FROM PETS TO ASSISTANTS

Although we tend to identify the 20th century as the time when dogs and animals in general were first used to provide assistance to people with a variety of physical and mental diagnoses, this actually is not the case. The first documented example of the therapeutic use of animals occurred in 9th century Gheel, Belgium, where animals were part of the “therapie naturelle” provided for the handicapped by members of the community.\(^1\text{(p7),2}\)

The first use of animals specifically for the treatment of the mentally ill occurred in late 18th century York, England.\(^3,4\) After the death of a Quaker in the inhumane conditions in what was then the York Asylum, a wealthy Quaker merchant, William Tuke, raised money to open the York Retreat in 1796 to care for the insane. Tuke’s methods were quite different from the coercive and punitive approaches in use at that time. Patients wore their own clothing and had the opportunity to work at crafts, read books, write, and wander the grounds, which contained a variety of small animals. The combination of the example set by the York Retreat, the continued efforts of the Tuke family to improve the treatment of the mentally ill, and a scathing report on conditions in British mental hospitals during the 1830s initiated gradual improvements in the overall treatment of the mentally ill.\(^4\)

The first documented therapeutic use of animals in the United States took place during World War II at an Army Air Corps convalescent hospital in Pawling, New York. According to Bustad and Hines,\(^1\text{(p19)}\) the hospital functioned more as a rest home than a medical facility for patients suffering from “operational fatigue,” which is probably called posttraumatic stress disorder today. The facility provided both an academic program and the physical activity of working at the facility’s farm.

DEFINING SOME TERMS

Although the history of human-animal relationships is filled with tales of how animals, dogs in particular, benefited humans, most of those examples were relatively informal, possibly even coincidental. The dogs did not receive any specific training, and there were no formal programs. In the 20th century, however, formal programs were developed to train dogs to provide a variety of services to humans.

Basically, there are 2 categories of dogs that provide assistance to people with disabilities: service dogs and therapy dogs. Although the phrase “assistance dog” is used frequently, and there is an organization called “Assistance Dogs International,” the term assistance dog has no meaning in law. A recent amendment to the Americans with Disabilities Act (ADA) (42 USC §12101-12213 and 47 USC §225, 611), which became effective March 15, 2011, defines a service animal as:

any dog that is individually trained to do work or perform tasks for the benefit of an individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability….The work or tasks performed by a service animal must be directly related to the handler’s disability.\(^5\)

Whether or not therapy dogs are covered under the amended ADA depends on the disability of their handlers, how they are trained, and how they are used, as specified in the definition presented above. It should be noted that the ADA clearly includes psychiatric assistance as a category for service dogs.

Ensminger defines a therapy dog and its work as:

...a dog that, with a handler, visits individuals or groups to provide some relief from an institution, such as a hospital, or condition, such as cerebral palsy or Alzheimer’s. Therapy dogs may be used one-on-one as part of a treatment program for an individual, which is often called animal assisted therapy (abbreviated AAT), but mostly therapy dogs in the United States today visit facilities to help or at least cheer up the populations of those facilities.\(^6\text{(p11)}\)

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The views expressed in this article are those of the author and do not reflect the views of the US Environmental Protection Agency, the US Army, or the US Army Medical Department.
Clearly, under the new ADA definition of service dogs, dogs used according to Ensminger’s definition do not qualify as service dogs.

**SERVICE DOGS**

Service dogs, as defined in the amended ADA, assist individuals with a variety of physical disabilities, including vision impairments, hearing impairments, mobility disorders, and seizure disorders. As important as these services are to their recipients, the most important service by far is the companionship that the dogs provide, particularly to individuals who may have been experiencing considerable isolation because of their disabilities.

**Service Dogs for the Visually Impaired**

According to Ensminger, the first use of service dogs for the visually impaired dates to post-World War I Germany where dogs were trained to guide soldiers blinded during the war. In 1927, Dorothy Harris Eustis, an American living in Switzerland and breeding and training German shepherd dogs, learned of the German program and wrote an article that appeared in the November 5, 1927 edition of *The Saturday Evening Post.* Her article eventually led to the founding of the first American organization for the training of guide dogs for the blind, The Seeing Eye, in 1929. Since then, a number of other organizations have been established for the training of guide dogs for the blind, including Guide Dogs for the Blind and Leader Dogs for the Blind. According to Ensminger, there were approximately 9,000 guide dogs in the United States as of 1999, most of whom had been trained by the 3 organizations mentioned above.

**Service Dogs for the Hearing Impaired**

The first organization to train dogs to assist people who had hearing impairments was established as a result of one woman’s efforts to replace a dog that had died. In 1973, Elva Janke contacted the Twin Cities Action News television program asking for assistance in training a dog to alert her to sounds that she could not hear. A trainer was found through the intervention of the director of the Minnesota Humane Society. Three years later, the American Humane Association in Denver, Colorado, established a national training center. In 1979, a separate organization, Hearing Dog, Inc, was established. The name was changed to International Hearing Dog, Inc after the organization placed a dog in Canada. Since its founding, the organization has trained and placed more than 1,100 hearing dogs, all of whom come from shelters. The dogs are trained to alert their handlers to a variety of sounds, including alarm clocks, telephones, doorbells, crying babies, sirens, and smoke alarms. According to Ensminger, there were approximately 4,000 hearing dogs in the United States as of 2001. Now, as with dogs for visually impaired individuals, there are numerous organizations training and placing hearing dogs.

**Service Dogs for the Mobility Impaired**

Today, the efforts of service dogs are not limited to serving as eyes and ears for individuals with visual or hearing impairments, they also serve as arms and legs. Service dogs for those with mobility impairments can perform a number of tasks for their handlers, including retrieving or fetching specific items or dropped items, opening doors, turning lights on or off, and carrying backpacks. The larger breeds can also serve as braces to help stabilize ambulatory handlers, assist them in getting out of chairs, and even pulling wheelchairs.

**Service Dogs for Those Suffering from Seizures**

There have been reports that some dogs can sense physiological changes in their owners when a seizure is approaching and alert the owner ahead of time. This warning allows the owner to move to a safe place and prepare and/or take preventive medication. Such reports are primarily anecdotal in nature. In 1999, however, a British organization, Support Dogs, was reported to have trained 6 dogs to detect and indicate coming seizures, providing a warning ranging from 10 to 45 minutes before the seizure. The study also indicated a reduction of seizure activity. More recently (2004), the University of Florida School of Veterinary Medicine conducted a study of 29 individuals who had epilepsy and also owned dogs. Nine dogs reportedly responded to their owners’ seizures, and three of these were also reported to have alerted their owners before the seizure. Nevertheless, there is skepticism in the scientific community that dogs can actually be trained to sense coming seizures.

**THERAPY DOGS**

As described earlier, there were informal efforts to include animals in the treatment of the mentally ill in the 18th and 19th centuries. In the 20th century, these efforts became more intentional. The therapist truly considered to be the true father of animal-assisted therapy, however, is Boris Levinson. He acknowledged that his discovery of the effectiveness of a dog in building rapport with a child client was purely accidental. The child and his mother arrived early for their appointment, before Levinson had time to confine his dog, Jingles. Until that time, Levinson had been unable to establish a relationship with the child, but Jingles quickly facilitated the establishment of a therapeutic relationship between Levinson and the child. Levinson went on to include dogs in many of his therapeutic sessions and to write and speak about the success of this new form of intervention. His initial efforts to present the results of his animal-assisted therapeutic efforts at professional conferences
were met with more than a little ridicule. Despite the skepticism with which Levinson’s colleagues greeted his presentations, a survey he conducted with clinicians in the New York State Psychological Association indicated that more than one-third of the respondents had themselves used animals in their practices.14 Levinson persisted in his efforts to interest mental health professionals in the benefits of including animals in their therapeutic activities, publishing *Pet-oriented Child Psychotherapy*15 in 1969 and *Pets and Human Development*13 in 1973, as well as numerous journal articles. A principal reason for Levinson’s persistence regarding the importance of human-animal relationships was his belief that humans had become totally alienated from each other and from nature.13

Another breakthrough occurred around the same time that Levinson was promoting the benefits of animal-assisted therapy. Samuel and Elizabeth Corson pioneered in the use of dogs, first in a psychiatric facility associated with Ohio State University and then with a nursing home population in the early 1970s.1,6(p104),14,16,17 Corson et al16 indicated that the introduction of the dogs into the treatment of patients previously unresponsive to a variety of different interventions increased social interactions among the patients and also improved patient/staff relationships. Subsequently, several studies were conducted between the late 1970s and the mid 1990s that not only verified the Corsons’ results, but also made the mind-body connection, demonstrating the relationship between the stress relief provided by pets and improved cardiovascular health.14

Around the same time, 2 important organizations were established.6 Therapy Dogs International was founded in 1976 by Elaine Smith,18 an American nurse who had worked in England and observed how patients responded to visits by the hospital chaplain who was accompanied by his dog. In 1977, the Delta Foundation was founded in Portland, Oregon, by several medical and veterinary professionals who were interested in the effects of human-animal relationships. The organization became the Delta Society in 1981, and also focuses on training, certifying, and registering therapy and service dogs in addition to its continued interest in research into human-animal interactions.19

**ANIMAL-ASSISTED ACTIVITIES AND ANIMAL-ASSISTED THERAPY**

Over the years, numerous different terms have been used to describe the act of using animals to assist people. To simplify matters, the Delta Society divided the types of activities into 2 categories: animal-assisted activities (AAA) and animal-assisted therapy (AAT). In AAA, specially trained professionals, paraprofessionals, or volunteers provide opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance the quality of life in a variety of settings without setting specific goals. AAT is an intervention, delivered by a health/human service professional with specialized expertise, in which an animal that meets specific criteria is an integral part of the treatment process. Key features include specified goals and objectives for each individual and measured practice.20

The term “therapy dog” has been applied to dogs who provide both AAA and AAT interventions with individuals or groups. Therapy dogs can be trained to assist in a medical crisis (eg, fetching medication, dialing 911), with treatment (eg, alerting someone with intense startle reflexes to the approach of another person), with emotional reactivity (eg, physical contact to help ground someone with an extreme fear reaction), and with security (verifying safe situations, turning lights on for those suffering from posttraumatic stress disorder).21 Under specific circumstances, therapy dogs providing this type of assistance to individuals with mental disabilities also can be considered service dogs under the ADA. Ensminger6 points out that dogs also can empower individuals with panic disorder or agoraphobia to venture out into the world, and can help ground and orient someone with a dissociative disorder. There also are anecdotal reports that service dogs can be of assistance to children who have autism.

Animals also can be incorporated into therapeutic approaches that focus on an Eriksonian life stage approach.22,23 Fine suggests that AAJ/AAT can be incorporated into therapeutic approaches to individuals as they move through Erikson’s 8 stages of human development.

**THEORETICAL BASES FOR AAT AND AAA**

Kidd and Kidd24 acknowledged the lack of an all-encompassing theory for the human-companion animal bond and examined the potential applicability of animal/animal, human/human, and human/object relations model theories for the development of a theory explaining the human-animal bond. After examining various theories in each model group, they concluded:

The best that can be said is that sometimes, under some circumstances, and in some ways, human/animal relationships are analogous to animal/animal, or to human/human, or to human/object relationships.26(p143)

They called for research to establish a database that could be used to develop theories relating to the human/animal bond.
In discussing attachment, Bowlby stated:

To say of a child that he is attached to, or has an attachment to, someone means that he is strongly disposed to seek proximity to and contact with a specific figure and to do so in certain situations, notably when he is frightened, tired, or ill….The theory of attachment advanced is an attempt to explain both attachment behavior, with its episodic appearance and disappearance, and also the enduring attachments that children and older individuals make to particular figures.25(pp371-372)

Following Bowlby then, the relationship that many children and adult pet owners have with their pets can be said to be a form of attachment behavior, particularly when the animal serves as a confidant and provides solace during times of stress. According to Crawford et al.,26 the aspects of attachment theory that are equally applicable to both human-human attachment and human-animal attachment include “emotional bond, goodness of fit, secure base, seeking proximity, and representational models.” To Siegel,27 a relationship with a companion animal represents one of many potential social bonds.

Among the aspects that contribute to the benefits of the human-companion animal relationship are the nonjudgmental characteristics of the animal’s regard for its owner, the childlike qualities of the animal (ie, neoteny), and the touching that is involved in the relationship (ie, it is akin to Rogerian therapy with the benefit of touch).

Parish-Plass,28 in particular, provides an example of the application of attachment theory through the means of AAT in an innovative program for abused and neglected children in Israel. She describes how the use of AAT can allow abused and neglected children to form stable relationships with animals (ie, attachments) with the assistance of a therapist, thereby helping them to develop healthier ways of relating to others and, hopefully, reduce the likelihood of them becoming abusive and neglectful parents themselves.

On a lighter note, Beck and Madresh29 compare attachments to romantic partners and attachments to pets, concluding that “pet owners experience more security in relationships with their pets than with their romantic partners.”29(p53) Interestingly, this conclusion is at least partially confirmed by an Associated Press poll in 2010 that asked pet owners whom they would choose if one had to go: their significant other or their pet. The poll found that 14% of those interviewed (n=1,501, nationwide) would choose their pet.30

Effects Of Human-Dog Relationships On Humans

Discussions of the benefits of pet ownership, AAA, and AAT are frequently met with skepticism largely because of the relative paucity of scientific documentation (ie, randomized controlled trials) and the heavy reliance on anecdotal accounts. Over the last 25 years, a number of reviews of the state of research in the animal-assisted intervention field have been conducted. In 1984, Beck and Katcher31 reviewed claims of therapeutic benefits of pets and also examined the research approaches to test that hypothesis. They found primarily descriptive studies that presented but did not test hypotheses and lacked demonstrations of the benefits of treatment or a cause and effect relationship.

In 2008, Barker and Wolen32 conducted a review of research of the effects of both pet ownership and animal-assisted activities (including animal-assisted therapy) conducted since 1980 to see if anything had changed since the 1984 Beck and Katcher review.31 They reviewed 129 studies, most of which were still descriptive in nature, although they did note that significantly more experimental studies have been conducted, some of which they praised for the methodology utilized. They concluded that:

* A hypothesis put forward by Edward Wilson, PhD, that humans evolved as creatures deeply enmeshed with the intricacies of nature, and that we still have this affinity with nature ingrained in our genotype. Information available at: http://wilderdom.com/evolution/BiophiliaHypothesis.html.
a few pockets of evidence do exist and appear to be growing. Pets appear to buffer the impact of stress on some owners, and may be associated with other health attributes such as increased physical activity…32(p492)

A number of studies have examined the effects of human-dog relationships on physical health. Friedmann and colleagues,33 Siegel,34 and Anderson et al35 found pet ownership (particularly dogs) benefits to include enhanced survival rates in individuals with cardiovascular disease, reduced need for physician visits, and reduced systolic blood pressure and plasma triglycerides. Allen and associates36 found reduced physiological activity during the performance of stressful tasks when individuals were in the presence of their pet dogs. Odendaal37 documented physiological responses when humans had positive interactions with dogs: β-endorphin, oxytocin, prolactin, β-phenylethylamine, and dopamine increased significantly among both humans and dogs; cortisol decreased significantly in humans, but not in dogs.

On the other hand, Grossberg et al38 found increased blood pressures and heart rates when individuals were performing stressful tasks in the presence of their pet dogs. Garrity and colleagues39 not only found no evidence of physical health benefits for elderly pet owners, but they actually found negative effects in the form of reduced human network support.

Regarding emotional well-being, Mugford and M’Comisky40 conducted one of the earliest studies of the benefits of companion animals for the elderly, in this case budgerigars (ie, parakeets), and found increased social interaction as a result of having the birds. Barker and Dawson,41 Brickel,42 and Goldmeier43 found that contact with a therapy dog or personal pet reduced depression and anxiety for those living in an institution or living alone.

Like the studies of physical effects of interactions with dogs, studies of psychological effects also were not uniformly positive. Ory and Goldberg,44,45 Miller and Lago,46 and Zasloff and Kidd47 found no differences in perceived happiness, psychological well-being, or loneliness between participants who owned pets and those who did not.

**Effects of Human-Dog Relationships on the Dogs**

Numerous studies have been conducted on how dogs can be used to help humans and on the effectiveness of that help. Relatively few studies, however, have been conducted on the effects on dogs of providing such assistance. In 2000, Serpell et al48(pp417-426) identified 7 potential animal welfare problem areas:

- Failure to provide for animal’s behavioral needs
- Breeding or selection of animal-assistance animals
- Failure to consider animal developmental events and processes
- Use of inappropriate or inhumane training methods
- Having unrealistic expectations of the animals
- Using inappropriate equipment and facilities for the animals
- Inadequately trained end users

Serpell, Coppinger, and Fine also point out what they refer to as an ethical “tension between interests”48(p415) in the use of dogs to assist humans. That can become an outright conflict of interest if the dogs experience pain, fear, or an inability to satisfy their own needs.

The different uses of dogs to provide assistance to humans all have their own potentials for turning the “tension between interests” into conflicts of interests. For example, service dogs tend to be on duty 7 days a week, 24 hours a day, resulting in the possibility of inadequate “down” time, as well as potential issues from wearing a harness for long periods of time and the potential for injuries from pulling a wheelchair. Resident therapy dogs in nursing homes and other residential facilities can also be expected to be on duty for long periods of time and potentially subjected to inappropriate handling/touching, as well as over-feeding and inadequate exercise. Visiting therapy dogs are taken in motor vehicles to visit nursing homes, schools, hospitals, and other facilities, often in crates. The transportation itself can be stressful for some animals, who also may be subjected to inappropriate handling as well as emotional stress transmitted from distressed humans, such as those in hospitals. Therapy dogs in private practices, even when working with loving and loved owner/therapists, can experience stress if sufficient provisions are not made for them to retreat to a place where they will be undisturbed for periods of time. They also can be exposed to emotional stress transmitted by distressed clients. Preventing conflicts of interest between dogs and their roles in assisting humans requires effort at a number of levels.

A good starting point is the source of the animals. In many cases, service dogs are bred by the organization that is training and placing the dog, or they come from shelters, depending on the type of service to be provided. Some dogs also are purchased or donated. Service dogs for the visually impaired are often bred by the
organization. Concerns have been raised about the early life of these dogs\textsuperscript{49,50} as they may spend their first year moving from a kennel in which they were born, to a temporary family for socialization, back into the kennel for extensive training, and then placement with a (hopefully) permanent human partner. Serpell and colleagues\textsuperscript{49} believe that these environmental changes can have adverse psychological effects on the dogs and may contribute to the high failure rate in service dog training. At the same time, however, Fallani et al\textsuperscript{51} examined the bond formed by a service dog with its blind owner and compared this bond with that formed between pet dogs and their owners. Some of the pet dogs actually showed higher anxiety than did the other dogs. In their study, guide dogs were able to form deep attachments to their blind owners in spite of their previous relationships with puppy walkers and trainers.

There are also concerns about the breeding practices within some organizations because of the inbreeding tendencies that may result in the desired fairly uniform appearance and behavior, but also result in a variety of genetic disorders. Another ethical question relates to the dogs bred to be service dogs who do not make it to training because of early diagnosis of genetic problems, or those who do not make it through training because of temperament or personality issues. In the case of the latter, at least one of the breeding/training/placement organizations adopts these animals out. Whether this is the case with all of the organizations that breed their own dogs is unknown. In the case of the former, the severity of the genetic problem may affect what happens to the puppy. But, the ethical question remains regarding breeding practices that result in significant numbers of dogs with genetic defects.

Shelters are another source of service (particularly hearing dogs) and therapy dogs. On the one hand, this is a significant benefit for dogs that otherwise might be euthanized. On the other hand, the frequent paucity of information about the backgrounds of shelter animals does raise the question of how to identify animals appropriate for service or therapy roles.\textsuperscript{48}

All of these points raise a number of ethical issues relating to the use of animals, particularly dogs, to provide service and other forms of therapeutic assistance to humans.

**WHERE DOES THE FIELD GO FROM HERE?**

**SUMMARY, CONCLUSIONS AND SUGGESTIONS**

We clearly use dogs to meet a large variety of human needs, both physical and emotional, frequently not only neglecting the effects on them, but not even recognizing them. For example, as Butler so eloquently states:

> Nothing else dogs do compares to the kinds of intrinsically stressful social interaction that takes place when they visit clinical, educational, or posttrauma situations. No other canine-related event, no sport nor competition requires a dog to enter the intimate zones of unfamiliar humans and remain there for several minutes of petting and hugging.\textsuperscript{52}\textsuperscript{(31)}

Butler also points out that the act of hugging, one so accepted in many parts of human society, is one that not only is foreign to a dog’s nature, but is also an act that dogs can perceive as one of dominance and experience as stressful. Yet hugging is encouraged in countless service dog and AAA/AAT interactions with dogs.

So, what direction should the field take in the future? First, given that service dog and AAT/AAA activities are not likely to end, more must be done to safeguard the physical and mental health of the dogs. How can animals be protected from potential exploitation and harm? A good starting point would be subscribing to and guaranteeing the “5 freedoms,” which are accepted as determinants of animal welfare\textsuperscript{49}(pp482-483): freedom from thirst, hunger, and malnutrition; freedom from discomfort; freedom from pain, injury, and disease; freedom from fear and distress; and freedom to express normal behavior, including socialization with its own species.

The next step is for trainers and handlers to be able to recognize the signs of stress in their puppies and dogs. There are numerous training courses, websites, and training manuals that can provide this information. Further, more needs to be done to screen shelter and privately owned animals to ensure that the dogs being trained for various service dog and AAA/AAT activities truly have the appropriate temperaments for this work. Last, more needs to be done in the area of initial and follow-up training by the service dog placement organizations to ensure that the dog recipients have a clearer understanding of how their dog communicates with them (ie, dog body language) and that their expectations of their dog are appropriate. Bustad and Hines\textsuperscript{1} included a role for veterinarians in helping to ensure the well-being of service and AAT/AAA dogs.

It also is clear that the future of the service dog and the AAT/AAA field needs to include a strong focus on research, not only research into the benefits of the association for humans, but research into the effects of this association on dogs. Beck and Katcher\textsuperscript{53} make a number of suggestions for future research, including combining
the biophilia hypothesis with social support theory to broaden the scope of human-animal relationship research to incorporate the larger natural environment. This approach connects back to Levinson’s belief that humans had become too divorced from contact with the natural world. They also recommend further research into the physiological effects on humans of associating with dogs and into the physiological effects of the relationship on the dogs. Additionally, as Garrity et al., Ory and Goldberg, Miller and Lago, and Zasloff and Kidd found, AAT/AAA does not always have positive results. It is important to identify populations for whom the relationship might not be helpful to avoid causing harm to those individuals and also to avoid subjecting dogs to potentially negative and even harmful situations.

Regardless of which research methodology is used, as Beck and Katcher have emphasized, it must be interdisciplinary in nature, involving not only mental health and medical professionals, but also sociologists, ethnologists, animal behaviorists and trainers, and likely numerous other professional communities. Our awareness of the extensiveness of the human relationship with dogs may have been awakened with the finding of the site of the joint burial of an ancient human and a puppy approximately 12,000 years ago, but we may only have scratched the surface of the real meaning of the relationship.

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The lifesize statue of a proud service dog greets all who visit the facilities of America’s VetDogs in Smithtown, New York (see article on page 8). Photo courtesy of LCDR Kathleen L. Watkins, USPHS.