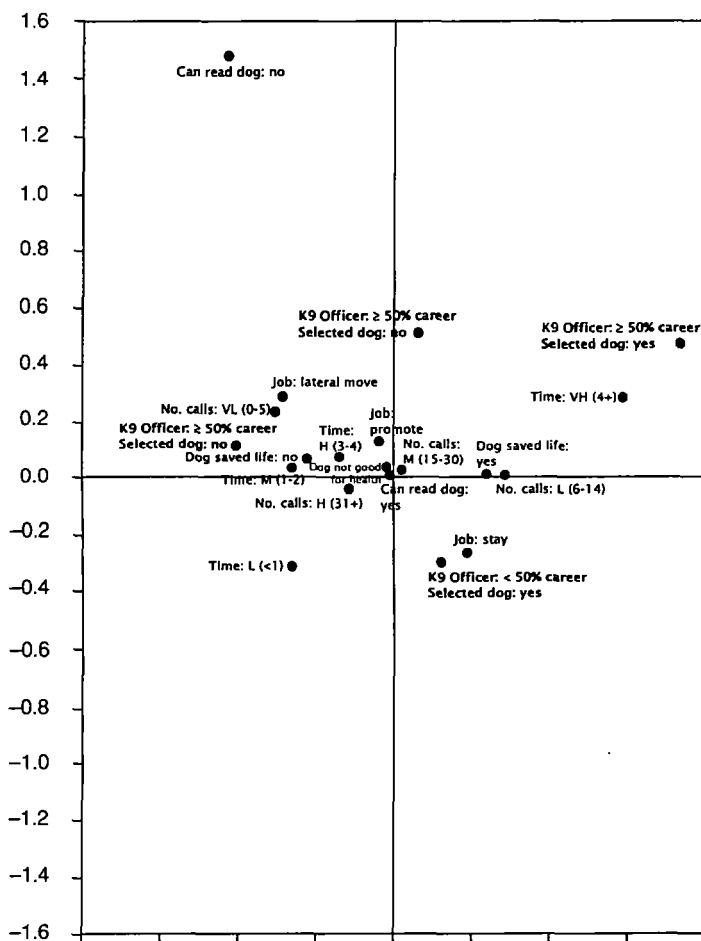


FIG. 2. Multiple correspondence analysis based on the canine officer's career and involvement in selecting the dog

Variable	Labels, Categories
Career as canine officer and involvement in selecting dog	>50% career canine officer, serving with canines for over half of career; <50% career canine officer, serving with canines for less than half of career; selected dog, did not select dog
Canine calls/month	most dog calls, 31+; many dog calls, 15-30; some dog calls, 6-14; few dog calls, 0-5
Job plans for future	job: promote; move up; move, lateral move; stay, remain in canine work
Years as canine officer	few dog years, <1; some dog years, 1-2; many dog years, 3-4; most dog years, 4+
Dog saving officer's life	dog saved life; dog did not save life
Officer able to read dog	can read dog; cannot read dog

Note.—Categories that tend to occur together are plotted along the same ray emanating from the origin.

canine calls, where the special skills and abilities of the canine team are specifically required.) Concerning working performance with canines, officers described their shifts, the types of calls handled with canines, the percentage of canine calls rated as high-risk, the percentage of these in which the canine was essential in the apprehension of a suspect, the number of street bites and accidental bites involving the dog, and whether a gun is drawn more or less frequently when working with the dog.

The dog's sleeping location in the bedroom versus other locations and whether the officer was involved in the dog's selection were analyzed as dependent variables using a series of stepwise logistic regression models. These dependent variables were chosen as indicators of a close relationship between the officer and the animal. For sleeping location, the predictors that emerged as important from the regression analyses on 250 officers were used in a multiple correspondence analysis to produce a graphical representation of these interrelationships among the categories (Fig. 1). The correspondence analysis places each category on a 2-dimensional axis system such that categories that tend to occur together are plotted along the same ray emanating from the origin. To characterize the 200 officers where data were complete and unambiguous regarding amount of their participation in selecting their dogs, a series of logistic regression models were used to identify the predictive factors and produce a graphical representation of these interrelationships among the categories (Fig. 2).

RESULTS

Officers' Companionship with Canines at Home

Officers played with their dogs an average of 6.5 hr. per week. Almost all played with, talked to, petted, and brushed the dogs frequently, as shown in Table 1. Over 75% of officers described the dogs as being important or very important in being valued by the family, benefitting the officer's health, and reducing the officer's stress.

A multiple correspondence analysis of the sleeping location of the dog showed that 96 officers whose dogs slept in the bedroom or elsewhere indoors also spent at least 11 off-duty training hours per month with the dog. These officers tended to have fewer than 30 calls per month where the canine was expected to be used (Fig. 1). Generally, these officers described their dogs as calm. They loved their dogs and expected to stay in canine work. Officers whose dogs slept inside the house were significantly more likely to describe the dog as a family member than 154 officers whose dogs slept outside. Officers whose dogs slept outdoors or in a kennel more often reported not loving their dog. Officers whose dogs slept outdoors characteristically had more than 30 canine calls per month in which the dog was to be used and spent very few off-duty training hours with their dogs. These

TABLE 1
PATTERNS OF ACTIVITY WITH CANINES REPORTED BY 255 OFFICERS

Activity	f
Frequent Leisure-time Activities	
Playing	238
Talking	231
Petting	239
Brushing weekly	245
Scheduled Shifts	
Day	26
Swing	99
Rotating	70
Graveyard	59
Types of Cases*	
Searching areas, tracking suspects	175
In-progress burglaries and robberies	107
High-risk felonies	106
General patrol	75
Prowlers	27
Crowd control	15
Public relations events†	75

*Average number of types of cases per officer: 2.3. †Events occurred 6–12 times per year.

officers rated their dogs as active. They expected to be promoted or make a lateral move out of canine work.

Departmental Management of Canines

As shown in Table 2, the 94 officers who assisted in selecting their dogs reported more frequently they had been canine officers for a long time. Officers involved with the selection had been with their current dog a shorter time than had the 106 officers who were uninvolved in the selection of their current dog, and had a smaller number of canine calls per month. Officers involved in selection were more likely to believe that the dog provided a health benefit and that the dog had saved the officer's life. These officers, more than those not involved in selection, expected to continue working with canines rather than seeking a promotion or lateral move (Fig. 2). They also were more confident of being able to read the dog.

Over 75% of officers considered the amount of extra work required with canines to be "a lot," were required to participate with a third party in maintenance training, and regularly worked overtime with their canines. Officers reported spending a mean of 4.1 hr. per week and 2.9 hr. per week, respectively, for on-duty and off-duty training with their canines, and averaged 4.7 hr. of overtime per week. A majority (51.0%) of officers attributed their overtime to participation in the canine corps.

Most frequently, the department (63.1%) assumed financial responsibil-

TABLE 2
CHARACTERISTICS OF OFFICERS SELECTING DOGS VERSUS THOSE NOT SELECTING DOGS

Variable	χ^2	<i>p</i>
Long-term canine officers	15.2	.0001
Short term with this canine	6.3	.01
Fewer canine calls/month	13.2	.0003
Believed health benefit	4.4	.04
Believed dog saved life	6.6	.01

ity for purchasing the canine; among these departments, 44.0% involved officers in the selection of their canines. In some cases (20.2%), the officer paid for purchase of the canine; almost all (94.1%) of these officers were involved in the selection of their dogs. The remaining dogs (16.7%) were purchased with donated funds; in these cases 47.6% of the officers participated in selection. The seven officers who sometimes disliked working with canines had not been involved in selecting their own dogs.

Working Performance with Canines

Officers responded to a mean of 34.9 ($SD=46.0$) canine calls per month where it was expected the dog would be used. Most dogs were assigned to swing, rotating, or graveyard shifts, not day shifts, as shown in Table 1. Officers (98%) believed dogs were important or very important for this task. The most common uses mentioned for canines were for searching areas or tracking suspects, burglaries and robberies, and felonies. The officers estimated that most of their calls were high risk, a mean of 60.9% ($SD=31.8$) of calls, and that they employed the canine in apprehension of suspects in most (82.0%) of these high-risk calls.

More than one-third of officers (38.1%) reported that the canine had saved the officer's life. Over half of the remaining officers noted that a life and death situation had not yet arisen for them, although some mentioned that the canine had saved them from injury or that the canine may have positively influenced the behavior of certain suspects.

Officers' Attitudes Toward Canine Service

Officers overwhelmingly (98.6%) reported liking canine service. As shown in Table 3, most of those electing to provide their reasons focused on the challenge, pleasure, and satisfaction of working with the canine. High demands for training, grooming, and liability with canines were mentioned as problems by some of the few officers who mentioned not liking canine service. Almost all officers (95.2%) rated the department as more effective as a consequence of having canines, and few (1.9%) rated it as less effective; 105 officers enumerated the advantages and disadvantages for the department of working with canines, as shown in Table 4. The advantages men-

TABLE 3
REASONS OFFICERS LIKE OR DISLIKE CANINE SERVICE*

Attitude	<i>f</i>
Liking Canine Service	
Action and challenge of work with canine	52
Pleasure of work and training with canine	48
Satisfaction of successful training	38
Extra security	22
Companionship	19
Disliking Canine Service	
High demands: training, grooming, liability	2

*Optional question: 166 officers provided reasons. Average number of descriptions per responding officer: 1.1.

tioned involved efficiency, safety, public relations, and a deterrent effect. Disadvantages included liability and training requirements.

Officers (99.6%) felt that the presence of the dog increased the public's perception of their competence and enhanced public opinion and respect for officers; most (81.6%) believed that the effect of dogs was important or very important. Most (91.4%) felt the dogs provided some intimidation during apprehensions and thereby made arrests easier and less risky. Dogs were believed to be important or very important in protecting the officers (91.4%).

TABLE 4
CANINES' EFFECTS ON DEPARTMENTAL EFFECTIVENESS*

	<i>f</i>
Advantages	
Greater efficiency	79
Increased officer safety	69
Good public relations	57
Deterrent effect on criminal behavior	32
Disadvantages	
Liability to the department	52
Training time and expense	49

*Optional question: 105 officers provided reasons. Average number of descriptions per responding officer: 3.2.

DISCUSSION

At home, these dogs assumed the role of companions in play, conversation, and grooming. Relationships of officers with their canines when at home appeared to be similar to those reported between owners and companion dogs. For example, 56% of owners in one study reported their companion dogs slept on their beds (Voith, 1985). More than one-third of the police dogs in this study slept inside the home, despite their large size. Close

involvement with the dog at home, as indicated by sleeping location, was associated with indicators of satisfaction with the dog and with being a canine officer, as proposed in the first hypothesis. Officers whose dogs slept inside loved their dogs and spent more off-duty training time with their dogs than other officers. They expected to remain in canine work, rather than to make a lateral move or promote out.

Officers involved in selecting their dogs indicated their satisfaction with their dogs and with canine work in general, supporting the second hypothesis that involvement in the selection would be associated with satisfaction with the dog and the job. Officers with a strong interest in working with dogs presumably are themselves self-selected and assume an active role in encouraging the department to acquire a dog and assisting in its selection. Officers involved in selecting their dogs were experienced canine officers. They believed the dog was beneficial to them. Planning to continue as canine officers, they remained highly motivated toward canine work.

Although canine officers typically engage in shift work and overtime, working with dogs assures the officers regular exercise associated with training and playing with the dogs, perhaps offsetting some of their stress. Combining on-duty and off-duty training times, officers on average regularly spent as much as seven hours a week working with their dogs. As tested in the third hypothesis, this structured training, as well as playing with the dog for an average of 6.5 hr. each week, inevitably provides exercise for the officer.

Popular literature often refers to the possible life-saving role of canines in their officers' lives (Roman, 1992). The officers in this study believed that canines provided a significant additional source of restraint and a less-than-lethal source of force, which facilitated the apprehension of suspects and sometimes saved the officers' lives. A strong aggressive drive is viewed as important in canines in police work (Bryson, 1996), and people working with guide dogs often advocate for a "hard" rather than a "soft" dog (Sanders, 1999). Nonetheless, the officers in this study who rated their dogs as calm gave no indication that this temperament was detrimental in working with their dogs.

Some published literature has downplayed the negative effects on officers of participating in risky calls and pointed to the organizational structure as the greatest source of stress and pressure (Crank & Caldero, 1991; Kirkcaldy, Cooper, & Ruffalo, 1995), adversely affecting job satisfaction and the "perceived quality of life" (Hart, Wearing, & Headey, 1993). The officers' responses in this study, however, suggest that an excessive number of canine calls may lead to burnout which can be associated with a less-optimal relationship with the canine, and perhaps other aspects of work performance. Officers with a high number of canine calls reported they were less likely to stay in canine work. A hypothesis that could be tested is that having too

many canine calls critically erodes the officer's time and energy available for off-duty training and play with the dog. Overscheduling the work time may adversely affect the quality of the relationship for the officer and canine that might otherwise enhance their job satisfaction.

REFERENCES

- ALEXANDER, D. A., & WALKER, L. G. (1994) A study of methods used by Scottish police officers to cope with work-induced stress. *Stress Medicine*, 10, 131-138.
- ANGULO, F. (1993) Association of pet ownership and prevention of depressive symptomatology among HIV-infected persons. Paper presented at conference of Delta Society, October 7-9, St. Louis, Missouri.
- AUSTAD, S. N., & BRISBIN, I. L. (1993) The use of trained dogs to discriminate human scent: a reply. *Animal Behaviour*, 46, 191-192.
- BRISBIN, I. L., JR., & AUSTAD, S. N. (1991) Testing the individual odour theory of canine olfaction. *Animal Behaviour*, 42, 63-69.
- BRYSON, S. (1996) *Police dog tactics*. New York: McGraw-Hill.
- BURKE, R. J. (1989) Career stages, satisfaction, and well-being among police officers. *Psychological Reports*, 65, 3-12.
- BURKE, R. J. (1994) Stressful events, work-family conflict, coping, psychological burnout, and well-being among police officers. *Psychological Reports*, 75, 787-800.
- CHAPMAN, S. G. (1990) *Police dogs in North America*. Springfield, IL: Thomas.
- CRANK, J. P., & CALDERO, M. (1991) The production of occupational stress in medium-sized police agencies: a survey of line officers in eight municipal departments. *Journal of Criminal Justice*, 19, 339-349.
- DUBROW, R., BURNETT, C. A., GUTE, D. M., & BROCKERT, J. E. (1988) Ischemic heart disease and acute myocardial infarction mentality among police officers. *Journal of Occupational Medicine*, 30, 650-654.
- EDDY, J., HART, L. A., & BOLTZ, R. P. (1988) The effects of service dogs on social acknowledgments of people in wheelchairs. *Journal of Psychology*, 122, 39-46.
- HART, L. A., HART, B. L., & BERGIN, B. (1987) Socializing effects of service dogs for people with disabilities. *Anthrozoös*, 1, 41-44.
- HART, L. A., ZASLOFF, R. L., & BENFATTO, A. M. (1996) The socializing role of hearing dogs. *Applied Animal Behaviour Science*, 47, 7-15.
- HART, P. M., WEARING, A. J., & HEADEY, B. (1993) Assessing police work experiences: development of the police daily hassles and uplifts scales. *Journal of Criminal Justice*, 21, 553-572.
- KIRKCALDY, B. (1993) Job stress and satisfaction: international police officers. *Psychological Reports*, 72, 386.
- KIRKCALDY, B., COOPER, C. L., & RUFFALO, P. (1995) Work stress and health in a sample of U.S. police. *Psychological Reports*, 76, 700-702.
- LANE, D. R., McNICHOLAS, J., & COLLIS, G. M. (1998) Dogs for the disabled: benefits to recipients and welfare of the dog. *Applied Animal Behaviour Science*, 59, 49-60.
- LAWRENCE, E. A. (1985) *Hoofbeats and society: studies of human-horse interactions*. Bloomington, IN: Indiana Univer. Press.
- LESTER, D., CAREY, D. T., TRACEY, J. J., TRENGROVE, J., & SULLIVAN, J. (1988) Measuring stress in police officers. *Psychological Reports*, 62, 986.
- LIGHT, W. G. (1984) Ranger service dogs: a program proposal. *Newsletter: the Association of National Park Rangers*, 7(3), 1, 7-10.
- LOS ANGELES POLICE DEPARTMENT. (1992) Subcommittee report: K9 policies and practices. August 13, Los Angeles, California.
- MADER, B., HART, L. A., & BERGIN, B. (1989) Social acknowledgments for children with disabilities: effects of service dogs. *Child Development*, 60, 1529-1534.
- MEEHAN, S. K. (1994) Officers and dogs share powerful human/animal bond. *Journal of the American Veterinary Medical Association*, 205, 1387.
- ROGERS, J., HART, L. A., & BOLTZ, R. P. (1993) The role of pet dogs in casual conversations of elderly adults. *Journal of Social Psychology*, 133, 265-278.

- ROMAN, M. (1992) A cop's best friend. *Reader's Digest*, 140(841), 8, 12, 14-16.
- SANDERS, C. R. (1999) *Understanding dogs: living and working with canine companions*. Philadelphia, PA: Temple Univer. Press.
- SEAGRAM, B. C., & STARK-ADAMEC, C. (1992) Women in Canadian urban policing: why are they leaving? *Police Chief*, 59(10), 120, 122-125.
- SERPELL, J. (1991) Beneficial effects of pet ownership on some aspects of human health and behavior. *Journal of the Royal Society of Medicine*, 84, 717-720.
- SETTLE, R. H., SOMMERVILLE, B. A., MCCORMICK, J., & BROOM, D. M. (1994) Human scent matching using specially trained dogs. *Animal Behavior*, 48, 1443-1448.
- SIEGEL, J. M. (1993) Companion animals: in sickness and in health. *Journal of Social Issues*, 49, 157-167.
- SIERPINA, D. (1995) A canine corps helps keep the peace at a downtown hospital. *New York Times*, 144(February 26), 2.
- STEARNS, G. M., & MOORE, R. J. (1993) The physical and psychological correlates of job burn-out in the Royal Canadian Mounted Police. *Canadian Journal of Criminology*, 35, 127-148.
- VIOLANTI, J. M., & ARON, F. (1995) Police stressors: variations in perception among police personnel. *Journal of Criminal Justice*, 23, 287-294.
- VOITH, V. L. (1985) Attachment of people to companion animals. *Veterinary Clinics of North America*, 15, 289-295.
- WILLIAMS, M. A., PETRATIS, M., BAEGHLE, T. R., RYSCHON, K. L., CAMPAIN, J. J., & SKETCH, M. H. (1987) Frequency of physical activity, exercise capacity, and atherosclerotic heart disease risk factors in male police officers. *Journal of Occupational Medicine*, 29, 596-600.

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